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पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

INTRODUCTION

In view of the recent amendment made in the Patents Act, 1970 by the Patents (Amendment) Act, 2005 effective from 01st January 2005, the Official Journal of The Patent Office is required to be published under the Statute. This Journal is being published on weekly basis on every Friday covering the various proceedings on Patents as required according to the provision of Section 145 of the Patents Act 1970. All the enquiries on this Official Journal and other information as required by the public should be addressed to the Controller General of Patents, Designs & Trade Marks. Suggestions and comments are requested from all quarters so that the content can be enriched.

(PROF. (DR) UNNAT P. PANDIT)
CONTROLLER GENERAL OF PATENTS, DESIGNS & TRADE MARKS

19nd APRIL, 2024

CONTENTS

<i>SUBJECT</i>		<i>PAGE NUMBER</i>
JURISDICTION	:	36917 – 36918
SPECIAL NOTICE	:	36919 – 36920
EARLY PUBLICATION (DELHI)	:	36921 – 36945
EARLY PUBLICATION (MUMBAI)	:	36946 – 37034
EARLY PUBLICATION (CHENNAI)	:	37035 – 37508
EARLY PUBLICATION (KOLKATA)	:	37509 – 37574
PUBLICATION AFTER 18 MONTHS (DELHI)	:	37575 – 38014
PUBLICATION AFTER 18 MONTHS (MUMBAI)	:	38015 – 38310
PUBLICATION AFTER 18 MONTHS (CHENNAI)	:	38311 – 38621
PUBLICATION AFTER 18 MONTHS (KOLKATA)	:	38622 – 38654
WEEKLY ISSUED FER (DELHI)	:	38655 – 38662
WEEKLY ISSUED FER (MUMBAI)	:	38663 – 38666
WEEKLY ISSUED FER (CHENNAI)	:	38667 – 38674
WEEKLY ISSUED FER (KOLKATA)	:	38675 – 38676
PUBLICATION UNDER SECTION 43(2) IN RESPECT OF THE GRANT (DELHI)	:	38688 – 38717
PUBLICATION UNDER SECTION 43(2) IN RESPECT OF THE GRANT (MUMBAI)	:	38718 – 38737
PUBLICATION UNDER SECTION 43(2) IN RESPECT OF THE GRANT (CHENNAI)	:	38738 – 38774
PUBLICATION UNDER SECTION 43(2) IN RESPECT OF THE GRANT (KOLKATA)	:	38775 - 38782
INTRODUCTION TO DESIGN PUBLICATION	:	38783
CANCELLATION PROCEEDINGS UNDER SECTION 19 OF THE DESIGNS ACT, 2000 & UNDER RULE 29(1) OF DESIGNS RULES, 2001 (AS AMENDED)	;	38784
REGISTRATION OF DESIGNS	:	38785 - 39125

**THE PATENT OFFICE
KOLKATA, 19/04/2024**

Address of the Patent Offices/Jurisdictions

The following are addresses of all the Patent Offices located at different places having their Territorial Jurisdiction on a Zonal basis as shown below:-

1 Office of the Controller General of Patents, Designs & Trade Marks, Boudhik Sampada Bhavan, Near Antop Hill Post Office, S.M. Road, Antop Hill, Mumbai – 400 037 Phone: (91)(22) 24123311, Fax : (91)(22) 24123322 E-mail: cgpdtm@nic.in	4 The Patent Office, Government of India, Intellectual Property Rights Building, G.S.T. Road, Guindy, Chennai – 600 032. Phone: (91)(44) 2250 2081-84 Fax : (91)(44) 2250 2066 E-mail: chennai-patent@nic.in ❖ The States of Andhra Pradesh, Telangana, Karnataka, Kerala, Tamil Nadu and the Union Territories of Puducherry and Lakshadweep.
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Website: www.ipindia.nic.in

www.patentoffice.nic.in

All applications, notices, statements or other documents or any fees required by the Patents Act, 1970 and The Patents (Amendment) Act, 2005 or by the Patents (Amendment) Rules, 2006 will be received only at the appropriate offices of the Patent Office.

Fees: The Fees may either be paid in cash or may be sent by Bank Draft or Cheques payable to the Controller of Patents drawn on a scheduled Bank at the place where the appropriate office is situated.

पेटेंट कार्यालय
कोलकाता, दिनांक 19/04/2024

• कार्यालयों के क्षेत्राधिकार के पते

विभिन्न जगहों पर स्थित पेटेंट कार्यालय के पते आंचलिक आधार पर दर्शित उनके प्रादेशिक अधिकार क्षेत्र के साथ नीचे दिए गए हैं:-

1	कार्यालय : महानियंत्रक, एकस्व, अभिकल्प तथा व्यापार चिह्न, एंटोप हिल डाकघर के समीप, एस. एम. रोड, एंटोप हिल, मुम्बई- 400 037, भारत, फोन: (91) (22) 24123311 फ़ैक्स: (91) (22) 24123322 ई. मेल: cgpdmt@nic.in	4	पेटेंट कार्यालय, भारत सरकार इंटेलेक्चुअल प्रॉपर्टी राइट्स बिल्डिंग, इंडस्ट्रियल इस्टेट एसआईडीसीओ आरएमडी गोडाउन एरिया एडजसेन्ट टु ईगल फ्लास्क, जी. एस. टी. रोड, गायन्डी चेन्नई - 600 032. फोन: (91) (44) 2250 2081-84 फ़ैक्स: (91) (44) 2250-2066 ई. मेल: chennai-patent@nic.in ❖ आन्ध्र प्रदेश, तेलंगाना, कर्नाटक, केरल, तमिलनाडु तथा पुडुचेरी राज्य क्षेत्र एवं संघ शासित क्षेत्र, लक्षदीप
2	पेटेंट कार्यालय, भारत सरकार बौद्धिक संपदा भवन, एंटोप हिल डाकघर के समीप, एस. एम. रोड, एंटोप हिल, मुम्बई- 400 037, फोन: (91) (22) 24137701 फ़ैक्स: (91) (22) 24130387 ई. मेल: Mumbai-patent@nic.in ❖ गुजरात, महाराष्ट्र, मध्य प्रदेश, गोवा तथा छत्तीसगढ़ राज्य क्षेत्र एवं संघ शासित क्षेत्र, दमन तथा दीव, दादर और नगर हवेली.	5	पेटेंट कार्यालय, भारत सरकार कोलकाता, (प्रधान कार्यालय) बौद्धिक संपदा भवन, सीपी-2, सेक्टर- V, साल्ट लेक सिटी, कोलकाता-700 091, भारत. फोन: (91) (33) 2367 1943/44/45/46/87 फ़ैक्स:/Fax: (91) (33) 2367 1988 ई. मेल: kolkata-patent@nic.in ❖ भारत का अवशेष क्षेत्र
3	पेटेंट कार्यालय, भारत सरकार बौद्धिक संपदा भवन, प्लॉट सं. 32, सेक्टर- 14, द्वारका, नई दिल्ली- 110 075. फोन: (91) (11) 25300200, 28032253 फ़ैक्स: (91) (11) 28034301, 28034302 ई. मेल: delhi-patent@nic.in हरियाणा, हिमाचल प्रदेश, जम्मू तथा कश्मीर, पंजाब, राजस्थान, उत्तर प्रदेश, दिल्ली तथा उत्तरांचल राज्य क्षेत्रों, एवं संघ शासित क्षेत्र चंडीगढ़		

वेबसाइट: <http://www.ipindia.nic.in>
www.patentoffice.nic.in

पेटेंट अधिनियम, 1970 तथा पेटेंट (संशोधन) अधिनियम, 2005 अथवा पेटेंट (संशोधन) नियम, 2006 द्वारा वांछित सभी आवेदन, सूचनाएं, विवरण या अन्य दस्तावेज़ या कोई शुल्क पेटेंट कार्यालय के केवल उपयुक्त कार्यालय में स्वीकृत होंगे।

शुल्क: शुल्क या तो नगद रूप में या Controller of Patents के नाम में देय बैंक ड्राफ्ट या चेक के द्वारा भेजी जा सकती है जो उसी स्थान के किसी अनुसूचित बैंक में प्रदत्त हो जहाँ उपयुक्त कार्यालय स्थित है।

SPECIAL NOTICE

18 Months publication as required under Section 11A of the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005.

Notice is hereby given that any person at any time before the grant of Patent may give representation by way of opposition to the Controller of Patents at appropriate office on the ground and in a manner specified under section 25(1) of the Patents (Amendment) Act, 2005 read with Rule 55 of the Patents (Amendment) Rules, 2006.

Notice is also given that if any interested person requests for copies of the complete specification, drawing and abstract of any application already published, the photocopy of the same can be supplied by the Patent Office as per the jurisdiction on payment of prescribed fees of Rs.8/- per page. If any further details are required to be obtained, the same can be provided by the respective Patent Offices on request.

(PROF. (DR) UNNAT P. PANDIT)
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SPECIAL NOTICE

Under the new provision of the Patents Act, 1970 as amended by the Patents (Amendment) Act, 2005 and Rules there under, Publication of the matter relating to Patents in the Official Gazette of India Part III, Section 2 has been discontinued and instead The Official Journal of the Patent Office is being published containing all the activities of The Patent Office such as publication of all the patent applications after 18th months , grant of patents & all other information in respect of the proceedings as required under the provisions of the Patents (Amendment) Act, 2005 and Rules thereunder on weekly basis on every **Friday**.

The Journal is uploaded in the website every Friday. So Paper form and CD-ROM form of the Journal are discontinued from 01/01/2009.

SPECIAL NOTICE

Every effort is being taken to publish all the patent applications under section 11(A) of the Patents Act. However, if duplication of publication of any application is found, then earlier date of publication will be taken for the purpose of provisional protection for applicant and Patent Office will grant Patent not before six months from the date of second publication, provided that there is there is no third party representation.

Early Publication:

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :21/02/2024

(21) Application No.202411012261 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : MATTED

(51) International classification :B41M0005240000, A61L0029060000, A43B0007120000, C08G0018650000, C08G0018440000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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Filing Date :NA

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(57) Abstract :

ABSTRACTThe oil softens the dry hard skin on the upper part of the brain and helps in growing new hair in place of the broken hair and in increasing the blood circulation. Along with this, the herbs are also grown into powder and given for consumption, which helps in getting rid of cold and cough accumulated in the brain. Melts and also open the clogged veins of the brain as well as the clogged veins of the entire body and even the heart.

No. of Pages : 7 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/03/2024

(21) Application No.202411017131 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AUTO IRRIGATION SYSTEM USING SOIL MOISTURE SENSOR

(51) International classification :A01G0025160000, H04W0004140000, G06Q0050020000, G01N0033240000, A01B0079000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The idea aims to automate irrigation in agricultural fields based on soil moisture content. Using a microcontroller, the system switches the pump ON/OFF, replacing the manual irrigation process. Moisture content is measured by inserting two metallic rods into the field, and an op-amp acts as a comparator connecting the microcontroller and sensing arrangement. Upon receiving signals, the microcontroller activates a relay to operate the water pump. An LCD displays soil moisture content and pump status, reducing the need for human intervention. Future enhancements may involve integrating GSM technology, enabling the system to send SMS notifications about pump status changes. Additionally, pump control through SMS could be implemented for remote operation.

No. of Pages : 7 No. of Claims : 5

(54) Title of the invention : SITE-SPECIFIC OPTICAL ENCRYPTION VIA NANOSCALE INTEGRATION OF CARBON ON MONOLAYER WS2

(51) International classification :B82B3/00, B82Y40/00, C01B31/02, C01B32/15, C23C14/34, C23C16/02, C23C16/04, C23C16/26

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A method (100) for electron beam induced deposition (102) of nano-structured Carbon on atomically thin 2D materials may be provided. The method (100) may include site specific integration of carbon nanostructures (104) on WS2 (106) monolayer to obtain a nanostructure pattern. Further, the method may include optical encryption (108) by the integration of carbon nanostructures in 2D material. The site-specific integration of carbon nanostructures (104) may facilitate strong interaction, charge transfer between the carbon nanostructures and WS2 monolayer which may modify the optical emission, thereby possibly used for the secure transmission of sensitive information. Fig.1

No. of Pages : 31 No. of Claims : 7

(54) Title of the invention : HATEFUL MEME DETECTION SYSTEM IN MULTIMODAL DATA USING DEEP LEARNING AND HIERARCHICAL ANALYSIS

(51) International classification :G06N0003080000, G06N0003040000, G06F0040300000, G06N0003020000, G06F0016350000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)JAGENDRA SINGH Address of Applicant :FF2, Sheetal Apartment, Chiranjeev Vihar ----- 2)Dr. Ashima Yadav 3)Dr. Mohit Agarwal 4)Dr. Rekha Saha 5)Dr. Rohit Kumar Kaliyar Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Ashima Yadav Address of Applicant :Assistant Professor, School of Computer Science Engineering and Technology, Bennett University, Greater Noida Greater Noida ----- 2)Dr. Mohit Agarwal Address of Applicant :Assistant Professor, School of Computer Science Engineering and Technology, Bennett University, Greater Noida Greater Noida ----- 3)Dr. Rekha Saha Address of Applicant :Associate Professor, Department of CSE, Inderprastha Engineering College (IPEC), Ghaziabad, India Ghaziabad ----- 4)Dr. Rohit Kumar Kaliyar Address of Applicant :Assistant Professor, School of Computer Science Engineering and Technology, Bennett University, Greater Noida, India. Greater Noida ----- 5)Dr. Jagendra Singh Address of Applicant :Associate Professor, School of Computer Science Engineering and Technology, Bennett University, Greater Noida, Uttar Pradesh, 201310, India Greater Noida ----- -----

(57) Abstract :

The invention explores the identification of hateful memes within a multimodal dataset through the application of deep learning methodologies Our proposed approach introduces a novel strategy that integrates the semantic analysis capabilities of BART for understanding textual content. To uncover the latent hierarchical relationships among various memes, we introduce an additional layer of LDA based topic modeling. Furthermore, we harness the visual processing capabilities provided by the Swin Transformer. The key advantage of Swin Transformer lies in its ability to handle long-range dependencies in visual tasks through a hierarchical architecture. By combining the outputs from both textual and visual models, our goal is to establish a robust framework for accurate meme classification into hateful or non-hateful categories. We believe that this framework holds potential for effectively identifying and mitigating the dissemination of harmful content across online platforms.

No. of Pages : 7 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/03/2024

(21) Application No.202411017552 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : NOVEL STABLE FORMULATION OF SOLIFENACIN SUCCINATE ORAL SUSPENSION

(51) International classification :A61K31/439, A61K47/00, A61K9/08, A61K9/20, A61K9/28, A61K9/50
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention relates to a stable formulation of solifenacin succinate oral suspension. Solifenacin succinate as indicated for the treatment of symptomatic treatment of urge incontinence and/or increased urinary frequency and urgency as may occur in patients with overactive bladder (OAB) syndrome. Moreover, The present invention deal with the tablets formulation can be difficult or impossible to administer in patients who are unable or patients who are either unwilling or unable to swallow tablets or capsules. For these patients, suitable dosage forms of solifenacin succinate are in liquid form. Therefore, it is desirable to formulate liquid formulation of solifenacin succinate which has reduced bitterness and astringency derived from solifenacin succinate and has good drug content uniformity even without shaking or with gentle shaking when it is formed into a pharmaceutical composition. As a result, they found that a preparation which has good drug content uniformity and after production and does not release the drug in the oral cavity and shows good release of the drug in the stomach can be obtained by adding a specific complexing agent to a suspension of complex between solifenacin succinate and a complexing agent, adjusting the pH and long-term stability of formulation, and thus, the invention has been completed.

No. of Pages : 15 No. of Claims : 3

(54) Title of the invention : DESIGNING A LOW COST RETROFIT WINDOW FOR BETTER THERMAL INSULATION

(51) International classification :E06B0003670000, E06B0003280000, E06B0003663000, F24D0013020000, E06B0001360000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

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Filing Date :NA

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(57) Abstract :

Designing a Low Cost Retrofit Window for Better Thermal Insulation The present innovation involves a unique retrofitting approach for conventional windows aimed at preventing heat loss. The proposed product, Designing a Low Cost Retrofit Window for Better Thermal Insulation, transforms the method of addressing heat loss from rooms. Traditional wooden or modern aluminium-framed windows with single glass systems often struggle to strike a balance between effective warming and energy conservation. Typically, windows account for approximately 60%-70% of a room's heat loss, acting as a pathway for thermal dissipation. In response to this challenge, the proposed product of window retrofitting solution minimizes heat loss caused by convection and leakage from frame gaps. The air trapped within the PVC sheets acts as an insulating medium thus increases the R-value of the window or reduces the U-Value. The trapped air between the PVC sheets act as a thermal insulator, creating a barrier between the warm interior air and the cold exterior air. Consequently, heat loss due to convection is significantly reduced, and the transfer of cold air into the room through frame gaps is mitigated by sealing the retrofit window with a hook and loop arrangement. A key advantage of the low cost retrofit windows for better thermal insulation lies in its ability to get installed for any size, shape, and type of the conventional window without damaging the window, structure and wall. This retrofitting approach not only improves energy efficiency of the retrofitted window but also ensures a swift and responsive warming experience for occupants for longer time. Moreover, the retrofitted window can be removed and reinstalled any number of times as it is fitted by Hook and loop fastener arrangement with an oral inflation valve for filling the air. These features enable the user to install the retrofitting without hampering the functionality of the window. The result is a personalized, energy-efficient, and environmentally friendly retrofitting window solution that aligns with the evolving needs of contemporary societies. This patent has been funded by JK Science Technology and Innovation Council. Figure to be published with Abstract: Figure 5

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202311058773 A

(19) INDIA

(22) Date of filing of Application :01/09/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A MIRROR GLASS DOOR FOR APPLIANCES AND GLASS DOOR APPLICATIONS

(51) International classification :E05D0005020000, F25D0023020000, E05D0007081000, E06B0003020000, E05D0011100000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT A MIRROR GLASS DOOR FOR APPLIANCES AND GLASS DOOR APPLICATIONS The present invention relates to a mirror glass door coating for refrigerator and glass door applications and its method of preparation.

No. of Pages : 29 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/03/2024

(21) Application No.202411017231 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SMART GROUNDWATER MONITORING SYSTEM WITH REAL-TIME ANALYTICS AND DNN BASED PREDICTIVE CAPABILITIES.

(51) International classification :G06Q0030020000, G01D0021020000, G08B0025010000, G08B0021040000, G08B0013196000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

This invention describes Groundwater Monitoring and Prediction System i for comprehensive environmental monitoring, particularly of groundwater. This system integrates a main housing unit constructed from durable, corrosionresistant materials, housing a central processor, data storage, and various communication modules. It includes high-precision sensors for measuring groundwater levels, temperature, pH, and other environmental parameters, all encased in waterproof and pressure-resistant shells. A key feature is the Deep Neural Network (DNN) processor within the main unit, responsible for real-time data analysis, predictive modeling, and trend analysis using advanced machine learning algorithms. The system boasts a dual power management system, utilizing both a rechargeable battery and renewable energy sources like solar panels. Enhanced with a user-friendly interface, including a touchscreen display and remote monitoring capabilities via a smartphone app, the system ensures efficient data transmission, analysis, and accessibility, making it an essential tool forsustainable environmental management and resource conservation.

No. of Pages : 25 No. of Claims : 7

(54) Title of the invention : ADNIS: A NOVEL INTRUSION DETECTION SYSTEM BASED ON ADAPTIVE NEURAL NETWORKS WITH DYNAMIC THREAT ASSESSMENT

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(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
The present invention a novel intrusion detection system based on adaptive neural networks with dynamic threat assessment. The method comprising, neural network architecture with adaptive learning capabilities, continuously adjusting network parameters based on real-time data to enhance intrusion detection accuracy and Analyzing and identifying potential threats in real time through a dynamic threat assessment mechanism. Neural network architecture is engineered to analyse network communication patterns effectively, identify unusual activity, and accurately categorize any intrusions. A dynamic threat assessment process that changes over time is incorporated into the proposed system, which is different from standard systems for intrusion detection. Because of its flexibility, cybersecurity is addressed proactively, guaranteeing strong defence against new threats. By utilizing real-time data, the neural network is continuously trained and improved, enhancing its detecting skills and reducing unwanted positive results.

No. of Pages : 12 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202411017371 A

(19) INDIA

(22) Date of filing of Application :11/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : INFILTRATION OF METAL IONS IN PARTIALLY POROUS PRUSSIAN BLUE-FE₂O₃ MIXED MICROSTRUCTURE TO OBTAIN 3-D NANO-CATALYTIC NETWORKS VIA ELECTROLESS DEPOSITION FOR ENVIRONMENTAL REMEDIATION APPLICATIONS.

(51) International classification :B01J23/745, B01J23/89, B01J35/39, B01J35/45, B82Y25/00, B82Y30/00, B82Y40/00

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Metal and metal oxide nanocomposites are promising candidates for heterogeneous catalytic applications. However, most of the metal oxide volume remains as a dead volume of not participating in the catalysis. Only the metal/metal oxide hetero-junctions available at catalyst surfaces are involved in the catalysis. Besides, narrow interlayer spacing, inferior intrinsic electronic conductivity, and poor structural stability of the metal oxides still limit its practical applications. Herein, we report a two-step strategy to infiltrate the metal nanoparticles into the 3D-porous Prussian blue/Fe₂O₃ microstructures (PPFM-M) boosted as a heterogeneous catalyst for environmental remediation applications. The porosity of the Prussian blue microstructures is thermally tuned to infiltrate the metal ion precursor to facilitate the galvanic displacement reaction between Fe and metal ion based on mixed potential theory. Of note, metal ions could replace the Fe ions via electro-less deposition to enlarge the lattice spell and form metal nanoparticles 3D-networks compared with the only surface attached M/Fe₂O₃ composite (PPFM-M), the structural stability and electron transfer kinetics of the PPFM-M are enhanced. As expected, the obtained PPFM-M catalyst exhibits remarkable catalytic efficiency for Rhodamine-B dye degradation and p-nitrophenol reduction remediations.

No. of Pages : 25 No. of Claims : 8

(54) Title of the invention : AN AUTONOMOUS DRONE-BASED FARMING PRODUCT CLASSIFICATION SYSTEM FOR EFFICIENT FARMING

(51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date	:B64C0039020000, G06Q0050020000, G06N0020000000, G06K0009620000, G06Q0010060000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)Manipal University Jaipur Address of Applicant :Manipal University Jaipur, Off Jaipur-Ajmer Expressway, Post: Dehmi Kalan, Jaipur-303007, Rajasthan, India Jaipur ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Sumit Dhariwal Address of Applicant :Department of Information Technology, Jaipur-Ajmer Express Highway, Dehmi Kalan, Near GVK Toll Plaza, Jaipur, Rajasthan 303007 Jaipur ----- 2)Dr. Ankur Pandey Address of Applicant :Department of Computer Science & Engineering, Jaipur-Ajmer Express Highway, Dehmi Kalan, Near GVK Toll Plaza, Jaipur, Rajasthan 303007 Jaipur ----- ---

(57) Abstract :

The present invention relates to a novel method for using a smart drone system to maximize time and resources in farming product growing. With its ability to classify farming products in the garden based on its terms, the system offers farmers useful information for accurate and effective agricultural management. The method comprises a fleet of autonomous drones equipped with advanced sensors, cameras, and machine-learning algorithms. The method further comprising the following steps, mapping of the area, data collection, Machine learning classification, analysis the result in real-time, and provide feedback to the central farm management system. The invention results provide farmers an actionable insight for optimized decision-making. The present method has lots of benefits like time efficiency, resource optimization, increased yield and cost savings to the farmers.

No. of Pages : 8 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202411017569 A

(19) INDIA

(22) Date of filing of Application :12/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : WEARABLE DEVICE AND METHOD FOR PROVIDING ALERT SIGNALS TO A USER WITH VISUAL IMPAIRMENTS

(51) International classification :A61B5/00, G06F1/16, G06F3/01 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)INDIAN INSTITUTE OF TECHNOLOGY KANPUR Address of Applicant :DEAN, RESEARCH & DEVELOPMENT, ROOM NUMBER 151, FACULTY BUILDING, POST OFFICE: IIT KANPUR, KANPUR, UTTAR PRADESH - 208016, INDIA KANPUR ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Siddhant Shrivastava Address of Applicant :Department of Design Program (IITK), Indian Institute of Technology Kanpur, Post Office: IIT KANPUR, Kanpur, Uttar Pradesh - 208016, India KANPUR ----- 2)J Ramkumar Address of Applicant :Department of Mechanical & Design Program (IITK), Indian Institute of Technology Kanpur, Post Office: IIT KANPUR, Kanpur, Uttar Pradesh - 208016, India KANPUR -----

(57) Abstract :

The present invention discloses a wearable device (100) for providing one or more alert signals to a user with visual impairments. The wearable device (100) comprises a wearable frame (102), one or more radial arms (104A, 104B), one or more sensors (106A, 106B, 106C), a controller unit (108), and a haptic generating unit (110). The one or more radial arms (104A, 104B) are configured with one or more sensor mounts to position the one or more sensors (106A, 106B, 106C). The one or more sensors (106A, 106B, 106C) provide obstacle data based on detecting one or more obstacles. The controller unit (108) generates real-time alert data by processing the obstacle data. Furthermore, the haptic generating unit (110) provides distinguishable haptic patterns based on the received real-time alert data. The wearable device (100) is configured to detect the one or more obstacles in surroundings, enhancing user safety and independence. FIG. 1A

No. of Pages : 30 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/03/2024

(21) Application No.202411017580 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : THREAT DETECTION AND NEUTRALISATION SYSTEM

(51) International classification :G06N0020000000, G06F0021550000, H04M0003420000, A63B0024000000, G16H0080000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

This invention focuses on the development of an Improved security System aimed at enhancing the user security and promoting responsible safety measures thus protecting the end user and Integrate with existing antivirus tools to provide a more comprehensive security solution. Through sophisticated machine learning algorithms, the system analyses the collected data to make the threat detection system more aware of the amount and the level of threats thus enhancing its capabilities for the future threats. The system also offers valuable insights to: Provide the ability to remotely access and control the mouse and keyboard, making it possible to respond to security threats and intervene if necessary. The description of the work in discussed in the disclosure and figures.

No. of Pages : 18 No. of Claims : 4

(54) Title of the invention : A PROGRAMMABLE MULTI-CHANNEL REMOTE CONTROL SYSTEM

(51) International classification :H04N0021450000, H04N0021422000, H04N0021442000, H04N0021478000, H04N0021470000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The programmable multi-channel remote control system presented herein is a revolutionary advancement in television entertainment technology. Featuring a handheld device equipped with five specialized time buttons (T1 to T5), users can effortlessly assign and activate specific channels according to a pre-programmed schedule. This innovation streamlines channel surfing, enhances viewing routines, and offers a tailored approach to television consumption. The user-friendly interface ensures accessibility for a diverse audience. Beyond traditional television usage, the system adapts to smart home systems, streaming services, and personalized content delivery, making it a versatile tool for a range of entertainment platforms. With cutting-edge wireless technology and an emphasis on efficiency, customization, and automation, this invention redefines how individuals engage with television, setting a new standard for the modern entertainment landscape. Accompanied Drawing [FIG. 1]

No. of Pages : 22 No. of Claims : 9

(54) Title of the invention : DYNAMIC PORTFOLIO OPTIMIZATION THROUGH AI-ENABLED PREDICTIVE INVESTMENT MODELING

(51) International classification :G06Q0040060000, G06Q0040040000, G06N0020000000, G06Q0040000000, G06Q0010060000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Punjika Rath Address of Applicant :KIET Group of Institutions, Ghaziabad, Uttar Pradesh, India ----- 2)Dr. Arunima Mishra 3)Dr. Deepa 4)Dr. Prateek Gupta 5)Ajay Chaudhary 6)Dr. Deepika 7)Dr. Diwakar Bouddh Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Punjika Rath Address of Applicant :KIET Group of Institutions, Ghaziabad, Uttar Pradesh, India ----- 2)Dr. Arunima Mishra Address of Applicant :KIET Group of Institutions, Ghaziabad, Uttar Pradesh, India ----- 3)Dr. Deepa Address of Applicant :KIET Group of Institutions, Ghaziabad, Uttar Pradesh, India ----- 4)Dr. Prateek Gupta Address of Applicant :KIET Group of Institutions, Ghaziabad, Uttar Pradesh, India ----- 5)Ajay Chaudhary Address of Applicant :KN Modi Institute of Engineering and Technology, Modinagar ----- 6)Dr. Deepika Address of Applicant :Ram Chandra Uniyal Govt. PG College, Uttarakashi, Uttarakhand, India ----- 7)Dr. Diwakar Bouddh Address of Applicant :Ram Chandra Uniyal Govt. PG College, Uttarakashi, Uttarakhand, India -----

(57) Abstract :
The dynamic portfolio optimization through AI-enabled predictive investment modeling represents a paradigm shift in the field of financial portfolio management. This approach seeks to overcome the limitations of traditional methods by integrating advanced artificial intelligence algorithms and machine learning techniques. The methodology involves a multi-step process, including data collection, feature engineering, model selection, dynamic calibration, portfolio construction, and risk management integration. Claims of superior predictive accuracy, adaptive portfolio allocation, and reduced dependency on human biases characterize the approach. The system aims to continuously adapt to changing market conditions, providing investors with data-driven decision support and optimizing asset allocations for enhanced returns. This abstract encapsulates the essence of a methodology poised to redefine portfolio optimization in the context of dynamic and unpredictable financial markets.

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/03/2024

(21) Application No.202411017148 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHOD AND SYSTEM FOR ENHANCED SATELLITE IMAGE PROCESSING AND ANALYSIS

(51) International classification :G06T0005400000, G06K0009620000, G06T0005000000, G06T0017050000, G06Q0050260000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This invention involves the development of a system for satellite image processing, which includes an input module, an image pre-processing module, an image enhancement module, and an image classification module. The system is designed to accept satellite images in various formats, apply contrast stretching and histogram equalization techniques, and classify the images using supervised or unsupervised classification algorithms based on their spectral characteristics. The project also includes the development of a computer program product that can perform the image processing steps. The system and method developed in this project can have numerous applications, including environmental monitoring, agriculture, land-use planning and water bodies monitoring. The system and method for satellite image processing is a novel and innovative solution that can significantly improve the accuracy, speed, and scalability of satellite image processing. The system and method can be used in various fields, such as agriculture, forestry, environment, and urban planning, to extract useful information from satellite images and support decision making.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202411017152 A

(19) INDIA

(22) Date of filing of Application :10/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR LOGGING WASHROOM CLEANING EVENTS FOR ENSURING CLEANLINESS

(51) International classification :H04L0043106000, A47K0005060000, A47K0005120000, H04N0021854700, A47K0010320000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

A system 100 and a method (300) for ensuring effective cleanliness of a washroom comprises the steps of sensing odor levels of the washroom, logging washroom entry and exit timestamps of a washroom cleaner, collecting odor levels of the washroom at the entry timestamp and odor levels of the washroom at the exit timestamp, determining a difference in odor levels of entry and exit timestamps, and reporting an unsatisfactory difference in odor levels recorded at the entry timestamp and at the exit timestamp.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/03/2024

(21) Application No.202411017181 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM & METHOD FOR BUILDING SMART URBAN SOLUTIONS USING IOT, AI, ML AND CLOUD-BASED TECHNOLOGY

(51) International classification :H04L0067100000, H04L0067120000, H04L0067510000, G16Y0030000000, H04L0067520000
(86) International Application No :NA
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(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The idea of a Smart City features the need to upgrade the quality, interconnection, and execution of different metropolitan administrations with the utilization of data and correspondence advancements (ICT). Savvy City advances advance cloud-based furthermore Internet of Things (IoT) based administrations in which genuine world UIs use cell phones, sensors and RFIDs. Cloud processing and IoT are as of now two most significant ICT models that are forming the up and coming age of figuring. Both ideas significantly affect how we assemble and convey brilliant applications/answers for perceptive urban communities. Distributed computing addresses the conveyance of equipment and programming assets on request over the Internet-as-a-administration. Then again, IoT idea imagines another age of gadgets (sensors, both virtual and physical) that are associated with the Internet and offer various types of assistance for esteem added applications. This paper tends to the united area of distributed computing and IoT for any shrewd city application organization. Dubai as a brilliant city is talked about with some application-based situations.

No. of Pages : 18 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202411017183 A

(19) INDIA

(22) Date of filing of Application :11/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : GENETIC DIVERSITY EVALUATION IN MUNGBEAN (VIGNA RADIATA (L.) WILCEZK) GENOTYPES ASSISTED BY 10 PRIMERS OF SSR MARKERS

(51) International classification	:C12Q0001689500, C12Q0001685800, G16B0040000000, G16B0020200000, G06K0009620000	(71)Name of Applicant : 1)Career Point University, Kota Address of Applicant :National Highway 52, Opp Alaniya Mata Ji Mandir, Alaniya, Kota -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
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(62) Divisional to Application Number	:NA	-----
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(57) Abstract :

Mungbean (*Vigna radiata* (L.) Wilczek) also known as green gram is an important source of protein in the category of food legumes. In the present study, SSR marker is used to analyze the genetic diversity amongst 23 genotypes of mungbean. Out of a total of 10 primers used for SSR analysis revealed generation of 15 alleles. The number of alleles per locus ranged from one (CEDG006, CEDG010, CEDG050, CEDG088, CEDG092 and CEDG232) to three (CEDG 214), with an average of 1.5 allele per primer. The index for expected heterozygosity was 0.29 ranging from 0.15 to 0.49 revealed a deficit in heterozygosity. The size of amplification products varied in case of each primer and the range was found to be 100 bp to 190 bp. 13 out of 15 alleles were found polymorphic. The average PIC value of SSR marker was found to be 0.205. The value of Jaccard's similarity coefficient had ranged from 0.28-1.00 with an average value of 0.64. The dendrogram constructed on SSR molecular marker data through UPGMA method and PCA using average linkage, had enabled grouping of the genotypes into three main clusters. Clustering pattern based on SSR marker data clearly indicated the narrow genetic base of mungbean genotypes that emphasizes the need to explore and exploit more number of germplasm from additional source to study genetic variation in mungbean for genetic improvement. The results indicated the marked usefulness of SSR in the assessment of genetic diversity in mungbean crop.

No. of Pages : 16 No. of Claims : 9

(54) Title of the invention : IOMTGUARD: A NOVEL INTRUSION DETECTION FRAMEWORK FOR IOMT USING CONVOLUTIONAL NEURAL NETWORKS

(51) International classification :G06N0003080000, G06N0003040000, G06K0009620000, G06F0021550000, G16H0030200000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Manipal University Jaipur Address of Applicant :Manipal University Jaipur, Off Jaipur-Ajmer Expressway, Post: Dehmi Kalan, Jaipur-303007, Rajasthan, India Jaipur - ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Prashant Vats Address of Applicant :Department of Computer Science & Engineering, Jaipur-Ajmer Express Highway, Dehmi Kalan, Near GVK Toll Plaza, Jaipur, Rajasthan 303007 Jaipur ----- 2)Dr. Preeti Rathi Address of Applicant :Department of CSE, School of Engineering and Technology, K.R. Mangalam University Sohna Road, Gurugram, Haryana 122103 Gurugram ----- 3)Dr. Rashmi Priya Address of Applicant :Department of CSE, School of Engineering and Technology, K.R. Mangalam University Sohna Road, Gurugram, Haryana 122103 Gurugram ----- 4)Dr. Govind Murari Upadhyay Address of Applicant :Department of Computer Applications, Jaipur-Ajmer Express Highway, Dehmi Kalan, Near GVK Toll Plaza, Jaipur, Rajasthan 303007 Jaipur ----- 5)Mr. Ashok Kumar Saini Address of Applicant :Department of Computer Science & Engineering, Jaipur-Ajmer Express Highway, Dehmi Kalan, Near GVK Toll Plaza, Jaipur, Rajasthan 303007 Jaipur ----- 6)Ms. Kanika Bhalla Address of Applicant :Institute of Innovation in Technology & management, GGSIP University, New Delhi-110058 New Delhi ----- -----

(57) Abstract :

The present invention relates to a novel intrusion detection framework for IoMT using Convolutional Neural Networks. The method comprises a framework, IoMTGuard, to analyze network traffic patterns generated by IoMT devices using CNNs. A Convolutional Neural Network (CNN) configured for automatic feature extraction from IoMT network traffic patterns, means for preprocessing raw network data for input into the CNN, a training mechanism for creating a labeled dataset and training the CNN on normal and anomalous IoMT network traffic patterns, a real-time analysis module for applying the trained CNN to analyze IoMT network traffic and detect potential intrusions, and an alert generation system for generating alerts or notifications upon identification of potentially malicious activities. The present The model is adaptable enough to react to evolving threats since it can automatically extract relevant properties through the use of CNNs. The model can automatically extract relevant data and adjust to shifting threat landscapes in the dynamic IoMT ecosystem thanks to CNNs. We conducted many experiments with real-world IoMT datasets to evaluate the performance of IoMTGuard. The results illustrate how well the framework detects intrusion attempts by minimizing false positives. IoMTGuard holds significant potential for enhancing the overall security of IoMT ecosystems, safeguarding confidential patient information, and guaranteeing the uninterrupted proper functioning of medical equipment. Consequently, our intrusion detection solution, IoMTGuard, which is based on CNN, offers a robust and proactive approach to managing security concerns in IoMT environments. IoMTGuard is a helpful solution for safeguarding the integrity and privacy of medical data in networks of healthcare facilities, since the IoMT landscape is growing and requires the installation of advanced security measures.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202311062697 A

(19) INDIA

(22) Date of filing of Application :18/09/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : DRIVE ASSEMBLY FOR SEEDING MACHINE

(51) International classification :A01C19/00, A01C7/20,
F16H49/00, F16H55/22

(86) International Application
No :NA

Filing Date :NA

(87) International Publication
No : NA

(61) Patent of Addition to
Application Number :NA

Filing Date :NA

(62) Divisional to Application
Number :NA

Filing Date :NA

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(57) Abstract :

Disclosed is a drive assembly (100) that includes first and second gearboxes (102, 104). The first gearbox (102) includes a first worm gear (108) and a first helical gear (110) that have a module value of 4. The first worm gear (108) includes a first set of teeth such that the first set of teeth that has 9 teeth. The first gearbox (102) includes a first set of magnetic plugs (208a-208n) that are adapted to collect a plurality of ferromagnetic chips from the first gearbox. The second gearbox (104) includes a second worm gear (114) and a second helical gear (116) that have a module value of 4. The second worm gear (114) includes a second set of teeth that has 9 teeth. The second gearbox (104) includes a second set of magnetic plugs (308a-308n) that are adapted to collect the plurality of ferromagnetic chips from the second gearbox (104). FIG. 1 is the reference figure.

No. of Pages : 27 No. of Claims : 8

(54) Title of the invention : SENSOR CONTROLLED SMART PAVEMENT DEFROST SYSTEM

(51) International classification :F25B0047020000, H05B0047190000, F25D0021120000, H04N0005353000, F25D0021000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

It has been observed that in cold climate regions, formation of frost on road surfaces reduces friction between the wheels of vehicles and the pavement surface resulting in skidding of vehicles, especially on the curves and steep gradients. Hence it becomes essential to remove this frost layer. Previous measures were manual and not so efficient. With the innovation of Sensor Controlled Smart Pavement Defrost System, all disadvantages of previous methods are overcome. The system consists, firstly, of a sensor placed on a higher level than the road, normally on a pole. This sensor is a non-intrusive surface condition sensor that uses laser and infrared electro-optical technology to read surface condition like temperature, surface friction(surface grip), wet or dry surface, and air humidity. It has a range of 15 meters for concrete and 10 meters for black asphalt. These sensors are available on demand. The innovation is firstly to remotely connect the sensor to a data logger which has relay outputs for various other components to connect like water pumps, boilers, control valves etc. The data logger can be placed in the vicinity of a place where boilers are installed which heat water on demand. The size and capacity of the boilers will depend on the road surface area to be defrosted. A grid system of GI pipes is proposed just under the pavement surface. This grid shall be connected to the boilers through controlled valves. Hot water will circulate in the grid and heat the pavement which in turn shall cause the ice layer to melt. All components like pumps, boilers, valves will be controlled by the relay connections of the data logger which will get its command from the sensors. Whole the system is automatic without any human intervention and shall start and stop on its own, depending on the frost conditions. Since the hot water will be used in a loop, there shall be no wastage of it, thus preserving this important component of the environment. The same hot water shall be used for heating the work area for the observer team of this system. There shall be individual systems for vulnerable places like steep slopes and curves where there is maximum possibility of the vehicle to lose grip.

No. of Pages : 9 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/03/2024

(21) Application No.202411017817 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD AND A SYSTEM FOR PROVIDING A COATING AGENT

(51) International classification :C10N0030060000, C10N0030000000, C10N0040250000, C07C0002840000, C10N0050000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A coating agent (100) to coat a structure (102) formed by cementitious material is disclosed. The coating agent (100) includes a solid contact material (202) and a lubricant oil (204). The solid contact material (202) is sieved by a sieve. The solid contact material (202) is a corn cob ash. Further, the lubricant oil (204) is adapted to be mixed with the solid contact material (202) to form the coating agent (100). The sieved solid contact material (202) and the lubricant oil (204) are mixed at a ratio of 1:1. Further, the coating agent (100) is coated on the structure (102) formed by the cementitious material.

No. of Pages : 23 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202411017536 A

(19) INDIA

(22) Date of filing of Application :12/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND METHOD FOR MUSIC ALIGNED WITH FACIAL EMOTIONS

(51) International classification :G06F0003010000, G10L0025630000, G06N0020000000, G06Q0030020000, G06Q0020080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This invention combines Artificial Intelligence and Machine Learning to analyze and interpret facial expressions. By tracking and analyzing the movements and features of the face, such as the eyebrows, eyes, and mouth, this technology can accurately determine the user's emotional state. Based on this analysis, appropriate music is selected to enhance the user's experience. This innovative application has the potential to create more personalized and engaging experiences in various fields, such as virtual reality fitness, where music can be dynamically adjusted to match the user's emotions during workouts. By leveraging the power of technology and music, facial emotion detection with music play opens up exciting possibilities for enhancing user engagement and satisfaction.

No. of Pages : 19 No. of Claims : 4

(54) Title of the invention : ROLE OF AI (ARTIFICIAL INTELLIGENCE) IN BIODIVERSITY CONSERVATION: PIONEERING SMART SOLUTIONS FOR A GREENER FUTURE

(51) International classification	:G06N0020000000, C12N0015100000, G06N0005040000, G06Q0010080000, A01G0022000000	(71)Name of Applicant : 1)Dr. Sandeep Kumar Address of Applicant :Ward No.3, Bengali Colony, Deoli ----- ----- 2)Dr. Harsh Gulati Name of Applicant : NA Address of Applicant : NA
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Filing Date	:NA	

(57) Abstract :

The present patent application pertains to the field of biodiversity conservation and, more specifically, to the utilization of artificial intelligence (AI) as a groundbreaking force in the monitoring and preservation of diverse ecosystems and species. In the age of the Anthropocene, characterized by human-induced environmental changes and a critical loss of biodiversity, innovative solutions are imperative to safeguard our planet's natural heritage. Traditional methods of biodiversity conservation, while well-intentioned, often fall short of the comprehensiveness, precision, and cost-efficiency required in the face of contemporary ecological challenges. Manual data collection, sometimes constrained by logistical difficulties and data accuracy concerns, can inadvertently delay responses to emerging threats or fail to provide the timely insights essential for preserving endangered species and their habitats. The disclosed invention, therefore, endeavors to bridge these gaps by introducing a pioneering system and method, collectively referred to as the Smart Biodiversity Guardian.

No. of Pages : 10 No. of Claims : 6

(54) Title of the invention : SYSTEM AND METHOD FOR DETECTING AND TRACKING HAND-OBJECT INTERACTION

(51) International classification :G06F0003010000, G06Q0010100000, G06T0007730000, G06K0009620000, B25J0009160000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

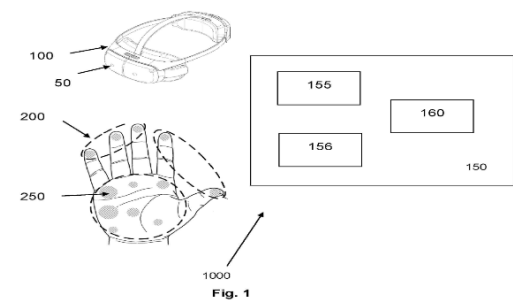
(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
In system and method of present disclosure, a fast, accurate and simultaneous detection and tracking of hand, object and interaction thereof is disclosed. The system makes use of vision based method and hand glove based data to aptly detect hand-object pose using a combination of detectors, followed by seamless tracking of hand and object that enables overall process computationally more efficient by considering of temporal frames. The tracker is monitored for its accuracy and corrected for any reported discrepancy. The exact coordinates of hand and object are obtained from joint estimation of 6DoF pose that functions as a valuable feedback for enhancing skill of any given trade.

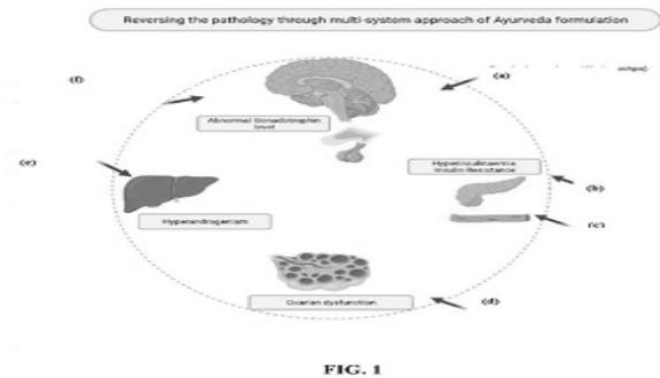


No. of Pages : 36 No. of Claims : 30

(54) Title of the invention : A NANOEMULSION-BASED COMPOSITION, METHOD OF PREPARATION AND APPLICATION THEREOF

(51) International classification :A61B0018000000, A61N0007020000, A61B0090000000, A61P0003040000, A61B0017000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Indian Institute of Technology Bombay Address of Applicant :Indian Institute of Technology Bombay - Powai ,Mumbai Maharashtra India 400 076 Mumbai ----- 2)Femacare Private Limited Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Arnab Ghosh Address of Applicant :Department of Biosciences and Bioengineering, Indian Institute of Technology Bombay - Powai,Mumbai Maharashtra India 400076 Mumbai ----- 2)Rohit Srivastava Address of Applicant :Department of Biosciences and Bioengineering, , Indian Institute of Technology Bombay - Powai,Mumbai Maharashtra India 400076 Mumbai ----- 3)Charu Sharma Address of Applicant :F-332, Street No. 7, Ganga Vihar, Shahdra, New delhi New delhi India 110094 New delhi ----- 4)Sachin Bhardwaj Address of Applicant :F-332, Street No. 7, Ganga Vihar, Shahdra, New delhi New delhi India 110094 New delhi -----

(57) Abstract :
ABSTRACT A Nanoemulsion-based Composition, Method of preparation and Application thereof The present invention relates to a nanoemulsion-based composition for alleviating multi-system disorders associated with polycystic ovary syndrome (PCOS), its method of preparation and application against the symptoms associated with PCOS in an individual. The embodiments herein provide a safe, fuss free, user-friendly, cost-effective, rapid, long-lasting and non-extensive therapeutic composition and/or formulation. FIG. 1



No. of Pages : 27 No. of Claims : 17

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321022140 A

(19) INDIA

(22) Date of filing of Application :27/03/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR THE CONTINUOUS PURIFICATION OF CRUDE CARBON BLACK FEEDSTOCK

(51) International classification :B01D29/60, B01D35/02, B01D36/04, C01B32/366, C02F1/40, C09C1/48		(71)Name of Applicant : 1)BALKRISHNA INDUSTRIES LIMITED Address of Applicant :BKT House, C/15, Trade World, Kamala Mills Compound, Senapati Bapat Marg, Lower Parel (West), Mumbai – 400013, Maharashtra, India Mumbai -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
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Filing Date	:NA	

(57) Abstract :

ABSTRACT A SYSTEM AND A METHOD FOR THE CONTINUOUS PURIFICATION OF CRUDE CARBON BLACK FEEDSTOCK The present disclosure relates to a system and a method for the continuous purification of a crude carbon black feedstock. The system comprises at least one primary storage unit (101), at least two filtration units (102a and 102b), at least one secondary storage unit (106), at least one residual oil collection unit (103), at least one treatment unit (105), at least one separated oil collection unit (109), and a control unit (110). The system of the present disclosure improves the efficiency of the carbon black production lines, as well as the quality of the carbon black. The method for the continuous purification of crude carbon black feedstock of the present disclosure is simple and economic.

No. of Pages : 35 No. of Claims : 17

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321027044 A

(19) INDIA

(22) Date of filing of Application :12/04/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : SIMPLE SEQUENCE REPEAT MARKERS ASSOCIATED WITH GENETIC MALE STERILITY IN COTTON

(51) International classification :C12Q0001689500, C12N0015820000, A01H0001000000, G01N0033680000, A01H0005100000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)RALLIS INDIA LIMITED Address of Applicant :23rd Floor, Vios Tower, New Cuffe parade, Off Eastern Freeway, Wadala, Mumbai-400037, Maharashtra, India Mumbai ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)SATISH KANUGANTI Address of Applicant :23rd Floor, Vios Tower, New Cuffe parade, Off Eastern Freeway, Wadala, Mumbai-400037, Maharashtra, India Mumbai ----- 2)RAMANATHAN VAIRAMANI Address of Applicant :23rd Floor, Vios Tower, New Cuffe parade, Off Eastern Freeway, Wadala, Mumbai-400037, Maharashtra, India Mumbai ----- 3)SAMPATH MUKUNDAN Address of Applicant :23rd Floor, Vios Tower, New Cuffe parade, Off Eastern Freeway, Wadala, Mumbai-400037, Maharashtra, India Mumbai -----

(57) Abstract :

The current invention relates to methods and compositions to identify and select genetically male sterile cotton plants, by using molecular markers. It more specifically relates to novel simple sequence repeat markers and primers for amplifying and identifying these markers in cotton plants, with the ms5ms6 double recessive genotype associated with male plant sterility.

No. of Pages : 50 No. of Claims : 12

(54) Title of the invention : A METHOD FOR SIMULATING FAILURE OF FINITE SLOPES AND A SYSTEM THEREOF

(51) International classification :C22F0001047000, G16H0050500000, B21B0003000000, C22C0021060000, H04N0007010000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA(62) Divisional to Application Number :NA
Filing Date :NA

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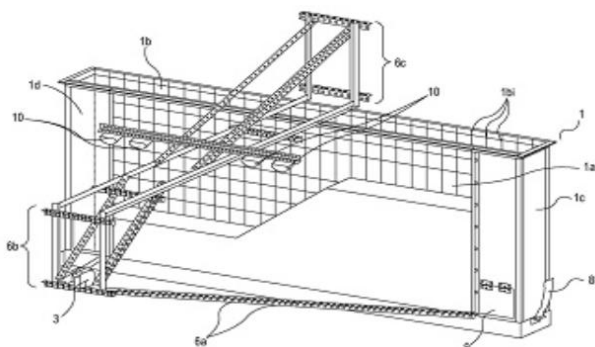
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(57) Abstract :

The present invention relates to a method for idealizing the plane strain condition in simulating the failure of finite slopes. The present invention further pertains to a method for the experimental simulation of progressive failure of finite slopes. Further, a system configured to simulate natural failure of finite slope is disclosed herein.



No. of Pages : 23 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321017746 A

(19) INDIA

(22) Date of filing of Application :16/03/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN IN-VITRO METHOD AND A KIT FOR DETERMINING THE SEVERITY OF COVID-19 OUTCOME

(51) International classification :C12Q0001688300, A61Q0005120000, G06F0011070000, C12Q0001689000, A61P0031140000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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Address of Applicant : NA

(72)Name of Inventor :

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2)Yogita Rajput

Address of Applicant :Multidisciplinary Research Units (MRU), Pt. J.N.M. Medical College Raipur Raipur -----

(57) Abstract :

ABSTRACT AN IN-VITRO METHOD AND A KIT FOR DETERMINING THE SEVERITY OF COVID-19 OUTCOME 5 The present invention relates to an in-vitro method for screening a subject, for determining the severity of Covid-19 outcome caused by Severe Acute Respiratory Syndrome Coronavirus 2(SARS-COV-2) using combination of gene signature comprising human RNA based biomarker and a kit thereof.

No. of Pages : 59 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321021121 A

(19) INDIA

(22) Date of filing of Application :24/03/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : MENINGOCOCCAL PROTEIN BASED VACCINE FORMULATIONS AND METHODS FOR MANUFACTURING THEREOF

(51) International classification :A61K0039000000, A61K003905000, A61K0039120000, A61K0047500000, A61K0047620000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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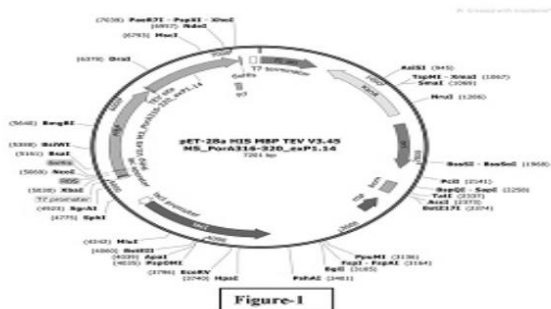
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(57) Abstract :

ABSTRACT MENINGOCOCCAL PROTEIN BASED VACCINE FORMULATIONS AND METHODS FOR MANUFACTURING THEREOF Present invention provides fusion proteins with desired reduction in factor H binding, particularly the present invention provides optimized manufacturing process for fusion 5 proteins and formulations comprising the fusion proteins. Present invention provides an efficient platform process for manufacturing an effective vaccine formulation against Neisseria meningitidis that meets multiple criteria including improved immunogenicity, safety, stability, and affordability



No. of Pages : 159 No. of Claims : 76

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321043183 A

(19) INDIA

(22) Date of filing of Application :27/06/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : LABSA FREE DISHWASH CLEANSING CONCENTRATE

(51) International classification :A61K8/44, A61Q19/10, C11D1/29, C11D1/83, C11D11/00, C11D17/00 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)GALAXY SURFACTANTS LTD. Address of Applicant :C-49/2, TTC Industrial Area, Pawne, Navi Mumbai 400 703, Maharashtra, India Navi Mumbai ----- - ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)TRAILOKYA, Sagar Anil Address of Applicant :Flat. No. 12, Jailakshi CHS, Plot No. 09, Sector 19, New Panvel 410206, Maharashtra, India New Panvel -- ----- 2)JUMDE, Vaishali Amol Address of Applicant :F-101, Satyakunj Complex, Sector 36, Kamothe 410206, Maharashtra, India Kamothe ----- 3)SHINDE, Harshal Address of Applicant :Saisagr Society, Plot No. 174, C 10, Gorai sector 2, Borivali, Mumbai 400092, Maharashtra, India Mumbai -- -----

(57) Abstract :

A concentrated dish wash composition is disclosed. The concentrated composition is based on an Anionic and Amphoteric surfactant system with other components, where ratio of Anionic: Amphoteric Surfactants is 1:1 and 1.5:1. The concentrate on dilution with water affords a low active (<10%) viscous dish wash formula ranging viscosity from 2500 cps to 10000 cps. Performance of diluted viscous liquid dish wash is superior to other substantially high active (>15%) formulations. The dish wash concentrate is free of LABSA, quickly dissolves in water (< 10 seconds) provides superior performance and is gentle to skin.

No. of Pages : 24 No. of Claims : 15

(54) Title of the invention : AN OPTICAL BIOSENSING DEVICE FOR ACCURATE FLUORIDE ESTIMATION

(51) International classification :G01N0033543000, C12Q0001000000, C12Q0001580000, G01N0033180000, C12Q0001040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :Project Scientist, Department of Biotechnology, NIT Raipur, Chhattisgarh, India - 492010 -----

(57) Abstract :

The present invention is related to an optical bio sensing device for accurate fluoride estimation designed for accurate estimation of fluoride levels in water samples. The biosensor utilizes a printed circuit board (PCB) incorporating an operational amplifier (Op Amp) 3140, a blue Light Emitting Diode (LED), and a light-dependent resistor (LDR). The urease enzyme is immobilized on the biosensor circuit, serving as a bio recognition element for fluoride detection. The fabrication involves screen printing, etching, and component installation on the PCB. The biosensor's validity is confirmed by comparing its response to a UV-visible spectrophotometer when measuring ammonia standard solutions. The biosensor exhibits stability, reproducibility, and a shelf life of 28 days when stored in wet conditions. Fluoride biosensor kinetics reveal a competitive inhibition nature. The biosensor is applied to analyze ground water samples, showing good recovery percentages compared to conventional methods.

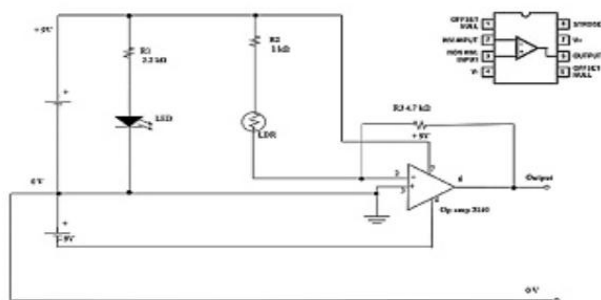


Figure 1

No. of Pages : 30 No. of Claims : 3

(54) Title of the invention : AN OPTICAL SENSOR FOR BIOFILM DETECTION

(51) International classification :B01L0003000000, G01N0033543000, G01N0027327000, H04W0028080000, H04N0005225000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :Research Scholar, Department of Biotechnology, NIT Raipur, Chhattisgarh, India - 492010 -----

(57) Abstract :

The present invention is related to an optical sensor for biofilm detection designed for the efficient and cost-effective detection of biofilms, complex microbial communities commonly associated with surfaces. The device, housed in a 3D-printed structure, incorporates a microcontroller (3), OLED display (1), light-dependent resistor (LDR) (4), and LED (5). Utilizing a paper-based substrate coated with methylene blue, the sensor demonstrates high accuracy, precision, and a lower detection limit of 0.014mg/ml for biofilms. Optimization of methylene blue concentration reveals 0.4mM as the ideal choice. The sensor's application extends to medical, food, water, and environmental sectors, providing a portable and rapid biofilm detection solution. The two-part casing enhances robustness, and the overall design ensures ease of assembly. The sensor operates by measuring changes in reflected light intensity, converting analog signals to digital, and displaying biofilm concentrations.

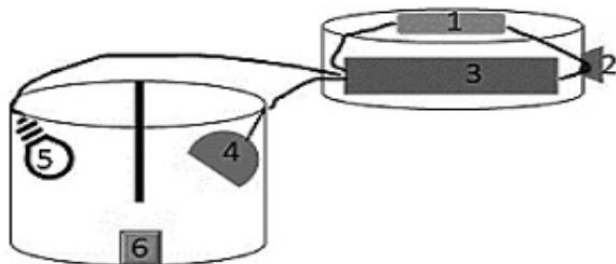


Figure 1

No. of Pages : 18 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321072779 A

(19) INDIA

(22) Date of filing of Application :26/10/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : RAILWAY TICKET BOOKING SYSTEM AND METHOD THEREOF

(51) International classification :G06Q0010020000, G06F0021330000, G06Q0010060000, H04N0021462700, G07B0015020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A railway ticket booking system (100) and method (200) for tatkal ticket booking is disclosed, that involve one or more users sending user data to a data acquisition module (103) for tatkal ticket booking. The data acquisition module (103) sends intimations and registers the user. A seat information module (104) fetches seats availability data. A token generator module (105) generates unique tokens for each user selected from registered users. A communicator module (106) sends the tokens to the corresponding users selected. A display module (107) at ticket counter displays each of the tokens one-by-one till the seats are available for tatkal ticket booking. If the user having token displayed on ticket counter is available at the ticket counter within the predefined duration, the data verification module (108) verifies the user data and corresponding token and the user gets tatkal ticket booked paying the booking amount, otherwise loses ticket booking eligibility.

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321079210 A

(19) INDIA

(22) Date of filing of Application :22/11/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : HYDROGEN STORAGE ALLOY WITH HIGH STORAGE CAPACITY

(51) International classification :C22C14/00, C22C28/00, C22C29/00, C22C30/04, C22C32/00, C30B13/00, C30B15/00, C30B28/00

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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Name of Applicant : NA

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Address of Applicant :Department of Energy Science and Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai -----

(57) Abstract :

Disclosed herein a hydrogen storage alloy represented by the general formula: $Ti_{x-0.02}V_yCr_zCe_{0.02}$; wherein $0.1 \leq x \leq 0.5$, $0.1 \leq y \leq 0.5$ and $0.2 \leq z \leq 0.5$ and $x+y+z \geq 0.98$, said hydrogen storage alloy having a body-centered cubic structure. This hydrogen storage alloy is adapted to achieve maximum hydrogen storage of 4.14 wt% at 298K under the hydrogen pressure of 0 bar and showed 2.13 wt% after 1500 absorption-desorption cycles. The alloy also showed fast hydrogen kinetics, where it reached 90% of maximum capacity within 40 secs.

No. of Pages : 29 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321079251 A

(19) INDIA

(22) Date of filing of Application :22/11/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SWAPPABLE MODULAR METAL HYRIDE SYSTEM WITH 1KG HYDROGEN STORAGE CAPACITY FOR VEHICULAR APPLICATIONS

		(71)Name of Applicant : 1)INDIAN INSTITUTE OF TECHNOLOGY BOMBAY Address of Applicant :Powai, Mumbai – 400076, Maharashtra, India Mumbai ----- Name of Applicant : NA Address of Applicant : NA
(51) International classification	:C01B3/00, F17C11/00	(72)Name of Inventor : 1)SHARMA, Pratibha Address of Applicant :Department of Energy Science and Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai ----- 2)GUPTA, Nandlal Santosh Kumar Sunita Devi Address of Applicant :Department of Energy Science and Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai ----- 3)TIWARI, Saurabh Address of Applicant :Department of Energy Science and Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai -----
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention discloses a modular multi-tubular metal hydride (MH) based hydrogen(H₂) storage system for storing 1kg hydrogen for vehicular applications. The present invention aims on developing least energy intensive hydrogen storage system wherein primarily utilizes high velocity ambient air due to vehicle motion as heat transfer fluid to desorb hydrogen. The present invention also discloses the impact of different profiles of artificial surface roughness over MH tubes which improves reaction performance due to improvement in heat transfer coefficient during fluid flow. It also proposes the use of water and PCM as an energy storage medium to store heat energy released during absorption and supply the same to desorb hydrogen from MH. The MH based hydrogen storage system in the present invention is compact, portable and swappable unit which can be attached in multiple units for higher hydrogen capacity and swapped with other unit to refuel similar to battery swapping. Figure 24

No. of Pages : 84 No. of Claims : 20

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :31/10/2023

(21) Application No.202321074104 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : REMOTE-CONTROL GUIDED VEHICLE PARKING SYSTEM.

(51) International classification :G05D0001020000, B60W0030060000, B62D0001260000, G02F0001130000, G07B0015020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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3)PROF. AINAL ABDUL AZEEZ

Name of Applicant : NA

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-

(57) Abstract :

In the present invention a remote-control guided vehicle parking system is provided. The remote-control guided vehicle parking system allows for easily operable lift, down, turning, forward and backward movements of a stationary vehicle. The system includes a lifting assembly wherein an electric remote operated motor is aligned with the ball screw of the scissor jack, for easy lift and down movement. The system includes a drive assembly that allows for 360-degree rotation movement of the system and a load bearing frame with channels and grooves to align with the chassis of the vehicle to be lifted. The system is a Bluetooth enabled that allows to drive, steer and load the system from a mobile device. The system has 360-degree rotation movement and can have easy access beneath the vehicle, from front or sideways of the vehicle. The system of the present invention is depicted in Figure 1.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321074424 A

(19) INDIA

(22) Date of filing of Application :01/11/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A CARBON FIBER-INFRARED GRILLING (CFIG) SYSTEM AND METHOD TO PRESERVE FOOD NURTIENTS

(51) International classification :A47J37/06, F24C7/04, H05B3/14, H05B3/68, H05B6/64
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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4)SHENDE, Milind

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(57) Abstract :

The present invention is a carbon fiber infrared grilling system and method to preserve food nutrients comprising carbon fiber helically wound on the cylindrical glass tube to provide even heating at MID-IR temperature. The food substrate is kept inside the first cylindrical glass tube without getting in contact with the walls of the tube. It is positioned in air to have 360°C heating. There is a reflective layer pre-coated with insulating materials to produce controlled temperature and reflect the radiations towards the food substrate directly. A second cylindrical tube larger than the first cylindrical tube enclose the food substrate to create a non-vacuum environment and to trap the radiations maintaining upto 300°C MID-IR temperature to ensure preservation of food substrate nutrients without inducing any harmful effect on the grilled food material/substrate. Figure 7

No. of Pages : 55 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321077847 A

(19) INDIA

(22) Date of filing of Application :16/11/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : MULTI-ARM STAR POLYMER WITH HYPERBRANCHED POLYALKYLENEIMINE CORE AND LONG ALKYL SIDE CHAINS

(51) International classification :C08G73/04, C08G73/10, C08J5/18, C11D3/37 (86) International Application No :NA Filing Date :NA (87) International Publication No: NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)INDIAN INSTITUTE OF TECHNOLOGY BOMBAY Address of Applicant :Powai, Mumbai – 400076, Maharashtra, India Mumbai ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)BEHERA, Sanjay Kumar Address of Applicant :Department of Chemical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai ----- 2)SETH, Jyoti Ravishankar Address of Applicant :Department of Chemical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai ----- 3)JUVEKAR, Vinaykumar Anant Address of Applicant :Department of Chemical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai -----

(57) Abstract :

The present invention provides a multi-arm star polymer that comprises a branched polyalkyleneimine core, an intermediate region of repeating branching units of short hydrocarbon units containing amide and terminal amine functional groups and a large number of linear long hydrocarbon chain segments. The synthesis of the molecule involves fewer steps and takes less time when compared with the synthesis of equivalent dendrimers. This molecule can be used as a drug carrier for a wide variety of hydrophobic and partially hydrophobic drugs, oils such as essential and ayurvedic oils and fragrance carrier and as a demulsifier for separating water from water in crude oil emulsions.

No. of Pages : 53 No. of Claims : 22

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321085845 A

(19) INDIA

(22) Date of filing of Application :15/12/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND M0ETHOD FOR DETERMINING PATH

(51) International classification :G01C21/20, G05D1/10,
G06F21/30
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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(57) Abstract :

Disclosed is an information processing apparatus (104) having processing circuitry (120) that receives a map from a user device (102). The map includes a plurality of centre points and a plurality of extreme points such that each centre point of the plurality of centre points and each extreme point of the plurality of extreme points are associated with at least one tree of a plurality of trees in a region. The processing circuitry (120) determines a plurality of circles for the plurality of trees. The processing circuitry (120) further determines a plurality of entry points and a plurality of exit points for the plurality of circles. The processing circuitry (120) further determines a path (300) by joining the exit point and the entry point of adjacent circles of the plurality of circles. FIG 1 is the reference figure.

No. of Pages : 38 No. of Claims : 17

(54) Title of the invention : ANIMAL FREE FUSION MILK PROTEINS AND A PROCESS FOR PREPARING THE SAME

(51) International classification :C12N0015820000, C07K0014485000, A61K0035200000, A61K0008990000, C07K0014810000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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Name of Applicant : NA

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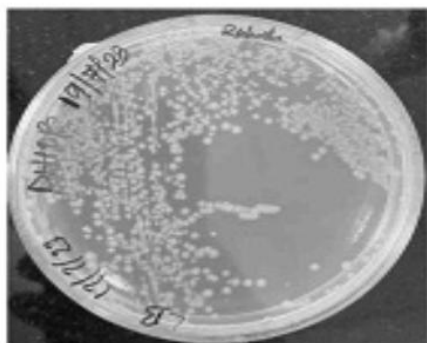
(72)Name of Inventor :

1)PARINI KAPADIA

Address of Applicant :A-503, Harmony, Dumas Road, Vesu, Surat-395007, Gujarat, India Surat -----

(57) Abstract :

ABSTRACT ANIMAL FREE ALPHA S1 AND ALPHA S2 CASEIN-FUSION MILK PROTEIN, A PROCESS FOR PREPARING THE SAME The present invention broadly relates to the field of biotechnology. More particularly, the present invention relates to animal-free fusion milk proteins and a process for the production of the same in recombinant host cells. Also, the present invention provides vectors, and expression cassettes for the expression of animal-free milk proteins in host cells.

Figure 1 - In-house culture of competent *E. coli* DH10β

No. of Pages : 46 No. of Claims : 21

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321027976 A

(19) INDIA

(22) Date of filing of Application :17/04/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : ANIMAL FREE- ALPHA-LACTALBUMIN AN BETA-LACTOGLOBULIN FUSION MILK PROTEINS AND A PROCESS FOR PREPARING THE SAME

(51) International classification :C12P0021020000, A61P0031120000, C12N0007000000, C12N0009640000, C12N0015820000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(72)Name of Inventor :

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(57) Abstract :

ABSTRACT Animal Free- Alpha-Lactalbumin and Beta-Lactoglobulin Fusion Milk Proteins and A Process For Preparing The Same
The present invention broadly relates to the field of biotechnology. More particularly, the present invention relates to animal-free fusion milk proteins and a process for the production of the same in recombinant host cells. Also, the present invention provides vectors, and expression cassettes for the expression of animal-free milk proteins in host cells.

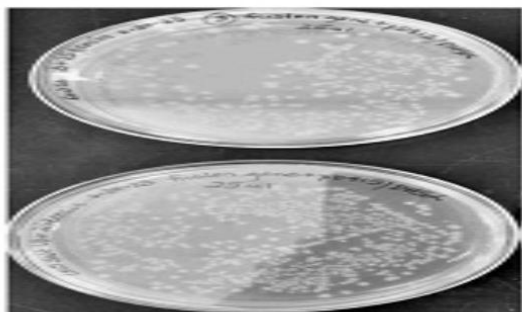


Figure 1

No. of Pages : 47 No. of Claims : 22

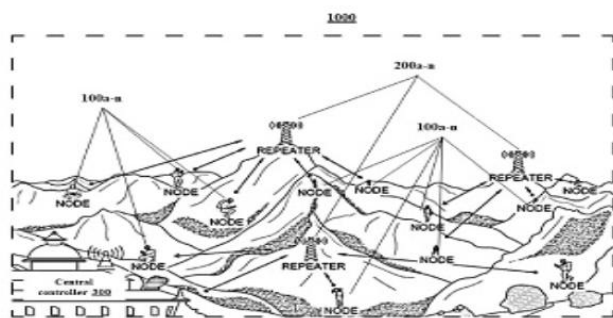
(54) Title of the invention : USER CONDITION MONITORING AND COMMUNICATION IN CELLULAR NETWORK-DEPRIVED ENVIRONMENTS

(51) International classification :G08C17/02, H04W24/02, H04W4/38, H04W4/80, H04W84/18
 (86) International Application No :NA
 Filing Date :NA
 (87) International Publication No : NA
 (61) Patent of Addition to Application Number :NA
 Filing Date :NA
 (62) Divisional to Application Number :NA
 Filing Date :NA

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1)Rutu Mahendrabhai Parekh
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(57) Abstract :

ABSTRACT USER CONDITION MONITORING AND COMMUNICATION IN CELLULAR NETWORK-DEPRIVED ENVIRONMENTS Embodiments herein provide user condition monitoring and communication in cellular network-deprived environments. The method includes an establishing, by the transmitter device (100a) a communication with repeater (200a) using LoRa module (103). The repeater (200a) is placed between the transmitter device (100a) and a receiver device (100b) to extend a range of the LoRa module (103). The repeater (200a) is connected to the receiver device (100b) and a central controller (300). The method includes creating a message to be transmitted to the central controller (300) and/or the receiver device (100b). The method includes encrypting the message and transmitting the encrypted message to the repeater (200a) using the LoRa module (103). FIG. 9A



No. of Pages : 75 No. of Claims : 29

(54) Title of the invention : PRESSURE RELIEF VALVE FOR WATER GEYSER

(51) International classification :B25B0027300000, E05B0015040000, B23P0021000000, B25B0027260000, H02J0003140000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present disclosure discloses a pressure relief valve (100) that revolutionizes water heater technology by introducing a cost-effective yet highly efficient solution. The valve body (102), featuring internal and external threads made of brass, incorporates a stainless steel (SS) spring (108) for controlled compression, triggered when water pressure exceeds 8 bar. Ensuring a water-tight seal, the valve employs a sealing mechanism and a spring compressor engaging a brass nut for precise adjustment. The integration of a brass thread insert (114-a) and a brass sealer insert (114-b) enhances sealing efficacy, while Polyoxymethylene (POM) material 8 bar spring holder with a silicon washer and Stainless Steel (SS) spring plate ensures stability. Further, the proposed versatile pressure relief valve optimizes cost without compromising on safety, efficiency, or reliability, meeting the diverse water pressure requirements of contemporary water heaters.

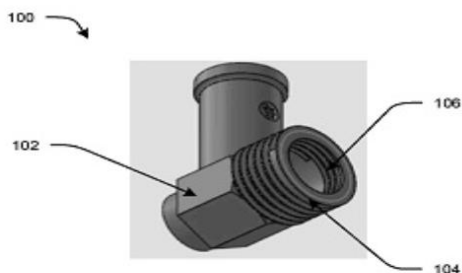


FIG. 1

No. of Pages : 16 No. of Claims : 5

(54) Title of the invention : AN IMPACTOR ATOMIZER ASSEMBLY WITH TUBE-IN-TUBE NOZZLE DESIGN ARRANGEMENT FOR LIQUID ATOMIZATION METHOD

(51) International classification :B05B12/02, B05B7/02, B05B7/04, B05B7/08 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)INDIAN INSTITUTE OF TECHNOLOGY BOMBAY Address of Applicant :Powai, Mumbai – 400076, Maharashtra, India Mumbai ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)BOSE, Manaswita Bimal Kumar Address of Applicant :Department of Energy Science and Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai ----- 2)RAUT, Swapnil Padmakar Address of Applicant :Department of Energy Science and Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai ----- 3)VADUKUT, Vinoy Varghese Address of Applicant :Department of Energy Science and Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai ----- 4)DASGUPTA, Souvik Address of Applicant :Department of Energy Science and Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai -----

(57) Abstract :

The present invention provides an impactor atomizer assembly with tapered tube-in-tube nozzle design arrangement for liquid atomization, the assembly comprising at least one control panel assembly to regulate a compressed air supply to the atomizer, an atomization chamber to hold the liquid atomization, an atomization assembly for atomizing the liquid into fine droplets and at least one tube-in-tube nozzle to allow flow of the compressed air and/or suction of liquid to a point of intersection wherein the atomizer assembly uses the nozzle design arrangement for liquid atomization in the atomizer assembly to create large amount of liquid droplets in a desired flow output. The present invention is to provide a method of liquid atomization in an atomizer using tapered tube-in-tube nozzle design arrangement. Further, the present invention provides an atomizer to be able to operate under a wide range of pressure and be able to generate droplets at a desired rate.

No. of Pages : 34 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/12/2023

(21) Application No.202321087912 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM FOR GENERATING ELECTRICITY FROM MOVING VEHICLES

(51) International classification :F03D9/11, F03D9/34, F03G7/08,
H02K7/18, H02S10/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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5)Sonawane Vilas Ramdas

6)Priya Balasaheb Kaduskar

7)Priyanka Rahul Lokhande

8)Nirmal Suresh Kothari

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(57) Abstract :

The present invention is related to a system for generating electricity from moving vehicles designed to harness renewable energy from the movement of vehicles along highways. By synergizing wind and solar energy, it generates electricity through the strategic placement of alternators that capture air pressure differentials formed by the motion of vehicles. Additionally, solar panels installed atop key infrastructural points like toll plazas and control rooms further contribute to electricity generation. The harvested electricity is efficiently stored and distributed for diverse applications, encompassing street lighting, toll operations, vehicle charging stations, surveillance networks, and emergency facilities. This innovation presents a transformative approach to power generation, offering a sustainable, cost-effective, and uninterrupted energy solution. Its implementation stands to conserve vital resources and foster environmental sustainability.

No. of Pages : 9 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321087929 A

(19) INDIA

(22) Date of filing of Application :22/12/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : PROJECTILE GAUGING MACHINE

(51) International classification :H02K0003280000, G03G0015000000, H02K0007180000, H04W0072000000, H01Q0013100000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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(57) Abstract :

A projectile gauging machine comprising an assembly to mount the machine structure on a frame, a projectile distribution assembly with distribution wheels to carry projectiles in different slots, a plurality of transfer wheel assemblies having main drive or wheel with 225 mm and 187.5 diameter with at least 12 and 10 slots respectively to carry projectiles in each slot.

No. of Pages : 35 No. of Claims : 17

(54) Title of the invention : SYSTEM AND METHOD FOR PERFORMING PROACTIVE SIGNALLING BETWEEN CORE NETWORKS

(51) International classification :H04W28/02, H04W28/24, H04W36/00, H04W36/14, H04W76/10, H04W76/27
 (86) International Application No :NA
 Filing Date :NA
 (87) International Publication No : NA
 (61) Patent of Addition to Application Number :NA
 Filing Date :NA
 (62) Divisional to Application Number :NA
 Filing Date :NA

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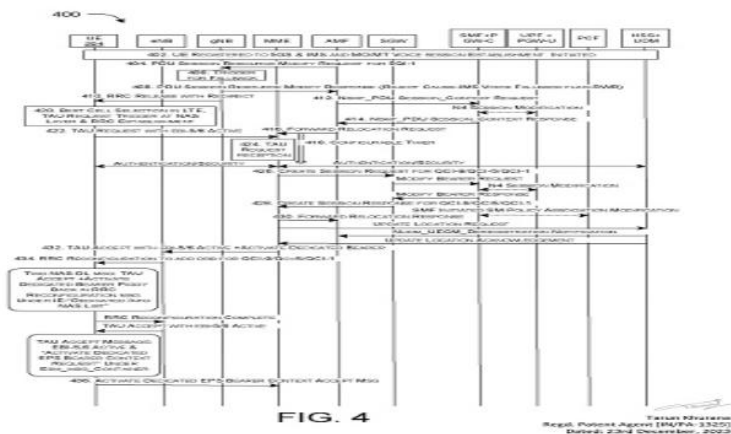
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(57) Abstract :

The present disclosure provides a system and a method for performing proactive signalling between a 5G core network (210-1) and a 4G core network (210-2). The 5G core network (210-1) tries to establish a Packet Data Unit (PDU) session by transmitting a PDU session modification request towards a gNodeB for establishing a Quality of Service (QoS) flow for a voice call. The gNodeB transmits a PDU session modification response indicating a fallback to EPS with a Release with Redirection flag, and triggers a fallback for the voice call. The 5G core network (210-1) receives a PDU session modification response including the flag from the gNodeB which proactively receives context based on the flag and forwards the context to the 4G core network (210-2). The 4G core network (210-2) piggybacks QoS establishment for voice call in a Tracking Area Update (TAU) accept message to a UE (204).



No. of Pages : 41 No. of Claims : 17

(54) Title of the invention : ACTION SLEEVE

(51) International classification :A61B1/00, A61B17/00, A61B17/56, A61B17/88, A61B17/94

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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(57) Abstract :

TITLE: ACTION SLEEVE The present disclosure provides various versions of an action sleeve (100). The action sleeve (100) is used in an endoscopic spine surgery and is inserted inside spinal canal to correct spinal stenosis caused due to an overgrowth. The action sleeve (100) includes different characteristic openings to facilitate lateral exit of scraping instruments therefrom such that only a bare minimum portion thereof protrudes out to engage laterally with a surgical site to perform scraping without affecting nearby anatomical features present within a spinal cord. The action sleeve (100) by virtue of having a very small diameter further facilitates a stitch-less surgery for correcting spinal stenosis. FIG. 1

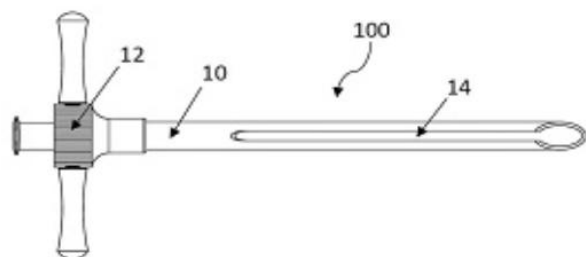


FIGURE 1A

No. of Pages : 30 No. of Claims : 22

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :29/03/2023

(21) Application No.202321022922 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : GENETIC MALE STERILITY LINKED SNP MARKERS IN COTTON

(51) International classification :C12Q0001689500, C12N0015820000, C12Q0001688300, A01H0001020000, A01H0005100000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The current invention relates to methods and compositions to identify and select male sterile cotton plants displaying genetic male sterility. The invention discloses novel single nucleotide polymorphic markers that are associated closely with ms5ms6 double recessive genotype in cotton plants. These molecular markers are useful for marker-assisted selection and validation of male sterile plants in cotton.

No. of Pages : 50 No. of Claims : 10

(54) Title of the invention : AN AUTOMATIC STORAGE AND RETRIEVAL SYSTEM FOR MOTHER BABY SHUTTLES ACROSS MULTIPLE FLOORS

(51) International classification :B65G1/04, B65G1/137, B65G25/06, B66F7/06, B66F7/28
 (86) International Application No :NA
 Filing Date :NA
 (87) International Publication No : NA
 (61) Patent of Addition to Application Number :NA
 Filing Date :NA
 (62) Divisional to Application Number :NA
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(57) Abstract :

The present invention is related to an automatic storage and retrieval system for mother baby shuttles across multiple floors. According to the invention, Shuttle changeover a vertical reciprocating conveyor system allows automated storage and retrieval systems to transfer mother-baby shuttles among floors. allowing the system to optimize the number of shuttles and eliminate the compulsion to provide an MB shuttle on every floor even if the system's throughput requirement is very low with high volume storage. The system is provided with an automatic position correction utility. OSG is provided along with dampers for the vertical reciprocating conveyor system. Whereas, active mechanical stoppers provisioned at every floor ensure safety backup by locking shuttles at any floor when the vertical reciprocating conveyor system is in operation, but if the shuttle is malfunctioning and moving towards the vertical reciprocating conveyor system.

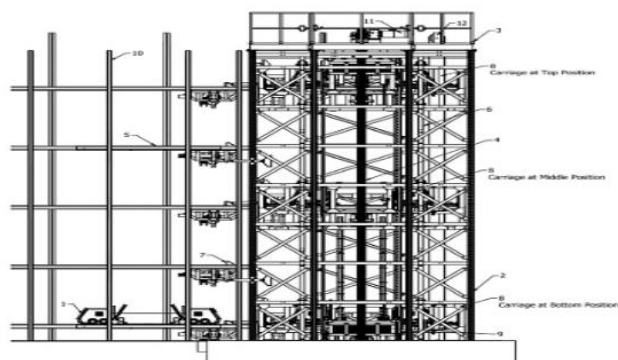


Figure 1

No. of Pages : 19 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321079920 A

(19) INDIA

(22) Date of filing of Application :24/11/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGNING H-BONDING TEMPLATES FOR DISTAL C-H FUNCTIONALIZATION

(51) International classification :C07C15/02, C07C22/00,
C07D211/00, C07D213/00

(86) International Application
No :NA
Filing Date :NA

(87) International Publication
No : NA

(61) Patent of Addition to
Application Number :NA
Filing Date :NA

(62) Divisional to Application
Number :NA
Filing Date :NA

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(57) Abstract :

Designing Hydrogen bonding templates for distal-C-H functionalization A compound of Formula-I, Formula I wherein, R1 is nitrile group (?CN) or hydrogen (?H); R2 is nitrile group (?CN) or hydrogen (?H); R3 and R4 are trifluoromethyl group (?CF3); X is nitrogen or hydrogen; Y is nitrogen when R2 is hydrogen; Y is hydrogen when R2 is nitrile group. Also provided are method of preparing compounds of formula 1 and process of meta-C?H olefination of nitroarenes and aromatic carbonyls in presence of compounds of formula 1.

No. of Pages : 49 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421000320 A

(19) INDIA

(22) Date of filing of Application :03/01/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : CHITOSAN-PVA COMPOSITE FILM-BASED IMPLANT FOR LOCAL DELIVERY OF A DRUG IN PANCREATIC CANCER CELLS

(51) International classification :A61K47/36, A61K47/50, A61K47/58, A61K9/00, A61L 27/40, A61L 27/54 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)INDIAN INSTITUTE OF TECHNOLOGY BOMBAY Address of Applicant :Powai, Mumbai – 400076, Maharashtra, India Mumbai ----- 2)TATA MEMORIAL CENTRE Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)KUMARI, Archana Address of Applicant :Department of Chemical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai ----- 2)BANDYOPADHYAYA, Rajdip Address of Applicant :Department of Chemical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai ----- 3)MAL, Arijit Address of Applicant :Department of Chemical Engineering, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai ----- 4)DE, Abhijit Address of Applicant :Molecular Functional Imaging Lab, Advance Centre for Treatment Research & Education in Cancer, Tata Memorial Centre, Plot No. 1 & 2, Sector 22, Kharghar, Navi Mumbai-410210, Maharashtra, India Navi Mumbai ----- -----

(57) Abstract :

A biodegradable polymer film-based implant for controlled delivery of a drug, said film comprising at least one biopolymer, at least one synthetic polymer, and a crosslinking agent; wherein said crosslinking agent is sodium tripolyphosphate (TPP) and said drug is dispersed in said film and such that said crosslinking agent enables controlled delivery of said drug. The implant is composed of biocompatible and biodegradable film, and shows a controlled release of drug at both acidic and neutral pH. The implant shows cytotoxic effect only to pancreatic cancerous cells, while no effect is found on normal cells. Also provided are methods for preparing the biodegradable polymer film-based implant.

No. of Pages : 36 No. of Claims : 14

(54) Title of the invention : A FLEXIBLE TACTILE SENSOR FOR OBJECT DETECTION AND A PROCESS OF DEVISING THE SAME

(51) International classification :G01B7/16, G01L1/16,
H10N30/302, H10N39/00

(86) International Application :NA
No

Filing Date :NA

(87) International Publication : NA
No

(61) Patent of Addition to :NA
Application Number

Filing Date :NA

(62) Divisional to Application :NA
Number

Filing Date :NA

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(57) Abstract :

Disclosed herein a sensitive flexible tactile sensor for object sensing and a method for devising the same. The flexible tactile sensor comprises a) a flexible polymer based substrate; b) metal electrode screen printed over said substrate as bottom electrode; c) a sensory layer of an electroactive material adhered over said metal electrode; d) a shadow mask placed over said sensory layer; e) metal electrode array screen printed over said masked top surface of said sensory layer; f) elastomer domes placed over said electrode arrays; and g) connecting wires to the extended electrodes using crimp connectors; wherein, said electroactive material of sensory layer is water-spray treated polarized PVDF film. The present invention further discloses a method of preparing electroactive polymer PVDF (piezoelectric material) used as a sensory layer; which is being crystallized into polar phase using water-spray assisted immersion precipitation technique comprising of the steps of: (i) mixing PVDF powder in a polar solvent hexamethyl-phosphoramide (HMPA) by stirring at 60°C for 3 hours; (ii) degassing in a vacuum desiccator for 24 hours; (iii) spin coating PVDF on a PET substrate; (iv) spraying water on the coated PVDF film using air-spray gun; (v) leaving the film in air for half an hour; (vi) dipping the film in a non-solvent (water) bath maintained at 10°C; and (vii) curing the film in air. FIG. 1A and 2A

No. of Pages : 28 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421011938 A

(19) INDIA

(22) Date of filing of Application :20/02/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : PROPULSION SYSTEM FOR A SPACECRAFT

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(51) International classification	:B64G1/40, F03G3/06	(72)Name of Inventor : 1)Mrs. Varsha Subhash Nikumbh Address of Applicant :Flat No. 3, Sumati Apartment, Near Shrungeri Math, Left Bhusary Colony, Paud Road, Kothrud, Pune - 411038 ----- 2)Mr. Subhash Shridhar Nikumbh Address of Applicant :Flat No. 3, Sumati Apartment, Near Shrungeri Math, Left Bhusary Colony, Paud Road, Kothrud, Pune - 411038 ----- 3)Mr. Shivendra Subhash Nikumbh Address of Applicant :Flat No. 3, Sumati Apartment, Near Shrungeri Math, Left Bhusary Colony, Paud Road, Kothrud, Pune - 411038 -----
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

Disclosed is a propulsion system for a spacecraft (102) that includes at least one extendable arm configured on external surface of the spacecraft, wherein the extension or retraction of the at least one extendable arm (106, 108) propels the spacecraft. The at least one extendable arm (106, 108) can be configured with a pendulum at its end distal from spacecraft and the pendulum can be configured to move within a pre-determined angular range. The extension or retraction of the at least one extendable arm can be attained by a motor and cam assembly coupled using linkages to the at least one extendable arm. The proposed system can include a plurality of extendable arms, each coupled using linkages to corresponding motors and cam assemblies, wherein the motors can be so operated as to provide stability to the spacecraft and to enable propulsion of the spacecraft in direction desired. FIG. 1C SHALL BE THE REFERENCE FIGURE

No. of Pages : 36 No. of Claims : 6

(54) Title of the invention : PROCESS AND FORMULATION OF SOYA CHOCOLATE PROTEIN BALLS

(51) International classification :A23C9/00, A23G1/30, A23G3/34, A23J3/16, A23L25/00, A23L27/30, A23L33/185

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

PROCESS AND FORMULATION OF SOYA CHOCOLATE PROTEIN BALLS. The present disclosure provides Soya chocolate protein balls and Process for Preparation thereof. This cost-effective process of making nutritious Soya chocolate protein balls has low-cost protein source, no extra processing, less ingredients with high protein absorption product. It incorporates the nutritional of soya granules and roasted sunflower seeds. The Soya chocolate protein balls have desirable taste and color without use of any food coloring agents and additives. Per 100 servings- 7 balls, soya granules Minimum protein content: 20 grams, maximum fat content: 0.2 grams, sunflower seeds: Minimum vitamin B-6 content: 0.26 mg, maximum protein content: 4gms. Therefore, the protein balls (100 grams) may have a total minimum protein content of 30-32 (soya+ sunflower seeds+ almonds+ peanut butter, maximum fat content: 0.2 gms (soya)+ 12 gms (peanut butter) = 12.0-12.5gms, and minimum Vit B6 content: 0.26mg, and other micronutrients.

No. of Pages : 14 No. of Claims : 19

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421000994 A

(19) INDIA

(22) Date of filing of Application :05/01/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ACID-LESS METHOD TO FABRICATE REDUCED GRAPHENE OXIDE LIKE MATERIAL ON GRAM SCALE FROM GRAPHITE

(51) International classification	:B82Y30/00, B82Y40/00, C01B32/184, C01B32/198, C08K3/04, C08K9/02	(71)Name of Applicant : 1)INDIAN INSTITUTE OF TECHNOLOGY BOMBAY Address of Applicant :Powai, Mumbai – 400076, Maharashtra, India Mumbai -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
(61) Patent of Addition to Application Number	:NA	1)SARKAR, Julfikar Ali
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(62) Divisional to Application Number	:NA	2)ASLAM, Mohammed Shabbir
Filing Date	:NA	Address of Applicant :Department of Physics, Indian Institute of Technology Bombay, Powai, Mumbai 400076, Maharashtra, India Mumbai -----

(57) Abstract :

The present invention provides a one-step method for synthesizing graphene like material (rGOL) which is reduced graphene oxide like material developed by mild oxidation of graphene like material on a gram scale directly from graphite powder. The graphene like material has been prepared without using any acids by using water as medium. The present method involves the assistance of H^+ ions and water molecules to intercalate through edges via assistance of mild sonication. Raman analysis of the obtained rGOL like material reveals ID/IG ~ 0.80, which confirms that the as prepared graphene like material is less defective. The measured conductivity of the rGOL as 9.22 S/cm is found to be higher than the conductivity of the graphene like material prepared by a standard method (rGO) (0.30 S/cm). The zeta potential studies indicate the aqueous dispersion of graphene like material is stable for a longer period of time.

No. of Pages : 36 No. of Claims : 7

(54) Title of the invention : A SYSTEM AND METHOD FOR ENHANCING MOTOR VEHICLE SAFETY AND PROVIDING EMERGENCY ASSISTANCE

(51) International classification :B60K28/06, B60W40/08, B60W40/09, G06V20/59 (86) International Application No :NA Filing Date :NA (87) International Publication No :NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Tushar Dinkar Kadam Address of Applicant :C-110 Grandeur Co Society Narhe Ambegaon Road Ambegaon Bk Pune-411046 ----- 2)Prof. Vijay Kolate 3)Dr. Jayshree Jagdale 4)Dr. Akbar Ahmad 5)Dr. Sumit Dubal Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Tushar Dinkar Kadam Address of Applicant :C-110 Grandeur Co Society Narhe Ambegaon Road Ambegaon Bk Pune-411046 ----- 2)Prof. Vijay Kolate Address of Applicant :Pisarve, Pune, Maharashtra, India, 412104 Pune ----- 3)Dr. Jayshree Jagdale Address of Applicant :C3/G2, Shalini Vishwa Society, PICT Dattanagar Road, Katraj, Pune, Maharashtra, India, 411046 Pune ----- 4)Dr. Akbar Ahmad Address of Applicant :13/4, Street Alkapuri Colony, Hastings Road, Near Circuit House, Allahabad, Uttar Pradesh, India, 211001 Prayagraj ----- 5)Dr. Sumit Dubal Address of Applicant :F201, Ganga Ambar, Ashoknagar, Tathwade, PCMC, Maharashtra, India, 411033 Pune -----

(57) Abstract :

Disclosed are a system and method to transform motor vehicle safety and emergency assistance. The system includes a central controller and cameras to continuously monitor driver behavior while sensors track vehicle, driver, and environmental parameters. Collected data feeds an alert mechanism that issues timely warnings about threats like fatigue or collisions. The system also enables communication between nearby vehicles to share hazard data, creates real-time maps for improved situational awareness, and provides voice alerts. An intelligent mirror detects occupants' status and AI to analyze images and data, initiating preventive actions and alerts per predefined safety thresholds. The method includes capturing driver images gauging behavior, measuring parameters via sensors, analyzing the data to reveal risks, and generating corrective alerts. Additional capabilities include collision avoidance, driver assistance, and fatigue detection. The collective system and method promise to transform driving safety via next-generation technologies and proactive, data-driven threat analysis and mitigation

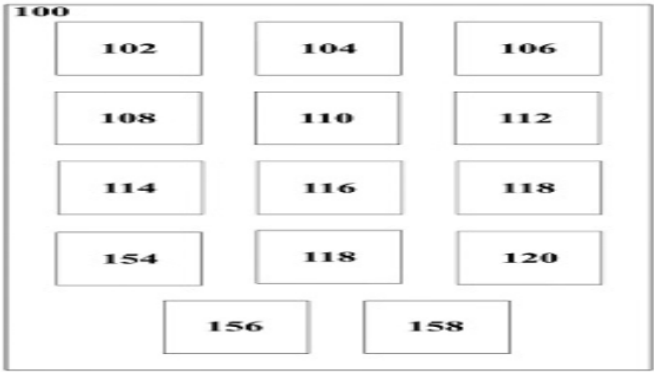


FIG. 1

(54) Title of the invention : WEIGHT BASED OBJECT SORTING AUTOMATION SYSTEM USING IOT BASED APPLICATION

(51) International classification :G06Q0010060000, B65G0043080000, C12M0001000000, C02F0003280000, A61K0009000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Most of the industries have at least one conveyor system to move or to separate the materials. The need to produce an automatic material separating conveyor is essential. Earlier many critics argued that automatic material separating system leads to failure, but due to the advancement of technology, reliable automatic system can be produced. Manual material separation system requires more money, time and machines. It will lead to high cost. To reduce these wastages, many companies started to adopt automation in the plant. If the industries use automation, it helps to increase rate of production, with smart utilization of space at lesser / reasonable rates. This automatic material removing conveyor system separates the material depending on their height. It contains a Node MCU, IR sensor, Weight sensor, servo motors, and liquid crystal display. Overall, the system helps to ease movement and add more visibility on Sorting is necessary in industries where products are manufactured on large scale this process is simplified by automation. Now a day's industrial area requires demand for automation. Due to automation human efforts are decreasing. Object sorting based on size is very difficult task in recent days. In industry there is rapidly increasing demand for automation. This project explains the automatic sorting object. The designing and implementing an efficient sorting based on Arduino. This project gives high accuracy and performance, easy to operate and construct which reduces human errors. Existing sorting method uses a set of inductive, capacitive and optical sensors do differentiate object based on size.

No. of Pages : 17 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202321089584 A

(19) INDIA

(22) Date of filing of Application :29/12/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : CARDANOL BASED SOL–GEL DERIVED POLYURETHANE POLYMER MORTAR (SGPM) COMPOSITES AND PROCESS FOR PREPARATION THEREOF

(51) International classification :C0416/04, C04B14/04, C04B14/10, C04B14/36, C04B24/24, C04B26/02, C04B26/16, C08J2375/04 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Bharatkumar Zaverbhai Dholakiya Address of Applicant :Department of Chemistry, S. V. National Institute of Technology (SVNIT), Ichchhanath, Surat-395007, INDIA Surat ----- 2)Nilam Gamit 3)Patil Yogesh Deoram 4)Sarde Bhagyashri Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Bharatkumar Zaverbhai Dholakiya Address of Applicant :Department of Chemistry, S. V. National Institute of Technology (SVNIT), Ichchhanath, Surat-395007, INDIA Surat ----- 2)Nilam Gamit Address of Applicant :Department of Chemistry, S. V. National Institute of Technology (SVNIT), Ichchhanath, Surat-395007, INDIA Surat ----- 3)Patil Yogesh Deoram Address of Applicant :Department of Civil Engineering, S. V. National Institute of Technology (SVNIT), Ichchhanath, Surat-395007, INDIA Surat ----- 4)Sarde Bhagyashri Address of Applicant :Department of Civil Engineering, S. V. National Institute of Technology (SVNIT), Ichchhanath, Surat-395007, INDIA Surat -----

(57) Abstract :
ABSTRACT OF THE INVENTION The present invention relates to Cardanol based sol–gel derived polyurethane polymer mortar (SGPM) composites. More particularly, the present invention relates to Cardanol based sol–gel derived polyurethane polymer mortar (SGPM) composites and process for preparation thereof. These SGPM composites were prepared by using cost-effective, abundantly available, and an agro-industrial waste material cardanol of Formula (1). Formula (1) Cardanol The produced novel sol–gel derived polyurethane polymer mortar (SGPM) composites consist high water repellent properties, chemical resistance properties, and higher mechanical characteristics.

No. of Pages : 39 No. of Claims : 9

(54) Title of the invention : A PORTABLE YONI DHOOPAN APPARATUS

(51) International classification :A61P0017020000, A61P0015020000, A61F0006080000, A61F0013840000, H02J0007350000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention is related to a portable yoni dhoopan apparatus. This invention presents a multipurpose apparatus designed to administer medicinal smoke for therapeutic purposes in the vaginal area and beyond. The apparatus integrates traditional medicinal practices with modern technology, offering a portable, versatile, and user-friendly solution for women's health concerns. Utilizing a combination of a lithium-ion battery (103), Nichrome wire heating coil (101), blower (106), and insulated components, the device facilitates the controlled generation and directed delivery of medicinal smoke. The inclusion of renewable energy sources like solar power enhances its eco-friendliness and adaptability in diverse settings. The primary objective is to address a spectrum of health issues, including vaginal infections, wound healing, vaginal flora maintenance, and managing menstrual irregularities. Its multipurpose functionality extends to diverse applications, such as scalp health, postpartum care, and wound ulcers, presenting a holistic healthcare approach.

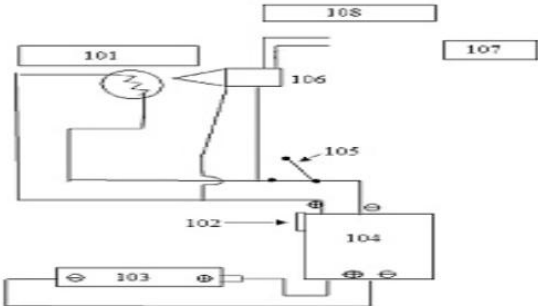


Figure 1

No. of Pages : 22 No. of Claims : 5

(54) Title of the invention : AARUSH STERILE DISPOSABLE EAR PIERCING SET

(51) International classification	:A44C0007000000, C12M0001120000, A44C0015000000, A61M0005320000, A61B0050300000	(71)Name of Applicant : 1)bharatmishra1234 Address of Applicant :2406, Tower 10, Raheja Vistas Premiere, NIBM Road, Undri, Mohammed wadi, -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
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Filing Date	:NA	Address of Applicant :2406, Tower 10, Raheja Vistas Premiere, Undri, Mohammad Wadi, Pune. 411060 Pune -----
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
Title: ‘Aarush Sterile Disposable Ear Piercing Set’ Introduction: Ear piercings and other body piercings are very popular nowadays. If not performed properly and under sterile conditions pain, infection, allergy to earrings and transmission of disease can occur. The artificial jewellery can cause hypersensitivity or contact dermatitis. Prior art: The spring-loaded piercing gun, the needle and intravenous cannulas are commonly used. Drawbacks in prior art: The Association of Professional Piercing strongly objects to the use of Ear Piercing Guns because of more tissue trauma and delayed pain. The studs are not very sharp hence more force is required for the piercings leading to more tissue trauma. The earring studs that are used in these guns are associated with higher chances of allergy and contact dermatitis. These studs are generally made up of stainless steel with Nickel as one of the components. They are not as per the standard medical guidelines. They can also transmit blood-borne infections like AIDS/ Hepatitis due to improper sterilization. Studs getting embedded in the ear lobule have also been reported with the use of these guns. Needles are commonly used by the piercing professional. They are less traumatic but require more delicate handling. There are a few disadvantages of this design like its long length (50 mm) which is difficult to handle and can injure the neck also. This is more painful as the earring stud has to pass through the needle as a guide. It is held between the index finger and thumb for insertion so control and precision are compromised. Many clients want to use their own gold jewellery after the piercing which is not possible until the new track matures. There is no commercially available complete set for piercing especially in domestic or semi-professional/professional settings where facilities of sterilization are not available. Solutions to Drawbacks: To overcome these problems, I made an ear piercing unit that is safer, less painful, more precise and desired jewellery can be worn in one sitting. I called this unit as ‘Aarush Ear Piercing Unit’. Along with this, I designed a complete sterile set for ear piercing. This can be used in a domestic or professional setting which is called an ‘Aarush Sterile Disposable Ear Piercing Set’. Summary of the Invention: Aarush Sterile Disposable Ear Piercing Set: it is a complete set for piercing needs. Aarush Sterile Disposable Ear Piercing Set which has Aarush Ear Piercing Unit, Drape Sheet, two ear drapes, two pairs of sterile gloves, gauze pieces, 5gm tube of numbing cream, alcohol swabs and pieces of No 1 silk threads. This is a sterile set, sterilization is done by ETO. Aarush Ear Piercing Unit has four components: 3.5 cm Needle with bevelled tip, Needle Sheath, Handling Knob and Tip guard: Conclusion: Aarush Sterile Disposable Piercing Set is the complete solution for ear piercing requirements. It has a pair of Aarush Ear Piercing Units which is innovative, easy to use, less painful and can be used to wear a wide range of own jewellery. The set is sterilized by ETO.



Figure 1: Current devices of Ear Piercing

No. of Pages : 20 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :18/03/2024

(21) Application No.202421020008 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT AND BLOCK CHAIN BASED DETECTION AND PREVENTION SYSTEM OF RICE PLANT DISEASE USING DEEP LEARNING (CNN) AND IMAGE PROCESSING

(51) International classification :G06Q0050020000, G16B00400000000, G06N0003080000, C07K0014470000, G06N0020200000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr Monika Bhatnagar Address of Applicant :Associate Professor & Head Department of Computer Science & Business System Oriental Institute of Science & Technology, Patel Nagar, Raisen Road Bhopal, Madhya Pradesh, India ----- 2)Prof Meenakshi Patel 3)Prof Sanjay Pal 4)Prof Princy Shrivastava 5)Prof Shilpa Tripathi 6)Prof Ratneshwar Singh 7)Prof Sandeep Piplotiya Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr Monika Bhatnagar Address of Applicant :Associate Professor & Head Department of Computer Science & Business System Oriental Institute of Science & Technology, Patel Nagar, Raisen Road Bhopal, Madhya Pradesh, India ----- 2)Prof Meenakshi Patel Address of Applicant :Assistant Professor Department of Computer Science & Engineering Oriental Institute of Science & Technology, Patel Nagar, Raisen Road Bhopal, Madhya Pradesh, India ----- 3)Prof Sanjay Pal Address of Applicant :Assistant Professor Department of Computer Science & Engineering Oriental Institute of Science & Technology, Patel Nagar, Raisen Road Bhopal, Madhya Pradesh, India ----- 4)Prof Princy Shrivastava Address of Applicant :Assistant Professor Department of Computer Science & Business System Oriental Institute of Science & Technology, Patel Nagar, Raisen Road Bhopal, Madhya Pradesh, India ----- 5)Prof Shilpa Tripathi Address of Applicant :Assistant Professor Department of Computer Science & Business System Oriental Institute of Science & Technology, Patel Nagar, Raisen Road Bhopal, Madhya Pradesh, India ----- 6)Prof Ratneshwar Singh Address of Applicant :Assistant Professor Department of Computer Science & Engineering Oriental Institute of Science & Technology, Patel Nagar, Raisen Road Bhopal, Madhya Pradesh, India ----- 7)Prof Sandeep Piplotiya Address of Applicant :Assistant Professor Assistant Professor Department of Computer Science & Engineering (AIML) Oriental Institute of Science & Technology, Patel Nagar, Raisen Road Bhopal, Madhya Pradesh, India -----

(57) Abstract :
IoT and Block Chain based Detection and prevention system of Rice Plant Disease using Deep learning (CNN) and image processing Abstract: Rice is a widely consumed food in several regions across the globe. The growth of the rice crop is influenced by many illnesses and deficiencies, resulting in a decrease in the yield of rice. The significance of sufficient crop monitoring cannot be overstated, since it plays a crucial role in promptly identifying diseases or deficits. The presence of specialised professionals is crucial for the accurate diagnosis of diseases and disorders. Nevertheless, the availability of such a workforce is limited and not universally accessible to all farmers. Efforts are underway to develop automated solutions powered by machine learning and deep learning (DL) to address this issue. These systems can aid farmers in identifying illnesses and deficiencies that impact crops, enabling prompt and suitable treatment to be provided. TL models have been employed in several studies, especially in recent times. Several recent studies have provided evidence that the efficacy of rice disease and deficient condition diagnosis systems can be enhanced through the implementation of an ensemble including multiple distinct total linear models. In contrast, the DL-based experiments do not involve pre-segmenting the region of interest. Instead, the DL model is responsible for autonomously extracting the infected zone.

No. of Pages : 8 No. of Claims : 5

(54) Title of the invention : SYSTEM AND METHOD TO PREPARE KSHAR SUTRA THREAD

(51) International classification :F23R0003280000, H05B0045380000, A61L0002100000, A61L0002070000, A61B0017340000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

SYSTEM AND METHOD TO PREPARE KSHAR SUTRA THREAD A system (100) for production of a kshar sutra thread intended for a kshar sutra therapy is disclosed. The system includes a frame (102) having a plurality of tubes (106a-106c) disposed there within. Each tube of the plurality of tubes (106a-106c) allows at least one thread to pass there through uninterruptedly. Each tube of the plurality of tubes (106a-106c) facilitates coating of at least one medicated medium on the at least one thread while the at least one thread passes through each tube (106a-106c) to obtain a medicated thread. The system further includes a cabinet (108) operatively coupled to the frame (102) such that the cabinet is configured to receive the medicated thread (101d) from at least one tube (106c) of the plurality of tubes (106a-106c) to facilitate sterilization and drying of the medicated thread while the medicated thread (101d) rests in the cabinet (108) to obtain the kshar sutra thread (101e). FIG. 1 will be the reference figure.



FIG. 1A

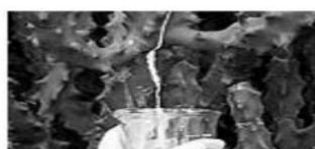


FIG. 1B



FIG. 1C



FIG. 1D

No. of Pages : 30 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :18/03/2024

(21) Application No.202421020138 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AI-POWERED FRAUD DETECTION SYSTEM IN FINANCIAL MANAGEMENT TRANSACTIONS

(51) International classification :G06Q0020400000, G06N0020000000, G06Q0040000000, A63F0003000000, G06K0009620000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

The present invention discloses an AI-powered fraud detection system specifically designed for real-time identification and prevention of fraudulent activities within financial management transactions. By incorporating advanced techniques in data pre-processing, feature extraction, and machine learning, the system offers a comprehensive and dynamic solution to address the evolving challenges of fraud in the financial landscape.

No. of Pages : 8 No. of Claims : 5

(54) Title of the invention : EVERLEVEL TRAY

(51) International classification :G06Q0010060000, G02B0027000000, A47G0023060000, A45D0034040000, B01J0019240000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The significance of a Everlevel Tray extends beyond mere convenience; it is an indispensable tool fostering stability, safety, and efficiency in the transportation of items. Its pivotal role in streamlining operations and elevating service quality across diverse industries cannot be overstated. As a reliable and user-friendly solution, an Everlevel Tray not only optimizes current workflows but also promises to adapt to evolving needs through continuous innovation. The Everlevel Tray is designed in present investigation is flexible in shape containing the tray to hold cups/tumbler as shown in Figure 1. The hole of the diameter is decided based on application. Inside each hole, a circular, square or any shape of ring is attached as per required application. Tray utilizes stability principle to maintain balance and stability. When the tray is tilted or moved, the stability effect helps to keep the cups/tumbler steady and prevents them from spilling. This tray ensures that the rings can rotate freely within the holes.

TRAY BODY: -

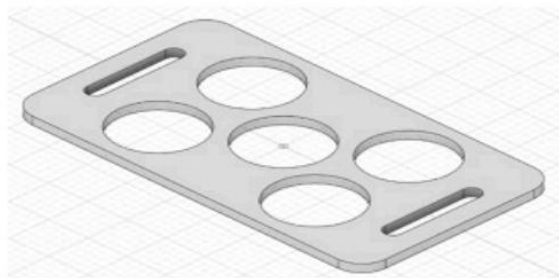


Figure 1 Tray Body

No. of Pages : 17 No. of Claims : 6

(54) Title of the invention : CORRECTIVE DYNAMIC TRAINING BOARD

(51) International classification :A63B0026000000, A63B0021000000, A63B0022180000, A63B0022160000, G09B0019000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA(62) Divisional to Application Number :NA
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(57) Abstract :

The present invention provides a corrective dynamic training board that provides a change in surfaces on which one can perform balance training exercises to give sport-specific training surface. The arch support provides an even distribution of weight on the foot while performing exercises on the board. It is portable and provides adjustable instability. In one aspect of the present invention, the board includes an upper layer, and a lower layer; a lower layer and a rigid rubber support and a removable medical arch support. The upper layer is being water filled unstable compartment. The lower layer is an inflatable compartment. The rigid support is made of rubber. The board includes sockets at each corner to provide attachments for different surfaces. The removable medical arch support is worn by patients with flat feet.

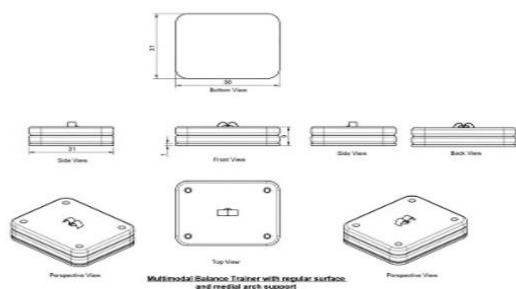


Figure 1

No. of Pages : 17 No. of Claims : 8

(54) Title of the invention : MACHINE LEARNING BASED HEALTH MONITORING WEARABLE DEVICE

(51) International classification :A61B0005000000, G06N0020000000, G16H0050300000, A61B0005145000, A61B0005020500

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention relates to provide a machine learning based health monitoring wearable device. Further, the present invention introduces a groundbreaking machine learning-based health monitoring wearable device, addressing the escalating demand for personalized healthcare solutions in today's fast-paced world. Unlike traditional wearables confined to clinical settings, this device offers continuous and non-intrusive monitoring, empowering users to take proactive control of their health. It leverages sophisticated algorithms to analyze vast data streams from diverse sensors, enabling early detection of potential health issues and providing personalized insights for preventive healthcare. With its user-friendly interface, robust privacy measures, and long battery life, the invention signifies a significant leap forward in health monitoring technology. By revolutionizing the way individuals monitor their health, it aims to improve health outcomes and promote proactive wellness management in everyday life.

No. of Pages : 11 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421020170 A

(19) INDIA

(22) Date of filing of Application :18/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHOD FOR SIMULTANEOUS ESTIMATION OF QUERCETIN AND BETA-SITOSTEROL IN PLANT EXTRACT USING RP-HPLC

(51) International classification :G01N30/02, G01N30/04, G01N30/16, G01N30/22, G01N30/28, G01N30/36, G01N30/50 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Rajiv Gandhi Proud yogiki vishwavidyalaya Bhopal Address of Applicant :Gandhi Nagar, Bhopal, Madhya Pradesh 462033 Bhopal ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Teena Patidar Address of Applicant :School of Pharmaceutical Sciences, Rajiv Gandhi Proud yogiki vishwavidyalaya Bhopal, MP, India Bhopal - ----- 2)Dr Suman Ramteke Address of Applicant :School of Pharmaceutical Sciences, Rajiv Gandhi Proud yogiki vishwavidyalaya Bhopal Bhopal ----- --- ----- 3)Naveet Dubey Address of Applicant :School of Pharmaceutical Sciences, Rajiv Gandhi Proud yogiki vishwavidyalaya Bhopal Bhopal ----- --- ----- 4)Akshay Kumar Address of Applicant :School of Pharmaceutical Sciences, Rajiv Gandhi Proud yogiki vishwavidyalaya Bhopal Bhopal ----- --- -----

(57) Abstract :

The present invention relates to an advanced analytical method for the simultaneous estimation of Quercetin and β -sitosterol in plant extracts using reverse-phase high-performance liquid chromatography (RP-HPLC). This innovative approach integrates a series of optimized steps including the use of a probe sonicator for enhanced sample preparation, and a meticulously configured HPLC system equipped with a UV detector. The method employs a C18 column under gradient elution conditions, utilizing a mobile phase composed of water, acetonitrile, and acetic acid. The analytical procedure is fine-tuned with a specific flow rate and detection wavelength, ensuring precise, accurate, and reproducible quantification of the compounds. This method represents a significant advancement in the field of analytical chemistry, offering a reliable, efficient, and streamlined process for the quality control and standardization of herbal medicines, facilitating the comprehensive analysis of these important phytochemicals..

No. of Pages : 26 No. of Claims : 3

(54) Title of the invention : REALTIME CROWD DISTRIBUTION SYSTEM AND METHOD FOR A RAILWAY PLATFORM

(51) International classification

:H04N0007180000, G06T0007200000, G06K0009620000, G08B0013196000, G01N0021840000

(86) International Application No

:NA

Filing Date

:NA

(87) International Publication No

: NA

(61) Patent of Addition to Application Number

:NA

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:NA

(62) Divisional to Application Number

:NA

Filing Date

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(57) Abstract :

REALTIME CROWD DISTRIBUTION SYSTEM AND METHOD FOR A RAILWAY PLATFORM Disclosed is a real time crowd distribution system (100) implemented with an object detection technique and object tracking technique. The real time crowd distribution system (100) includes a surveillance camera (102) to captures the video of people from the top view. The real time crowd distribution system (100) includes a microcontroller unit (110) is communicatively coupled to the real time crowd distribution system (100) and configured to divide captured live video data into the frames. The real time crowd distribution system (100) utilizes real time image classification technique to count and store the number of occupants entering and exiting a public transportation. The real time crowd distribution system (100) provides a comprehensive solution to the unequal distribution of passengers by preemptively displaying the occupancy levels of the public transportation onto oncoming platforms. FIG. 1 will be the reference figure.

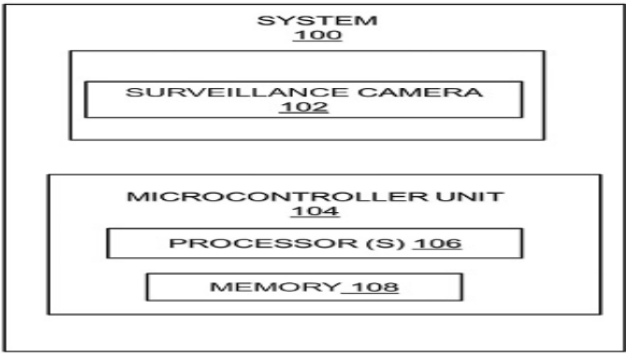


FIG. 1

(54) Title of the invention : A METHOD FOR MANUFACTURING WEAR RESISTANT TRACK SHOE WITH NON-STICK PROPERTIES.

(51) International classification :A61P0043000000, G06Q0010060000, C21D0009000000, G01M0099000000, A61P0001040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

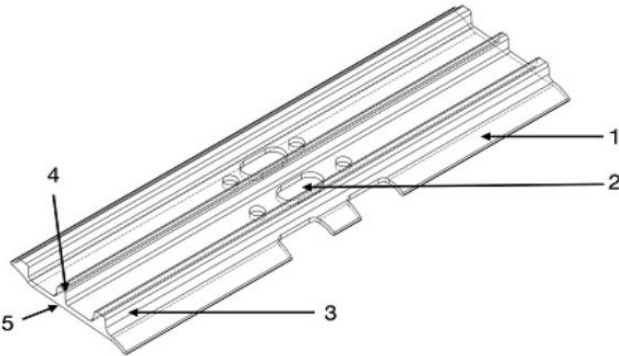
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(57) Abstract :
This invention discloses a unique method for manufacturing wear-resistant track shoes with exceptional non-stick properties, targeting heavy machinery components like excavators and tracked vehicles. By employing advanced metallurgical compositions and innovative manufacturing techniques, this method enhances the strength and durability of track shoes, significantly extending their lifespan. The process involves selecting a steel base material from a range of grades, performing forging operations for increased structural integrity, and applying a dual-layer construction for enhanced resilience against adverse conditions. Additionally, a non-stick coating is applied to facilitate mud removal during operation, reducing maintenance downtime and improving overall performance. This inventive method not only addresses existing challenges in track shoe manufacturing but also offers economic benefits and environmental sustainability to the heavy machinery industry. Reference: Fig. 1



No. of Pages : 17 No. of Claims : 5

(54) Title of the invention : AI BASED AUTOMATIC WEATHER PREDICTION SYSTEM TO PREDICT RAINFALL USING MACHINE LEARNING ALGORITHMS SYSTEMS USING CLOUD AND MACHINE LEARNING ALGORITHMS

(51) International classification :G06N0020000000, G06Q0040080000, G01W0001100000, G01W0001140000, A01G0015000000 (86) International Application No :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA (62) Divisional to Application Number :NA	(71)Name of Applicant : 1)Dr. Anjali Soni Address of Applicant :Assistant Professor, Department of Chemistry, Medi-Caps University, Indore, A.B. Road, Pigdamber, Indore, Madhya Pradesh, India ----- 2)Dr T .Anuradha 3)Dr. Deepika K C 4)Mrs. Bhuvaneshwari Jolad 5)Suragali. Chanti 6)Dr. G.Manikandan 7)A.Arun 8)Ujjwal Kumar Kamila 9)Jayadevan N M 10)Mr.K.Karthikeyan Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Anjali Soni Address of Applicant :Assistant Professor, Department of Chemistry, Medi-Caps University, Indore, A.B. Road, Pigdamber, Indore, Madhya Pradesh, India ----- 2)Dr T .Anuradha Address of Applicant :Professor, Department of Information Technology, Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada, Krishna Andhra Pradesh India ----- 3)Dr. Deepika K C Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, Malnad college of Engineering, Salagame road, Hassan Karnataka India ----- 4)Mrs. Bhuvaneshwari Jolad Address of Applicant :Assistant Professor, Department of Electronics and Telecommunication Engineering, Dr. D. Y. Patil Institute of Technology, Pimpri, Pune Sant Tukaram Nagar, Pimpri, Pune-411018 Maharashtra India ----- 5)Suragali. Chanti Address of Applicant :Assistant professor Department of CSE GMRIT GMR Nagar Rajam. Vizianagaram District. Andhrapradesh India ----- 6)Dr. G.Manikandan Address of Applicant :Associate professor Department of Artificial Intelligence and Machine Learning, St.Joseph's College of Engineering OMR, Chennai Tamilnadu India ----- 7)A.Arun Address of Applicant :Assistant professor, Department of Computer science and engineering, Karpaga vinayaga college of engineering and technology / Anna University, GST Road,Chinna Kolambakkam,Padalam, Chengalpet.dt.603308 Tamilnadu India ----- 8)Ujjwal Kumar Kamila Address of Applicant :Assistant Professor, CSE Department, Asansol Engineering College, Asansol, West Bengal, 713305, India ----- 9)Jayadevan N M Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, KARPAGAM College Of Engineering, Myleripalayam, Coimbatore 641032, Tamil Nadu, India ----- 10)Mr.K.Karthikeyan Address of Applicant :Assistant Professor Department of Computer Science and Engineering, SNS College Of Engineering, Coimbatore Anna University , Chennai Tamil Nadu Coimbatore India -----

(57) Abstract :
AI based Automatic weather prediction system to predict rainfall using Machine learning algorithms systems using cloud and Machine learning algorithms ABSTRACT: The adverse impacts of climate change have led to significant challenges faced by numerous nations in accessing essential resources such as water and other necessities for sustenance. The precipitation, whether in the form of rain or snow, is a significant meteorological determinant that impacts the quality of life and economic prosperity of the majority of Indians. The uncertainty around precipitation patterns significantly affects various aspects like as traffic, agriculture, the environment, urban planning, and water supply. Accurate monthly and seasonal rainfall estimates are crucial for effective planning of farming activities. The precision of these forecasts is crucial as the quantity and dispersion of precipitation impact all agricultural endeavours and, consequently, the nation's food production. Forecasting precipitation can assist various entities, such as governmental, non-governmental, and private organisations, in making strategic decisions and preparations for the future in domains such as agriculture, early detection of potential hazards, disaster and drought prevention, and insurance coverage. Artificial intelligence (AI) has been extensively employed across various domains, encompassing the prediction of future precipitation patterns. The objective of this project is to employ artificial intelligence models for the purpose of forecasting precipitation at meteorological locations.

No. of Pages : 11 No. of Claims : 7

(54) Title of the invention : A METHOD FOR PID CONTROLLER OPTIMIZATION IN BRUSHLESS DC MOTOR USING GRASSHOPPER ALGORITHM

(51) International classification :G05B11/42, G06N3/006, H02P23/00, H02P7/00 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Mr. Jayesh Rajaram Dhuri Address of Applicant :PhD Research Scholar Department of Electrical Engineering RKDF IST, SRK University, Bhopal, M.P, India ----- 2)Dr. E. Vijay Kumar Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr. Jayesh Rajaram Dhuri Address of Applicant :PhD Research Scholar Department of Electrical Engineering RKDF IST, SRK University, Bhopal, M.P, India ----- 2)Dr. E. Vijay Kumar Address of Applicant :Professor & HOD Department of Electrical Engineering RKDF IST, SRK University, Bhopal, M.P, India -----

(57) Abstract :

Abstract A method for PID controller optimization in Brushless DC motor using Grasshopper algorithm The present invention relates to the field of optimization of PID controller parameters in brushless DC motor (BLDCM). More specifically, the present invention relates to the field of automatic calculation and optimization of PID controller in BLDCM using Grasshopper algorithm. BLDC motor have wide acceptance in industrial applications in comparison to conventional DC motor due to its advantages of high efficiency, improved speed, high torque, minimal noise, and extended life. One of the prominent problems in BLDC motor is to control the speed using optimal PID (Proportional–Integral–Derivative) factors. The proposed invention discloses a method of determining the PID factors in brushless DC motor using grasshopper algorithm. The proposed invention comprises a DC-DC converter regulator circuit, an inverter circuit, a permanent magnet brushless direct current motor and a PID controller for controlling the voltage direct current inverter circuit power feed using grasshopper algorithm. The proposed invention comprises the steps of generating random population, evaluating fitness function for each population, normalizing the distance among the grasshopper using updated parameters and update the position of current solution. This process is iterated and update the best solution until termination criteria is reached. The PID factors (Kp, ki and kd) are optimized using grasshopper algorithm which in turn is used to tune the BLDC motor speed. Hence, a desired speed is achieved using the optimum PID factors evaluated using grasshopper algorithm. Thus, the proposed algorithm provides better results and improves the dynamic performance of BLDC motors used in various industrial applications.

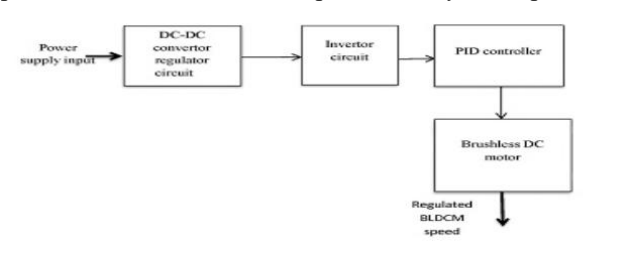


Figure 1: Block diagram for PID controller optimization system in accordance with the proposed invention

(54) Title of the invention : A CONTROLLED RELEASE CUBOSOMAL FORMULATION FOR SKIN DEPIGMENTATION TREATMENT

(51) International classification :A61K31/21, A61K47/10, A61K47/12, A61K47/14, A61K9/127, A61Q17/00, A61Q19/00, B82Y5/00 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Rungta Institute of Pharmaceutical Sciences, Bhilai Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Dr Saket Rungta Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Tilotma Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Dr. Rajesh Kumar Nema Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 3)Dr. Harish Sharma Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 4)Dr. Gyanesh Kumar Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 5)Suchita Wamankar Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai -----

(57) Abstract :
The present invention relates to a cubosomal formulation for treating skin depigmentation, featuring controlled drug release. The formulation comprises glyceryl monooleate (GMO), poloxamer 407 (P 407), oleic acid, dexamethasone, and additives. The method involves dissolving GMO, mixing lipid components, preparing an aqueous phase with dexamethasone, combining phases, and stabilizing with a surfactant. Further processing may optimize particle size. In vitro studies demonstrate sustained drug release and efficient skin permeation. Key findings include a gradual release profile over 24 hours, with 60% drug release, and effective permeation with a flux of 2 µg/cm^2/h. The formulation's properties suggest enhanced therapeutic potential for skin depigmentation treatment

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :20/03/2024

(21) Application No.202421020970 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : FORMULATION AND EVALUATION OF MORINGA OLEIFERA SEED OIL FACEWASH

(51) International classification :A61Q0019000000, A61Q0019080000, A61K0036185000, A61K0009000000, C11B0003000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Rungta Institute of Pharmaceutical Sciences, Bhilai Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Dr Saket Rungta Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Sarika Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Dr. Rajesh Kumar Nema Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 3)Suchita Wamankar Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 4)Kamlesh Kushwaha Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 5)Deepika Chandra Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 6)Sanju Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 7)Lekhraj Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 8)Sanskar Sondhiya Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 9)Deepanshu Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 10)Dr. Saket Rungta Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai -----

(57) Abstract :

The present invention relates to the novel Moringa Oleifera seed oil facewash formulation aimed at enhancing skin health. Moringa Oleifera, renowned for its nutritional composition, serves as the primary active ingredient due to its rich vitamin content and nourishing properties. The formulation also includes surfactants for cleansing, humectants for hydration, and additives for pH adjustment and stability. The method of preparation involves accurate weighing and mixing of ingredients followed by quality control checks. Evaluations demonstrate the formulation's physical, chemical, and microbiological stability, along with its compatibility with human skin. The facewash composition offers potential benefits in promoting skin elasticity, combating bacterial growth, and providing a sensory-enhanced user experience. This invention represents a promising approach to skincare the natural properties of Moringa Oleifera seed oil.

No. of Pages : 14 No. of Claims : 10

(54) Title of the invention : DEVELOPMENT OF BIODEGRADABLE NANOCARRIER CO-DELIVERY OF FLAVONOIDS WITH DOXORUBICIN FOR TREATMENT OF BREAST CANCER

(51) International classification	:A61P0035000000, A61K0009000000, A61K0031704000, A61K0009510000, A61K0045060000	(71)Name of Applicant : 1)Rungta Institute of Pharmaceutical Sciences, Bhilai Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Dr Saket Rungta Name of Applicant : NA Address of Applicant : NA
(86) International Application No	:NA	(72)Name of Inventor : 1)Chandraprabha Dewanwan Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024; Rungta College Of Pharmaceutical Sciences & Research, Bhilai, Chhattisgarh, India, Pin Code: 490024 Bhilai -----
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(87) International Publication No	: NA	3)Dr. Gyanesh Kumar Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai -----
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Filing Date	:NA	

(57) Abstract :
The present invention relates to specifically to biodegradable nanocarriers designed for the co-delivery of flavonoids and doxorubicin for the treatment of breast cancer. The novel approach for co-delivering naringenin and doxorubicin in poly(lactic-co-glycolic acid) (PLGA) nanoparticles for breast cancer therapy. The synthesis of PLGA-doxorubicin conjugate and preparation of naringenin-loaded PLGA-doxorubicin nanoparticles are detailed. Characterization techniques including dynamic light scattering, scanning electron microscopy, and UV-Vis spectroscopy confirm the uniformity, morphology, and drug loading efficiency of the nanoparticles. In vitro studies demonstrate sustained release profiles, potent cytotoxicity against breast cancer cells, and efficient cellular uptake. Molecular assays elucidate the mechanism of action, revealing apoptosis induction and cell cycle disruption. This i approach presents a promising strategy for targeted breast cancer treatment, by using the synergistic effects of naringenin and doxorubicin encapsulated within biodegradable nanoparticles, potentially minimizing systemic toxicity while enhancing therapeutic efficacy.

No. of Pages : 15 No. of Claims : 6

(54) Title of the invention : A SMART WINDOW SYSTEM AND METHOD FOR DYNAMIC SOLAR ENERGY CONTROL

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number	:H01L0031054000, H01L0031020000, H04L0009060000, H02S0040220000, E06B0007280000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)Dr. Monica Sankat Address of Applicant :Dr. Monica Sankat 3/7, BDA colony, Lalghati Bhopal, 462001, Madhya Pradesh India Bhopal ----- 2)Dr. Ram Kumar Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Monica Sankat Address of Applicant :VIT Bhopal University, Bhopal, Madhya Pradesh, India, 466114 Bhopal ----- 2)Dr. Ram Kumar Address of Applicant :VIT Bhopal University, Bhopal, Madhya Pradesh, India, 466114 Bhopal ----- 3)Prasannajeet Ohja Address of Applicant :VIT Bhopal University, Bhopal, Madhya Pradesh, India, 466114 Bhopal ----- 4)Tanmay Srivastav Address of Applicant :VIT Bhopal University, Bhopal, Madhya Pradesh, India, 466114 Bhopal ----- 5)Navanil Das Address of Applicant :VIT Bhopal University, Bhopal, Madhya Pradesh, India, 466114 Bhopal -----

(57) Abstract :
Embodiments of the present disclosure may include a smart window system, including Frames and seals positioned on edges for concealing wirings. Embodiments may also include An Argon Gas Filled Cavity enhancing insulation. Embodiments may also include A substrate glass serving as the foundational layer. Embodiments may also include A cover glass acting as a protective shield. Embodiments may also include A hydroxypropyl Cellulose Acrylamide Hydrogel (HPC-AAm)as a thermotropic layer transitioning from transparent to translucent based on temperature changes. Embodiments may also include A power supply unit providing power to the sensor and tracking system. Embodiments may also include A tracking system concentrating reflected light onto concentrated photovoltaic (CPV)cells. Embodiments may also include Concentrated photovoltaic cells converting captured light into usable energy. Embodiments may also include an energy storage storing captured solar energy. Embodiments may also include A temperature and humidity sensor triggering system activation



Figure 1

No. of Pages : 18 No. of Claims : 10

(54) Title of the invention : METHOD AND SYSTEM FOR ENABLING SUSTAINABLE DYNAMIC-RESOURCE ALLOCATION IN BLOCKCHAIN-ENABLED EDGE-COMPUTING NETWORKS FOR SMART CITIES

(51) International classification :G06F9/50, H04L47/70, H04L67/10, H04L9/32, H04W28/16 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr Dolly Thankachan Address of Applicant :Associate Professor and Head of Department of Electrical and Electronics Engineering Oriental University, Indore(M.P.) Indore ----- 2)Dr Manisha Bhatnagar Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr Dolly Thankachan Address of Applicant :Associate Professor and Head of Department of Electrical and Electronics Engineering Oriental University, Indore(M.P.) Indore ----- 2)Dr Manisha Bhatnagar Address of Applicant :Balaji Skys, Near Bhavans' School Pipliyakumar Gaon Nipania, Indore (M.P.) PIN: 452010 Indore --- -----

(57) Abstract :

The system comprises a network of edge computing nodes(102) interconnected via a blockchain network(104), facilitating decentralized consensus and transparent record-keeping. A monitoring and tracking module(106) continuously assesses resource utilization and Quality of Service (QoS) metrics in real-time, including processor speed, memory, network bandwidth, latency, and energy consumption. Leveraging this data, a resource distribution module(108) dynamically allocates computing resources across nodes while adhering to principles of fairness and equitable distribution.A central processing module(110), integrated with smart contracts within the blockchain network(104), enforces resource allocation rules, ensuring fair distribution while accommodating the individual demands of various stakeholders within smart city environments. An adaptive resource allocation engine(112) utilizes machine learning techniques, historical data, and real-time projections to optimize QoS, reduce resource waste, and mitigate environmental impact.Overall, this system provides a scalable and adaptable solution for sustainable and equitable resource allocation, enhancing efficiency and reliability of edge-computing networks in smart city infrastructures.

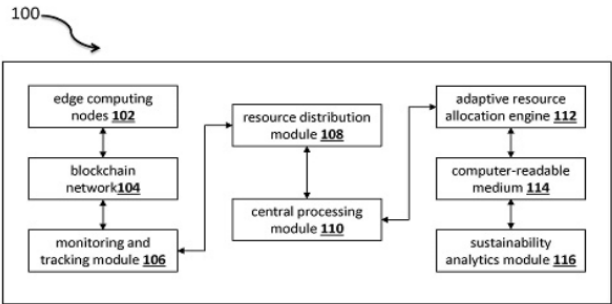


Figure 1

No. of Pages : 28 No. of Claims : 9

(54) Title of the invention : AUTOMATED HOMOEOPATHIC MEDICATION DISPENSER AND METHOD OF DISPENSING THEREOF

(51) International classification :A61J7/00, B65B37/16, B65D83/04
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The present invention introduces an automated homoeopathic medication dispenser designed to optimize the dispensing process for homoeopathic remedies. Featuring a unique combination of components and control mechanisms, the dispenser ensures precise dosing, efficient operation, and seamless integration with modern healthcare systems. A curved hopper guides medication towards a spiral-shaped mid-riff, facilitating smooth and consistent flow towards the dispenser outlet. A receptacle, equipped with a precision stepper motor, collects dispensed medication with accuracy. A vibrating mechanism enhances medication flow, while a microcontroller and mobile application enable remote monitoring and dosing control. Additional features such as sensors for medication detection and environmental monitoring sensors further enhance functionality.

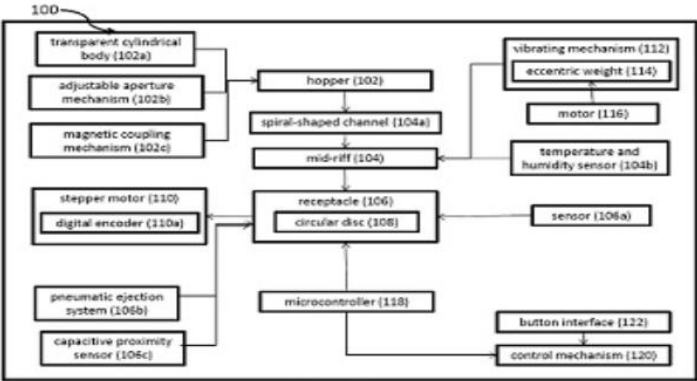


Figure 1

No. of Pages : 29 No. of Claims : 10

(54) Title of the invention : A BUSINESS DECISION-MAKING TOOL EMPOWERED BY DATA ANALYTICS AND VISUALIZATION, ENABLING WELL-INFORMED CHOICES

(51) International classification :G06Q0010060000, G06F0016248000, G06N0005020000, G06T0019200000, G06F0008750000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :
A BUSINESS DECISION-MAKING TOOL EMPOWERED BY DATA ANALYTICS AND VISUALIZATION, ENABLING WELL-INFORMED CHOICES ABSTRACT One of the most essential services that data visualisation provides in the context of business analytics and decision-making is the transformation of difficult datasets into visual representations that are simpler and easier to understand. The objective of this study is to present a comprehensive analysis of the function that data visualisation performs in enhancing the processes of business analytics and decision-making. The purpose of this study is to evaluate the benefits, drawbacks, and best practices that are associated with data visualisation within the framework of business intelligence. Furthermore, the paper examines a range of different strategies, tools, and frameworks, highlighting the impact that diverse methods, tools, and frameworks utilised for successful data visualisation have on growing decision-making capabilities. Additionally, the article highlights their impact on increasing decision-making capacities. Additionally, it offers real-world case studies and examples to highlight the practical applications of data visualisation in a range of business subject areas. This is in addition to the fact that it delivers this information. The findings of this study demonstrate the vital role that data visualisation plays as a strategic tool for organisations to extract important insights, drive informed decision-making, and gain a competitive edge. This is in the context of today's data-driven corporate world, which highlights the importance of data visualisation.

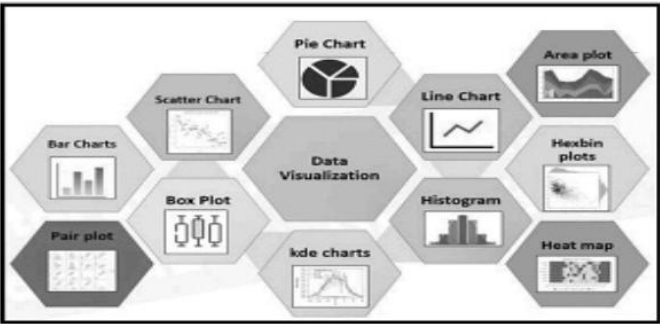


Fig. 1. Depicts the Techniques, Tools, and Frameworks for Data Visualization

(54) Title of the invention : SMART CITY INFRASTRUCTURE MANAGEMENT USING IOT AND BIGDATA

(51) International classification :H04L0067120000, G06N0020000000, G06Q0010060000, G06Q0050260000, G06Q0010000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. Amar Vishnu Yedake Address of Applicant :Assistant Professor, Department of Marketing Management, Sri Balaji University, Pune, Maharashtra, India. ----- 2)Julia Oinam 3)Dr. Indrajit Yadav Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Amar Vishnu Yedake Address of Applicant :Assistant Professor, Department of Marketing Management, Sri Balaji University, Pune, Maharashtra, India. ----- 2)Julia Oinam Address of Applicant :Assistant Professor, Department of Media Studies, Christ (Deemed to Be University), Yeshwanthpur Campus, Bangalore, Karnataka, India. ----- 3)Dr. Indrajit Yadav Address of Applicant :Director, Vishveshwarya Technical Campus, Patgaon, Maharashtra, India. -----

(57) Abstract :

The proposed invention presents a comprehensive system for smart city infrastructure management using Internet of Things (IoT) and Big Data analytics. By deploying a network of interconnected IoT devices across various municipal assets and services, including transportation, waste management, energy grids, and public safety systems, the system enables real-time monitoring, analysis, and optimization of urban services. Through advanced data mining, machine learning, and statistical techniques, actionable insights are extracted from the vast amounts of data generated by IoT devices, empowering decision-makers to make informed choices and allocate resources efficiently. The system encompasses methods for traffic management, waste management optimization, energy grid management, data-driven urban governance, public safety enhancement, citizen engagement, environmental sustainability, and inclusive urban development. By leveraging IoT data and predictive analytics, cities can overcome existing challenges, drive sustainable development, and create more livable, resilient, and inclusive communities.

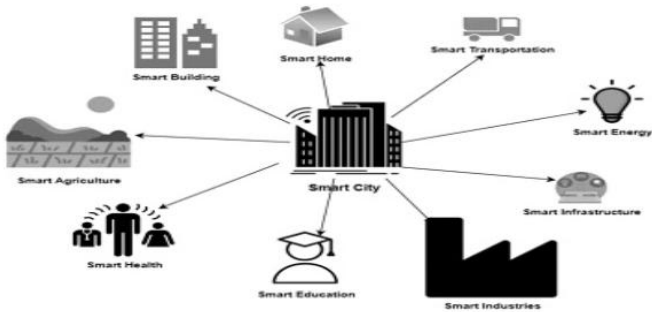


Figure 1: Functional Process diagram of proposed system

No. of Pages : 18 No. of Claims : 10

(54) Title of the invention : CHAMBER FOR RAPID SEPARATION OF BIOMASS

(51) International classification :C02F1/00, C02F1/52, C02F3/06, C02F3/12, C02F9/00
 (86) International Application No :NA
 Filing Date :NA
 (87) International Publication No : NA
 (61) Patent of Addition to Application Number :NA
 Filing Date :NA
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(57) Abstract :

ABSTRACT Chamber for rapid separation of biomass This patent application relates to a sustainable and continuous filtering chamber for rapid and efficient separation of sludge and biomass from wastewater. It comprises of an inlet pipe (1), a lower section (2) and an upper section (3) wherein most of the sludge and biomass is retained in the lower section (2) while water flows in the upper section (3) through 4 compartments C1, C2, C3 and C4 encompassing different filtration and nourishing constituents to filter the wastewater and nourish it such that the water sucked out from the suction pipe (3.6.2) is sludge and biomass free and fit for further use. The chamber is made from durable and robust fiber-reinforced plastic, iron and glass material and can be attached to any wastewater tank for filtration. It features an advanced, electricity-free filtration system, making it cost-effective and sustainable. Fig. 1

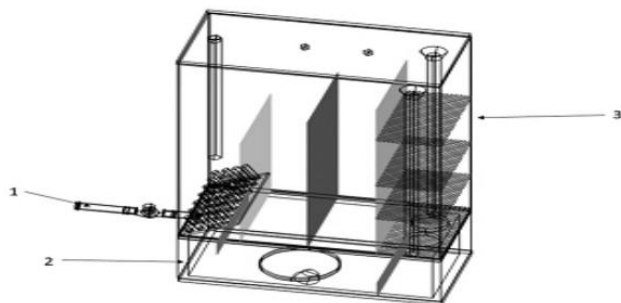


FIG. 1

No. of Pages : 22 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :20/03/2024

(21) Application No.202421020972 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : LIGAND CONJUGATED BIOACTIVES NANOEMULSION FOR BRAIN TARGETING IN THE TREATMENT OF DEMENTIA

(51) International classification :A61K38/40, A61K47/24, A61K47/69, A61K9/107, A61K9/127, A61K9/72 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Rungta Institute of Pharmaceutical Sciences, Bhilai Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Dr Saket Rungta Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Ms. Suchita Wamankar Address of Applicant :Associate Professor, Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Dr. Anshita Gupta Soni Address of Applicant :Associate Professor, Rungta College of Pharmaceutical Sciences And Research, Nandanvan, Raipur, Chhattisgarh, Pin Code:492099 Nandanvan ----- 3)Dr. Chanchal Deep Kaur Address of Applicant :Professor, Rungta College of Pharmaceutical Sciences And Research, Nandanvan, Raipur, Chhattisgarh, Pin Code:492099 Nandanvan ----- 4)Dr. Rajesh Kumar Nema Address of Applicant :Professor, Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 5)Dr. Harish Sharma Address of Applicant :Associate Professor, Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 6)Dr. Tilotma Sahu Address of Applicant :Associate Professor, Rungta Knowledge City, Rungta Institute of Pharmaceutical Sciences, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai -----

(57) Abstract :

The present invention relates a method for preparing a ligand-conjugated bioactives nanoemulsion for targeted drug delivery to the brain, particularly aimed at treating dementia. This method begins with the dissolution of biocompatible lipids and triglycerides to form a lipid phase, into which the active pharmaceutical ingredient (API), resveratrol, is introduced along with the brain-targeting ligand, lactoferrin, conjugated to resveratrol molecules. Through gentle stirring and the addition of non-ionic surfactants and co-surfactants, solubilization is facilitated. Gradual incorporation of purified water forms the nanoemulsion, which is then adjusted for pH and potentially supplemented with stabilizing excipients. This precisely formulated nanoemulsion is further adapted into a nasal spray for efficient administration, involving integration into an isotonic solution suitable for nasal application. This process ensures the maintenance of nasal mucosal integrity, prevents microbial contamination, and optimizes spray characteristics through the inclusion of excipients, promising enhanced therapeutic outcomes for various medical conditions.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421020973 A

(19) INDIA

(22) Date of filing of Application :20/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : NANOPHYTOFORMULATIONS BASED THERAPEUTIC INTERVENTION FOR THE TREATMENT OF CANCER

(51) International classification :A61K31/722, A61K47/14, A61K47/36, A61K47/50, A61K47/55, A61K47/60, A61K8/11, A61K9/00 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Rungta Institute of Pharmaceutical Sciences, Bhilai Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Dr Saket Rungta Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Prerana Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024; Rungta College of Pharmaceutical Sciences & Research, Bhilai, Chhattisgarh, India, PinCode:490024 Bhilai ----- 2)Dr. Gyanesh Kumar Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 3)Dr. Harish Sharma Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 4)Dr. Mukesh Sharma Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 5)Anjali Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024; Rungta College Of Pharmaceutical Sciences & Research, Bhilai, Chhattisgarh, India, PinCode:490024 Bhilai ----- 6)Chandraprabha Dewangan Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024; Rungta College Of Pharmaceutical Sciences & Research, Bhilai, Chhattisgarh, India, PinCode:490024 Bhilai -----

(57) Abstract :

The present invention relates to the method for preparing nanophytoformulations tailored for targeted cancer therapy. By encapsulating phytochemicals extracted from plants within nano-sized carriers composed of biocompatible and biodegradable materials, the formulations address challenges associated with conventional cancer treatments. These nanophytoformulations exhibit passive and active targeting mechanisms to minimize exposure to healthy tissues while maximizing therapeutic efficacy against cancer cells. Additionally, the formulations ensure controlled and sustained release of the encapsulated phytochemicals at the tumor site, enhancing their bioavailability and minimizing systemic toxicity. Furthermore, the prepared nanophytoformulations demonstrate minimal cytotoxicity towards normal cells, highlighting their potential as a safe and effective treatment option for cancer.

No. of Pages : 12 No. of Claims : 7

(54) Title of the invention : ENHANCING TIME SERIES PREDICTION PERFORMANCE THROUGH DECOMPOSITION TECHNIQUES

(51) International classification :G06K0009620000, G06F0011360000, A61B0005145000, H04W0004029000, G01N0015140000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. Anil Kumar Kushwah Address of Applicant :Assistant Professor, CSE Department, Indian Institute of Information Technology, Nagpur Nagpur ----- ----- 2)Dr. Jagdish Chakole 3)Dr. Aishwarya Sagar Anand Ukey 4)Dr.Shrikant Zade Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Anil Kumar Kushwah Address of Applicant :Assistant Professor, CSE Department, Indian Institute of Information Technology, Nagpur Nagpur ----- ----- 2)Dr. Jagdish Chakole Address of Applicant :Assistant professor, Computer Science and Engineering Department, Indian Institute of Information Technology Nagpur Nagpur ----- ----- 3)Dr. Aishwarya Sagar Anand Ukey Address of Applicant :Assistant Professor, Department of CSE, IIIT Nagpur, Nagpur, 441108 Nagpur ----- ----- 4)Dr.Shrikant Zade Address of Applicant :Nagpur Institute of Technology, Nagpur Nagpur ----- -----

(57) Abstract :

Enhancing time series prediction performance through decomposition techniques is the proposed invention. The proposed invention focuses on understanding the correlation between decomposition techniques and enhancement of time series performance. The invention focuses on analyzing the parameters of time series prediction performance using algorithms of decomposition techniques.

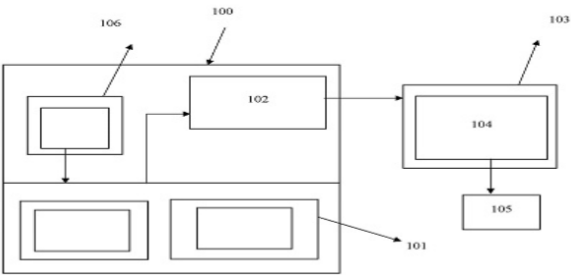


Figure 1: schematic view

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421021012 A

(19) INDIA

(22) Date of filing of Application :20/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : LIGNOSULPHONATE DERIVED REACTIVE DYES PIGMENTS FOR COATING APPLICATIONS

(51) International classification :C09B17/02, C09B26/00, C09B3/70, C09B62/507 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Vikas Sambhaji Patil Address of Applicant :University institute of Chemical Technology, KBC North Maharashtra University, Jalgaon ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Rahul Pandurang Patil Address of Applicant :University Institute of Chemical Technology, KBC North Maharashtra University, Jalgaon 425001 Jalgaon ----- 2)Amol Sanjayrao Choudhary Address of Applicant :Astik Dyestuff Pvt. Ltd. Plot no 707 B&C, Ankleshwar GIDC Gujarat, India - 393002 Ankaleswar ----- ----- 3)Vikas Sambhaji Patil Address of Applicant :University institute of Chemical Technology, KBC North Maharashtra University, Jalgaon Jalgaon ----- -----

(57) Abstract :

This invention gives an approach to prepare the synthetic pigment by reactive combination industrial waste lignosulphonate and reactive dyes. Reactive dyes containing the vinyl sulphone, chlorotriazine base and bifunctional species. This work presents a method for producing lignosulphonate-derived pigments for anti-corrosion coating applications. The reactive nature of dyes and hydroxy functional group on lignosulphonate are utilized for the covalent combination of pigment synthesis. Production of various pigments using three types of reactive dyes: vinyl sulphone, monochloro triazine, and bifunctional dyes were completed. Both vinyl sulphone and monochloro triazine groups were employed to synthesis of hybrid pigments which contains biowaste material and synthetic reactive dyes. Here eleven pigments were synthesized and utilized as coloring agents in a polymer coating. 1H-NMR, FT-IR, and UV-Visible spectroscopic techniques support the analysis and confirm the pigment production. Thermal behavior of pigment was derived from the DSC and TGA analysis shows good thermal stability. Lignosulphonate was found to be more thermally stable than pigment compounds due to stable salt formation during pyrolytic degradation in lignosulphonate. In order to utilize synthetic material as pigment a dispersion ability in polymeric matrix was well resulted due to the moderate particle size confirmed by particle size analysis. Further, all pigment coatings were tested for chemical resistance.

No. of Pages : 44 No. of Claims : 6

(54) Title of the invention : CHEMICALLY SYNTHESIZED NICKEL-IRON PHOSPHATE FILM FOR ENERGY STORAGE APPLICATION

(51) International classification :B01J35/45, B82Y30/00, B82Y40/00, H01M4/136, H01M4/1397, H01M4/58
 (86) International Application No :NA
 Filing Date :NA
 (87) International Publication No : NA
 (61) Patent of Addition to Application Number :NA
 Filing Date :NA
 (62) Divisional to Application Number :NA
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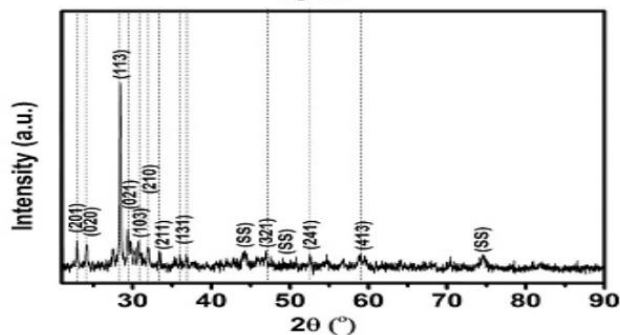
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(57) Abstract :

Chemically synthesized nickel-iron phosphate film for energy storage application Film deposition of nickel-iron phosphate ($\text{Ni}_3\text{Fe}_4(\text{PO}_4)_6$) on a stainless steel substrate is carried out using chemical bath deposition method. The deposition involves the utilization of aqueous solutions containing nickel nitrate, iron nitrate nonahydrate, and ammonium dihydrogen phosphate with deposition times ranging from 2 to 4 hours. The X-ray diffraction pattern of $\text{Ni}_3\text{Fe}_4(\text{PO}_4)_6$ reveals its triclinic crystal structure. By means of scanning electron microscopy analysis, microrods with an interlocked-like morphology of $\text{Ni}_3\text{Fe}_4(\text{PO}_4)_6$ film are identified. Additionally, the utilization of $\text{Ni}_3\text{Fe}_4(\text{PO}_4)_6$ for energy storage is illustrated via investigations into electrochemical supercapacitive processes.

Figure 1



No. of Pages : 20 No. of Claims : 10

(54) Title of the invention : INTELLIHATCH

(51) International classification :A63B0071060000, B25J0009160000, A61M0016000000, A01K0041000000, F24F0110500000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

The IntelliHatch is designed to create ideal conditions for egg incubation by regulating temperature and humidity, as well as automating egg rotation. Utilizing an Arduino Uno microcontroller, an HTU21D sensor for temperature and humidity monitoring, and a range of components including a halogen bulb, water containers, a 12V DC fan, an LCD display, an L298N motor driver, HC05 Bluetooth module, a 1-channel relay module, and three user-input push buttons, the system enables users to set specific temperature and humidity thresholds, along with rotation intervals. Continuously monitoring environmental conditions, the IntelliHatch dynamically adjusts settings. If temperature or humidity deviates from the predefined thresholds, the system activates the halogen bulb, manages the water containers, engages the 12V DC fan, and performs egg rotation using the L298N motor driver. Real-time temperature and humidity feedback is presented on the LCD screen for easy monitoring. Safety features, including an emergency stop function, are seamlessly integrated into the system. The IntelliHatch provides an automated and intelligent solution for successful egg hatching, offering a user-friendly interface and precise control mechanisms.

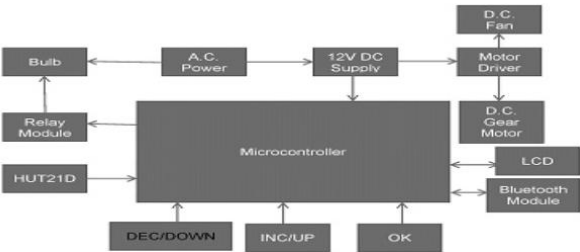


Figure 1 illustrates a block diagram for IntelliHatch

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421021535 A

(19) INDIA

(22) Date of filing of Application :21/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN EMTRICITABINE DEGRADATION IMPURITIES AND PREPARATION METHOD THEREOF

(51) International classification :A61K31/4439, A61K31/505, C07D239/69, G01N30/02, G01N30/04, G01N30/16, G01N30/22, G01N30/28
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT AN EMTRICITABINE DEGRADATION IMPURITIES AND PREPARATION METHOD THEREOF The present invention is relates to an identification and isolation of an emtricitabine degradation impurity compounds (Formula 2 & 11). The present invention also relates to process of preparing the emtricitabine impurity compounds by photocatalytic forced degradation study.

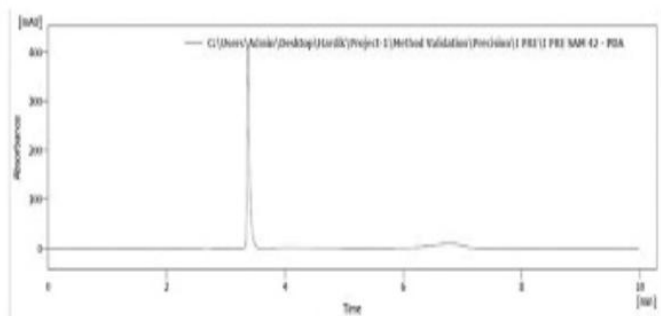


Figure 1

No. of Pages : 26 No. of Claims : 5

(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED VIRTUAL REALITY THERAPY SESSIONS FOR MENTAL HEALTH TREATMENT

(51) International classification :G16H0020700000, G16H0050300000, G16H0010200000, G16H0080000000, G06F0003010000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
The proposed invention introduces an innovative system that combines Artificial Intelligence (AI) and Virtual Reality (VR) technologies to revolutionize mental health treatment. By integrating AI algorithms into VR therapy sessions, the system offers personalized interventions tailored to individuals' specific needs and preferences. Users engage in immersive virtual environments designed to simulate therapeutic scenarios, such as exposure therapy and relaxation exercises, while AI continuously analyzes user data to adapt interventions in real-time. This dynamic approach enhances treatment effectiveness, engagement, and accessibility, addressing key barriers to traditional therapy. The system's scalability enables remote access and community-wide mental health initiatives, while its potential to contribute valuable insights to mental health research underscores its significance in advancing the field. Despite challenges related to data privacy and technology access, the proposed invention represents a significant advancement in mental health care, offering new possibilities for personalized, effective, and accessible interventions.

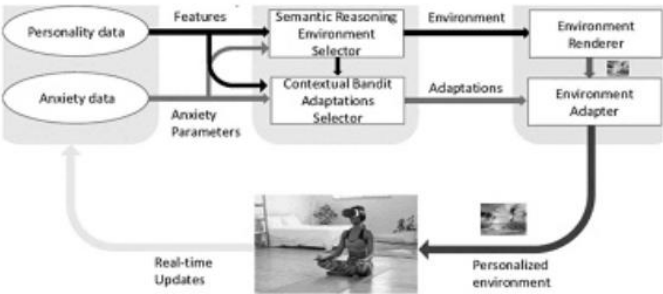


Figure 1: Functional Process diagram of proposed system

No. of Pages : 22 No. of Claims : 10

(54) Title of the invention : ASSISTIVE-GAN BASED DEFENCE ON BLACK-BOX AND WHITE-BOX ATTACKS.

(51) International classification :G06N0003080000, G06N0003040000, G06F0021570000, G06F0021550000, A61P0009000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Bhasha Anjaria Address of Applicant :Faculty of Engineering and Technology, Parul Institute of Technology, Parul University ----- 2)Dr. Jaimeel Shah Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Bhasha Anjaria Address of Applicant :Faculty of Engineering and Technology, Parul Institute of Technology, Parul University ----- 2)Dr. Jaimeel Shah Address of Applicant :Faculty of Engineering and Technology, Parul Institute of Technology, Parul University Vadodara ----- -----

(57) Abstract :
This research presents a novel Generative Adversarial Network (GAN)-based defense system that effectively generates diverse adversarial samples to exploit deep learning model vulnerabilities and enable arbitrary output class manipulations. These adversarial samples are then used to train a robust defense mechanism against prominent attacks like PGD, FGSM, and DeepFool, incorporating counter-adversarial techniques, continuous monitoring, and adaptation to enhance model interpretability and resilience. The evaluation of the defense system's robustness demonstrates its capability to withstand both simple and sophisticated adversarial attempts, highlighting the importance of ongoing research and development in cybersecurity to stay ahead of emerging assault strategies and improve protection through hybrid techniques and integrated defensive mechanisms.

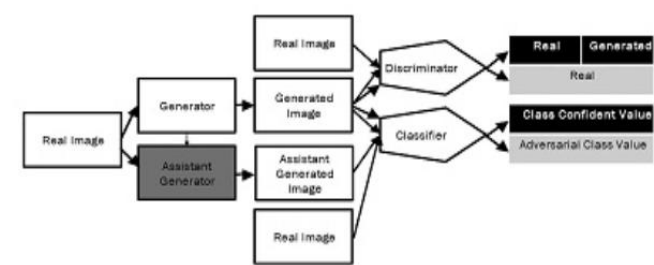


Figure 1: Suggested Schematic

No. of Pages : 9 No. of Claims : 3

(54) Title of the invention : ADAPTIVE FUZZY CONTROL FOR EFFICIENT CONGESTION AVOIDANCE IN FANET AND IOT ENVIRONMENTS

(51) International classification :H04W0084180000, H04W0028020000, H04L0047120000, H04L0047100000, G05B0013020000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :
ABSTRACT Adaptive Fuzzy Control for Efficient Congestion Avoidance in FANET and IoT Environments The present invention relates to an adaptive fuzzy control system designed to efficiently manage and mitigate congestion in Flying Ad-Hoc Networks (FANETs) and Internet of Things (IoT) environments. This innovative system leverages the flexibility and adaptability of fuzzy logic to dynamically adjust network parameters in real-time, based on the current state of network congestion. By integrating a data collection module, a preprocessing module, an adaptive fuzzy logic controller (FLC), a dynamic parameter adjustment mechanism, and an integration module, the system provides a comprehensive solution to the challenges of network congestion in the highly dynamic and unpredictable contexts of FANETs and IoT networks. The data collection module is responsible for gathering real-time network performance data, such as packet loss rate, throughput, and latency, from various nodes within FANET and IoT environments. This data is then preprocessed to normalize and reduce noise, preparing it for analysis by the adaptive FLC. Utilizing a set of specifically designed fuzzy rules, the FLC assesses network congestion levels and determines the appropriate adjustments to network parameters, such as transmission rates, packet sizes, and routing protocols, to alleviate congestion and optimize network performance. The dynamic parameter adjustment mechanism implements these adjustments autonomously, ensuring that the network operates efficiently under varying conditions. Additionally, the integration module enables seamless integration of the adaptive fuzzy control system with existing network management systems, facilitating real-time congestion management and performance optimization across different platforms and network architectures. This system addresses the limitations of traditional congestion control mechanisms by providing a scalable, efficient solution capable of adapting to the complex, variable conditions typical of FANET and IoT environments. Ultimately, this invention aims to enhance network reliability, improve resource utilization, and ensure a superior user experience in FANET and IoT applications.

No. of Pages : 17 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421020491 A

(19) INDIA

(22) Date of filing of Application :19/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS FOR GENERATION OF BIOELECTRICITY BY BACTERIAL MORPHOTYPES FROM CELLULOSIC WASTE USING MFC

(51) International classification	:H01M0008160000, C12N0009420000, C02F0003280000, C02F0003000000, C02F0003340000	(71)Name of Applicant : 1)Dr. Yogita Basene Address of Applicant :Department of Biotechnology, Pandit S. N. Shukla University, Shahdol, Nawalpur Campus, Near Sarfa Dam, Shahdol Shahdol -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
(61) Patent of Addition to Application Number	:NA	1)Dr. Yogita Basene
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(62) Divisional to Application Number	:NA	2)Prof. Ragini Gothalwal
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(57) Abstract :

ABSTRACT A PROCESS FOR GENERATION OF BIOELECTRICITY BY BACTERIAL MORPHOTYPES FROM CELLULOSIC WASTE USING MFC The present invention relates to a process for the generation of sustainable energy from waste. More specifically the present invention relates to the generation of bioelectricity from bacterial morphotypes of cellulosic waste using microbial fuel cells (MFC). The bacterial community existing in natural habitats possesses cellulose hydrolytic ability which can disintegrate complex organic substrates like cellulose into simple sugar. These cellulose-degrading bacteria can act as a bio-catalyzer for oxidation–reduction reaction of the organic substrate like cellulose (a major constituent of biomass) for electricity generation by using a microbial fuel cell (MFC). The instant invention discloses the effect of various parameters of MFC such as carbon source, nitrogen source, pH, inoculum size, temperature, salt bridge concentration, and mediators on cellulase production and voltage generation by indigenous bacteria present in domestic and cellulosic waste.

No. of Pages : 30 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421022013 A

(19) INDIA

(22) Date of filing of Application :22/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : RP-HPLC METHOD FOR DETERMINATION OF SELINEXOR IN BULK DRUG AND PHARMACEUTICAL DOSAGE FORM

(51) International classification :A01N43/647, G01N30/02, G01N30/04, G01N30/16, G01N30/22, G01N30/28, G01N30/36, G01N30/50
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention relates to to develop a new simple, accurate and reproducible RP-HPLC method for the analysis of Selinexor in bulk and tablets. The HPLC analysis was performed on the Phenomenex Gemini C18 (250 mm × 4.60 mm), 5µm particle size in isocratic mode, at 25 0C temperature using a mobile phase consisting of methanol: water (95:5, v/v) at a flow rate of 1.0 mL/min. The detection was carried out at 254 nm. There was no interference from the excipients commonly present in the tablets. The drug content was found to be 99.933 % for SLN. Accuracy of the method was studied by the recovery studies at three different levels 80 %, 100 % and 120 % level. The % recovery was found to be within the limits of the acceptance criteria with average recovery of 99.37-99.98. The % RSD below 2.0 shows the high precision of proposed method. Results of precision studies carried out intraday and interday by using different concentrations of SLN 6, 8 and 10 µg/mL and showed %RSD in range of 0.47-1.36 and 0.64-0.99 respectively. Therefore, the results confirmed the suitability of the method for quantifying Selinexor in their formulations.

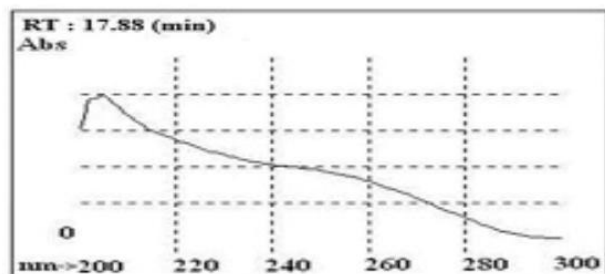


Figure 1

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/03/2024

(21) Application No.202421022090 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN IOT BASED DECENTRALIZED LEDGER MANAGEMENT SYSTEM AND A DEVICE FOR ENHANCED BLOCKCHAIN SECURITY

(51) International classification :H04L0009320000, G06F0021620000, H04L0009080000, H04L0009060000, G06F0021640000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention related to an IoT based decentralized ledger management system and a device for enhanced blockchain security, comprising: i) A device to secure decentralized database; ii) A decentralized ledger management unit connected to said device, wherein at least one management unit is connected to plurality of modules to collect data from said ledgers; iii) A security unit to communicate with said ledger management unit to secure ledger and stores a plurality of security rules including authentication rules, audit rules, personal information rules, encryption rules, data rules, access rules, communication rules, and resource rules; iv) Atleast one node to receive transactions from units in a communication network; and v) A data storage unit for storing decentralized ledger having a blockchain architecture.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :20/03/2024

(21) Application No.202421021126 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DETECTION OF HEART FAILURE BY USING ADVANCED MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE TECHNIQUES

(51) International classification :G16H0050200000, G06N0020000000, G06N0003040000, G16H0070600000, A61P0009040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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3)Gera. Jemimah
4)Sangita Mishra
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Address of Applicant : NA
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(57) Abstract :
Detection of Heart Failure by using Advanced Machine learning and Artificial Intelligence Techniques ABSTRACT: There is a growing prevalence of heart failure (HF), which underscores the need for a comprehensive evaluation and individualized therapeutic strategy for every individual. The production of significant quantities of data is challenging for conventional analytical methods due to the accumulation of clinical information from patients with heart failure (HF). The present challenge has been successfully addressed by means of the advancements in big data methodologies and artificial intelligence. These systems possess the capability to produce accurate forecasts concerning forthcoming observations and results, thereby aiding researchers in the provision of individualized treatment for patients afflicted with heart failure and enabling precise diagnoses. In recent years, the domain of cardiovascular care has experienced substantial changes, primarily propelled by the swift progressions in artificial intelligence. These alterations have been prompted by current circumstances. This article presents an extensive review of the existing implementations of artificial intelligence (AI) in the domain of heart failure, accompanied by a critical evaluation of the obstacles it faces. This underscores the concern regarding the garbage in, garbage out predicament, in which erroneous outcomes may result from artificial intelligence systems utilizing distorted data. The subject of this discussion is diagnostic algorithms for heart failure, with a particular emphasis on the differences between the models that are presently in use. Concerns regarding the classification and treatment of patients based on the left ventricular ejection fraction (LVEF) are raised in this article. These concerns draw attention to the current inconsistencies in scientific understandings. Moreover, this study investigates the complexities that emerge throughout the execution of artificial intelligence, encompassing variable variables and biases present in the training dataset. This highlights the limitations of current AI models when applied to real-world scenarios and the difficulty of understanding their predictions. These factors contribute to the low level of trust that physicians have in AI-powered models. Considering the fact that the existing medical errors have been corrected prior to the incorporation of artificial intelligence (AI) into these frameworks, the fundamental notion is that AI exhibits potential as a beneficial tool for clinicians in the management of heart failure patients.

No. of Pages : 11 No. of Claims : 6

(54) Title of the invention : RAINFALL-RUNOFF MODELING FOR SUSTAINABLE WATER RESOURCE MANAGEMENT

(51) International classification :G06Q0010060000, G06Q0050060000, G06N0020000000, G06F0030200000, G06Q0050260000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. Darshan J. Mehta Address of Applicant :Assistant Professor Civil Engineering Department Dr. S. & S. S. Ghandhy Government Engineering College, Surat, Gujarat, India ap_darshan_mehta@gtu.edu.in ----- 2)Dr. Sanjaykumar M. Yadav 3)Keyur Prajapati Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Darshan J. Mehta Address of Applicant :Assistant Professor Civil Engineering Department Dr. S. & S. S. Ghandhy Government Engineering College, Surat, Gujarat, India ap_darshan_mehta@gtu.edu.in ----- 2)Dr. Sanjaykumar M. Yadav Address of Applicant :Professor Department of Civil Engineering Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat, India ----- 3)Keyur Prajapati Address of Applicant :Water Resources Project Specialist Upper Thames River Conservation Authority, London, Ontario, Canada - -----

(57) Abstract :

ABSTRACT The present invention introduces an advanced Rainfall-Runoff Modeling System designed for Sustainable Water Resource Management. This system integrates real-time environmental data, utilizes sophisticated computational algorithms, and incorporates a user-friendly interface to predict and manage rainfall runoff dynamically within various watershed areas. At the core of this innovative approach is the seamless integration of data from multiple sources, including satellites, sensors, and IoT devices, which are processed and analyzed to feed into the computational model. This model, underpinned by both hydrological principles and machine learning algorithms, adapts over time to improve its predictive accuracy. The system architecture is designed to facilitate easy data integration, efficient processing, and accurate simulation of rainfall-runoff dynamics, thereby enabling stakeholders to make informed decisions regarding water management. Key features include an adaptive learning mechanism that refines the model based on new data inputs and observed outcomes, and a comprehensive user interface that allows users to input data, configure simulations, and visualize results in an intuitive manner. Practical applications of this invention span across flood risk management, agricultural planning, urban water supply management, and environmental conservation, showcasing its versatility and utility in addressing a wide range of water-related challenges. The implementation of this modeling system is anticipated to have significant environmental, social, and economic impacts, including enhanced flood risk mitigation, improved water conservation practices, increased agricultural productivity, and the promotion of sustainable water resource management practices. Overall, this invention represents a significant advancement in the field of hydrology and water management, offering a novel tool that combines accuracy, adaptability, and accessibility to support the sustainable management of water resources in the face of changing environmental conditions and increasing water demands.

No. of Pages : 18 No. of Claims : 5

(54) Title of the invention : FIELDROVER- ALL IN ONE AGRICULTURE ROBOT

(51) International classification :G06Q0010060000, G06Q0050020000, G06Q0010040000, C12P0007640000, B60W0050080000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Abhale Babasaheb Annasaheb Address of Applicant :at post madhi khurde tal kopargaon ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Pardeshi Yash Shankarlal Address of Applicant :SND College of Engineering & Research Center A/P:-Bhabhulgaon Tal:-Yeola Dist.Nashik Yeola ----- 2)Gaike Sangram Raghunath Address of Applicant :SND College of Engineering & Research Center A/P:-Bhabhulgaon Tal:-Yeola Dist.Nashik Yeola ----- 3)Abhale Babasaheb Annasaheb Address of Applicant :SND College of Engineering & Research Center A/P:-Bhabhulgaon Tal:-Yeola Dist.Nashik Yeola ----- 4)Gade Somnath Ashok Address of Applicant :SND College of Engineering & Research Center A/P:-Bhabhulgaon Tal:-Yeola Dist.Nashik Yeola -----

(57) Abstract :
The FieldRover – All-in-One Agriculture Robot stands at the forefront of agricultural innovation, offering a comprehensive solution that combines cutting-edge technologies with traditional farming practices. By seamlessly integrating components such as the ESP8266 microcontroller, Blynk IoT platform, L298 motor driver, and ESP32 Cam, the FieldRover transforms the way farming operations are conducted, optimizing resource utilization, enhancing productivity, and enabling data-driven decision-making. With its versatility, adaptability, and real-time monitoring capabilities, the FieldRover represents a paradigm shift in modern agriculture, promising increased efficiency, sustainability, and profitability for farmers worldwide.

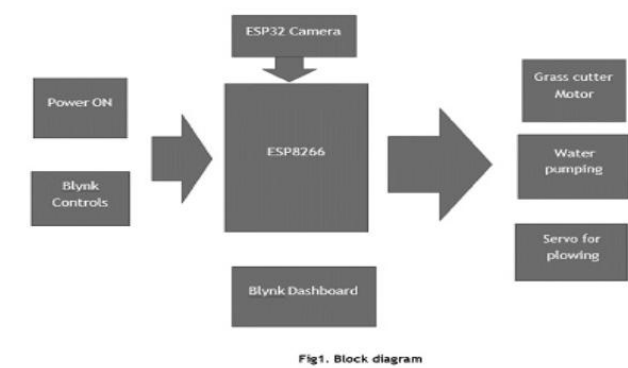


Fig1. Block diagram

No. of Pages : 9 No. of Claims : 5

(54) Title of the invention : AUTOMATIC CROP PROTECTION FROM HEAVY RAIN USING IOT & BLYNK APPLICATION

(51) International classification :G06Q0050020000, A01B0079000000, A01B0069040000, G06Q0010060000, B64C0039020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Abhale Babasaheb Annasaheb Address of Applicant :at post madhi khurde tal kopargaon ----- -- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Gade Somnath Ashok Address of Applicant :SND College of Engineering & Research Center A/P:-Bhabhulgaon Tal:-Yeola Dist.Nashik Yeola ----- 2)Gavande Chetan Vishn Address of Applicant :SND College of Engineering & Research Center A/P:-Bhabhulgaon Tal:-Yeola Dist.Nashik Yeola ----- 3)Thakare Swapnil Babanrao Address of Applicant :SND College of Engineering & Research Center A/P:-Bhabhulgaon Tal:-Yeola Dist.Nashik Yeola ----- 4)Pagare Maitreya Gautam Address of Applicant :SND College of Engineering & Research Center A/P:-Bhabhulgaon Tal:-Yeola Dist.Nashik Yeola ----- 5)Wakhare Rohan Rajendrasa Address of Applicant :SND College of Engineering & Research Center A/P:-Bhabhulgaon Tal:-Yeola Dist.Nashik Yeola -----

(57) Abstract :

Smart farming, precision agriculture and Agriculture 4.0 all involve the integration of advanced technologies into existing farming architecture. The goal is to increase production efficiency and product quality, as well as reducing overall costs. To this end, the inclusion of Smart technologies into Irish agriculture has been inevitable with increased pressure being placed on farming practices to remain profitable, as well as adhere to environmental regulation.The global Smart Agriculture Solution Market is said to have stood at around US \$10.2 Billion in 2016, and is projected to reach a valuation of US \$38.1 Billion by the end of 2024. The growing adoption of advanced technology in farming, from agricultural drones, precision seeding systems, auto-steering, automatic feeding systems and fruit-picking robots (amongst others), have all incentivised traditional agri-companies to invest in smart agriculture technology. The deployment of advanced agri-tech has the potential to allow for an increased focus on non-profitable tasks, such as farm maintenance and environmental practices. The reduction of heavy labour and tedious tasks can also lead to improvements in the health and work/life balance of farming staff.

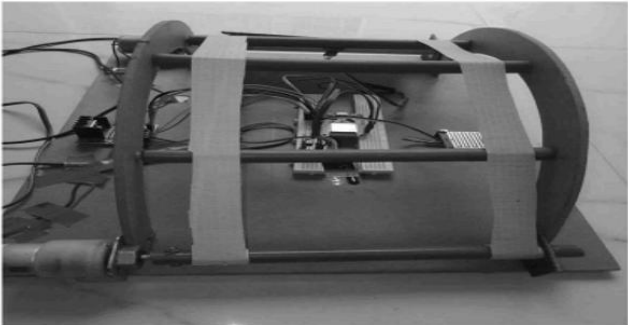


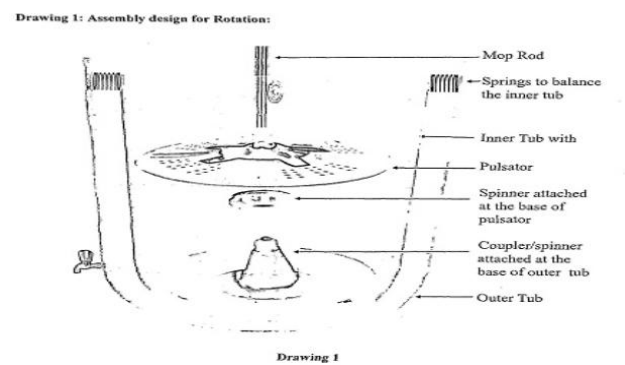
Fig 1.System Architecture

No. of Pages : 9 No. of Claims : 5

(54) Title of the invention : THE INNOVATIVE HAND-OPERATED WASHING MACHINE FOR SUSTAINABLE RURAL LIVING.

(51) International classification :D06F0039080000, D06F0037300000, A47G0029120000, D06F0037200000, D06F0039020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)DR. RAVI SAHADEO MANOHAR Address of Applicant :B.N.N. COLLEGE, DHAMANKAR NAKA, COLLEGE ROAD, BHIWANDI, DIST.: THANE, MAHARASHTRA, INDIA - 421305. ----- 2)DR. KAKAVIPURE DILIP KESHAV Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DR. RAVI SAHADEO MANOHAR Address of Applicant :B.N.N. COLLEGE, DHAMANKAR NAKA, COLLEGE ROAD, BHIWANDI, DIST.: THANE, MAHARASHTRA, INDIA - 421305. ----- 2)DR. KAKAVIPURE DILIP KESHAV Address of Applicant :B.N.N. COLLEGE, DHAMANKAR NAKA, COLLEGE ROAD, BHIWANDI, DIST.: THANE, MAHARASHTRA, INDIA - 421305. ----- 3)MR. SANTOSH GULAB KAMBLE Address of Applicant :B.N.N. COLLEGE, DHAMANKAR NAKA, COLLEGE ROAD, BHIWANDI, DIST.: THANE, MAHARASHTRA, INDIA - 421305. -----

(57) Abstract :
The present invention discloses a hand-operated cloth washing machine designed to facilitate efficient cloth washing using readily available components. The machine comprises a mop rod specifically adapted for cloth washing applications, a pulsator for generating agitation within the washing medium, and two buckets serving as containment vessels. A bearing mechanism enables the rotation of an inner bucket within an outer bucket,enhancing the washing process. Additionally, an advanced model of the hand-operated cloth washing machine is proposed, featuring design enhancements aimed at reducing user effort during operation and increasing washing capacity compared to conventional hand-operated cloth washing machines. This innovation presents a cost- effective and user-friendly solution for cloth washing, particularly suitable for environments with limited access to conventional washing machines.



No. of Pages : 13 No. of Claims : 7

(54) Title of the invention : A POSTERIOR CHEEK RETRACTOR

(51) International classification :A61B17/00, A61C11/00,
A61C7/00, A61C7/08(86) International Application
No :NA

Filing Date :NA

(87) International Publication
No : NA(61) Patent of Addition to
Application Number :NA

Filing Date :NA

(62) Divisional to Application
Number :NA

Filing Date :NA

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Nashik -----

(57) Abstract :

I claim, 1- A Posterior Cheek Retractor comprising main body of V and U shaped wire made up of Nickel Titanuim or Stainless steel instrument (3) of length from 10 cm to 26 cm and diameter of 0.237 mm (18 gauge) to 0.7229 mm (21 gauge) characterised in that one end segment of buccal pad (1) of oval or round or cylindrical shape and opposite end segment of buccal pad (6) of oval or round or cylindrical shape made up of Cold cure acrylic or Heat cure acrylic or Waxes or Toughened plastic/acrylic; two spiral helix (2,5) of diameter of each from 2 mm to 6 mm configured adjacent to each said buccal pads; and round shape wire projection (4) of size 5 mm at the center of the instrument efficiently and effectively used in fixed orthodontic mechanotherapy for retracting posterior part of the cheek or tissue sections in the maxillofacial region at molar site.

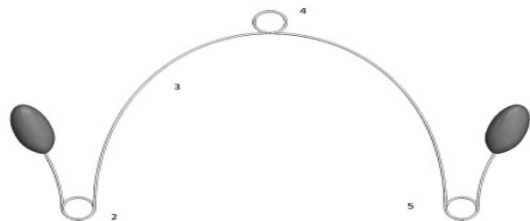


Figure 1: Front view of Posterior Cheek Retractor

No. of Pages : 19 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421020838 A

(19) INDIA

(22) Date of filing of Application :19/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AI-DRIVEN STAIN DETECTION AND ROTATIONAL BRUSH CLEANING APPARATUS FOR GARMENTS

(51) International classification	:H04N0001387000, A61G0005040000, A47L0025080000, C11D0003420000, A61B0090000000	(71)Name of Applicant : 1)Rajarambapu Institute of Technology, Rajaramnagar Address of Applicant :A/P- Islampur,Tal- Walwa,Dist.- Sangli, Maharashtra 415409 -----
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Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
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Filing Date	:NA	Address of Applicant :Computer Science and Engineering, Rajarambapu Institute of Technology, Rajaramnagar. - 415414 ---- -----

(57) Abstract :

AI-Driven Stain Detection and Rotational Brush Cleaning Apparatus for Garments. This invention describes an advanced garment care apparatus merging AI and robotics to transform laundry methods. The apparatus features a circular body with garment clips, enabling 360-degree rotation and vertical flipping. A high-tech robotic arm with sensors scans garments for stains using AI. Upon detection, the arm utilizes a brush mechanism, moving 360 degrees vertically and horizontally for precise stain removal. It dispenses water and foam as needed, optimizing cleaning. After stain removal, the apparatus automatically dips the fabric into water for thorough cleaning. Users can also manually adjust the brush for different stain types and locations. This innovative apparatus enhances efficiency and convenience in laundry care, bridging technology with fabric maintenance for a promising future.

No. of Pages : 25 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :20/03/2024

(21) Application No.202421020946 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : CLOSEDCRED: WHERE WEB3 AND DEFI MEET UPI PAYMENTS

(51) International classification :G06Q0040020000, G06Q0020100000, G06Q0020360000, G06Q0020060000, G06Q0020380000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ClosedCred is a payment platform seamlessly integrating Web3 and decentralized finance (DeFi) with Unified Payments Interface (UPI) transactions. The platform enables effortless sending and receiving of cryptocurrencies, including microtransactions comparable to UPI transactions. Utilizing stablecoins such as USDC on the Aptos Network and MATIC on the Polygon network, users can execute micropayments seamlessly, via UPI's existing QR codes. During the account abstraction process, users' UPI IDs are securely linked to their Web3 wallet addresses, biometric data (fingerprint or iris scan), and Know Your Customer (KYC) details, including phone numbers and email addresses. ClosedCred facilitates micro investments through features like Round Ups and Daily Deposits, offering a wide array of financial and payment services. These services encompass mobile recharge, electricity bills, credit card bills, rent payments, loan repayments, insurance, travel bookings, OTT subscriptions, food ordering services, and more, all accessible using cryptocurrencies. ClosedCred leverages decentralized exchanges such as Uniswap and Sushi swap to enable users to utilize tokens from various chains for payments, seamlessly converting them to APT or MATIC via cross-chain bridges. Additionally, the platform offers loans backed by tokenized real estate and crypto assets, including non-fungible tokens (NFTs) and Liquid Staking Derivatives (LSDs). It also provides investment opportunities in tokenized stocks and mutual funds, marking a paradigm shift in the digital finance landscape. With a focus on top-notch security, user-friendly design, and instant access to a diverse range of assets, ClosedCred emerges as the forefront of the future of finance, readily accessible to users.

No. of Pages : 30 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :20/03/2024

(21) Application No.202421020966 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : FIBER-INFUSED RESILIENCE: ASSESSING THE FLEXURAL BEHAVIOR OF BILAYER CONCRETE BEAMS WITH HYBRID STEEL AND GFRP REBARS

(51) International classification :E04C0005160000, E04C0005070000, B32B0027320000, C04B0014480000, E21D0011100000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SHRIKANT MADHAV HARLE Address of Applicant :61, SHILPKALA COLONY, ANGAD NAGAR, SHEGAON ROAD, AMRAVATI-444604 ----- ----- 2)Milind V. Mohod 3)Shrikant R. Bhuskade 4)Swapnil Rangrao Band 5)Harshwardhan Prabhakar Nistane 6)Mayur Shankarrao Mahalle 7)Samruddhi Chandrakant Sagane 8)Tushar Ashokrao Dalawi Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)SHRIKANT MADHAV HARLE Address of Applicant :61, SHILPKALA COLONY, ANGAD NAGAR, SHEGAON ROAD, AMRAVATI-444604 ----- ----- 2)Milind V. Mohod Address of Applicant :Anju Colony, V M V Road, Amravati Amravati ----- 3)Shrikant R. Bhuskade Address of Applicant :Gurudeo Colony, Near Ajinkya Colony, VMV Road, Amravati 444604 (MS) Amravati ----- 4)Swapnil Rangrao Band Address of Applicant :Anand Vihar Colony, Vidhyut Nagar, V.M.V Road, Amravati Amravati ----- 5)Harshwardhan Prabhakar Nistane Address of Applicant :‘Surabhi’ , Rathi Nagar VMV road Amravati 444603 Amravati ----- 6)Mayur Shankarrao Mahalle Address of Applicant :Siddhivinayak Apartment, Rukhmini nagar , Amravati Amravati ----- 7)Samruddhi Chandrakant Sagane Address of Applicant :Govind Nagar, near Anandwadi, Kathora Road, Amravati Amravati ----- 8)Tushar Ashokrao Dalawi Address of Applicant :Arjun Nagar, Amravati Amravati ----- -----

(57) Abstract :

The present invention pertains to a novel method and system for optimizing the flexural behavior of bilayer concrete beams through the integration of a hybrid reinforcement system. The invention specifically focuses on combining traditional steel rebars and Glass Fiber Reinforced Polymer (GFRP) rebars within the bilayer structure, complemented by the introduction of steel fibers into the concrete matrix. This unique combination aims to enhance the structural integrity, strength, and durability of bilayer concrete beams, addressing limitations associated with conventional reinforcement methods.

No. of Pages : 12 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :20/03/2024

(21) Application No.202421020967 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : FORMULATION AND DEVELOPMENT OF ALOE VERA-ENHANCED AMOXICILLIN FLOATING TABLETS FOR PEPTIC ULCER TREATMENT

(51) International classification :A61K0009000000, A61K0036886000, A61K0031430000, A61P0001040000, A61K0009200000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Rungta Institute of Pharmaceutical Sciences, Bhilai Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Dr Saket Rungta Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Divyansh Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Tanuj Pandey Address of Applicant :Rungta Institute of Pharmaceutical Sciences,Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 3)Prerana Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 4)Dr. Gyanesh Kumar Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 5)Dr. Harish Sharma Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 6)Dr. Rajesh Kumar Nema Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai -----

(57) Abstract :

The present invention relates to a novel approach to treating peptic ulcer disease by developing a solid dosage form that combines amoxicillin with Aloe vera powder. This single-therapy formulation offers potential enhancements in therapeutic efficacy and patient compliance. The mechanism of action involves the antibacterial activity of amoxicillin against Helicobacter pylori, coupled with the anti-inflammatory and mucosal protective properties of Aloe vera. Sustained-release technology ensures prolonged drug release, while optimized composition aids in gastric retention and controlled drug delivery. The preparation of Aloe vera powder and formulation of tablets are detailed, followed by comprehensive post-compression parameter evaluation. In vitro dissolution and floating properties testing confirm the formulation's effectiveness.

No. of Pages : 12 No. of Claims : 3

(54) Title of the invention : BHARATI URJA

(51) International classification :F03B0013260000, F03B0017060000, E02B0009080000, F03B0013180000, E02B0017000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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2)Anil G. Kale

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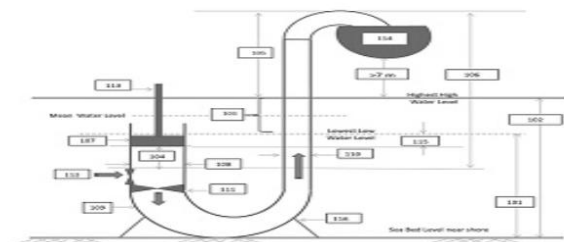
2)Anil G. Kale

Address of Applicant :N 803, Hillview Residency Society, Near Mahatma Society, Jijaji Nagar, Kothrud, Pune, Maharashtra. India. Pin 411038 Pune -----

(57) Abstract :

BHARATI URJA a Novel Technique of Harnessing Tidal Energy Using Low Tidal Ranges below five meters. TEC devices used across the world are of two categories. They are either by utilizing Tidal Stream Energy method which uses the movement energy of the tidal stream to capture the Tidal Energy or by using barrages method for storing ocean water during the tidal cycle and running reversible turbines. Depending on the site's characteristics, different tidal energy extracting devices are used to capture tidal energy. But both methods are not possible to use at majority of the places. These present methods have their prerequisites which are available at very few coastal locations across the world. Present Invention The TEC made using BHARATI URJA technique utilizes this daily natural event of tidal cycle with low tidal range below five meters to harness Electrical energy, by elevating sea water to drive the turbine which in turn drives an electric generating unit. The Modified U-Tube is fixed to the ocean floor near shore on concrete foundation by means of piling in the sea bed to withstand any wave load. The piston rod in the cylinder attached to a heavy Noncorrosive coated mild steel longer lever arm which is eccentrically pivoted with bearings. The hollow circular container metal float made of MS with non-corrosive coat is attached on short lever arm end. This float encased in concrete caisson to guide vertically up and down and also to keep it safe from drifting. Thus in this technique, at every occurrence of the Flood tide, the TEC system arrangement generates the required force for pushing piston down subsequently water gets pushed through the cylinder and gets raised in smaller leg of Modified U-Tube to the desired height. This arrangement can be easily adopted for different tidal ranges by appropriately altering the dimensions of Float, Lever arm ratio.

Drawing 1 of 3
A Schematic Diagram of Modified U-Tube used in "BHARATI URJA" TEC technique.



No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :20/03/2024

(21) Application No.202421020968 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DEVELOPMENT OF PHYTOCONSTITUENTS LOADED COLLOIDAL DRUG DELIVERY SYSTEM FOR TREATMENT OF COLON CANCER

(51) International classification :A61K31/37, A61K47/24, A61K9/127, A61P35/00, B82Y5/00, C07D311/30, C09K19/16 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Rungta Institute of Pharmaceutical Sciences, Bhilai Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 2)Dr Saket Rungta Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Anjali Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024; Rungta College Of Pharmaceutical Sciences & Research, Bhilai, Chhattisgarh, India, PinCode:490024 Bhilai ----- 2)Dr. Harish Sharma Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 3)Dr. Gyanesh Kumar Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024 Bhilai ----- 4)Chandraprabha Dewanwan Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024; Rungta College Of Pharmaceutical Sciences & Research, Bhilai, Chhattisgarh, India, PinCode:490024 Bhilai ----- 5)Prerana Sahu Address of Applicant :Rungta Institute of Pharmaceutical Sciences, Rungta Knowledge City, Kohka Kurud Road, Bhilai, Chhattisgarh, Pin Code: 490024; Rungta College Of Pharmaceutical Sciences & Research, Bhilai, Chhattisgarh, India, PinCode:490024 Bhilai -----

(57) Abstract :

The present invention relates to the development of a liposomal colloidal drug delivery system for the treatment of colon cancer, targeting the delivery of phytoconstituents, specifically resveratrol and quercetin, known for their anticancer properties. Resveratrol and quercetin were chosen due to their documented ability to inhibit tumor growth and induce apoptosis in colon cancer cells. The liposomal formulation offers advantages in protecting these phytoconstituents and facilitating their targeted delivery to the colon. The optimized formulation parameters and methodology for preparing the liposomal composition are detailed, including the encapsulation of resveratrol and quercetin. Evaluation results demonstrate the formulation's physicochemical properties, in vitro release kinetics, cellular uptake, and cytotoxicity against colon cancer cells. This liposomal colloidal drug delivery system shows promise as an effective strategy for colon cancer therapy, offering enhanced bioavailability and reduced systemic toxicity.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202427019843 A

(19) INDIA

(22) Date of filing of Application :18/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS FOR IMPROVING POLYPEPTIDE EXPRESSION IN MAMMALIAN CELL CULTURE

(51) International classification	:C12P 21/00, A61K 39/395, C12N 5/00, G01N 33/68	(71)Name of Applicant : 1)KASHIV BIOSCIENCES, LLC Address of Applicant :20, New England Avenue Piscataway, New Jersey 08854 -----
(31) Priority Document No	:202221010310	Name of Applicant : NA
(32) Priority Date	:25/02/2022	Address of Applicant : NA
(33) Name of priority country	:-----	(72)Name of Inventor :
(86) International Application No	:PCT/IB2023/051765	1)BHAVSAR, Kaumil Bhupendra bhai Address of Applicant :6 Laxminagar Society, Part 1, Naranpura Ahmedabad Gujarat Ahmedabad 380013 -----
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(87) International Publication No	:WO 2023/161885	-----
(61) Patent of Addition to Application Number	:NA	3)VAISHNAV, Parth Hitarthbhai Address of Applicant :4- Ami apartment, 6 Patel colony Jamnagar Gujarat Jamnagar 361008 -----
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(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention relates to a process of improving the production of anti-IgE antibody specifically Omalizumab with improved titer and reduced galactosylation and/or reduced acidic variant expressed in mammalian cell culture in suitable culture condition for an example using fed batch mode by maintaining specific temperature $36.5^{\circ}\text{C} \pm 0.5$ throughout the duration of cells culture.

No. of Pages : 30 No. of Claims : 15

(54) Title of the invention : COMPACT WIDEBAND GAP-COUPLED VARIATIONS OF HEXAGONAL MICROSTRIP ANTENNAS ON THINNER SUBSTRATE

(51) International classification :A61P0043000000, H01Q0013020000, H01Q0001380000, H01P0003080000, H04R0009020000
 (86) International Application No :NA
 Filing Date :NA
 (87) International Publication No : NA
 (61) Patent of Addition to Application Number :NA
 Filing Date :NA
 (62) Divisional to Application Number :NA
 Filing Date :NA

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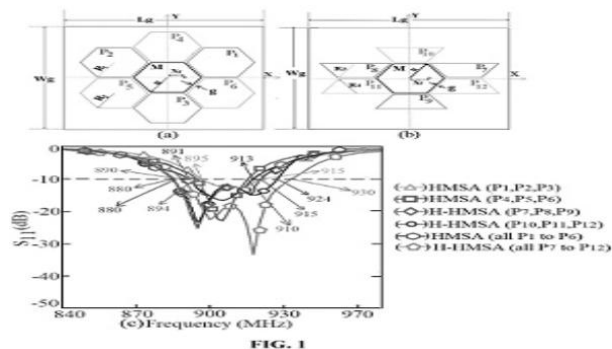
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(57) Abstract :

The present innovation uses a simple coaxial feeding mechanism to reduce size utilizing hexagonal MSA (HMSA) (104) and half-hexagonal MSA (H-HMSA) (105) variants on a thinner FR4 substrate (~0.01°c) (103). In pursuit of minimizing the overall patch size, rectangular slots (106) are introduced beneath each patch (104, 105) on the ground plane (101), thereby forming a defected ground structure (DGS). In a lower frequency range, the DGS rectangular slots (106) produce BW by lowering the fundamental mode frequency, and also a reduction in the area within the range of 38.13% is achieved. The suggested designs require gain improvement because of the thinner substrate, and this is accomplished by incorporating the configurations inside the flaring of a Pyramidal Horn structure (103).



(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/03/2024

(21) Application No.202421022224 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PURI FRYING MACHINE

(51) International classification :A47J37/00,
A47J37/12
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application
Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT A Puri Frying Machine The present invention provides a puri frying machine which can be used for automated, contactless and hygienic frying of puri / pani puri / pellets / pop balls / snacks etc. It mainly comprises a frying machine (3) containing oil, whose heating, oil level and other parameters are controlled with the help of sensors and various other components, for providing automation and completing the frying process without manual intervention. It may optionally be equipped with an automatic feeder (7) to automatically feed the raw materials in the machine. Being portable, the machine can easily be taken anywhere and can be supplemented with other attachments according to the requirement. Fig. 3

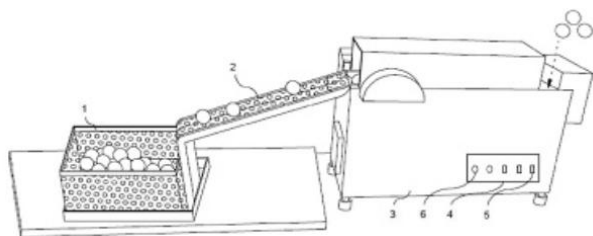


Fig. 1

No. of Pages : 19 No. of Claims : 3

(54) Title of the invention : A SURFACE MOUNT TECHNOLOGY (SMT) PANEL FRAME

(51) International classification :H04N0021610000, H05K0003000000, H01R0012570000, H01L0033600000, H05K0003340000

(86) International Application No	:NA
Filing Date	:NA

(87) International Publication No : NA

(61) Patent of Addition :NA
to Application Number :NA
Filing Date :NA

(62) Divisional to
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Filing Date :NA

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(57) Abstract :

Abstract A Surface Mount Technology (SMT) panel frame The present invention provides a Surface Mount Technology (SMT) panel frame. The SMT panel frame (100) includes a panel (110) and atleast one copper material region (130) arranged on the panel (110). The panel (110) is substantially enough to securely hold atleast one printed circuit board (120), the panel (110) being removably arranged around the printed circuit board (120), wherein a predefined region on the printed circuit board (PCB) (120) is designated for the placement of Data Matrix Codes (DMC), fiducials and test points. The atleast one copper material region (130) selectively arranged within the panel (110) based on the placement of Data Matrix Codes, fiducials, and test points, such that the copper material regions align with the position and placement of panel fiducials, DMC and the test points thereby reducing the requirement of copper throughout the panel (110). Figure 1

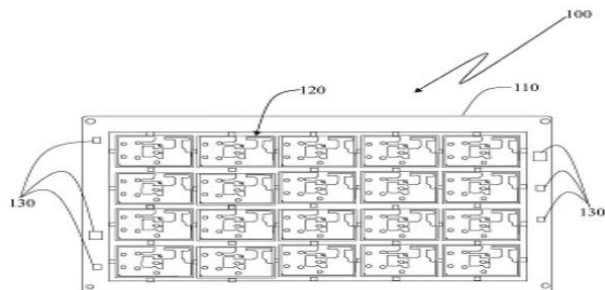


Figure 1

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202421022438 A

(19) INDIA

(22) Date of filing of Application :22/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : INTERACTIVE PERSONAL ROBOT - TALKBUDDY

(51) International classification :G06F0003010000, G06Q0010100000, G06N0003000000, B25J0009160000, B25J0011000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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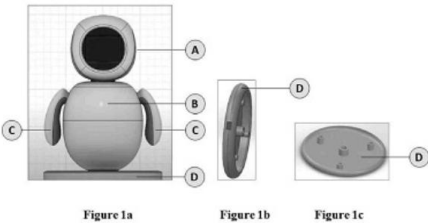
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(57) Abstract :
ABSTRACT The Interactive Personal Robot TalkBuddy is a groundbreaking initiative in DIY robotics, aiming to create an emotionally intelligent personal robot. TalkBuddy uses advanced sensors to recognize and react to human emotions, fostering immersive interactions. The project is open-source, user-friendly, and encourages community-driven development. It allows customization of the robot's look and functions, serving as a technological milestone and a creativity stimulator in the robotics community. to become empathetic companions, enriching human lives through emotional connections and shared experiences.



No. of Pages : 12 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202241070714 A

(19) INDIA

(22) Date of filing of Application :07/12/2022

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND METHOD FOR MAGNETIZING RARE EARTH METALS TO CONSTRUCT A ROTOR ASSEMBLY

(51) International classification :H02K0015030000, H02K0015000000, B32B0007020000, H02K0003120000, H02K0007040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A system 101 to magnetize one or more rare earth metals 110 includes one or more laminated sheets 114. The one or more laminated sheets 114 are stacked together to construct a laminated block 116. The one or more stacked laminated blocks 116 stacked together to construct the rotor assembly 100. The rotor assembly 100 includes one or more surfaces 118 on an outer periphery 120. The rotor assembly 100 includes one or more slots 102 provides a predetermined space to position the one or more rare earth metals 110 in a non-magnetized state. The system 101 further includes a magnetization unit 122. The magnetization unit 122 includes one or more magnetizing surfaces 124 and one or more magnetizing windings 126. The one or more magnetizing surfaces 124 magnetize the one or more rare earth metals 110 of the rotor assembly 100 by passing a predetermined supply. FIG. 1A

No. of Pages : 36 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341003030 A

(19) INDIA

(22) Date of filing of Application :16/01/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : COSMETIC COMPOSITION

(51) International classification :A61K36/28, A61K36/53, A61K8/73, A61K8/92, A61K8/97, A61Q19/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT The present invention discloses a cosmetic composition for skin cleansing. The cosmetic composition comprises powder snail mucin, as an active ingredient, along with other natural or naturally available ingredients. The invention further provides a method to extract snail mucin powder and a method to prepare a powder cosmetic composition that is free from water and other preservatives thereby preventing any contamination or use of harsh chemicals on skin.

No. of Pages : 25 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341004462 A

(19) INDIA

(22) Date of filing of Application :23/01/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM, DEVICE, AND METHOD FOR VENTRICULAR DECOMPRESSION

(51) International classification :A61B17/00, A61M60/113, A61M60/117, A61M60/148, A61M60/226, A61M60/40

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

SYSTEM, DEVICE, AND METHOD FOR VENTRICULAR DECOMPRESSION [00074] The present invention generally relates to the field of cardiology and health management. More particularly, this invention relates to a portablecardiac assist device. The disclosure illustrates a device which may assist left ventricle to transfer adequate blood volume from the left ventricle to the aorta, thus improving systemic pressure, reducing end-diastolic left ventricular pressure, reducing left atrial pressure, and thus reducing pulmonary vein back pressure. This relieves the symptoms of heart failure at rest, such as dyspnea. This may in turn reduce remodeling in left ventricle. This may improve the morbidity and mortality in the heart failure patients. This may also reduce usage of diuretic medications used in heart failure patients which may be very useful in subset of heart failure patients with acute kidney injury or chronic kidney disease.

No. of Pages : 34 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :28/01/2023

(21) Application No.202341005647 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEMS AND METHODS FOR EFFICIENT POWER MANAGEMENT AT A RADIO UNIT

(51) International classification :H04W0052020000, H04W0004020000, H03F0001020000, G06F0001323400, G06F0001320600

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Systems and methods for efficient power management in a wireless communication network are described. In particular, the system (for example, implemented at a radio unit) may monitor a downlink traffic at the radio unit in the wireless communication network. Further, the system may determine a low traffic state of the radio unit based on a pre-defined threshold of the monitored downlink traffic for a pre-configured time period. Furthermore, the system may configure the radio unit to enter a low power state based on the determined low traffic state. As such, the system may select a power consumption policy and apply the selected power consumption policy at the radio unit for efficient power management in the wireless communication network. Therefore, the radio unit may intelligently take decisions related to power consumption.

No. of Pages : 55 No. of Claims : 10

(54) Title of the invention : AN APPARATUS FOR INSPECTING A SUBMERGED STRUCTURE

(51) International classification :B63C11/00, B63C11/52,
B63G8/14

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to
Application Number :NA
Filing Date :NA

(62) Divisional to Application
Number :NA
Filing Date :NA

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(57) Abstract :

Present disclosure discloses an apparatus for inspecting submerged structures and a method of regulating operation of the apparatus thereof. The apparatus comprises a remote unmanned vehicle (ROV) (200) manoeuvrable underwater, and an inspection device (100) coupled to the ROV. The inspection device (100) includes a plunger (20) configured to reciprocate within the enclosure (10) with a predefined acceleration or deceleration. The plunger (20) at one end is in proximity of a surface of a submerged structure and the other end is connected to a biasing member (40). The biasing member (40) allows the plunger to move in a forward direction towards the submerged structure and retract the plunger to its initial position. Further, an actuator disposed ahead of the biasing member drives the plunger for striking the submerged structure. The rebound reading is correlated with compressive strength of the submerged structure using a standard correlation scale. Figure 3 is a representative figure.

No. of Pages : 28 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341009816 A

(19) INDIA

(22) Date of filing of Application :14/02/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHOD AND SYSTEM FOR MANAGING RADIO FREQUENCY SIGNAL COUPLING

(51) International classification :H03F0003240000, H04B0001040000, H03F0001020000, H04W0052020000, H03F0001320000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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Bangalore -----

(57) Abstract :

Approaches for managing radio frequency signal coupling are described. An apparatus may include a baseband processor with a plurality of transceiver chains including a plurality of transmit chains. Each of the plurality of transmit chains includes a power amplifier configured to receive an input signal from the baseband processor and amplify the input signal to generate an output signal having an output power. The transmit chain includes a coupler configured to generate a feedback signal based on the output signal. Based on a reference signal, the baseband processor identifies a set of coupling coefficients for each of the plurality of transmit chains, and pre-process the input signal to generate a modified input signal to be transmitted via each of the plurality of transmit chains such that the modified input signal nullifies signal impairment due to radio frequency signal coupling between any two transmit chains in the plurality of transmit chains.

No. of Pages : 44 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341013344 A

(19) INDIA

(22) Date of filing of Application :28/02/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : CHELATED PLANT NUTRIENT COMPOSITION AND METHOD FOR PREPARING NUTRITIONAL CHELATED PLANT NUTRIENT COMPOSITION

(51) International classification	:C10N0020000000, C05G0003000000, C07F0009400000, C05D0009020000, C05G0005230000	(71)Name of Applicant : 1)RAMCIDES CROPS SCIENCE PRIVATE LIMITED Address of Applicant :8th cross street NP, SIDCO Industrial Estate, Ambattur Chennai Tamil Nadu India 600098 Chennai -----
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(87) International Publication No	: NA	(72)Name of Inventor :
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(57) Abstract :

Disclosed is a highly soluble nutritional chelated plant nutrient composition. The nutritional chelated plant nutrient composition includes phosphonic acid or its derivatives ranging from 20 to 80% of the composition, nitrogenous compound (cation part) ranging from 10 to 70% of the composition, one or more macronutrients ranging from 0.5 to 70 % of the composition, one or more micronutrients ranging from 0.5 to 50 % of the composition, one or more trace elements ranging from 0.5 to 50 % of the composition, and one or more secondary nutrients ranging from 0.5 to 50 % of the composition. The present disclosure also relates to a method of preparing a chelated plant nutrient composition. Figure 1 will be the reference.

No. of Pages : 34 No. of Claims : 10

(54) Title of the invention : SYSTEM AND METHOD FOR ARTIFICIAL INTELLIGENCE GOVERNANCE PLATFORM FOR RESPONSIBLE ARTIFICIAL INTELLIGENCE

(51) International classification :G06Q0010060000, G06Q0010100000, G06Q0030000000, G06Q0020060000, G06Q0050260000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)PRIVASAPIEN TECHNOLOGIES PRIVATE LIMITED Address of Applicant :PRIVASAPIEN, 22, 1ST FLOOR, CLAYWORKS, CREATE CAMPUS, 11KM, ARAKERE BANNERGHATTA RD, OMKAR NAGAR, AREKERE, BENGALURU, KARNATAKA- 560076, INDIA BENGALURU ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)ABILASH SOUNDARARAJAN Address of Applicant :33 HIMAGIRI MEADOWS, GOTTIGERE, BANNERGHATTA ROAD, BANGALORE, KARNATAKA, INDIA- 560083 BANGALORE ----- ---

(57) Abstract :
An Artificial Intelligence Governance system, ensuring responsible AI utilization is disclosed. The system features a processing subsystem hosted on a server, orchestrating bidirectional communications across a network among numerous modules. A database module captures and manages diverse activities associated with interacting with Neural network with attention based AI models, while a user input module facilitates user engagement through API or UI. A configuration module defines organizational policies and regulatory requirements, ensuring responsible AI practices. An authentication module regulates user access based on roles, employing granular permission sets. A Neural network with attention based AI governance module uses a pre-trained AI model to classify risks in user prompts. A session management module establishes standardized API endpoints for seamless integration, and a dashboard module offers a summarized overview, governing responsible AI usage within the organization. This system provides transparency, and ethical AI practices across various organizational contexts. FIG. 1

No. of Pages : 38 No. of Claims : 14

(54) Title of the invention : SYSTEM AND METHOD FOR INPUT RISK IDENTIFICATION IN AN ARTIFICIAL INTELLIGENCE RESPONSIBLE GOVERNANCE PLATFORM

(51) International classification :G06Q0010060000, G06Q0020380000, G06Q0010100000, G06F0021600000, G06Q0040020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)PRIVASAPIEN TECHNOLOGIES PRIVATE LIMITED Address of Applicant :PRIVASAPIEN, 22, 1ST FLOOR, CLAYWORKS, CREATE CAMPUS, 11KM, ARAKERE BANNERGHATTA RD, OMKAR NAGAR, AREKERE, BENGALURU, KARNATAKA- 560076, INDIA BENGALURU ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)ABILASH SOUNDARARAJAN Address of Applicant :33 HIMAGIRI MEADOWS, GOTTIGERE, BANNERGHATTA ROAD, BANGALORE, KARNATAKA, INDIA- 560083 BANGALORE ----- ---

(57) Abstract :
A system (10) for input risk identification within an artificial intelligence responsible governance platform is disclosed. The system includes a processing subsystem (50) hosted on a server (60), the system enables bidirectional communications among multiple modules. The core component, a neural network with attention based AI risk classification module (70), employs various submodules including privacy, financial, health, intellectual property, technology, and confidential information, each meticulously trained and configured. Leveraging advanced machine learning techniques, such as natural language processing, pattern recognition, and contextual analysis, these submodules identify and categorize risks within user input or information flows. The annotation module (140) ensures clarity by annotating identified risks, while the feedback module (150) collects user insights for continuous improvement. The output module (160) communicates risk classification data to downstream risk mitigation modules, offering a comprehensive solution for managing and mitigating diverse risks associated with artificial intelligence interactions in accordance with organizational policies and regulatory requirements. FIG. 1

No. of Pages : 48 No. of Claims : 15

(54) Title of the invention : SYSTEM AND METHOD TO PREDICT, SUMMARIZE AND RECOMMEND RISKS IN ARTIFICIAL INTELLIGENCE RESPONSIBLE GOVERNANCE PLATFORM

(51) International classification :G06Q0010060000, G06Q0020400000, G06F0021570000, G06N0007000000, G06Q0020380000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)PRIVASAPIEN TECHNOLOGIES PRIVATE LIMITED Address of Applicant :PRIVASAPIEN, 22, 1ST FLOOR, CLAYWORKS, CREATE CAMPUS, 11KM, ARAKERE BANNERGHATTA RD, OMKAR NAGAR, AREKERE, BENGALURU, KARNATAKA- 560076, INDIA BENGALURU ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)ABILASH SOUNDARARAJAN Address of Applicant :33 HIMAGIRI MEADOWS, GOTTIGERE, BANNERGHATTA ROAD, BANGALORE, KARNATAKA, INDIA- 560083 BANGALORE ----- ---

(57) Abstract :
A system (10) to predict, summarize and recommend risks in artificial intelligence responsible governance platform is disclosed. The core module includes the risk analysis module to analyze input prompts using a Neural network with attention based artificial intelligence model. The risk analysis module further includes a domain level prediction module to predict the nature, purpose, scope and context of the input prompts, a time context prediction module to predict the time related aspects, a sensitivity prediction module to recognize and filter the occurrence of sensitive information, a likelihood and severity prediction module to evaluate and grade risks and its probability, a risk prediction module to finalize representation of selected risks, customize and share a predicted risk recommendation context to a user. Further, an output module configured to visualize summary of the identified risk, transfer the summary, recommended contextual risks to a downstream risk mitigation module. FIG. 1

No. of Pages : 41 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341026564 A

(19) INDIA

(22) Date of filing of Application :10/04/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND METHOD TO TREAT IDENTIFIED SECURITY RISK TO ARTIFICIAL INTELLIGENCE PLATFORM

(51) International classification :G06Q0010060000, G06F0021620000, G16H0050300000, B60L0003000000, B60W0050140000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The system (10) includes a processing subsystem including a context based risk treatment selection module to choose treatment based on potential adversarial attack patterns. The processing subsystem includes a synthetic data based sensitive attribute modification module to replace identified sensitive attributes with a synthetic prompt. The processing subsystem includes a generative artificial intelligence-based input data optimization module to create a new prompt. The processing subsystem includes a treatment visualization module to help user visualize the attack mitigation. The processing subsystem includes a human in loop validation module to enable a user to understand the potentially adversarial risk present in the input data. The processing subsystem includes a residual risk acceptance module to enable validation of the identified adversarial attack and corresponding mitigation. The processing subsystem includes a consent capture module to enable organizations to capture the informed consent. The processing subsystem includes a recording module to store information. The processing subsystem includes a response display module to display the output.

FIG. 1

No. of Pages : 32 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341026568 A

(19) INDIA

(22) Date of filing of Application :10/04/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM FOR MULTI MODAL AGGREGATION IN A GOVERNANCE PLATFORM AND A METHOD THEREOF

(51) International classification :G10L0015220000, G06F0011340000, G06F0003048100, G06Q0030000000, G06Q0050000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :

A system (100) for multi modal aggregation and governance platform is provided. The system includes an identity protection module (114) providing a plurality of identities of a user at a plurality of downstream modules, convert them into a unified user identity and proxy the unified identity, a query receiving module (116) receives a plurality of queries from the user and classify them into one or more categories, a governance module (118) understands a context of the multimodal queries, control user prompt or chain of thought prompts, execute the multimodal queries via a responsible artificial intelligence model (120), control the queries or prompts, generate reports related to the risks involved in the input query and the response outputs, query and response distribution module (122) distributes executed the plurality of multimodal queries to the plurality of downstream generative AI modules (140), including translation and select a foremost response. FIG. 1

No. of Pages : 34 No. of Claims : 10

(54) Title of the invention : A SYSTEM FOR PRIVACY PROTECTED IDENTITY AND PROFILING PREVENTION AND A METHOD THEREOF

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number :H04L0009320000, G06F0021620000, H04L0009080000, G06Q0020380000, G06Q0040000000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)PRIVASAPIEN TECHNOLOGIES PRIVATE LIMITED Address of Applicant :PRIVASAPIEN, 22, 1ST FLOOR, CLAYWORKS, CREATE CAMPUS, 11KM, ARAKERE BANNERGHATTA RD, OMKAR NAGAR, AREKERE, BENGALURU, KARNATAKA- 560076, INDIA BENGALURU ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)ABILASH SOUNDARARAJAN Address of Applicant :33 HIMAGIRI MEADOWS, GOTTIGERE, BANNERGHATTA ROAD, BANGALORE, KARNATAKA, INDIA- 560083 BANGALORE ----- ---

(57) Abstract :
A system (100) for privacy protected identity and profiling prevention in a responsible artificial intelligence ecosystems is disclosed. The system includes a user registration module (114) to register a user with a unique identity and authenticate the user, a generative artificial intelligence ecosystem integration module (116) receives sensitive information, provides privacy protected aggregate identity, accepts queries, connects the registered user with a plurality of downstream modules, performs a privacy threat modelling, comprehends a plurality of sensitive identities, and aggregates usage of a user's data, a profiling prevention module (120) identifies general sensitive information, annotate the identified information, a pseudo-identity mapping module (122) generates tokenized data and pseudonymized data for encryption and decrypting information, a secure key management module (124) generates a secure key for generating shares of the secure key, and a notification module (126) notifies the user regarding a database usage of the user by a third party. FIG. 1

No. of Pages : 43 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341026577 A

(19) INDIA

(22) Date of filing of Application :10/04/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND METHOD FOR PARENTAL CONTROL FOR GENERATIVE AI GOVERNANCE

(51) International classification :H04N0021450000, H04N0021475000, H04N0021454000, G06F0021620000, H04N0007160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A system (10) for a parental control in a generative artificial intelligence governance platform is disclosed. The core modules include the parental requirement capture module to allow a parent to specify prerequisite conditions, harm identification, regulatory requirements, acceptable automated risk mitigation and alert services. A context based query assessment module to understand the context of a prompt, compare it against the configured parental requirement and quantify risk by interacting with subsequent questions. The query treatment module to identify risks associated with the prompt. Further, the query treatment module is configured to mitigate the risks from the child perspective based on a context of the intended action and parental requirement defined. The child prompt engineering module is configured to monitor the query, review the response and modify or block the response based on the policy defined. A parental alert module to alert the parent of the risk thereby ensuring parental control. FIG. 1

No. of Pages : 36 No. of Claims : 11

(54) Title of the invention : SYSTEM AND METHOD TO EVALUATE RISKS ASSOCIATED WITH AN ARTIFICIAL INTELLIGENCE PLATFORM AND GOVERNANCE

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number :G06Q0010060000, G01C0021360000, G16H0050300000, G06F0021620000, G06Q0020380000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)PRIVASAPIEN TECHNOLOGIES PRIVATE LIMITED Address of Applicant :PRIVASAPIEN, 22, 1ST FLOOR, CLAYWORKS, CREATE CAMPUS, 11KM, ARAKERE BANNERGHATTA RD, OMKAR NAGAR, AREKERE, BENGALURU, KARNATAKA- 560076, INDIA BENGALURU ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)ABILASH SOUNDARARAJAN Address of Applicant :33 HIMAGIRI MEADOWS, GOTTIGERE, BANNERGHATTA ROAD, BANGALORE, KARNATAKA, INDIA- 560083 BANGALORE ----- ---

(57) Abstract :
A system (10) to evaluate one or more risks associated with an artificial intelligence platform and governance is provided. The processing subsystem (50) includes a user input module (90) configured to receive input prompts from a user. The processing subsystem includes a processing module (100) to convert the input prompts into vectors. The processing subsystem includes a context evaluation module (110) to evaluate the artificial intelligence model adversarial attack signatures to generate an ethical attack score, security attack score and privacy attack score. The processing subsystem includes a summarization module to evaluate a probability score based on the ethical attack score, the security attack score and the privacy attack score. The summarization module is to identify an attack based on the probability score. The processing subsystem includes a flagging module to render the attack identified in a user interface. The processing subsystem includes a human feedback module to communicate feedbacks. FIG. 1

No. of Pages : 35 No. of Claims : 10

(54) Title of the invention : A SYSTEM FOR PRESCRIPTIVE AND PROTECTED PROMPT ENGINEERING AND A METHOD THEREOF

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number :G06Q0010060000, G06N0007000000, G06Q0040020000, G06F0021620000, G06F0021550000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)PRIVASAPIEN TECHNOLOGIES PRIVATE LIMITED Address of Applicant :PRIVASAPIEN, 22, 1ST FLOOR, CLAYWORKS, CREATE CAMPUS, 11KM, ARAKERE BANNERGHATTA RD, OMKAR NAGAR, AREKERE, BENGALURU, KARNATAKA- 560076, INDIA BENGALURU ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)ABILASH SOUNDARARAJAN Address of Applicant :33 HIMAGIRI MEADOWS, GOTTIGERE, BANNERGHATTA ROAD, BANGALORE, KARNATAKA, INDIA- 560083 BANGALORE ----- ---

(57) Abstract :
A system (100) for prescriptive and protected prompt engineering for a generative artificial intelligence is disclosed. The system includes processing subsystem (108) which includes a user requirement input module (114) to receive one or more first queries prompt from a user, an interactive query module (116) suggests a plurality of second queries prompt to the user, a context gathering module (120) collects information related to a context of the input query, an objective gathering module (122) collect objectives of the first input queries, an assumption validation module (124) validates the selected option for the prompts, a prompt creation module (126), an expected utility validation module (128) validates the utility of the prompt, a risk assessment and mitigation module (130) understands risk of the input prompts and mitigation related to the prompts, and a prompt translation module (132) translates the selected prompt based on user's language preference. FIG. 1

No. of Pages : 32 No. of Claims : 9

(54) Title of the invention : SYSTEM AND METHOD TO ALTER QUERIES PROVIDED TO AN ARTIFICIAL INTELLIGENCE PLATFORM FOR PRESERVING PRIVACY

(51) International classification :G06F0021620000, G06F0021320000, G06F0016245500, H04L0009000000, H04W0012020000 (86) International Application No :NA (86) International Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA (61) Patent of Addition Filing Date :NA (62) Divisional to Application Number :NA (62) Divisional to Filing Date :NA	(71)Name of Applicant : 1)PRIVASAPIEN TECHNOLOGIES PRIVATE LIMITED Address of Applicant :PRIVASAPIEN, 22, 1ST FLOOR, CLAYWORKS, CREATE CAMPUS, 11KM, ARAKERE BANNERGHATTA RD, OMKAR NAGAR, AREKERE, BENGALURU, KARNATAKA- 560076, INDIA BENGALURU ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)ABILASH SOUNDARARAJAN Address of Applicant :33 HIMAGIRI MEADOWS, GOTTIGERE, BANNERGHATTA ROAD, BANGALORE, KARNATAKA, INDIA- 560083 BANGALORE ----- ---

(57) Abstract :
A system to alter queries provided to an artificial intelligence platform for preserving privacy is disclosed. The system includes a query assessment module to identify sensitive attributes in prompts, a query annotation module to annotate them and a context and sensitivity based query paraphrasing module to generate synthetic attributes along with a privacy budget module to alter identified numerical values for creating synthetic prompt. The system includes a query output module to receive the synthetic privacy preserved query from upstream and forward it to downstream neural network with attention based language model and a query response origin module to receive an output generated by the artificial intelligence platform upon receiving the query. The system includes a query response assessment module to identify the sensitive synthetic attributes, a response privacy and context preservation module to modify the output to restore original entities and an output module to render the output. FIG. 1

No. of Pages : 33 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341026680 A

(19) INDIA

(22) Date of filing of Application :11/04/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : BULLET CONTAINMENT TRAP SYSTEM

(51) International classification :F41J0013000000, F41H0005040000, F41J0013020000, B01D0045080000, B67C0011000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

TITLE: BULLET CONTAINMENT TRAP SYSTEM 7. ABSTRACT The disclosed invention is a bullet containment trap system (10) featuring an array of components designed for safety and efficiency in firearms training environments. Central to the system is a funnel structure (2) crafted from armor-grade steel plates (3) leading into a throat (4), guiding projectiles into a deceleration chamber (5) outfitted with modular cassettes (12) for slowing bullets. The system is stabilized by a support structure (6) that also allows adjustment of the funnel plates for optimal bullet capture. Additionally, a lead exit (8) ensures the collection of fragments into barrels (7) for easy disposal. A key innovation is the trajectory routing mechanism, integrating a modular funnel structure (32) at the rear, complemented by impact plates (34), side plates (35), and outer plates (36) at strategic angles, ensuring precise bullet deflection and minimizing edge impacts, thus enhancing the trap's overall effectiveness and durability. The Figure associated with the Abstract is Fig 1.

No. of Pages : 21 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341026733 A

(19) INDIA

(22) Date of filing of Application :10/04/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A method of mutation to eliminate the toxic phorbol esters in Jatropha curcas L.

(51) International classification :C12N0015010000, C12Q0001685800, A01H0001000000, G16B0020200000, A23L0011300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Abstract A method of mutation to eliminate the toxic phorbol esters in Jatropha curcas L. [0060] The present invention discloses a method of mutation to generate functional genic sequence variants in order to eliminate toxic phorbol esters (PE) in Jatropha curcas L. The method of mutation involves collecting germplasm of non-toxic Jatropha cultivars and validating for absence of phorbol esters. The gene(s) responsible for PE biosynthesis is identified and amplified from the collected germplasm. The identified mutational sequence variant(s) is converted into easily usable TaqMan marker. The mutational sequence variant(s) is used as a molecular marker aiding in distinguishing toxic and edible non-toxic genotypes of Jatropha curcas L. for breeding purposes resulting in selection and breeding of high yielding edible non-toxic Jatropha curcas L. cultivars. The method of mutation is highly efficient and cost effective.

No. of Pages : 23 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341027941 A

(19) INDIA

(22) Date of filing of Application :17/04/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN ELBOW ROM (RANGE OF MOTION) ANALYZER SYSTEM AND A METHOD THEREOF

(51) International classification :H04L0047110000, H04L0047200000, A41D0013080000, H01L0027112000, A41D0013050000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT TITLE: AN ELBOW ROM (Range Of Motion) ANALYZER SYSTEM AND A METHOD THEREOF An elbow ROM (Range of Motion) analyzer system (100) for a user, said system (100) comprises a repository (102), a display device (104), a plurality of sensors (106), a recording unit (108), a push button (110) and a comparison unit (112). The repository (102) stores a plurality of animated tutorial videos and a plurality of elbow movement parameters. The display device (104) plays a selected animated tutorial video which the user views at the start of the session and the user follows along with the video. The plurality of sensors senses a plurality of elbow movement parameters of the user and the recording unit (108) records that. upon push button (110) triggering an end of the session. The comparison unit (112) processes recorded data and generates a plurality of results.

No. of Pages : 22 No. of Claims : 10

(54) Title of the invention : A DEVICE FOR INCREASING MOBILITY OF AN ARM OF A SUBJECT

(51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date	(71)Name of Applicant : 1)SRM INSTITUTE OF SCIENCE AND TECHNOLOGY Address of Applicant :Kattankulathur, Chennai-603203, Tamil Nadu, India Chennai ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)PORKODI JAYAVEL Address of Applicant :SRM Institute of Science and Technology, Kattankulathur, Chennai-603203, Tamil Nadu, India Chennai ----- 2)ASHOKKUMAR DEVARAJ Address of Applicant :SRM Institute of Science and Technology, Kattankulathur, Chennai-603203, Tamil Nadu, India Chennai ----- 3)VARSHINI KARTHIK Address of Applicant :SRM Institute of Science and Technology, Kattankulathur, Chennai-603203, Tamil Nadu, India Chennai ----- 4)JAISON JACOB MATHUNNY Address of Applicant :SRM Institute of Science and Technology, Kattankulathur, Chennai-603203, Tamil Nadu, India Chennai ----- 5)KANCHANA DEVANATHAN Address of Applicant :SRM Institute of Science and Technology, Kattankulathur, Chennai-603203, Tamil Nadu, India Chennai ----- 6)SURESH JOTHI Address of Applicant :SRM Institute of Science and Technology, Kattankulathur, Chennai-603203, Tamil Nadu, India Chennai -----

(57) Abstract :
ABSTRACT A DEVICE FOR INCREASING MOBILITY OF AN ARM OF A SUBJECT The present disclosure envisages a device (100) for increasing mobility of an arm (90) of a subject comprising a clamp (12), a base plate (10), an arm plate (20), and a drive unit (80). The clamp is removably secured to a surface. The base plate is rotatably displaced about a first pivot defined on the clamp, to allow rotation of the base plate about the first pivot about an operative vertical axis. The arm plate is rotatably attached to a second pivot defined on the base plate. The arm plate is configured to support the arm of the subject, to allow rotation of the arm plate about the second pivot about an operative horizontal axis. The drive unit is coupled with wheels attached to the base plate, and with an interconnecting link (60) attached to arm plate, and is configured to displace the base plate and the arm plate.

No. of Pages : 23 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341028595 A

(19) INDIA

(22) Date of filing of Application :19/04/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A 4D PRINTED HYDROGEL, METHOD OF PREPARATION AND IMPLEMENTATIONS THEREOF

(51) International classification :A61L0027520000, A61K0009060000, A61B0090000000, A61B0008000000, A61L0015600000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT A 4D PRINTED HYDROGEL, METHOD OF PREPARATION AND IMPLEMENTATIONS THEREOF The present disclosure provides a single-component hydrogel comprising a photo-crosslinked polymer matrix having anisotropic photo-crosslinking density, wherein the matrix comprises, at least one layer of a component obtained using a first composition comprising a functionalized photo-crosslinking polymer; a photo-initiator; and a secondary polymer, wherein the secondary polymer is physically entangled with the functionalized photo-crosslinking polymer in the photo-crosslinked polymer matrix. The present disclosure also provides a dual component hydrogel, which comprises at least one layer of a first component obtained using a first composition and at least one layer of a second component obtained using a second composition. Both the single and dual component hydrogels exhibit bidirectional shape morphing property. The present disclosure further provides kits and methods of preparing single and dual component hydrogels.

No. of Pages : 73 No. of Claims : 31

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341029584 A

(19) INDIA

(22) Date of filing of Application :24/04/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN APPARATUS FOR COOKING GRAINS

(51) International classification :A61K0036899000, B01D0035280000, A47J0043220000, A23L0007100000, A47J0031060000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT AN APPARATUS FOR COOKING GRAINS The present disclosure relates to an apparatus for cooking grains (160). The present disclosure envisages an apparatus (200) having an apparatus for cooking comprising an outer vessel (140) and an inner vessel (100). The outer vessel (140) is configured to contain water. The inner vessel (100) is configured to be nestled in the outer vessel (140). The inner vessel (100) has dimensions less than the outer vessel (140). The inner vessel (100) is defined by a body (120), a perforated base (110) and a handle (115) extending from the perforated base (110). The handle (115) is operatively upwards for placing or removing said inner vessel (100) from said outer vessel (140) into two operative configurations of said apparatus (200). The inner vessel (100) is configured to be loaded with grains (160) for cooking. The perforation inside the base (110) being of a predetermined size less than the dimensions of the grains (160) to be cooked and the outer vessel (140) being configured to be heated to heat said water and perform cooking of said grains (160) loaded inside water. The apparatus (200) is an energy-efficient product.

No. of Pages : 18 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341032946 A

(19) INDIA

(22) Date of filing of Application :10/05/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEMS AND METHODS FOR EFFICIENT COORDINATION IN A NETWORK FOR ENERGY MANAGEMENT

(51) International classification :H04W0052020000, H04W0088080000, H04W0076100000, H04W0088060000, H04L0041500000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to :NA Application Number :NA Filing Date :NA (62) Divisional to :NA Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)HFCL Limited Address of Applicant :HFCL Ltd, 10th Floor, Embassy Tech Village, Outer Ring Road Trillium I & J Block, Village Varthur Hobli, Devarabeesanahalli, Bangalore - 560103, Karnataka, India. Bangalore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)MONDAL, Subhas Chandra Address of Applicant :HFCL Ltd, 10th Floor, Embassy Tech Village, Outer Ring Road Trillium I & J Block, Village Varthur Hobli, Devarabeesanahalli, Bangalore - 560103, Karnataka, India. Bangalore ----- 2)VALLURI, Satyanarayana Murthy Address of Applicant :HFCL Ltd, 10th Floor, Embassy Tech Village, Outer Ring Road Trillium I & J Block, Village Varthur Hobli, Devarabeesanahalli, Bangalore - 560103, Karnataka, India. Bangalore -----

(57) Abstract :

Systems and methods for efficient coordination in a network for power management are described. In particular, the system (for example, a radio unit) monitors a downlink traffic at the radio unit in the network, and determines a low traffic state of the radio unit. Further, the system identifies a power consumption policy for the radio unit to enter a low power state, and communicates the power consumption policy and a set of parameters associated with the power consumption policy to a distributed unit and/or a management unit via an M-plane or a C-plane communication. Further, the system receives an offset time from the distributed unit based on the set of parameters. The system applies the power consumption policy at the radio unit on completion of the offset time. Therefore, by selecting an appropriate mode of communication, the systems and methods enable efficient coordination in the network.

No. of Pages : 71 No. of Claims : 18

(54) Title of the invention : A PROJECTILE DETECTION SYSTEM WITHIN A CONTROLLED ZONE

(51) International classification :G01J5/02, G01J5/04, G01J5/08 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)ZEN TECHNOLOGIES LIMITED Address of Applicant :B-42, Industrial Estate, Sanath Nagar, Hyderabad, Telangana India, 500018 Email: ipcell@zentechnologies.com Tel: +91-040-23813281, 23812894, 23813294, 23814894 Hyderabad ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)KISHORE DUTT ATLURI Address of Applicant :B-42, Industrial Estate, Sanath Nagar, Hyderabad, Telangana India, 500018 Hyderabad ----- --

(57) Abstract :
Title: A PROJECTILE DETECTION SYSTEM WITHIN A CONTROLLED ZONE 7. ABSTRACT The disclosure introduces a projectile detection system (100) designed for controlled zone (10). The system (100) comprises a device (1) affixed to supporting panels (2), preinstalled with a self-sealed target module (3), for accurately detecting projectile hit positions. The device (1) includes first (4) and second infrared (IR) units (5) strategically positioned around the corners of the supporting panels (2) to achieve maximum coverage of the target area. An adjustable aperture shutter means (9) and optical lens (12) enhances accuracy and beam detection. The IR units, supported by adjustable mechanisms, enable precise alignment, and coordinated operations through a controlled module (6). This comprehensive system (100) offers precise targeting and data acquisition, enhancing functionality and accuracy for infrared-based measurements and observations in controlled zone (10). The figure associated with abstract is Fig 1.

No. of Pages : 30 No. of Claims : 10

(54) Title of the invention : SYSTEMS AND METHODS FOR EFFICIENT TIME MULTIPLEXED DIGITAL BEAMFORMING

(51) International classification :H04B0007060000, H04L0047500000, H04W0072040000, H04B0007080000, H04B0007185000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)HFCL Limited Address of Applicant :HFCL Ltd, 10th Floor, Embassy Tech Village, Outer Ring Road Trillium I & J Block, Village Varthur Hobli, Devarabeesanahalli, Bangalore - 560103, Karnataka, India. Bangalore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)BHATT, Prasad Venkatesh Address of Applicant :HFCL Ltd, 10th Floor, Embassy Tech Village, Outer Ring Road Trillium I & J Block, Village Varthur Hobli, Devarabeesanahalli, Bangalore - 560103, Karnataka, India. Bangalore ----- 2)BHATTACHARYYA, Santanu Address of Applicant :HFCL Ltd, 10th Floor, Embassy Tech Village, Outer Ring Road Trillium I & J Block, Village Varthur Hobli, Devarabeesanahalli, Bangalore - 560103, Karnataka, India. Bangalore ----- 3)HOTA, Saurabh Address of Applicant :HFCL Ltd, 10th Floor, Embassy Tech Village, Outer Ring Road Trillium I & J Block, Village Varthur Hobli, Devarabeesanahalli, Bangalore - 560103, Karnataka, India. Bangalore -----

(57) Abstract :
Systems and methods for efficient time multiplexed digital beamforming in a network are described. In particular, the system (for example, a radio unit) receives a C-plane packet from a fronthaul interface and stores corresponding control information of the C-plane packet at a scheduler, stores beam weight information in one or more beam weight buffers, receives and stores data samples in data input buffers, receives processing information from a timer, receives one or more scheduling instructions for at least two of the data input buffers from the scheduler, sequentially retrieves the data samples from the at least two of the data input buffers based on the one or more scheduling instructions, and processes the retrieved data samples from the at least two of the data input buffers for beamforming within a single symbol duration based on synchronization of the one or more scheduling instructions.

No. of Pages : 59 No. of Claims : 31

(54) Title of the invention : AN INTELLIGENT RECOMMENDER SYSTEM FOR QUANTUM COMPUTATIONS

(51) International classification :G06N0010000000, G06N0003040000, G06N0003080000, G06N0020000000, G06F0011070000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)QUANTUMSTATS AI GLOBAL PRIVATE LIMITED Address of Applicant :CAPITAL PARK, Suite 305B, Image Gardens Rd, VIP Hills, Madhapur, Hyderabad, Telangana 500081 ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Avinash Chalumuri Address of Applicant :CAPITAL PARK, Suite 305B, Image Gardens Rd, VIP Hills, Madhapur, Hyderabad, Telangana 500081 ----- 2)Mr. Bibhav Raj Address of Applicant :CAPITAL PARK, Suite 305B,Image Gardens Rd, VIP Hills,Madhapur, Hyderabad, Telangana 500081. Hyderabad ----- 3)Gopika Chaganti Address of Applicant :CAPITAL PARK, Suite 305B,Image Gardens Rd, VIP Hills,Madhapur, Hyderabad, Telangana 500081 Hyderabad ----- 4)Mr. Sanjay Chittore Address of Applicant :CAPITAL PARK, Suite 305B,Image Gardens Rd, VIP Hills,Madhapur, Hyderabad,Telangana 500081. Hyderabad -----

(57) Abstract :

7. ABSTRACT The present invention is a system for quantum encoding template recommendations. The system comprises a cloud-based service and multiple modules, including data classification (102), quantum data encoding templates (104), quantum application mapping (106), hardware recommendations (108), error correction, hybrid quantum-classical computing (112), resource estimation (114), and algorithm benchmarking (116). The method begins with advanced machine learning, employing deep neural networks to classify diverse data types. The quantum data encoding templates module (104) tailors' templates for different modalities, allowing the transformation of classical data into quantum states represented by qubits. Quantum algorithms are then mapped to specific data types, enabling effective problem-solving in areas such as optimization and cryptography. The system recommends quantum hardware platforms based on factors like coherence times and error rates, incorporating quantum error correction and noise mitigation (110) techniques. The figure associated with abstract is Fig. 1.

No. of Pages : 25 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341056674 A

(19) INDIA

(22) Date of filing of Application :22/08/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A HYBRID COMPOSITE MATERIAL WITH HIGH IMPACT RESISTANCE AND A METHOD OF FABRICATION THEREOF

(51) International classification :C08L0051040000, C22C0038480000, C22C0038500000, C22C0038460000, B29C0070220000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(72)Name of Inventor :
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(57) Abstract :
ABSTRACT A Hybrid Composite Material with High Impact Resistance and a Method of Fabrication thereof Present invention discloses a hybrid composite material with high impact resistance (C) and a method of fabrication thereof. It discloses a lightweight hybrid composite material that can provide protection from severe impact (C1) or protection from projectiles (C2) to living or non-living objects such as buildings, vehicles, humans etc. The hybrid composite material is a combination of layers of two or more composite materials either with a core material or without . The layer facing the impact or projectiles (C11/ C21) is composed of a composite with impact resistance. The layer facing the object to be protected (C13/ C22) comprises of thermoplastic composite. The invention provides for method of fabrication of said hybrid composite material to include vacuum bagging, assembly of layers etc. The hybrid composite material with high impact resistance (C) is cost effective, portable, lightweight and has potential applications in mining industry, aviation, space, civil infrastructures etc. Figure 1 and 10

No. of Pages : 80 No. of Claims : 62

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :29/09/2023

(21) Application No.202341065476 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : GLASS FABRICATION USING PHOSPHATE FOR VARIETY OF OPTICAL APPLICATIONS

(51) International classification :C09K0011770000, C03C0003160000, C03C0004120000, H01S0003170000, C03C0004000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

GLASS FABRICATION USING PHOSPHATE FOR VARIETY OF OPTICAL APPLICATIONS The present disclosure describes the phosphate glass with telluride material has a composition of P_2O_5 : TeO_2 : BaF_2 : ZnO : $LiCl$ and contains Nb_2O_5 : CdO : Ag_2O with transition oxide NiO : CuO : MnO_2 dopant ions of a rare earth metal La_2O_3 : Tm_2O_3 : Eu_2O_3 . The thermal, optical, and luminescence properties of the fabricated glasses were investigated. The fabricated glasses are with high-quality, some of this fabricated glasses allows using in bandpass filters in the UV and VIS region especially red, and also fabricated glasses doped with rare earth ions RE uses in solid lasers, optical amplifiers, and optical coherence tomography (OCT). The fabricated glasses has low OH, homogenous, and the luminescence performance is good. The fabricated glasses co-doped Tm_2O_3 / Eu_2O_3 led to the enchantment of the optical telecommunication band broadband NIR photo luminescence emission. Moreover, the fabricated glasses doped with Mn_2O_3 / Ag_2O / Pr_2O_3 , Eu_2O_3 / Tm_2O_3 is superior's materials for wideband near-infrared phosphors which candidate for LED-based light sources and optical fiber application at 0.45 and 1.84 μ m. FIG. 1

No. of Pages : 30 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341074076 A

(19) INDIA

(22) Date of filing of Application :31/10/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEMS AND METHODS FOR AUTOMATIC CALIBRATION OF RADIO FREQUENCY CHAINS IN A BASE STATION

(51) International classification :H04L0005000000, H04W0072040000, H04L0005140000, H04B0017318000, H02J0003380000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)HFCL Limited Address of Applicant :HFCL Ltd, 10th Floor, Embassy Tech Village, Outer Ring Road Trillium I & J Block, Village Varthur Hobli, Devarabeesanahalli, Bangalore - 560103, Karnataka, India. Bangalore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)AGGARWAL, Parag Address of Applicant :HFCL Ltd, 10th Floor, Embassy Tech Village, Outer Ring Road Trillium I & J Block, Village Varthur Hobli, Devarabeesanahalli, Bangalore - 560103, Karnataka, India. Bangalore ----- 2)MONDAL, Subhas Chandra Address of Applicant :HFCL Ltd, 10th Floor, Embassy Tech Village, Outer Ring Road Trillium I & J Block, Village Varthur Hobli, Devarabeesanahalli, Bangalore - 560103, Karnataka, India. Bangalore -----

(57) Abstract :

Systems and methods for efficient automatic calibration of radio frequency (RF) chains in a base station 300 are described. In particular, the method includes monitoring a value of a number of resource block set by a higher layer in the base station 300, updating a configuration of each of a plurality of RF transmit chains and/or feedback chains associated to the base station based on the value of the number of resource block, monitoring power at RF components in the base station 300, and based on the monitored power, automatically calibrating the RF transmit chains and/or feedback chains at a start phase and an operating phase of the base station 300. The systems and methods are implemented for both time division duplex (TDD) and frequency division duplex (FDD) modes.

No. of Pages : 61 No. of Claims : 18

(54) Title of the invention : A DEVICE FOR USER’S SAFETY

(51) International classification :A61B0005150000, A61M0005310000, A61M0005280000, B01L0003000000, A61J0001200000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT A DEVICE FOR USER’S SAFETY The sole of a footwear (125) includes a wearable safety device (100), comprises piezo-electric sensors (108) capture kinetic energy from user movement, converting it into electrical energy for charging the rechargeable battery (102), while a dynamo (106) supplements this charge by generating electricity when the user kicks a predator. An AI-based circuit (104) vigilantly monitors battery levels, triggering a discharging cycle upon reaching a predefined threshold. This discharge activates a shock-generating module (155), drawing power from the battery (102) to administer an electric shock via an output pipe (112) lining the footwear sole's (125) periphery. This system harmonizes user motion and direct predator defense, culminating in an advanced safety solution discreetly embedded within the footwear.

No. of Pages : 36 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341087938 A

(19) INDIA

(22) Date of filing of Application :22/12/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT ENABLED ROBOTIC CROP PLANNING AND SUGGESTING SYSTEM

(51) International classification :A61B0034100000, A61B0034300000, G06Q0050020000, G06Q0010060000, G06Q0010040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT Title: Iot Enabled Robotic Crop Planning And Suggesting System. An IoT enabled robotic crop planning and suggesting system is disclosed. Said robot is configured to independently navigate its surroundings, create detailed maps of said given land area, provide recommendations pertaining to the optimal number of crops to cultivate in a specific area, and predict the most suitable crop to cultivate/grow in said area, by taking into account the soil and atmospheric conditions, and periodically assess soil nutrient levels and suggest appropriate supplements for any deficiencies. FIG.1

No. of Pages : 21 No. of Claims : 6

(54) Title of the invention : ISOLATION AND CHARACTERIZATION OF FERMENTED RED RICE WATER BACTERIA

(51) International classification :A61K0036899000, A61K0035120000, A23L0007196000, A61K0036062000, A61K0039000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Mr. GONNATH .B Address of Applicant :Sri Shakthi Institute of Engineering & Technology,Coimbalore-641062 ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr. BALAMURUGAN A Address of Applicant :Sri Shakthi Institute of Engineering & Technology,Coimbalore-641062 ----- 2)Mr. Gowtham N Address of Applicant :Sri Shakthi Institute of Engineering & Technology,Coimbalore-641062 ----- 3)Ms. Vyshali.s Address of Applicant :Sri Shakthi Institute of Engineering & Technology,Coimbalore-641062 ----- 4)Mr.Yogeshwaran S Address of Applicant :Sri Shakthi Institute of Engineering & Technology,Coimbalore-641062 ----- 5)Mr. GOPINATH. B Address of Applicant :Sri Shakthi Institute of Engineering & Technology,Coimbalore-641062 -----

(57) Abstract :

This study focuses on the isolation and characterization of bacteria from fermented rice. A detailed characterization of fermented rice water strains and evaluating their agricultural applications are done. The isolation and characterization of fermented rice bacteria in agriculture are beneficial as they often exhibit properties such as nitrogen fixation, phosphate solubilisation, and production of plant growthpromoting substances. Fermented rice water is obtained after soaking rice in water and allowing it to undergo a fermentation process. We use Kerala rice known as Rose matra rice. This project includes extraction, isolation, and detailed analysis of bioactive compounds present in fermented rice water. Fermented rice water bacteria helps in soil fertility and plant growth». Fermented rice water contains bacteria such as lactic acid bacteria and yeast which helps in promoting a healthy balance of micro flora on the skin. This can enhance skin barrier function and overall skin health. Incorporating fermented rice water into cosmetic products harnesses these benefits, offering a natural and holistic approach to skin care. Fermented rice water can help identify beneficial compounds, such as antioxidants and peptides, contributing to potential skincare benefits. Understanding its chemical composition helps in exploring it's moisturizing, anti-inflammatory, and skin barrier-enhancing properties. In addition it _allows for quality control in cosmetic formulations, promoting the development of effective, safe and eco-friendly skincare products. The isolation of probiotic microbes from the fermented rice water can be done by culturing the rice water in medium. The microbes can be characterized and identified for the further utilization in the field of agriculture, cosmetics, food technology.

No. of Pages : 5 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341090219 A

(19) INDIA

(22) Date of filing of Application :30/12/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS OF PREPARATION OF COLLAGEN FIBRIN COMPOSITE FILM AS WOUND DRESSING MATERIAL AND PRODUCT THEREOF

(51) International classification	:A61L0026000000, A61K0038390000, A61L0024100000, G06Q0050200000, A61L0015320000	(71)Name of Applicant : 1)MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH Address of Applicant :NO.12, VEMBULIAMMAN KOIL STREET WEST K.K. NAGAR CHENNAI CHENNAI TAMIL NADU INDIA 600 078 Chennai -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
(61) Patent of Addition to Application Number	:NA	1)DR.V RAMNATH
Filing Date	:NA	Address of Applicant :PRINCIPAL FACULTY OF ALLIED HEALTH SCIENCES, MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH, NO. 1, BANGALORE HIGH ROAD, ENATHUR, KANCHIPURAM CHENNAI TAMIL NADU INDIA 631 552 Chennai -----
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

TITLE: A PROCESS OF PREPARATION OF COLLAGEN FIBRIN COMPOSITE FILM AS WOUND DRESSING MATERIAL AND PRODUCT THEREOF APPLICANT: MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH APPLICATION NUMBER: 202341090219 DATED: 30/12/2023 ABSTRACT The present invention discloses a process of preparation of collagen fibrin composite film for wound dressing comprises of following steps; a. preparation of collagen solution comprises of mixing collagen in 10% Lactic acid and stirring to form collagen solution; b. preparation of Fibrin solution comprises of mixing Fibrin in 0.05% trypsin-EDTA solution and stirring to form Fibrin solution; c. preparation of collagen fibrin composite film comprises of mixing the collagen solution and Fibrin solution along with metronidazole and graphene oxide nanoparticles and stirring followed by subjecting to solvent casting to form a film and treating the film with 0.5M of glutaraldehyde solution to form collagen fibrin composite film. The present invention also discloses a collagen fibrin composite film for wound dressing prepared by the process as described above.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341090222 A

(19) INDIA

(22) Date of filing of Application :30/12/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS OF PREPARATION OF GELATIN ALGINATE CHITOSAN COMPOSITE FILM AS WOUND DRESSING MATERIAL AND PRODUCT THEREOF

(51) International classification	:A61K0036906600, G06Q0050200000, A61L0015280000, A61L0027200000, A61K0008979400	(71)Name of Applicant : 1)MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH Address of Applicant :NO.12, VEMBULIAMMAN KOIL STREET WEST K.K. NAGAR CHENNAI CHENNAI TAMIL NADU INDIA 600 078 Chennai ----- Name of Applicant : NA Address of Applicant : NA
(86) International Application No	:NA	(72)Name of Inventor : 1)DR.V RAMNATH Address of Applicant :PRINCIPAL FACULTY OF ALLIED HEALTH SCIENCES, MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH, NO. 1, BANGALORE HIGH ROAD, ENATHUR, KANCHIPURAM CHENNAI TAMIL NADU INDIA 631 552 Chennai -----
(87) International Publication No	: NA	2)S. SEETHALAKSHMI Address of Applicant :ASSISTANT PROFESSOR, PG&RESEARCH DEPARTMENT OF BIOCHEMISTRY, ST.JOSEPH'S COLLEGE OF ARTS AND SCIENCE CUDDALORE CUDDALORE TAMIL NADU INDIA 607001 Cuddalore -----
(61) Patent of Addition to Application Number	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

TITLE: A PROCESS OF PREPARATION OF GELATIN ALGINATE CHITOSAN COMPOSITE FILM AS WOUND DRESSING MATERIAL AND PRODUCT THEREOF APPLICANT: MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH APPLICATION NUMBER: 202341090222 DATED: 30/12/2023 ABSTRACT The present invention discloses a process of preparation of gelatin alginate chitosan composite film enriched with black turmeric for wound dressing comprises of following steps; a. extraction of gelatin from chicken feet comprises of mixing grinded paste of denailed chicken feet with NaOH solution and stirring followed by filtration to obtain residue I and the residue I is mixed with butyl alcohol under constant stirring followed by filtration to obtain residue II and the residue II is mixed with HCl and stirring followed by filtration to obtain residue III and washing the residue III with tap water followed by mixing with lactic acid solution and heating followed by filtration to obtain residue IV containing gelatin; b. preparation of ethanolic extract of Curcuma caesia Roxb (CR) comprises of mixing powdered rhizome of Curcuma caesia Roxb (CR) with ethanol followed by stirring and filtering to obtain filtrate containing ethanolic extract of Curcuma caesia Roxb (CR); c. preparation of gelatin alginate chitosan composite film enriched with black turmeric comprises of mixing the Gelatin, sodium alginate, Chitosan and the ethanolic extract of Curcuma Caesia Roxb (CR) followed by stirring to form a blend and subjecting to solvent casting to form gelatin alginate chitosan composite film enriched with black turmeric. The present invention also discloses a gelatin alginate chitosan composite film enriched with black turmeric for wound dressing prepared by the process as described above.

No. of Pages : 23 No. of Claims : 4

(54) Title of the invention : PRO-FUSE: HIGH TEMPERATURE 3D PRINTING COOLANT SYSTEM

(51) International classification	:B33Y0030000000, B33Y0010000000, B33Y0050020000, B29C0064118000, A61F0002300000	(71)Name of Applicant : 1)Gopi Chander Address of Applicant :496,3rd Main Road, TNHB Colony, Velachery, Chennai ----- 2)Aashmika Mahajan Name of Applicant : NA Address of Applicant : NA
(31) Priority Document No	:nil	(72)Name of Inventor : 1)Gopi Chander Address of Applicant :496,3rd Main Road, TNHB Colony, Velachery, Chennai ----- 2)Aashmika Mahajan Address of Applicant :496 3rd Main Road, TNHB Colony Velachery Chennai Chennai -----
(32) Priority Date	:16/10/2023	
(33) Name of priority country	:-----	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number:	NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The device, a comprehensive solution designed to revolutionize high-temperature material 3D printing in the fields of medicine and dentistry. It combines a specialized coolant system, an optimized 3D printer, and an insulated chamber design to overcome the challenges associated with precise and efficient printing of materials such as Polyetheretherketone (PEEK) and similar high-performance polymers. Pro-fuse consists of a meticulously engineered coolant system featuring a high-performance pump, a strategically positioned coolant reservoir, a hot end inlet for precise extruder cooling, a radiator for efficient heat dissipation, a cooling fan for enhanced cooling, and a closed-loop coolant return system. This system ensures consistent and accurate temperature control throughout the 3D printing process, critical for maintaining material properties and structural integrity. The optimized 3D printer blueprint, integrated with the coolant system, features a specialized extruder capable of handling high-temperature materials with precision. A heated build chamber and an advanced print bed provide a stable printing environment, reducing warping and ensuring secure adhesion. The result is a 3D printer uniquely suited for high-temperature material 3D printing. An insulated chamber design complements the system, maintaining stable chamber temperatures, preventing temperature fluctuations, and enhancing the overall efficiency of the printing process. The device has far-reaching clinical implications, enabling the creation of patient-specific dental prostheses, orthopedic implants, craniofacial reconstructions, and personalized drug delivery devices. Surgeons benefit from precision surgical instruments and guides, while patients experience enhanced comfort and functionality with customized prosthetic and orthotic solutions. Additionally, the device expedites research and development, contributing to the accelerated innovation of healthcare solutions. Pro-fuse represents a transformative innovation poised to redefine personalized medicine and dentistry, offering precision, customization, and efficiency in the creation of medical and dental devices. Its potential impact extends beyond the present, promising a brighter and more personalized future for healthcare.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441000695 A

(19) INDIA

(22) Date of filing of Application :04/01/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ANALYSIS ON BACTERIAL DIVERSITY IN INDIAN BREED PORK USING GENE SEQUENCING

(51) International classification :C12Q0001688800, A01K0067020000, A01N0063200000, A61K0035747000, C12N0001200000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)S.VINITHA Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore-641062. ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)GOWINYA.S Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore-641062. ----- 2)GUHAPRIYA.R Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore-641062. ----- 3)PREETHIKA.P Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore-641062. ----- 4)SATHYA.G Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore-641062. ----- 5)VINITHA.S Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore-641062. -----

(57) Abstract :

The microbial composition of pork is of significant importance for both food safety and flavor development. Indian breed pork, sourced from local farms, making it an interesting subject for analysis Pork samples offers unique attributes compared to commercial breeds, ected and subjected to isolation of microorganism Identify the microbial population at the genus level, were coll aids in fining new genus and species of microbes. Most commonly, Lactobacillus, Clostridium, Escherichia, and Pseudomonas. were among the most abundant. This research aims to find and suggest a complex microbial ecosystem contributing to the characteristic flavor and quality of Indian breed porkiMany'studies suggested that, the' bacterial composition among pork samples from different geographic regions in India, indicating the potential influence of local environmental factors and farming practices 6n microbial communities. The bacterial diversity in Indian breed pork has implications for both food safety and the development of traditional pork products. This research contributes to the knowledge of microbial ecology in pork and may guide strategies for improving the quality and safety of Indian breed pork products.

No. of Pages : 2 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :24/01/2024

(21) Application No.202441004810 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : HERBAL SHAMPOO

(51) International classification :A61Q0005000000, A61Q0005020000, A61K0008979400, A61P0017000000, A61K0036480000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Dandruff is a chronic, non-inflammatory scalp disorder characterized by severe peeling of scalp tissue and is one of the most common dermatological skin problems for many people in today's world and many anti-dandruff shampoos, whether synthetic or herbal, are marketed to combat the problem and the main objective of this invention is to eliminate harmful synthetic ingredients from antidandruff shampoo and substitute with the safe natural active ingredients like coumarin enriched Cyperus Rolundm' extract, fenugreek and aloe vera, that provides an advantage of Herbal cosmetics with their non-toxic nature, reduced allergic reaction and time-tested usefulness and to shampoo and its physicochemical parameters including the colour, odour, pH, solid content, foam volume, surface tension, wetting time and viscosity were determined, that results in good cleansing and detergency effects, low surface tension, good viscosity and excellent stability.

No. of Pages : 11 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :29/01/2024

(21) Application No.202441005652 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DRUG LOADING IN NANOMATERIALS USING MICROGRAVITY

(51) International classification :A61K0047690000, A61K0009510000, B82Y0005000000, A61K0009000000, A61K0009127000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention relates to a method of increasing the drug loading efficiency of a nanomaterial such as iron oxide nano particles (IONP), organic nanomaterials such as liposomes. The invention describes a method of increasing drug loading efficiency of nanomaterials under microgravity conditions. The drug loaded nanomaterials made by the method encompassed in the invention exhibit twofold to fourfold increase in drug loading efficiency and exhibit enhanced drug delivery. These nanomaterials are biocompatible and have minimal toxicity.

No. of Pages : 33 No. of Claims : 12

(54) Title of the invention : A RESPIRATORY MONITORING SYSTEM AND METHOD FOR MONITORING BREATHING PATTERNS DURING PRANAYAMA PRACTICE

(51) International classification :A61B0005000000, A61B0005080000, A61B0005024000, A61B0007000000, A61B0005113000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)M.S. Ramaiah Institute of Technology Address of Applicant :MSR Nagar, MSRIT Post, Bangalore - 560054, Karnataka, India Bangalore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)NATARAJAN SRIRAAM Address of Applicant :Ramaiah Institute of Technology, MSR Nagar, MSRIT Post, Bangalore-560054, Karnataka, India Bangalore ----- 2)BANGALORE RAMESH PURNIMA Address of Applicant :Ramaiah Institute of Technology, MSR Nagar, MSRIT Post, Bangalore-560054, Karnataka, India Bangalore ----- 3)JIGYANS KRANTI MOHAPATRA Address of Applicant :Indian Institute of Technology-Kharagpur, Kharagpur -721302, West Bengal, India Kharagpur ----- ----- 4)RAGHAVENDRA BHAT Address of Applicant :SVYASA, Prashanti Kutiram, Vivekananda Road, Kalluballu Post, Jigani, Anekal, Bangalore-560105, Karnataka, India Bangalore ----- 5)JUDU ILLAVARASU Address of Applicant :Indian Institute of Management-Kozhikode, IIMK Campus, Kozhikode-673570, Kerala, India Kozhikode ----- -----

(57) Abstract :
ABSTRACT A RESPIRATORY MONITORING SYSTEM AND METHOD FOR MONITORING BREATHING PATTERNS DURING PRANAYAMA PRACTICE The present disclosure envisages a respiratory monitoring system (100) and a method (400) for monitoring breathing patterns during pranayama practice. The system (100) comprises a data storage device (102), a microprocessor (104) coupled to the data storage device (202), and a mobile application (106). The mobile application (106), collects an input breathing pattern and a plurality of breathing parameters of a user by a data collection module (106A) using a sensor module (202) implemented in a wearable user device (200), determines the class of the input breathing pattern by an assessment module (106B), generates a precision output for the correctness of the breathing pattern of the user, by an evaluation module (106C), and transmits the output by an output module (106D) in the form of an audio or visual feedback to a user interaction unit (302) of a portable user device (300) using the set of audio-video generation rules.

No. of Pages : 29 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441009039 A

(19) INDIA

(22) Date of filing of Application :10/02/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD FOR SURFACE MODIFICATION OF PEGYLATED MELANIN NANOPARTICLE AS STIMULI RESPONSIVE DRUG DELIVERY VEHICLE

(51) International classification :A61K0041000000, A61K0047690000, A61K0009510000, A61P0035000000, B82Y0005000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT A METHOD FOR SURFACE MODIFICATION OF PEGYLATED MELANIN NANOPARTICLE AS STIMULI RESPONSIVE DRUG DELIVERY VEHICLE This invention relates to a method (10) for producing 5-Fluorouracil (5FU) loaded PEGylated mono-sized nano melanin (15) (PEG-MNM-5FU) for in vitro release and targeted delivery to cancer cells (17). The process involves isolating (11) Stutzerimonas stutzeri BTCZ109 strain from Arabian sea sediments, extracting (12) nano melanin (NM), which is mono-sized (13) and modified with Polyethylene glycol (PEG) as PEGylated mono-sized nano melanin (PEG-MNM) (14). The PEG-MNM is impregnated with 5-Fluorouracil, with a maximum loading capacity of 32%, to build a stimuli responsive drug-loaded delivery vehicle (PEG-MNM-5FU) (15) wherein the controlled and prolonged in vitro release of the drug, 5-FU for physiological pH is in the range of 31- 41%, acidic pH is in the range of 17-25% and reactive oxygen (16) is in the range of 20% - 33% and the drug delivery to skin cancer cell line has an IC50 value of 88.52 +/- 0.34 µg/mL observed after 72 hours of incubation. ??Figure 1 for Abstract).

No. of Pages : 37 No. of Claims : 9

(54) Title of the invention : A METHOD FOR PREPARING A CALCIUM BISMUTH LAYERED DOUBLE HYDROXIDE (CABI LDH) WITH SILVER DOPED GRAPHITIC CARBON NITRIDE COMPOSITE AS A PHOTOCATALYST

(51) International classification :B01J23/54, B01J35/39, B01J35/45, B01J35/73, B01J37/025, B82Y30/00, B82Y40/00

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

A METHOD FOR PREPARING A CALCIUM BISMUTH LAYERED DOUBLE HYDROXIDE (CABI LDH) WITH SILVER-DOPED GRAPHITIC CARBON NITRIDE COMPOSITE AS A PHOTOCATALYST 5 ABSTRACT A method for preparing a calcium bismuth layered double hydroxide (CaBi LDH) with a silver-doped graphitic carbon nitride composite is provided. The method includes preparing the graphitic carbon nitride by calcining urea at 500 degree Celsius (0 C). 10 The method further includes introducing a silver nitrate to the prepared graphitic carbon nitride solution. The method further includes exposing the mixture of silver nitrate and graphitic carbon nitride to a light-emitting diode (LED) light source and stirring the mixture. The method further includes synthesizing the CaBi LDH by calcining one or more eggshells at 900 0 C. The method further includes adding 5 molar (M) sodium 15 hydroxide drop-wise to the mixture to form a precipitate. The method further includes mixing CaBi LDH and silver-doped graphitic carbon nitride in water and centrifuging, washing, and drying the precipitate to achieve a final CaBi LDH with silver-doped graphitic carbon nitride photo-catalyst composite. 20 [FIGS. 8 and 9]

No. of Pages : 42 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :27/02/2024

(21) Application No.202441013985 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A UNIVERSAL CHAIR-SIDE ORTHODONTIC HANDY SPOT WELD-ER WITH A SPRING-LOADED HANDLE

(51) International classification :H02M0003335000, B23K0011110000, F02P0015100000, B23K0009100000, A61B0017120000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)JSS Dental College and hospital, JSS Academy of Higher Education & Research Address of Applicant :Sri Shivarathreeswara Nagara, Mysuru, Karnataka, India 570015 Mysore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. I Girish Kumar Address of Applicant :Department of Orthodontics & Dentofacial Orthopedics, JSS Academy of Higher Education & Research, Mysore Mysore ----- 2)Dr. Raghunath N Address of Applicant :Department of Orthodontics & Dentofacial Orthopedics, JSS Academy of Higher Education & Research, Mysore Mysore ----- 3)Jayachandran PP, Address of Applicant :Department of Dental Mechatronics, JSS Academy of Higher Education & Research, Mysore , Mysore -----

(57) Abstract :

A UNIVERSAL CHAIR-SIDE ORTHODONTIC HANDY SPOT WELDER WITH A SPRING-LOADED HANDLE ABSTRACT 5
A universal orthodontic handy spot welder (200) is provided. The welder includes a spring-loaded handle (100) for welding in an orthodontic procedure. The welder further includes a transformer (212) including a primary coil (218) and a secondary coil (220) for controlling a voltage supplied to the spring loaded handle (100). The welder further includes a main switch (206) for controlling the circuit of the primary coil (218). The welder further includes a fuse (204) connected between the main switch (206) and a power supply (202). The welder further includes a foot control (208) connected between the main switch (206) and the primary coil (218) for controlling the intensity of welding performed using the spring-loaded handle (100), by a user. The welder further includes a weld intensitometer (210) configured for controlling an intensity of welding and connected between the primary coil (218) and the main switch (206). 20 Figures 2 and 5

No. of Pages : 21 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441014418 A

(19) INDIA

(22) Date of filing of Application :28/02/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND METHOD FOR REARING BLACK SOLDIER FLY LARVAE

(51) International classification :A01K0067033000, C05F0017964000, C05F0017400000, C05F0017500000, B01D0063020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

ABSTRACT SYSTEM AND METHOD FOR REARING BLACK SOLDIER FLY LARVAE The invention provides a system (100) and a method for rearing black soldier fly larvae (L). The system (100) includes a compost container (102) to accommodate the organic waste matter and the moisture regulating medium. A filter (104) separates liquid from the organic waste matter. A tank (105) stores the liquid filtered by the filter (104). A plurality of liquid control valves (110) facilitates the removal of excess liquid from the tank (105). A plurality of aeration valves (106) aids ambient air flow into the compost container (102). A plurality of mesh doors prevents the entry of any foreign body into the compost container (102). The black soldier flies lay eggs in the compost container (102) and the black soldier fly larvae(L) feed on the organic waste matter in the compost container (102) facilitating its conversion into compost. Fig.1

No. of Pages : 19 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/03/2024

(21) Application No.202441017782 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ADVANCEMENT IN UPI TRANSACTION

(51) International classification :G06Q0020400000, G06F0021320000, G06Q0020380000, G07F0007100000, H04L0009320000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The patent focuses on improving UPI transactions by introducing several innovative features. Firstly, it proposes a transaction reversal feature, allowing users to reverse transactions promptly in case of errors or unauthorized activities, enhancing transaction flexibility and user control. Secondly, it emphasizes transaction security by introducing authorized verification symbols on platforms. These symbols serve as visual cues to users, indicating that the platform has been verified and authenticated, enhancing trust and reducing the risk of fraud. Thirdly, the patent introduces the concept of business UPIs tailored for large-sum transactions. These specialized UPI accounts are designed to handle significant transaction volumes securely, catering to the needs of businesses and high-value transactions. Lastly, the patent integrates facial recognition technology as an additional layer of security following PIN entry. By incorporating biometric authentication, it enhances user authentication and reduces reliance solely on PINs, further fortifying the security of UPI transactions. Overall, the patent aims to enhance the security, flexibility, and usability of UPI transactions by introducing novel features such as transaction reversal, authorized verification symbols, business UPIs, and facial recognition authentication. These innovations collectively contribute to a more robust and secure UPI ecosystem, fostering trust and confidence among users and businesses alike.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441019065 A

(19) INDIA

(22) Date of filing of Application :15/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A DENGUE REVERSE TRANSCRIPTION POLYMERASE CHAIN REACTION (RT-PCR) ASSAY KIT FOR DETECTION AND SEROTYPING OF DENGUE VIRUS

(51) International classification :C12Q0001700000, C12Q0001685100, C12Q0001688600, C12Q0001689000, C12Q0001686000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

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(57) Abstract :

A DENGUE REVERSE TRANSCRIPTION POLYMERASE CHAIN REACTION (RT-PCR) ASSAY KIT FOR DETECTION AND SEROTYPING OF DENGUE VIRUS ABSTRACT 5 A dengue reverse transcription polymerase chain reaction (RT-PCR) assay kit for detection and serotyping of dengue virus is provided. The dengue RT-PCR assay kit includes a plurality of primer sets for dengue virus detection and serotyping including at least one forward primer and reverse primer, a synthetic positive control sequence for validating the effectiveness of the RT-PCR assay kit, an internal control sequence for monitoring an efficiency of an entire process and identifying potential issues during sample processing and amplification, one or more standards for serving as benchmarks for accurate quantification and spanning copy numbers from 10^5 to 10^1 and an Eva green dye and high-resolution melt analysis (HRMA) for cost-effective and sensitive detection. The Eva green dye binds to double-stranded DNA, facilitating real-time monitoring of amplification. [FIG.1]

No. of Pages : 33 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441019078 A

(19) INDIA

(22) Date of filing of Application :15/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN ANTI-INFLAMMATORY COMPOSITION CONTAINING BIOLOGICALLY ACTIVE INDOLE ALKALOID VINDOLIN EXTRACT ISOLATED FROM VINCA ROSEA AND A METHOD THEREOF

(51) International classification :A23L33/105, A61K36/73, A61K8/97, A61P29/00, C07B61/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :

AN ANTI-INFLAMMATORY COMPOSITION CONTAINING BIOLOGICALLY ACTIVE INDOLE ALKALOID VINDOLIN EXTRACT ISOLATED FROM VINCA ROSEA AND A METHOD THEREOF ABSTRACT An anti-inflammatory composition and a method of isolating biologically active indole alkaloid Vindolin extract from vinca rosea is disclosed. The indole alkaloid Vindolin extract circumvents neuro inflammation symptoms associated with one or more diseases, reduces inflammatory marker TNF- α secretion. The method includes mixing (402) a dried and powdered plant material of about 25 g of Vinca Rosea plant with ethanol (96%) through overnight maceration at about 55 °C. The method further includes filtering (404) the powdered plant material by using a filter paper and repeating the mixing till the powdered plant becomes colourless, wherein a rotary evaporator is used to evaporate the ethanolic extract to dryness. The method further includes redissolving (406) the obtained green extract containing chlorophyll and alkaloids in 25ml ethanol, diluting with double distilled water, and acidifying with 3% HCl at pH 15.1. FIG. 4

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/03/2024

(21) Application No.202441022234 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN AUTOMATIC SHOE DRYING SYSTEM

(51) International classification :A47L0023200000, G06F0001160000, H05B0045395000, G01R0031440000, G06Q0020400000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Exemplary embodiments of the present disclosure are directed towards an automatic shoe drying system, includes a rectangular housing comprising an upper compartment and a lower compartment, wherein the upper compartment may be configured to accommodate a microcontroller and one or more heating elements configured to generate heat, whereby drying the shoes. The microcontroller may be configured to regulate the operation of the one or more heating elements. A buzzer coupled to the microcontroller and situated atop the upper portion of the housing, may be configured to emit an audio signal upon the successful completion of the shoe drying process and an LED indicator linked to the microcontroller and located on the upper portion of the housing, whereby the LED indicator may be configured to display comprehensive status updates of the drying system FIG. 1

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/03/2024

(21) Application No.202441022237 A

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(54) Title of the invention : SYSTEM AND METHOD FOR ARDUINO BASED SEED SPRINKLER

(51) International classification

:G01N0033240000, A01G0025160000, G06Q0050000000, G06F0016440000, G01C0021160000

(86) International Application No
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(57) Abstract :

Exemplary embodiments of the present disclosure are directed towards a system and method for Arduino based seed sprinkler. A system and method for Arduino based seed sprinkler comprises of a soil sensor utilizing Arduino UNO microcontroller detects the soil and displays the information on the LCD screen connected to the soil sensor. Furthermore, the Arduino UNO microcontroller holds commands, receives parameters from the sensors and sends output signals accordingly to the DC motor connected to the Arduino UNO microcontroller. Furthermore, a DC motor receives information from the Arduino UNO thereby activating the servomotor connected to the DC motor. Finally, the servomotor connected to the seeds holding bottle and sheet with holes, allows the seeds to flow through the sheet holes and seed sowing can be observed in the field. FIG. 1

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :22/03/2024

(21) Application No.202441022238 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND METHOD FOR RAINCOAT FUEL GENERATOR

(51) International classification :A41D0003040000, H02N0002180000, H05B0003340000, E05B0047000000, E05B0047060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :

Exemplary embodiments of the present disclosure are directed towards a system and method for raincoat fuel generator. A system and method for raincoat fuel generator comprises of a PTFE sheet positioned above the raincoat, configured to capture the rain droplets, thereby, passing the minute charge of rain droplets to Arduino UNO microcontroller. Furthermore, the Arduino UNO microcontroller positioned in middle of the raincoat, configured to receive rain droplets, convert the minute charge of rain droplets to electrical energy, thereby by passing the electrical energy to a battery. Furthermore, the battery, configured to capture and store the electrical energy received from Arduino UNO microcontroller, thereby, activating the heating pads. Finally, the heating pads, activated by the electrical energy received from Arduino UNO microcontroller, thereby generate heat to the raincoat. FIG. 1

No. of Pages : 18 No. of Claims : 7

(54) Title of the invention : INTEGRATED ASSISTIVE TECHNOLOGY- GYROSCOPIC PATIENT SUPPORTING SYSTEM, AND HOME APPLIANCE CONTROL FOR PARALYZED PATIENTS

(51) International classification :A61B0005000000, A61B0005110000, A61G0005000000, H04L0065600000, A61H0001020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Integrated Assistive Technology refers to a comprehensive system that combines various tools and devices to aid individuals with disabilities in their daily lives. One key component is the Gyroscopic Patient Supporting System, a cutting-edge technology that employs gyroscopes to provide stability and support for paralyzed patients. This system dynamically adjusts to a patient's movements, enhancing their mobility and independence. This research project focuses on the development of an integrated assistive technology system that incorporates a gyroscope-based patient supporting system, health monitoring capabilities, and home appliance control for paralyzed patients. The objective is to enhance the quality of life, independence, and overall well-being of individuals with paralysis by providing them with a comprehensive and user-friendly technological solution. The proposed system consists of three main components: an integrated assistive technology framework, a gyroscope-based patient supporting system, and home appliance control. These components work in harmony to provide a holistic and adaptable solution for paralyzed patients. The gyroscope-based patient supporting system is designed to assist individuals with paralysis in their daily activities and movements. It utilizes a gyroscope sensor that is integrated into a wearable device worn by the patient. The gyroscope sensor detects the patient's movement intentions, such as tilting or nodding their head, and translates them into commands that control a patient support mechanism. This mechanism can be a robotic arm, a wheelchair, or a bed that adjusts its position to provide optimal support and assistance to the patient. The system aims to improve the patient's mobility and independence, allowing them to perform tasks and interact with their environment more effectively. Furthermore, the system includes home appliance control functionality to enable paralyzed patients to independently control various appliances in their home environment.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :26/03/2024

(21) Application No.202441023745 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT-ENABLED MANHOLE MONITORING SYSTEM

(51) International classification :G01N0033000000, A47L0015420000, A61H0001020000, A61B0005030000, A61B0005021500

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

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(57) Abstract :

Exemplary embodiments of the present disclosure are directed towards an IoT-enabled manhole monitoring system comprising a manhole lid comprising a top compartment, a middle compartment and a bottom compartment, whereby the top compartment is configured to accommodate a servo motor, a gas detecting sensor, and an LCD display, and the bottom compartment is configured to accommodate a water level sensor, a temperature sensor and a tilt sensor, wherein the water level sensor, the temperature sensor, gas sensor and the tilt sensors are configured to monitor various functional parameters within the manhole and transmit the monitored functional parameters data to a microcontroller; and the microcontroller is configured to transmit the monitored functional parameters data received from one or more sensors to a web server thereby enabling monitoring of the manhole system in real-time. FIG. 1A.

No. of Pages : 19 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :26/03/2024

(21) Application No.202441023747 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : VOICE CONTROL-TICKETING MACHINE

(51) International classification

:G07F0017420000, G10L0015220000, H03H0001000000, G10L0015300000, G07B0001000000

(86) International Application No
Filing Date

:NA
:NA

(87) International Publication No

: NA

(61) Patent of Addition to Application Number
Filing Date

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(62) Divisional to Application Number
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(57) Abstract :

Exemplary embodiments of the present disclosure are directed towards a voice control-ticketing machine. A voice control-ticketing machine comprises of a Voice Recognition (V3 Module), configured to capture voice inputs, convert them into machine-readable data, and pass on the voice inputs to the noise filter. Further, the noise filter filters the disturbances from the voice and the clear voice is sent to Arduino. Further, the Arduino receives and recognizes the voice data from the noise filter, processes the commands and forwards them to the ticket vending machine. Further, the ticket vending mechanism configured to dispense tickets based on user requests and collects cash/credit card/debit card. Further, an LCD display, integrated into the ticketing machine, serves as the user interface. FIG. 1

No. of Pages : 16 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441026151 A

(19) INDIA

(22) Date of filing of Application :29/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : OIL-COOLED LITHIUM-ION BATTERY PACK SYSTEM

(51) International classification :H01M0010052500, H01M0050200000, H01M0010613000, F02F0003220000, H01F0027120000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

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(57) Abstract :

ABSTRACT OIL-COOLED LITHIUM-ION BATTERY PACK SYSTEM The present invention relates to an oil-cooled lithium-ion battery pack system designed for enhanced cooling efficiency and prolonged battery life. The system comprises a battery box or pack [1] filled with oil, where lithium-ion cells [2] are immersed in the oil to dissipate heat. A mild steel (MS) plate [3] is positioned above the oil and welded to contain the oil within the pack. Silicon paste [8] is utilized to seal any gaps, preventing oil spillage. The system includes an inlet [4] and outlet [5] for oil recirculation, a radiator [7] for cooling the oil, and an oil pump [6] for injecting cooled oil back into the battery pack. This innovative design ensures optimal thermal management, improving the overall performance and longevity of lithium-ion batteries in various applications.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :29/03/2024

(21) Application No.202441026311 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : INTELICARE:ARITIFICIAL INTELLIGENCE ENHANCED CANCER REHABILITATION PROGRAM

(51) International classification :G16H0020300000, A61H0001020000, G06N0020000000, A61B0005000000, G06N0003040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The innovative IntelliCare: AI-Enhanced Cancer Rehabilitation Program aims to transform the field of cancer rehabilitation by incorporating state-of-the-art artificial intelligence (AI) technologies into traditional rehabilitation approaches.Modern artificial intelligence (AI) technology are being incorporated into conventional cancer rehabilitation methods as part of the ground-breaking IntelliCare: AI-Enhanced Cancer Rehabilitation Program, which seeks to revolutionize the sector. Cancer survivors may face complicated challenges involving physical, cognitive, and emotional components during their recovery journey. Traditional rehabilitation programs, while essential, may not always provide tailored and adaptable solutions to address the specific requirements of each patient. IntelliCare seeks to bridge this gap by leveraging AI algorithms to produce a dynamic and personalized rehabilitation experience.

No. of Pages : 12 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441026884 A

(19) INDIA

(22) Date of filing of Application :31/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A HERBAL COMPOSITION BASED ON EXTRACTS OF SALVIA HISPANICA L. AS A ROOT CANAL IRRIGANT

(51) International classification :A61K0036537000, A61C0005400000, A61C0017020000, A61P0031040000, A61C0005500000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

A HERBAL COMPOSITION BASED ON EXTRACTS OF Salvia hispanica L. AS A ROOT CANAL IRRIGANT ABSTRACT 5 A herbal composition as a root canal irrigant is disclosed. The herbal composition includes pharmaceutically effective amount of extracts of Salvia hispanica L. used as an intra canal irrigant within the root canals of teeth. It is a plant-based substance and contains anti-inflammatory, antiviral, anticoagulant, antibacterial, and anti-cancer 10 properties. The extracts of Salvia hispanica L. is a good chelating agent and has significant antioxidant levels. The extracts of Salvia hispanica L. has a chelating property that is highly beneficial in removing the smear layer on the root dentin without compromising on the hardness of the root dentin. It dissolves the necrotic pulp while inhibiting degradation of collagen. The extracts of Salvia hispanica L. is a polyphenolic extract.

No. of Pages : 15 No. of Claims : 6

(54) Title of the invention : PATHFINDER: A FEDERATED LEARNING BASED SECURE NAVIGATION SYSTEM FOR VISUALLY IMPAIRED

(51) International classification :G01C0021360000, G01C0021200000, G06Q0030020000, H04L0067100000, G01C0021340000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

An indoor navigation system for the visually impaired usually refers to a system that can be operated inside buildings or similar environments. In normal scenarios, such systems use GPS or other location-aided services for location identification and enabling navigation. In this particular study, we are proposing a federated learning-based indoor navigation system that offers enhanced privacy preservation and is ideally applicable for navigation in high-security areas. The system makes use of a real-time video feed to identify locations and give coordinates to the user. The main motto for such an approach is to overcome the inefficacy of GPS for indoor applications. The real-time video feed generated by the navigation device is used as the data source for performing various functionalities of the system. As the system is built on the federated learning principle, it comprises of a set of clients and a server device and training is performed at the client end. The data always remains at the client end adding to the system's security. The system comprises of location identification module that makes use of the output generated from the model along with an inbuilt graph-based location map to identify various locations and generate navigation instructions as well. As the system is devoid of any other location identification tools, even when a user starts traversing on a given path, the system solely depends on a video feed to verify the path. Checkpoints are given in a certain path that the device will be constantly searching for. In case a user comes across a location not listed as a checkpoint on the given path, the system immediately reroutes and gives updated navigation instructions from the current location. The navigation path is provided to the user in form of audio feed which can be accessed via any audio-based output device.

No. of Pages : 18 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441027213 A

(19) INDIA

(22) Date of filing of Application :02/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PHOTOELECTRIC SENSOR BASED FLUID MONITORING AND ALERTING SYSTEM

(51) International classification :A61M0005168000, A61B0005000000, A61M0005360000, G01F0023292000, A61M0005140000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

When a patient under the nursing care is administered with Intravenous Fluid(IV), there is a need to removal of needle immediately after completion of fluid from the dispenser. Otherwise there is a possibility of blood flowing from the vein into the IV fluid dispenser due to the difference in pressure and can be fatal in extreme cases. On many occasions, due to various reasons of such as inadequate nursing staff may not be able to pay attention at the right time causing inconvenience, distress or even harm to the patient. To handle such situation, a device to monitor level of IV fluid with photoelectric sensor is proposed. Ability of detecting changes in surface conditions through a variety of optical properties by Photoelectric Sensors have been utilised to monitor the IV fluid level. Emitter and Receiver used in Photoelectric Sensors are used to measure the light intensity via the medium of travel. When emitted light is interrupted or reflected by the sensing object as shown in Fig. 1, it changes the amount of light that arrives at the Receiver. So, The difference between the transmitted and received intensities can be empirically used to determine certain properties of the fluid or even the presence/absence of the fluid. The light source for the majority of Photoelectric Sensors is infrared or visible light. One of the applications of the device is to monitor the presence of the fluid by attaching it at threshold level of IV fluid dispenser. When the level of liquid in the dispenser falls below the threshold level of the photoelectric sensor, alert could be generated. Another application is to be able to detect if there are any suspended particles in a fluid. The inconvenience caused due to absence of nurses will be reduced with such saline monitoring device.

No. of Pages : 5 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :02/04/2024

(21) Application No.202441027229 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : PREVENTION OF DEATH ON HIGHWAY BY ACCIDENT

(51) International classification :G07C0005080000, G08G0001010000, G08B0021040000, G16H0050500000, G06N0020000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

[06] Traffic hazards pose significant challenges worldwide due to factors such as dense population and increasing vehicle numbers, leading to road accidents that claim countless lives. Recognizing this pressing issue, there's a critical need for improved transportation infrastructure to mitigate accidents and save lives. To address this challenge, the project aims to develop an accident detection and prediction system leveraging OpenCV and machine learning techniques. This system will employ a camera to capture real-time road video, with OpenCV processing the footage to identify potential accidents. Machine learning algorithms will then analyze the data to predict accident probabilities. Additionally, the system will be equipped to alert nearby emergency services promptly in the event of an accident. Ultimately, the project strives to enhance road safety by providing advanced accident warnings and facilitating swift emergency responses. Accompanied Drawing [FIG. 1] [FIG. 2][FIG. 3] [FIG. 4] [FIG. 5][FIG. 6] [FIG. 7] [FIG. 8][FIG. 9] [FIG. 10]

No. of Pages : 17 No. of Claims : 6

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(51) International classification	:B63G0008000000, G05D0001000000, B63C0011480000, B63C0011520000, B63C0011420000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	:NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
Underwater search and rescue operations are vital tasks in India, akin to borewell accidents, encompassing various scenarios from surface-water to deep-water rescue, and the recovery of bodies or objects. The National Disaster Response Force (NDRF) undertakes these operations across diverse water bodies, facing challenges such as limited visibility, mobility, and endurance, along with environmental hazards. An innovative subaquatic Remotely Operated Vehicle (ROV) system is designed to enhance the efficiency, safety, and precision of underwater inspections and salvage missions. The ROV integrates advanced features such as low-frequency sensors for noise reduction, high-definition cameras for clear visibility, and SONAR-based relative positioning mapping. Additionally, it employs a hydrodynamic design inspired by sea turtles for reduced drag, and utilizes Kevlar material for structural integrity at depth level up to 150 meters. The ROV is capable of intelligent navigation, precise mapping, and efficient manoeuvrability with six-degrees of freedom for agile movement in complex underwater terrains. By combining these cutting-edge technologies and intelligent navigation systems, the proposed ROV system empowers the NDRF to conduct missions with unprecedented effectiveness, safety, and precision, thereby addressing the critical need for efficient underwater search and rescue operations in India.

No. of Pages : 26 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028009 A

(19) INDIA

(22) Date of filing of Application :04/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : COST AND ENERGY EFFICIENT TASK SCHEDULING SYSTEM FOR CLOUD-FOG ENVIRONMENT

(51) International classification	:G06F0009500000, G06N0003080000, H04L0067109700, G06F0009480000, G06N0003040000	(71)Name of Applicant : 1)VIT-AP University Address of Applicant :Inavolu, Amaravati, Andhra Pradesh - 522237, India. Amaravati -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
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Filing Date	:NA	Address of Applicant :Research Scholar, SCOPE, Computer Science and Engineering, VIT-AP University, Inavolu, Amaravati, Andhra Pradesh - 522237, India. Amaravati -----
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(57) Abstract :

A cloud-fog environment system 100 for task scheduling based on requests from Internet of Things devices 102 includes one or more Internet of Things devices 102; and a cloud server 104 in communication with a plurality of cloud-fog layers 106 and a data center 108. The server 104 having one or more processors to perform operations to receive, by the fog layer 106, a plurality of tasks requests generated from the IoT devices 102; send all requests to a scheduler 110 for resource requirements; create accurate schedule plan by exchanging cloud and fog nodes via the scheduler 110; and transmit, to nearest fog node, distribution of task scheduling. The scheduler 110 is an Electric Earthworm Optimization Framework (EEOF), within the fog layer 106 to resolve task scheduling by allocating appropriate compute nodes based on the details of the initialized work and the capabilities of available resources through information exchange between cloud and fog nodes for creating accurate schedule plans.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028027 A

(19) INDIA

(22) Date of filing of Application :04/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : PORTABLE 12 LEAD ECG USING MULTIPLEXERS

(51) International classification :A61B0005000000, A61B0005300000, A61B0005339000, A61B0005282000, A61B0005327000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

ABSTRACT Portable 12 Lead ECG using Multiplexers This Invention relates to biomedical engineering particularly in measurement of 12 lead ECG signal using multiplexers. The present invention pertains to a novel method and system for channeling electrode data to a single-channel AD8232 filter IC within a 12 Lead Electrocardiogram (ECG) system. The system incorporates a set of multiplexers controlled by an ESP32 microcontroller, facilitating the selective routing of electrode signals to input channels of the AD8232 filter IC. By employing this method, simultaneous monitoring of multiple ECG leads is achieved. The integration of the AD8232 filter IC, multiplexers, and ESP32 microcontroller offers a compact and cost-effective solution for ECG monitoring devices, thereby addressing existing challenges in traditional ECG systems.

No. of Pages : 27 No. of Claims : 6

(54) Title of the invention : IMPROVING NETWORK LIFETIME: A NOVEL ENERGY-EFFICIENT ROUTING PROTOCOL FOR WIRELESS IOT SENSOR NETWORKS

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number :H04L0045000000, H04W0084180000, H04W0004700000, H04L0067120000, G06F0021570000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)P.E.S. College of Engineering Address of Applicant :Mandya, Pin code: 571 401, Karnataka, India ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Revanesh M Address of Applicant :Professor, Department of Computer Science and Engineering, P.E.S. College of Engineering, Mandya-571 401, Karnataka, India ----- 2)Dr. Sahana Raj B S Address of Applicant :Professor and HOD, Department of Master of Computer Applications, P.E.S. College of Engineering, Mandya-571 401, Karnataka, India ----- 3)Santhosh Babu K C Address of Applicant :Associate Professor, Department of Master of Computer Applications, P.E.S. College of Engineering, Mandya-571 401, Karnataka, India ----- 4)Ashraya A N Address of Applicant :Assistant Professor, Department of Master of Computer Applications, P.E.S. College of Engineering, Mandya-571 401, Karnataka, India ----- 5)Vidyashree B. P Address of Applicant :Assistant Professor, Department of Master of Computer Applications, P.E.S. College of Engineering, Mandya-571 401, Karnataka, India -----

(57) Abstract :

[06] The Internet of Things (IoT) plays a crucial role in modern life, spanning from small wearable gadgets to large industrial systems. However, ensuring secure data transfer in IoT poses challenges due to vulnerabilities like default credentials and lack of updates. This vulnerability opens doors for cyberattacks, amplified by the interconnected nature of IoT devices. To address this, researchers have developed a routing method for wireless IoT sensor networks that optimizes energy consumption. This method uses clustering and efficient path computation to minimize power usage, while an evolutionary sleep scheduling approach further improves network performance. Simulation results show that this protocol surpasses existing ones like LEACH and FCM, promising enhanced energy efficiency and network security in IoT environments. Accompanied Drawing [FIG. 1] [FIG. 2][FIG. 3] [FIG. 4] [FIG. 5][FIG. 6] [FIG. 7] [FIG. 8][FIG. 9] [FIG. 10]

No. of Pages : 24 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/04/2024

(21) Application No.202441028043 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AUTOMATED DECISION SUPPORT SYSTEM FOR CRICKET UMPIRING UTILIZING MACHINE LEARNING

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(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The proposed invention introduces an Automated Decision Support System for Cricket Umpiring, leveraging machine learning technology to provide real-time assistance to umpires during matches. Trained on historical cricket data, including ball trajectories and player movements, the system analyzes incoming match data to identify key events and potential decision points, aiding umpires in making accurate calls. The system integrates seamlessly with existing officiating protocols, preserving the autonomy of human umpires while enhancing decision-making accuracy. Scalable and adaptable, it holds promise for applications beyond cricket, revolutionizing sports officiating and inspiring future innovations in sports technology. Through iterative testing and refinement, the system ensures reliability and robustness, offering a glimpse into the future of sports officiating where tradition meets innovation seamlessly.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/04/2024

(21) Application No.202441028058 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AWS TERNARY HASH TREE: STRENGTHENING SECURITY IN MULTI-CLOUD ENVIRONMENTS

(51) International classification :G06F0011140000, H04L0067109700, G06F0021640000, H04L0009320000, H04N0019960000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The methods for storing and retrieving the data are infinite. There are several different types of drives that you may use: USB drives, network file sharing, external disc drives, portable computer discs, and many more.The ease of access and alteration of files is what adds to the allure of cloud storage, despite the wide range of storage options available.The previous problems are intended to be fixed by this approach. In this work, we use replica-based Ternary Hash Tree (R-THT) and Ternary Hash Tree (THT) to create a unique integrity verification framework in a multicloud environment for safeguarding cloud storage.In contrast to previous work, the auditing is conducted at three different levels: tree block ordering, storage block ordering, and replica level. This ensures if data is corrupted during the checking process, the checker will automatically handle file recovery. Users who need file recovery will criticize the cloud. The results show how safe and cost-effective the proposed secure cloud auditing architecture is in terms of computing, storage, and communication costs.

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028080 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A HAIR CARE SERUM COMPOSITION CONTAINING ACETANISOLE AND A METHOD THEREOF

(51) International classification :A61Q0007000000, A61Q0005120000, A61Q0019000000, A61K0008978900, A61K0008920000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention relates to hair care formulation for cosmetic applications, more particularly it relates to a formulation of a hair care serum containing Acetanisol, a natural fragrant substance to promote hair growth, which is isolated from an essential oil extracted from marine red algae or seaweed including Portieria homemarmii and a method of preparing the composition are disclosed. The hair care serum composition comprising of Acetanisol (OS-5.0%), testosterone (OS-5%), a pharmaceutically acceptable carrier (40-50%) that provides moisturizing effect, surfactants (1-5%) for even distribution of hair serum during application and preservatives (OJ-1%) to protect from microbial growth and extend shelf life, wherein the Acetanisol isolated from P. hornemannii demonstrates increased follicular density by 147 % in combination with testosterone. The Acetanisol acts as an active ingredient and also provides fragrance for the serum.

No. of Pages : 23 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/04/2024

(21) Application No.202441028101 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SEMI-AUTOMATED REAPER CUM BINDER MACHINE FOR LEAFY GREEN

(51) International classification :A01D0034000000, G06Q0050020000, A01D0045280000, A01D0069020000, A01D0045260000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

ABSTRACT India is one of the largest producers of leafy greens in the world: with a wide variety of greens grown across the country. Leafy greens are an essential part of the Indian diet and are consumed in various forms, both raw and cooked. The production of leafy greens in India is significant not only for domestic consumption but also for export to other countries. However, there are challenges in the production and harvesting of leafy greens. Our reaper cum binder machine is designed with state-of-the-art technology to ensure not only efficient harvesting but also minimal damage to the delicate greens. The machine features precision controls that can adapt to varying crop conditions: optimizing the cutting and binding process. Extensive testing, harvesting trial; bundling evaluation and refinement were carried out during the development phase to achieve a harmonious balance between speed and accuracy. Our design considers the unique characteristics of different leafy greens, offering a versatile solution for various crops. By minimizing crop damage during harvesting, our reaper cum binder aims to enhance overall yield and quality, thereby contributing to sustainable and economically viable agricultural practices. Through this endeavor, we aim to revolutionize leafy green harvesting, providing farmers with a reliable and efficient tool that meets the demands of modern agriculture. The reaper cum binder machine covers 1 acre of land in 3096 hours, replacing the work of 11 manual laborers.

No. of Pages : 9 No. of Claims : 7

(54) Title of the invention : ZINC OXIDE NANOPARTICLES-INFUSED CONCRETE

(51) International classification :A01N0059160000, B01J0023060000, A61K0008270000, C04B0041520000, C01G0009020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Zinc oxide nanoparticles (ZnO NPs) plays a pivotal role in concrete by harnessing its unique antimicrobial properties and the ability to break down organic compounds. Introducing ZnO NPs into concrete facilitates the absorption of pollutants, like NO_x, upon exposure to sunlight. The photocatalytic process of ZnO NPs traps these pollutants on the concrete's surface. Subsequent removal can occur through rainfall or water sprayers, contributing to an eco-friendly purification process. Notably, this entire photocatalytic mechanism operates seamlessly on solar energy alone addressing the impact of UV rays on concrete surfaces, traditional structures like RCC, roofs, walls, and plastering can suffer damage over time. UV rays cause molecular chain breakdown, weakening the concrete, leading to the formation of fine powder and surface ruptures. This structural deterioration significantly shortens the lifespan of buildings. To counteract UV damage, ZnO NPs acts as a shield. When UV rays strike the concrete surface, ZnO NPs disperses and absorbs the radiation, converting it into radiated heat. This process, illustrated without figures, positions ZnO NPs as an effective sun barrier, safeguarding against both shorter and longer UV rays. The result is a concrete surface that remains resilient, prolonging the life of structure

No. of Pages : 13 No. of Claims : 7

(54) Title of the invention : A LOW-COST SEMI-AUTOMATED MULTITASKING ROBOT FOR AGRICULTURE

(51) International classification :G06Q0050020000, A01B0079000000, A01M0021020000, A01M0021040000, A01M0007000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Vidyavardhaka College of Engineering Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Naveen Kumar H N Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- 2)Dr. Chandrashekar M Patil Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- 3)Dr. Mahadevaswamy Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- 4)Dr. Jagadeesh B Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- 5)Dr. Sudheesh K V Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- 6)Ms. Saniya Masood Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- 7)Ms. Sanjana Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- 8)Ms. Shraddha P Menon Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- 9)Ms. Sneha S Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru -----

(57) Abstract :

The demand for technologies that offer substantial cost savings, prediction of crop diseases, feasible solutions to protect the crop, and improved operational efficiency, is rising exponentially. Digital agriculture management applications have advanced significantly, influencing Information and Communication Technology (ICT) to provide advantages for farmers and consumers as well as pushing technological solutions into rural areas. Intelligent systems are increasingly emerging as the optimal means to propel precision agriculture. However, the prevailing landscape of multitasking robots is primarily focused on singular functions, such as harvesting or weeding, lacking comprehensive integration of multiple farming operations on a unified platform. This highlights a key research gap that requires addressing the smooth integration of various farming tasks without affecting overall performance. The primary focus of the proposed work is to fill that void by designing and developing a semi-automated multitasking robot that can navigate, sow, plough, remove weeds, fertilize, and spray water/pesticides. The unique feature of the robotic model is the integration of Bluetooth technology, which works in harmony with Arduino to facilitate various farming operations effectively. A cost-effective and scalable model is proposed which can be implemented in real-world farming scenarios. The work aims to contribute to the evolution of precision agriculture by developing an adaptable and accessible solution for a variety of farming operations that is in line with the agricultural sector's dynamic requirements.

No. of Pages : 26 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/04/2024

(21) Application No.202441028128 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : INTELLIGENT MEDICATION MANAGEMENT SOLUTION WITH IOT AND MACHINE LEARNING FOR ENHANCED PATIENT SAFETY

(51) International classification :A61B5/00, A61J1/03, A61J7/00, A61J7/04, G06N20/00, G16H20/13, G16H40/67 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr.G.Victo Sudha George Address of Applicant :Professor, Dept. of Computer Science and Engineering, Dr.M.G.R. Educational and Research Institute Chennai ----- 2)Dr.G.Soniya Priyatharsini 3)Mrs.A.Maheswari 4)Mrs.R.M.SARITHA 5)Ms.GIRIJA V 6)Ms.M.DEVIKA 7)Ms.C.Sowmiya Sree 8)Ms.Kallu Pranusha Reddy Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.G.Victo Sudha George Address of Applicant :Professor, Dept. of Computer Science and Engineering, Dr.M.G.R. Educational and Research Institute Chennai ----- 2)Dr.G.Soniya Priyatharsini Address of Applicant :Associate Professor, Dept. of Computer Science and Engineering, Dr.M.G.R. Educational and Research Institute Chennai ----- 3)Mrs.A.Maheswari Address of Applicant :Assistant Professor, Dept. of Computer Science and Engineering, Dr.M.G.R. Educational and Research Institute Chennai ----- 4)Mrs.R.M.SARITHA Address of Applicant :Assistant Professor, Dept. of Computer Science and Engineering, Dr.M.G.R. Educational and Research Institute Chennai ----- 5)Ms.GIRIJA V Address of Applicant :Assistant Professor, Cambridge Institute of Technology, Visvesvaraya Technological University Bangalore ----- 6)Ms.M.DEVIKA Address of Applicant :Assistant Professor Dept. of Computer Science and Engineering, Dr.M.G.R Educational and Research Institute Chennai ----- 7)Ms.C.Sowmiya Sree Address of Applicant :Assistant Professor, Dept. of Computer Science and Engineering, Dr.M.G.R. Educational and Research Institute Chennai ----- 8)Ms.Kallu Pranusha Reddy Address of Applicant :Assistant Professor, Department of CSE, Visvesvaraya College of Engineering and Technology Bangalore -----

(57) Abstract :
Achieving a high level of medication adherence, or compliance with drug regimen, is crucial for keeping healthcare expenses under control. Evaluation of present adherence, improvement of adherence, and maintenance of the necessary level of medication adherence—particularly for long-term chronic conditions—present significant challenges owing to the complex nature of medication adherence, which is caused by a multitude of underlying factors. There are a number of complicated, expensive, and difficult-to-implement therapies that have been suggested in the healthcare literature to increase adherence. Furthermore, it is unclear which ones would work best for which patients under what circumstances with what degrees of adherence. Thus, it is necessary to model, assess, and compare the therapies both singly and in combination to determine their effect on medication adherence. In light of this, this study presents the design and evaluation of an SMMS to enhance medication adherence. Additionally, we offer an analytical model for assessing medication adherence with the help of SMMS-supported interventions, such as context-aware reminders, better medication scheduling, and healthcare professional support. The results of the performance test demonstrate that SMMS may achieve very high medication adherence for both single and multiple drugs, even in patients with modest cognitive deficit. Additionally, various effective composite strategies for medication adherence are suggested and assessed. Even with marginally better drug adherence, substantial overall healthcare savings are demonstrated. The savings from better medication adherence become even more pronounced as the expense of hospitalization rises. In order to improve drug adherence in various settings, the suggested study serves as a foundation for designing individualized treatments to patients.

No. of Pages : 10 No. of Claims : 4

(54) Title of the invention : NOVEL APPROACHES TO HAIRPIN CURVE BEND: REVOLUTIONIZING BEND DESIGN AND PERFORMANCE

(51) International classification :G08G0001160000, G08G0001095000, G08G0001096700, G08G0001010000, B60W0030095000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Vidyavardhaka College of Engineering Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Ravikumar V Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- ----- 2)Dr Ayesha Taranum Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- ----- 3)Prof. Kavyashree S Address of Applicant :Vidyavardhaka College of Engineering, #206, Gokulam 3rd Stage, Mysuru – 570 002 Mysuru ----- -----

(57) Abstract :

The proposed system aims to address the paramount concern of safety and comfort during hill travel, with a specific focus on preventing accidents at hairpin bends and U curves. To achieve this goal, the system leverages IoT (Internet of Things) technology to implement an intelligent traffic warning signal that alerts drivers of approaching vehicles near these challenging road configurations. Hill travel poses unique challenges due to the winding and often steep nature of the terrain, making it essential to enhance safety measures to protect both drivers and passengers. Hairpin bends and U curves, in particular, are notorious for their increased accident risks, as they limit visibility and require precise maneuvering. The IoT-based traffic warning signal comprises a network of sensors strategically positioned along the hillside road. These sensors continuously monitor the traffic flow, detecting vehicles approaching hairpin bends and U curves. When a potential hazard is detected, the system activates a warning signal, which can take the form of flashing lights, audible alerts, or even notifications sent directly to drivers' smartphones through a dedicated app. This innovative approach aims to provide real-time situational awareness to drivers, alerting them to the presence of other vehicles in or near these challenging road sections. By doing so, the system empowers drivers to make informed decisions, adapt their speed, and take necessary precautions to prevent accidents. In summary, the primary objective of the proposed system is to enhance safety and comfort during hill travel, specifically at hairpin bends and U curves, by employing IoT-based technology to deliver timely warnings to drivers. By preventing accidents and minimizing the associated risks, this system has the potential to significantly improve the overall hill travel experience while saving lives and reducing injuries on these treacherous roads.

No. of Pages : 10 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028132 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SOLAR-POWERED E-BIKE INTEGRATED PLOUGHING SYSTEM FOR AGRICULTURE TILLAGE

(51) International classification :H01L0031050000, H02S0020300000, F21S0009030000, H02S0020230000, H01L0031054000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT OF THE INVENTION This eco-friendly machine aims to reduce air pollution while facilitating agricultural activities. The electric bike is operated using solar energy, with a lead- acid battery charged through solar cells. Solar cells harness sunlight to generate electricity via the photovoltaic effect, converting electromagnetic radiation into voltage These cells are interconnected and assembled into modules, protected by a glass sheet to endure weather conditions. By connecting solar cells in series, desired peak DC voltage is achieved, while connecting them in parallel yields desired peak current. This Electric Cultivator offers a cost-effective alternative to traditional, expensive tractors, especially beneficial for small scale farming. It boasts excellent battery backup during soil cultivation, with minimal charging costs, making it an economically Viable solution for farmers.

No. of Pages : 4 No. of Claims : 5

(54) Title of the invention : AN APPLICATION FOR THE LIVESTOCK IMMUNISATION ALERT

(51) International classification :G06Q0010100000, G06Q0010060000, G06Q0030000000, G16H0080000000, A01K0003000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr.Ch Anuradha Address of Applicant :Flat no:502,N heights pearl apartments, opp PVPSIT, vijayawada(Rural), Krishna, Andhra Pradesh-520007, ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Deva Harshini Kommineni Address of Applicant :D-NOI 74-14-44, ayyappa nagar, Vijayawada, Krishna nagar, N.T.R, Andhra Pradesh - 520007. ---- ----- 2)Tipirneni Sathvika Lakshmi Address of Applicant :D.no:8—9/1 endowment colony, Opp nagarjuna hospital, Pantakaluva road, Vijayawada, N.T.R, Andhra Pradesh - 520007. ----- 3)Edupuganti Gnana Srihas Address of Applicant :D.No:4-252,Pattabhi Residency,flat no:106, poranki, Vijayawada, Krishna, Andhra Pradesh-521137. ----- ----- 4)Alluri Sai Vignesh Address of Applicant :D.N0.42-4-108, Vijayaprada Residency, Flat no.5F-1, A.S.R. Murthy Street, Ramakrishnapuram, Vijayawada (Central), N.T. R, Andhra Pradesh - 520003. ----- -----

(57) Abstract :

ABSTRACT OF THE INVENTION We are proposing to develop an application to monitor the vaccination schedule of the cattle. We know that cattle serve as a primary source of livelihood for millions of individuals globally.They provide milk, leather, and products which are used in industries as raw material. Therefore effective management practices of cattle is the need of the hour.The management significantly impact productivity, enhancing profitability for farmers and stakeholders within the cattle industry. Vaccination stands as a fundamental regarding the health of cattle, but managing vaccination schedules and records remains a challenge for many cattle ranchers.The application enables cattle ranchers to provide timely medical attention to the cattle at the time of vaccination. The application provides services such as vaccination scheduling, record-keeping and traceability, information and Guidance on Cattle. The proposed application is available in both english and telugu. In the future the application can also be used as Connectivity and Collaboration tool between the ranchers and veterinarians.

No. of Pages : 10 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/04/2024

(21) Application No.202441028143 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SMART TROLLEY FOR SHOPPING MALLS

(51) International classification :G06Q0030020000, G06Q0030060000, G06K0007100000, G06Q0030040000, A61K0036880000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Nowadays, buying and searching at huge malls is turning into a daily activity in subway cities. We can see large rush at malls on holidays and weekends. The rush is even a lot of once there are special offers and discount. People purchase totally different things and place them in trolley. After total purchase one needs to go to cashier for payments. The cashier prepares the bill victimization bar code reader that could be a time overwhelming method and leads to long queues at charge counters. This project targeted to minimize the Queue at a billing counter in a shopping complex. Smart Trolley does the same by displaying the total price of the product kept inside the cart. In this way the customer can directly pay the amount at the billing counter and leave with the commodities he/she has bought. The hardware is based on Arduino Uno, RFID Reader Module, RFID Card and Buzzer. It eliminates the traditional scanning of products at the counter and in turn speeds up the entire process of shopping, also with this system the customer shall know the total amount to be paid and hence can accordingly plan his shopping only buying the essential commodities resulting in enhanced savings. Since the entire process of billing is automated it reduces the possibility of human error substantially. Also the system has a feature to delete the scanned products by customer to further optimize the shopping experience

No. of Pages : 6 No. of Claims : 2

(54) Title of the invention : SYSTEM AND METHOD FOR CONTROLLING AN ACTIVE SUSPENSION SYSTEM IN A VEHICLE

(51) International classification :G06N0003080000, G06N0003040000, B60G0017016500, B60G0017015000, B60G0017018000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)VELLORE INSTITUTE OF TECHNOLOGY Address of Applicant :VELLORE INSTITUTE OF TECHNOLOGY KATPADI VELLORE Tamil Nadu India Vellore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Vinodh Kumar E Address of Applicant :School of Electrical Engineering VIT VELLORE Tamil Nadu India 632014 Vellore ----- 2)Joshi Kumar Viswanadhapalli Address of Applicant :School of Electrical Engineering VIT, VELLORE Tamil Nadu India 632014 Vellore ----- 3)Dr. Jitendra Kumar Goyal Address of Applicant :Room no. 102E, TT Annex Vellore Institute of Technology, VIT, VELLORE Tamil Nadu India 632014 Vellore ----- 4)Yaduraj Jagadeesan Address of Applicant :School of Electrical Engineering VIT VELLORE Tamil Nadu India 632014 Vellore ----- 5)Drumil Hasmukh Panchal Address of Applicant :School of Electrical Engineering VIT VELLORE Tamil Nadu India 632014 Vellore -----

(57) Abstract :
Asystem for controlling an active suspension system (102) in a vehicleis provided. The system includes a controller (104) and a reinforcement learning (RL) system (106), the controller adjusts the active suspension based on road profiles. The RL system employs an inverse reinforcement learning (IRL) model (110), integrating a higher order sliding mode observer (HOSMO) model (112) to estimate the suspension system's state at intervals. Utilizing a neural network model (114), it computes a reward function for road profiles, considering the IRL model, system state, and intended actions. This reward function trains a RL model (116), contributing to reduced chassis vibration and heightened passenger comfort. The system's adaptive learning ensures optimal performance, making it versatile and effective across diverse road conditions. Overall, this integration of IRL, HOSMO, and RL models represents a significant advancement in active suspension control, offering an intelligent and adaptable solution for improved vehicle dynamics. FIG. 1

No. of Pages : 31 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/04/2024

(21) Application No.202441028192 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AI BASED AUTOMATIC FIRE EXTINGUISHER SYSTEM IN VEHICLE

(51) International classification :G08B0029180000, A62C0037360000, G06Q0050300000, G06N0020000000, G07C0005000000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

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(57) Abstract :

The integration of Artificial Intelligence (AI) with advanced technologies has significantly enhanced safety measures in various domains, including transportation. In this project, we propose an innovative AI-based automatic fire extinguisher system designed specifically for vehicles. This system employs Arduino Uno microcontroller, GSM module, GPS, and fire sensors to detect and mitigate fire incidents effectively. The primary objective of this system is to detect fire outbreaks in vehicles at an early stage and promptly initiate fire extinguishing procedures to minimize damage and ensure passenger safety. The integration of AI algorithms enhances the system's capability to accurately identify fire hazards while minimizing false alarms. The system utilizes fire sensors strategically installed within the vehicle's compartments to continuously monitor the surrounding environment for any signs of fire. Upon detecting abnormal temperature rise or smoke indicative of a fire outbreak, the sensors trigger the Arduino Uno microcontroller. The Arduino Uno, functioning as the central processing unit, employs AI algorithms to analyze sensor data and determine the severity of the fire. Based on the analysis, the system activates the appropriate response mechanisms to address the situation effectively. In case of a confirmed fire incident, the system initiates the deployment of the onboard fire extinguisher. The AI algorithms optimize the extinguisher's deployment by considering factors such as fire location, intensity, and vehicle occupants' safety. Additionally, the system utilizes the GPS module to transmit the vehicle's location to emergency services, facilitating swift response and assistance. Furthermore, the integration of the GSM module enables real-time communication capabilities, allowing the system to send alerts and notifications to relevant stakeholders, including vehicle owners, emergency contacts, and authorities. This ensures timely intervention and coordinated efforts to mitigate the fire incident.

No. of Pages : 9 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028228 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD FOR FABRICATING BIODEGRADABLE MAGNESIUM-BASED IMPLANTS USING A 3D-PRINTING PROCESS

(51) International classification :B33Y0080000000, B33Y0010000000, A61L0027180000, A61L0027580000, A61L0027560000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

ABSTRACT: Title: A Method for Fabricating Biodegradable Magnesium-Based Implants Using a 3D-Printing Process The present disclosure proposes a method for fabricating biodegradable magnesium-based implants for a patient using at least one 3D-printing technique. The method produces one or more biodegradable and non-degradable medical implants. The method reduces the cost of the production of one or more implants compared to traditional methodologies. The method is adaptable to fabricate the internal and external scaffolds in one or more implants. The method is adaptable to apply suitable antibiotics into each layer and in between the layers of one or more implants. The method is adaptable to enhance the biodegradation of magnesium-based implants through postprocessing. The method is adaptable to introduce low-cost, patient-specific biodegradable or non-degradable implants into the market.

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/04/2024

(21) Application No.202441028229 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SOLAR HYBRID DRYER FOR CONTINUOUS DEHYDRATION OF FOOD PRODUCTS

(51) International classification :G06Q0050120000, A23B0007020000, F21S0009030000, A23L0017600000, A47J0031460000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Syed Zahed Address of Applicant :Door no 37-1-406/11, Bhagya Nagar 2nd line, 1st cross, Ongole. Prakasam-523001, Andhra Pradesh, India. Ongole ----- 2)Syed Rehana Tasneem 3)Sheikh Sajad Rasool Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Syed Zahed Address of Applicant :Door no 37-1-406/11, Bhagya Nagar 2nd line, 1st cross, Ongole. Prakasam-523001, Andhra Pradesh, India. Ongole ----- 2)Syed Rehana Tasneem Address of Applicant :Door no 37-1-406/11, Bhagya Nagar 2nd line, 1st cross, Ongole. Prakasam-523001, Andhra Pradesh, India. Ongole ----- 3)Syed Abdul Hakeem Zakir Ahamed Address of Applicant :Door no 37-1-406/11, Bhagya Nagar 2nd line, 1st cross, Ongole. Prakasam-523001, Andhra Pradesh, India. Ongole ----- 4)Syed Abdul Haleem Junaid Ahamed Address of Applicant :Door no 37-1-406/11, Bhagya Nagar 2nd line, 1st cross, Ongole. Prakasam-523001, Andhra Pradesh, India. Ongole ----- 5)Sheikh Sajad Rasool Address of Applicant :House No. MH-15, Jamia Masjid Raipora Palhallan, Pattan, Baramullah-193121, Jammu & Kashmir, India. Baramulla -----

(57) Abstract :

ABSTRACT: Title: A Solar Hybrid Dryer for Continuous Dehydration of Food Products The present disclosure proposes a solar hybrid dryer (100) that utilizes both solar energy and alternative heating sources for continuous batch production of dehydrated food products even in cloudy or rainy conditions. The solar hybrid dryer (100) comprises a drying chamber (110) and a control chamber (116). The solar hybrid dryer (100) ensures consistent and precise temperature control for each compartment within the solar hybrid dryer (100), thereby catering to the specific drying requirements of different food types. The solar hybrid dryer (100) empowers users to transform waste and vulnerable crops into valuable and shelf-stable food products, thereby maximizing income and minimizing waste. The solar hybrid dryer (100) offers a customizable and modular design with detachable compartments for accommodating various food products and facilitating easy installation in various environments

No. of Pages : 23 No. of Claims : 10

(54) Title of the invention : REMOTE POSITIONING SYSTEM FOR UNDERGROUND COAL MINES USING VISIBLE LIGHT AND LORA COMMUNICATION

(51) International classification :E21F0017180000, E21F0011000000, G08C0017020000, H04N0007180000, H04W0004300000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)National Institute of Technology Calicut Address of Applicant :NIT Campus (P.O), Calicut, Kozhikode –673601, Kerala, India. Calicut ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Saikat Chandra Bakshi Address of Applicant :Associate Professor, Department of Electronics & Communication Engineering, National Institute of Technology Calicut, NIT Campus (P.O), Calicut, Kozhikode – 673601, Kerala, India. Calicut ----- 2)Ms. Ankita Ray Chowdhury Address of Applicant :CA- 223/2, Saltlake, Sector – I, Kolkata-700064, West Bengal, India. Kolkata ----- 3)Mr. Avik Kumar Das Address of Applicant :Vill. Mukundapur, PO. Rajbalhat. Dist. Hooghly-712408, West Bengal, India. Hooghly ----- - 4)Dr. Ankita Pramanik Address of Applicant :101/7, Salimpur Road, Dhakuria, Kolkata – 700031, West Bengal, India. Kolkata ----- 5)Dr. Gopal Chandra Roy Address of Applicant :Flat No. 407, Block B, HIT Green 137, Ichapur Extension Road, Howrah – 711104, West Bengal, India. Howrah -----

(57) Abstract :

ABSTRACT: Title: Remote Positioning System for Underground Coal Mines Using Visible Light and LoRa Communication The present disclosure proposes a remote positioning system (100) that identifies miners' position in an underground coal mine (UCM) environment. The underground coalmine remote positioning system (100) comprises plurality of transmitter units (102) and at least one receiver unit (110). The plurality of transmitter units (102) are positioned along a path of the underground coal mine environment. The at least one receiver unit (110) is affixed to a helmet of the mine personnel. In specific, each transmitter unit (102) comprises a processing unit (104), a lighting unit (106) and a primary LoRa transceiver (108). The at least one receiver unit (110) comprises a processor (112), at least one photodiode (114) and a secondary LoRa transceiver (116). The proposed remote positioning system (100) utilizes long-range (LoRa) technology for wireless communication between the ground monitoring station and the underground coal mine environment.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028232 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A NOVEL LIQUID TOXIN BINDER FORMULATION FOR USE IN THE DRINKING WATER OF POULTRY BIRDS

(51) International classification :A23K0050750000, A61K0039120000, A23K0050420000, A23L0033100000, A61P0043000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)NEOSPARK DRUGS AND CHEMICALS PRIVATE LIMITED Address of Applicant :NEOSPARK CORPORATE CENTRE, 241 BL BAGH, PANJAGUTTA, HYDERABAD-500082 HYDERABAD ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DR VEMULAPALLI SIVA PRASAD Address of Applicant :NEOSPARK CORPORATE CENTRE, 241 BL BAGH, PANJAGUTTA, HYDERABAD-500082 HYDERABAD ----- 2)MR CHIKKAM SRINIVASA NAIDU Address of Applicant :NEOSPARK CORPORATE CENTRE, 241 BL BAGH, PANJAGUTTA, HYDERABAD-500082 ----- ----- 3)DR PAPPU SELLAPPAN SHIVA Address of Applicant :NEOSPARK CORPORATE CENTRE, 241 BL BAGH, PANJAGUTTA, HYDERABAD-500082 ----- -----

(57) Abstract :

Abstract A NOVEL LIQUID TOXIN BINDER FORMULATION FOR USE IN THE DRINKING WATER OF POULTRY BIRDS
The present invention pertains to novel water-miscible potent liquid formulations, designed to mitigate challenges associated with poor grain quality in the poultry industry, which often lead to mycotoxicity and adverse effects on broiler health and performance. The formulation comprises soluble silicates, amphoteric polymer, and hepatic health potentiators. The efficacy of these formulations in alleviating mycotoxin-induced adverse effects and their potential to improve broiler growth and performance are highlighted. This innovation offers a promising solution to combat mycotoxicity and enhance the overall health and productivity of broilers, underscoring a commitment to producing high-quality poultry products. Additionally, the invention encompasses a process for the preparation of these formulations.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028357 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT BASED SMART PARKING ECOSYSTEM WITH CONNECTED WIRELESS INDUCTION CHARGERS

(51) International classification :G08G0001140000, H02J0007020000, H02J0050100000, G07B0015020000, H02J0050000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This invention introduces an innovative Internet of Things (IoT)-based ecosystem designed to revolutionize parking spaces through smart technology integration and wireless charging capabilities. The system employs IoT-enabled sensors to monitor parking availability and guide vehicles to the nearest available spot, seamlessly integrating with wireless induction chargers embedded within parking spaces. Upon parking, electric vehicles (EVs) are automatically charged without the need for manual cable connections, leveraging advanced wireless induction technology. This ecosystem not only optimizes parking space utilization and reduces the time spent by drivers searching for parking but also facilitates efficient energy use and provides an enhanced charging solution for EV owners. Through an intelligent management system, the ecosystem dynamically manages energy distribution based on real-time demand and vehicle charging requirements, promoting energy conservation and sustainability. This smart parking ecosystem embodies a significant leap forward in urban mobility, offering a dual solution to parking and EV charging challenges, thereby improving user experience and contributing to the development of smart cities. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/04/2024

(21) Application No.202441028371 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : CALIBRATION OF LOW-COST IOT SENSORS IN ENVIRONMENTAL MONITORING NETWORKS VIA APPLICATION OF MACHINE LEARNING TECHNIQUES

(51) International classification :G06N0020000000, B01D0053620000, G06Q0010040000, H04W0004380000, G01R0033560000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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6)Mr.R.Balamurugan

Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, K.Ramakrishnan College of Engineering, Trichy - 621112 -----

(57) Abstract :

The proposed invention introduces a novel approach to calibrating low-cost IoT sensors in environmental monitoring networks through the application of machine learning techniques. Traditional calibration methods often struggle to maintain accuracy and reliability, hindering effective decision-making in critical areas such as pollution control and climate change mitigation. Leveraging machine learning algorithms, our system automatically adjusts sensor readings based on historical data patterns and environmental conditions, eliminating the need for manual calibration and ensuring continued accuracy over time. This innovation not only enhances the reliability of environmental data but also offers significant cost savings compared to traditional methods. With implications spanning industries and applications, from agriculture to healthcare and smart cities, our invention promises to revolutionize how we collect, analyze, and utilize environmental data, ultimately driving positive change towards a more sustainable and resilient future. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 20 No. of Claims : 10

(54) Title of the invention : A NEURO-INSPIRED DEEP LEARNING FRAMEWORK ENHANCING IMAGE RECOGNITION CAPABILITIES

(51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date	(71)Name of Applicant : 1)R.M.K. Engineering College Address of Applicant :R.S.M. Nagar, Kavaraipettai, Gummidipoondi Taluk, Tiruvallur District, Pin Code: 601206, Tamil Nadu ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.A.Thilagavathy Address of Applicant :Associate Professor, Department of Computer Science and Engineering, R.M.K. Engineering College, R.S.M. Nagar, Kavaraipettai, Gummidipoondi Taluk, Tiruvallur District, Pin Code: 601206, Tamil Nadu ----- 2)Dr.Naveen Raju D Address of Applicant :Associate Professor, Department of Computer Science and Engineering, R.M.K. Engineering College, R.S.M. Nagar, Kavaraipettai, Gummidipoondi Taluk, Tiruvallur District, Pin Code: 601206, Tamil Nadu ----- 3)Ms. Gayathri S Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, R.M.K. Engineering College, R.S.M. Nagar, Kavaraipettai, Gummidipoondi Taluk, Tiruvallur District, Pin Code: 601206, Tamil Nadu ----- 4)R.Deepa Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, R.M.K. Engineering College, R.S.M. Nagar, Kavaraipettai, Gummidipoondi Taluk, Tiruvallur District, Pin Code: 601206, Tamil Nadu ----- 5)Ms.P.Ilampiray Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, R.M.K. Engineering College, R.S.M. Nagar, Kavaraipettai, Gummidipoondi Taluk, Tiruvallur District, Pin Code: 601206, Tamil Nadu -----

(57) Abstract :

The proposed Neuro-Inspired Deep Learning Framework represents a groundbreaking approach to image recognition, drawing inspiration from the structure and function of the human brain. Leveraging convolutional neural networks (CNNs) and attention mechanisms, the framework autonomously extracts hierarchical features from raw image data, enhancing accuracy and efficiency. Through integration of unsupervised learning, reinforcement learning, and self-organization principles, the model achieves adaptability and robustness in diverse real-world scenarios. Techniques for visualization and interpretation ensure transparency and explainability of the model's decision-making processes. With a modular architecture and compatibility with existing deep learning frameworks, the framework promotes collaboration and interoperability within the research community. Offering scalability and versatility across various domains, from medical imaging to augmented reality, the proposed framework heralds a paradigm shift in image recognition technology, paving the way for transformative advancements in artificial intelligence. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 20 No. of Claims : 10

(54) Title of the invention : EFFICIENT INTEGRATION OF LIGHTWEIGHT PMSM TECHNOLOGY IN HYBRID ELECTRIC VEHICLES FOR ENHANCED PERFORMANCE AND RANGE OPTIMIZATION

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(51) International classification	:B60K0006520000, B60W0020110000, F03D0009250000, B60W0010080000, H04W0072040000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The proposed invention presents a groundbreaking approach to enhancing the performance and range optimization of Hybrid Electric Vehicles (HEVs) through the integration of Lightweight Permanent Magnet Synchronous Motor (PMSM) technology. By replacing traditional electric motors with lightweight PMSM units, the invention aims to achieve significant reductions in vehicle weight, leading to improved fuel efficiency and extended driving range. Advanced control algorithms and power management strategies are employed to optimize power allocation between the internal combustion engine and the electric motor, ensuring seamless operation and enhanced overall performance. This innovation represents a pivotal advancement in sustainable transportation solutions, offering consumers a more efficient and environmentally friendly alternative to conventional vehicles.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/04/2024

(21) Application No.202441028375 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SENSOR-BASED WALKING AID ENHANCED WITH ARTIFICIAL INTELLIGENCE FOR ELDERLY INDIVIDUALS

(51) International classification :A61B0005110000, A61H0003000000, A61B0005000000, G08B0021040000, A61H0003040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The proposed invention introduces a sensor-based walking aid enhanced with artificial intelligence (AI) for elderly individuals, addressing the challenges of mobility impairment in aging populations. The walking aid incorporates a variety of sensors, including accelerometers, gyroscopes, and pressure sensors, to capture comprehensive data on user movement, posture, and balance. Integrated AI algorithms analyze this data in real-time, providing adaptive support and feedback tailored to the user's specific needs and environmental conditions. This innovative approach enables proactive fall detection and prevention, enhances user comfort and usability, and promotes greater mobility and independence for elderly individuals. With its potential to revolutionize assistive technology for the aging population, the sensor-based walking aid represents a significant step towards improving the quality of life for millions of individuals worldwide.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028376 A

(19) INDIA

(22) Date of filing of Application :06/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : INTERACTIVE SPEECH TRAINING SYSTEM FOR ENHANCING SPEAKING SKILLS

(51) International classification :G09B0019060000, G09B0019040000, G09B0005060000, G06Q0030020000, G09B0009000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The proposed invention introduces an Interactive Speech Training System designed to enhance speaking skills through personalized feedback and immersive learning experiences. Leveraging speech recognition technology, artificial intelligence, and gamification elements, the system offers users a dynamic platform to practice speaking in a supportive virtual environment. Learners of all proficiency levels can engage in interactive exercises, simulated conversations, and role-playing scenarios tailored to their individual needs and preferences. The system analyzes users' spoken language in real-time, providing targeted feedback on pronunciation, fluency, and grammar. Additionally, it incorporates gamified elements to motivate learners and foster a sense of achievement. With its adaptability, accessibility, and scalability, the Interactive Speech Training System represents a paradigm shift in language education, empowering users to communicate effectively in diverse linguistic contexts.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :06/04/2024

(21) Application No.202441028389 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : CREATIVE EPOXY RESIN TILE CASTING USING CONSTRUCTION AND DEMOLITION WASTE

(51) International classification :A23F0003140000, E04G0023080000, C04B0041000000, F21K0009000000, C04B0018160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This invention describes a pioneering technique for crafting tiles using epoxy resin and construction & demolition (C&D) waste. Focused on sustainable practices, this invention is the optimal blend of waste materials and resin, aiming to produce visually appealing tiles. By repurposing C&D waste, the method not only contributes to waste reduction but also offers a creative pathway for environmentally conscious construction materials, addressing both aesthetic and structural considerations.

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028394 A

(19) INDIA

(22) Date of filing of Application :06/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHOD FOR ENHANCING JOB PERFORMANCE AND QUALITY OF WORK LIFE IN TRANSPORTATION ORGANIZATIONS

(51) International classification :G06Q0010060000, G06Q0010100000, G06Q0050000000, A61K0036534000, A47C0007620000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

The concept of Quality of Work Life (QWL) has garnered global attention due to its profound impact on motivation, productivity, and overall well-being, both within and outside the workplace. Factors such as support from peers, effective job enrichment, career development opportunities, and job security significantly influence QWL. This study delves into assessing the QWL among Telangana State Road Transport Corporation (TSRTC) employees. Utilizing survey methods, 251 TSRTC employees participated, with data collected through interviews and questionnaires. Statistical analyses, including chi-square techniques, were employed to investigate the relationship between years of experience and productivity improvement. Findings indicate that no significant relationship exists between years of experience and overall QWL enhancement within TSRTC.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028408 A

(19) INDIA

(22) Date of filing of Application :06/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DEVELOPMENT OF AN APP BASED AUDIOMETER FOR HEARING ASSESSMENT

(51) International classification :A61B0005120000, A61B0005000000, G16H0040670000, H04W0088020000, H04L0001000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The proposed digital audiometric App aims to enhance the hearing assessment by using software technology to provide a convenient, affordable, and accessible solution for self hearing Test. Traditional audiometers, are often bulky and expensive, present barriers to widespread hearing assessment, particularly in remote or underserved areas. By utilizing the Earphone functionalities inherent in smartphones, our app will enable the individuals to self-administer accurate pure-tone audiometry tests across various frequencies and decibels, ensuring reliable results through validation process Our methodology involves fine-tuning frequency and decibel levels to optimize the accuracy of audiometric testing. The app advantages over traditional audiometers include reduced cost, portability, and ease of use, facilitating early detection of hearing impairments and personalized treatment plans. Key features include real-time data visualization, secure storage, and integration of data, ensuring comprehensive monitoring, graphical output with downloadable features. With compatibility across Android devices, the proposed app provides the graphical output which is not available in existing apps. Proposed digital audiometric app promises to democratize access to hearing healthcare, empowering individuals to take control of their auditory well-being anytime, anywhere.

No. of Pages : 6 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028466 A

(19) INDIA

(22) Date of filing of Application :07/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AUTOMATED RE-POSITION MATTRESS

(51) International classification :A61G0007057000, A61B0005110000, A61B0005000000, A61G0007015000, B64C0039020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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10)Prof.Prabhavathy

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(57) Abstract :

Abstract The invention described is a body heat reflecting mattress system with a heat sensing layer designed to improve heat insulation properties and prevent bedsores. It includes components like a pipe-like structure, solenoid, external energy storage system, control unit, and internal energy source. The technology aims to adjust patient posture using a heat sensor detector to prevent decubitus ulcers. The system utilizes passive and active heat insulation methods and includes a body position change alarm system for patient safety. Additionally, there are components for monitoring patient location, measuring surface position accurately, and providing a robotic nursing mattress system with advanced features like a sensor strip for detecting temperature and humidity levels. The sensor strip configuration offers benefits such as improved stability, ease of maintenance, and consistent microclimate control.

No. of Pages : 10 No. of Claims : 10

(54) Title of the invention : PEROVSKITE SOLAR CELLS OPTIMIZATION: THE SIGNIFICANCE OF PROGRESSIVE ANNEALING METHODS

(51) International classification :H01L0051420000, H01L0051000000, H01L0031200000, H01L0031032000, G01R0031260000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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9)Dr. Brundaban Sahoo

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(57) Abstract :

PEROVSKITE SOLAR CELLS OPTIMIZATION: THE SIGNIFICANCE OF PROGRESSIVE ANNEALING METHODS The method for the development with the PSCs, or perovskite solar cells, have attracted a lot of interest in the photovoltaic community because of their remarkable photoelectric characteristics, which include a large carrier diffusion distance, high light absorption, and a band gap that can be adjusted. One of the most important factors affecting perovskite solar cells' preparation and performance is temperature. The device structure is significantly impacted by the annealing temperature, whereas carrier transport, the perovskite band gap, and interface characteristics are influenced by the operating temperature. The pure crystalline phase, extended charge-carrier lifetime, and low defect density of these MAP-treated perovskite films can significantly increase PSC efficiency without the need for an extra enhancer/passivation layer. The findings suggest that PSC efficiency may be considerably raised by tailoring the absorber layer's thickness. Due to significant advancements in materials development over the past 10 years, perovskite solar cells (PSCs) have seen a fast increase in efficiency, which is now the subject of intensive research. FIG.1

No. of Pages : 16 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028518 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : EXPLORING THE INFLUENCE OF WOMEN'S FINANCIAL INCLUSION ON ECONOMIC EMPOWERMENT: A MACHINE LEARNING PERSPECTIVE

(51) International classification :G06Q0040020000, G06Q0050260000, G06F0021620000, G06Q0010060000, G06Q0020380000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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9)Dr. K. Sundaresh
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(57) Abstract :
EXPLORING THE INFLUENCE OF WOMEN'S FINANCIAL INCLUSION ON ECONOMIC EMPOWERMENT: A MACHINE LEARNING PERSPECTIVE The method for the development with the results are in line with other earlier research projects that concluded financial digitalization has a major role in women's economic empowerment. This research stands out because it offers a current evaluation of the financial situation of Saudi women and evaluates ongoing government measures aimed at advancing women's economic empowerment and leadership potential. Know Your Customer (KYC) guidelines and simple accounts are among the systems; financial services have been expanded and have become a vehicle for women's empowerment; a modest loan has been introduced to help women become capable and self-sufficient. The study offers recommendations for ways to get beyond the obstacles that prevent women from using and accessing financial services in the context of societal norms that limit their ability to do so. FIG.1

No. of Pages : 17 No. of Claims : 1

(54) Title of the invention : VOICE REGENERATION SYSTEM AND METHOD FOR PROGRESSIVE VOICE LOSS MITIGATION

(51) International classification :G10L0015220000, G06N0020000000, G10L0025840000, G06F0003060000, G10L0015260000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)NITTE (DEEMED TO BE UNIVERSITY) Address of Applicant :6TH FLOOR, UNIVERSITY ENCLAVE, MEDICAL SCIENCES COMPLEX, DERALAKATTE, MANGALURU, KARNATAKA 575018 ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)RAKSHITHA Address of Applicant :DEPT. OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING, NMAM INSTITUTE OF TECHNOLOGY, NITTE (DEEMED TO BE UNIVERSITY), NITTE - 574110, KARNATAKA, INDIA Udupi ----- ----- 2)DR. SHARADA U SHENOY Address of Applicant :DEPT. OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING, NMAM INSTITUTE OF TECHNOLOGY, NITTE (DEEMED TO BE UNIVERSITY), NITTE - 574110, KARNATAKA, INDIA Udupi ----- ----- 3)KHUSHI S BHIMANI Address of Applicant :DEPT. OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING, NMAM INSTITUTE OF TECHNOLOGY, NITTE (DEEMED TO BE UNIVERSITY), NITTE - 574110, KARNATAKA, INDIA Udupi ----- ----- 4)KRISHNA M S Address of Applicant :DEPT. OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING, NMAM INSTITUTE OF TECHNOLOGY, NITTE (DEEMED TO BE UNIVERSITY), NITTE - 574110, KARNATAKA, INDIA Udupi ----- -----

(57) Abstract :
Disclosed herein is a voice regeneration system (100) for progressive voice loss mitigation to restore and enhance voice of users while also detecting and mitigating potential voice phishing attempts. The system (100) comprises a central control unit (102) managing operations of the system (100) and executing essential tasks, a computational acceleration unit (104) collaborating with the central control unit (102) to optimize performance, a data storage module (106) facilitating seamless access to stored data, a temporary data storage unit (108) providing fast data processing speeds, a sound capture unit (110) capturing voice inputs for regeneration and analysis, and a voice phishing detection assembly (112) identifying and mitigating fraudulent voice activities through specialized hardware components and machine learning algorithms, ensuring integrity and security of voice-based communication.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028523 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHOD AND SYSTEM FOR RAPID SERVICE RESTORATION IN LV GRIDS UTILIZING PORTABLE DGS

(51) International classification :H02J0003380000, H02J0009060000, H04W0024040000, G06Q0010000000, H02S0010120000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The proposed invention presents a method and system for rapid service restoration in low-voltage (LV) grids using portable distributed generation (DG) units. Combining advanced technologies from electrical engineering and renewable energy integration, the system aims to enhance grid resilience and reliability during disruptions. Real-time monitoring and predictive analytics identify outage locations and optimize the deployment of portable DG units, minimizing downtime for consumers. Adaptive control algorithms ensure seamless integration of renewable energy sources, promoting sustainability and reducing reliance on fossil fuels. The system's versatility extends to disaster preparedness, offering emergency power solutions for critical facilities. Overall, the proposed invention represents a significant advancement in grid management, offering a comprehensive solution to outage restoration challenges while paving the way for a more resilient and sustainable energy future.

No. of Pages : 19 No. of Claims : 10

(54) Title of the invention : NEURAL NETWORK-ASSISTED DIAGNOSIS OF ELECTRICAL JUNCTION ANOMALIES IN EVS

(51) International classification :G06N0003040000, G06N0020000000, G06N0003080000, G06K0009620000, G05B0023020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Dr. Peluru Janardhana Rao Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Avanathi's Research Technological Academy, Bhogapuram, Vizianagaram, Andhra Pradesh, India, Pincode: 531162 ----- 2)Dr. Anuradha. T 3)Mrs. Yerramsetty Pavani 4)Dr. Nellore Manoj Kumar 5)Mr. Abanikanta Pattanayak 6)Mrs. Charu Varshney 7)Ms. Shalini Sharma 8)Mr. P. Shiva Kumar 9)Dr. CH Hussaian Basha 10)Dr. Shaik Rafi Kiran Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Peluru Janardhana Rao Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Avanathi's Research Technological Academy, Bhogapuram, Vizianagaram, Andhra Pradesh, India, Pincode: 531162 ----- 2)Dr. Anuradha. T Address of Applicant :Professor, Department of Electrical and Electronics Engineering, KCG College of Technology, Chennai, Tamil Nadu, India, Pincode: 600097 ----- 3)Mrs. Yerramsetty Pavani Address of Applicant :Academic Consultant, Department of Electrical and Electronics Engineering (EEE), SVU College of Engineering, Sri Venkateswara University, Tirupati, Andhra Pradesh, India, Pincode: 517502 ----- 4)Dr. Nellore Manoj Kumar Address of Applicant :Independent Researcher, Founder & CEO, Infinite-Research Organization, B.O. 15-225, Gollapalem, Venkatagiri, Tirupati District, Andhra Pradesh, India, Pincode: 524132 ----- 5)Mr. Abanikanta Pattanayak Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Gandhi Institute of Excellent Technocrats (GIET), Ghangapatna, Bhubaneswar, Odisha, India, Pincode: 752054 ----- 6)Mrs. Charu Varshney Address of Applicant :Assistant Professor, Department of Computer Science, G.L. Bajaj Group of Institution, Mathura, Uttar Pradesh, India, Pincode: 281406 ----- 7)Ms. Shalini Sharma Address of Applicant :Assistant Professor, Electrical and Electronics Engineering Department, Bhagwan Parshuram Institute of Technology, New Delhi, India, Pincode: 110089 ----- ----- 8)Mr. P. Shiva Kumar Address of Applicant :Assistant Professor, Electrical and Electronics Engineering, Institute of Aeronautical Engineering, Hyderabad, Telangana, India, Pincode: 500043 ----- 9)Dr. CH Hussaian Basha Address of Applicant :Assistant Professor, Department of EEE, Nitte Meenakshi Institute of Technology, 6429, NITTE Meenakshi College Rd., BSF Campus, Yelahanka, Bengaluru, Govindapura, Karnataka, India, Pincode: 560064 ----- 10)Dr. Shaik Rafi Kiran Address of Applicant :Professor, Department of EEE, Sri Venkateswara College of Engineering (Autonomous), Tirupati, Andhra Pradesh, India, Pincode: 517507 ----- ---

(57) Abstract :
Our proposed invention presents a neural network-assisted diagnostic system for detecting electrical junction anomalies in electric vehicles (EVs). The system harnesses the power of artificial intelligence and machine learning to autonomously analyze vast amounts of data collected from EV systems, enabling real-time identification of potential faults or abnormalities within electrical junctions. By leveraging advanced signal processing techniques and neural network algorithms, the system offers a proactive approach to maintenance interventions, minimizing downtime and enhancing the reliability and safety of EVs. Moreover, the system's adaptability to diverse EV architectures and applications ensures its utility across various segments of the electric vehicle market, contributing to the broader goal of accelerating the transition to sustainable transportation solutions.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028530 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : MODIFIED DOUBLE STAINING TECHNIQUE FOR STAINING RAT, MICE, AND RABBIT FETUSES IN TERATOLOGY STUDIES

(51) International classification	:G01N0001300000, G01N0001310000, A61B0006040000, G06T0007350000, A61B0006000000	(71)Name of Applicant : 1)Ms. Sneha Suma Hegde Address of Applicant :Assistant Professor, Department of Studies in Zoology, Vijayanagara Sri Krishnadevaraya University, Ballari-583104, Karnataka -----
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(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The invention introduces a revolutionary dual staining technique for teratological studies, significantly enhancing the visualization of fetal skeletal structures in rats, mice, and rabbits. This advanced method combines Alizarin red and Alcian blue to distinctly stain osseous and cartilaginous tissues, respectively, enabling precise differentiation and detailed analysis of skeletal abnormalities. By standardizing the staining process, it ensures consistent, reproducible results across different species and laboratory conditions. This innovation not only advances scientific understanding of fetal development and its aberrations but also aligns with ethical research principles by optimizing the efficiency of specimen use. Its broad applicability extends from academic research to pharmaceutical safety assessments, offering a robust tool for evaluating the teratogenic potential of environmental and genetic factors.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028533 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : EFFICIENCY ANALYSIS OF LT/HT AND INDUSTRIAL TRANSFORMERS

(51) International classification :G05B23/02, H01F27/00, H02J13/00 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Mr. Muralidhar P Address of Applicant :Easwari Engineering College, Bharathi Salai, Ramapuram, Chennai-600089 ----- 2)Mr. Arunkumar R 3)Mr. Shafiq Imran S 4)Dr.M.Sujatha Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr. Muralidhar P Address of Applicant :Easwari Engineering College, Bharathi Salai, Ramapuram, Chennai-600089 ----- 2)Mr. Arunkumar R Address of Applicant :Easwari Engineering College, Bharathi Salai, Ramapuram, Chennai-600089 ----- 3)Mr. Shafiq Imran S Address of Applicant :Easwari Engineering College, Bharathi Salai, Ramapuram, Chennai-600089 ----- 4)Dr.M.Sujatha Address of Applicant :Easwari Engineering College, Bharathi Salai, Ramapuram, Chennai-600089 -----

(57) Abstract :

The proposed invention introduces an innovative system for the efficiency analysis and monitoring of distribution transformers, addressing critical challenges in the power distribution sector. Leveraging advanced sensing technologies, signal processing circuits, and embedded computing systems, the system enables real-time monitoring of key transformer parameters such as voltage levels, load variations, and oil levels. By providing continuous insights into transformer performance and health status, the system empowers utilities to implement proactive maintenance strategies, optimize grid operation, and ensure compliance with safety standards. Furthermore, the invention facilitates seamless communication of monitoring data to relevant stakeholders, supporting data-driven decision-making and enabling the integration of advanced grid management techniques. This comprehensive solution promises to enhance the reliability, efficiency, and sustainability of electricity supply networks, ultimately contributing to a more resilient and responsive power infrastructure.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028538 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : FACE RECOGNITION ATTENDANCE SYSTEM AND METHOD THEREOF

(51) International classification :G07C0001100000, H04N0005232000, G06F0021320000, H04N0005262000, G16H0030200000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

Disclosed herein is a face recognition attendance system (100) to records attendance of an individual present in a work area. The system (100) comprises of a capturing unit (134) to capture images of the individual a storage assembly (114) to store the images of the individual, a timer (116) to determine the time of the individual present in the work area and a control unit (122). The control unit (122) includes a data processing module (128) to process the images captured by the capturing unit (102), compare the images of the individual captured with the images of the individual pre-stored in the storage assembly (114). Moreover, based on the pre stored images and the time an attendance of the individual is marked. The system (100) further comprises a display screen (118) embedded with the capturing unit (102) and configured to display a name of the individual entering the work area.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028548 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SINGLE-TRANSFORMER POWER CONVERTER MERGING VOLTAGE REGULATION AND INVERTER FOR A POWER MANAGEMENT SYSTEM

(51) International classification :G05F1/10, G05F1/20, H01F27/40, H01F30/02, H02J9/06, H02M7/06
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT: Title: Single-Transformer Power Converter Merging Voltage Regulation and Inverter for a Power Management System
The present disclosure proposes a power management system (100) with switchable voltage regulation and battery backup. The power management system (100) comprises a transformer (102), a voltage stabilizer module (104), an inverter module (106), and a control system (108). The power management system (100) can merge voltage stabilization and inverter functionalities into a single unit, and enhance efficiency, reduce cost, and reduce size. The power management system (100) utilises a single transformer for both voltage stabilization and inverter/UPS functionality, improving efficiency and reducing cost. The power management system (100) provides a synchronization mechanism with the AC mains to minimize inrush current and enables faster switching, leading to improved performance.

No. of Pages : 14 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028559 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ISOBARIC CHAMBER CONSTRUCTION BY ATTACHING PRESSURE VESSEL TO GAS BALLOONS SUBMERGED IN DEEP LIQUID COLUMN

(51) International classification :G01N0033680000, G01N0001100000, B01D0053260000, B30B0011000000, H01J0049000000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

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(62) Divisional to Application Number :NA

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(57) Abstract :

This device named as Isobaric chamber construction by attaching pressure vessel to gas balloons submerged in deep liquid column relates to Physical Sciences. Few gas filled flexible balloons (40) are submerged in liquid filled in a pressure vessel (10) provided near ground level. Few balloons (40) are submerged in liquid filled in a deep liquid holding body (30), at depth where liquid's pressure is equal to pressure to be maintained in the balloons (40). Balloons (40) in the pressure vessel are connected through pipes (130) to balloons (40) in deep liquid holding body (30) to allow to and fro circulation of gas in between them. This device is useful to supply liquid and gas at constant pressure. Isobaric liquid or gas supplied from pressure vessel (10) to isobaric fluid utilizing means is replaced by fluid pumped by means of liquid pump-set (100) or gas compressor (90) driven by a motor.

No. of Pages : 32 No. of Claims : 14

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028574 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN AERATION SYSTEM AND A METHOD THEREOF

(51) International classification :E03C0001040000, E03C0001084000, F16K0031600000, C02F0003200000, A01B0045020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT Disclosed herein is a an aeration system (100) in a water tap , the aeration system (100) comprises, a water tap (106) including a tap handle (108), a valve seat (110), an O-ring (112) ,a sprout (114) and an aerator(116) configured to maintain constant rate of water flow, wherein the aerator (116) being made of clay the the water tap (106) is coupled with a buckled grooves hose (118), the water tap is coupled with a pipeline (104) and the pipeline (104)being connected to a water source (102). A zip tag (120) coupled to the aerator to regulate water flow in the water tap (106). The aeration system (100) further comprises of a zip-tag (120) is crafted from nylon threaded with the buckled grooves hose (118) to prevent accidental loosening of the aerator due to the excess pressure of the water flow. The aerator (116) being made of clay.

No. of Pages : 27 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028576 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD FOR DETECTION OF MERCURY IN AQUEOUS SOLUTIONS

(51) International classification :A61K0036590000, A61K0036185000, A61P0029000000, B82Y0040000000, A61K0033380000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Disclosed herein is a method (200) for preparing aqueous solution of plant-mediated non-functionalized silver nanoparticles. The method (200) includes preparing a cyclea peltata leaf extract (104). The method (200) also includes preparing an aqueous solution of silver nitrate (102). The method (200) also includes mixing 1.0 mM of the aqueous solution of silver nitrate (102) and 25-30% of the cyclea peltata leaf extract (104). The method (200) also includes agitating the prepared mixture for a pre-determined period to obtain the aqueous solution of plant-mediated non-functionalized silver nanoparticles.

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028578 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : TRACTOR VERGED TRAILER WITH MANURE SPREADER

(51) International classification :A01C0003060000, A01C0023000000, C05F0003000000, B60Q0001300000, A01K0001010000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT Manure spreader is a farming machine used to distribute solid manure, which is a valuable organic fertilizer, across field or pastures. The spreading of stack heaped manure is performed manually with spade which involves human drudgery so, the primary purpose of a manure spreader is to improve the distribution of organic matter, nutrients, and minerals uniformly onto agricultural land with less human involvement. The existing trailer utilized for the transport of manure is a complex operation and also requires more maintenance so we have designed the machine to help farmers efficiently spread manure to improve soil quality. The trailer used to carry load for the tractor is redesigned for marginal and small scale farmers who cultivate up to 2 hectares. The container is filled with manure; and a rotating mechanism with conveyor belt inside the container moves the manure toward the rear end of the spreader where there is a set of spinning disks which breaks up clumps and ensures that the manure is evenly distributed. Included are recommendations regarding the process of constructing a new spreading machine or improving existing methods of spreading manure. Index Terms — Manure spreader, Farm Yard Manure, Uniformity, Beater mechanism: spreading.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028580 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : IMPLEMENTING THE CNN ALGORITHM FOR RECOGNIZE THE FACE IN ATTENDANCE REVIEW SYSTEM

(51) International classification :G07C0001100000, G06F0021320000, G06N0003040000, G06Q0050200000, G06N0003080000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)HINDUSTAN INSTITUTE OF TECHNOLOGY Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 PH:9715781007 MAIL:hitprincipal@hindusthan.net ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. C. Natarajan Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 ----- 2) Dr.M.Thangamani Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 ----- 3)S.Tamizharasu Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 ----- 4)Rajasekhar Lingisetty Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 ----- 5)S. Satheesh Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 ----- 6)Lavanya K Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 ----- 7)Dr.J. Thilagavathi Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 ----- 8)Dr. D. Apandakumar Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 ----- 9)Dr. A. Mohanraj Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 ----- 10)M. Thiruvenkadasamy Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 ----- 11)Dr.J Juliet Josephine Joy Address of Applicant :HINDUSTAN INSTITUTE OF TECHNOLOGY VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE-641032 -----

(57) Abstract :

ABSTRACT Face identification has been considered an interesting research domain in the past few years as it plays a major biometric authentication role in several applications including attendance management and access control~ systems. Attendance management systems are very important to all organization though they are complex and time-consuming for managing regular attendance log. There are many automated human identification techniques such as biometrics, RFID, eye tracking, Voice recognition. Face is one of the most broadly used biometrics for human identity authentication. This paper presents a facial recognition attendance system based on deep learning convolutional neural networks. The system takes student images as input data, employs CNNs to identify faces, and logs attendance in real time into an Excel sheet and also displayed in output console. Overall, the face recognition attendance system utilizing a CNN model has shown promising results in accurately detecting and recognizing students based on input images. The system's ability to seamlessly integrate with webcam footage and update attendance data in real-time makes it a valuable tool for efficient attendance management in educational institutions. However, further optimization and fine-tuning may be necessary to address any potential limitations and enhance the system's performance in real-world scenarios.

No. of Pages : 11 No. of Claims : 8

(54) Title of the invention : SEMI-AUTOMATED COCONUT TREE TRENCHING AND FERTILIZER APPLYING MACHINE

(51) International classification :A23N0005030000, A61K0036889000, A01B0045020000, A01G0029000000, A01G0017000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr IBRAHIM SHERIFF.K.A Address of Applicant :Sri Shakthi institute of Engineering & Technology, Coimbatore, 641062. ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)BRINDA.P Address of Applicant :Sri Shakthi institute of Engineering & Technology, Coimbatore, 641062. ----- 2)DEEBESH.R Address of Applicant :Sri Shakthi institute of Engineering & Technology, Coimbatore, 641062. ----- 3)HARI PRASATH.S Address of Applicant :Sri Shakthi institute of Engineering & Technology, Coimbatore, 641062. ----- 4)KABILAN.R.S Address of Applicant :Sri Shakthi institute of Engineering & Technology, Coimbatore, 641062. ----- 5)MADAN PRASATH.T.S Address of Applicant :Sri Shakthi institute of Engineering & Technology, Coimbatore, 641062. ----- 6)Dr. IBRAHIM SHERIFF.K.A Address of Applicant :Sri Shakthi institute of Engineering & Technology, Coimbatore, 641062. ----- 7)CHANDAN GAUTAM Address of Applicant :Sri Shakthi institute of Engineering & Technology, Coimbatore, 641062. -----

(57) Abstract :

ABSTRACT: The coconut palm, known as the 'Kalpavriksha' or the tree of heaven; is revered for its multifaceted usefulness, with every part serving a distinct purpose. In India, approximately ten million individuals rely on coconuts directly or indirectly for their livelihoods. And Trenching is an important operation for coconut trees which involves the excavation of shallow furrows or trenches around the base of the trees. These trenches are dug a short distance away from the trunk and serve to improve soil aeration, fertilizer and nutrient application at root level thereby enhancing the overall health and growth of the coconut trees. The process of basin digging around coconut trees entails excavating a circular pit typically 4-6 inches deep, with width adjusted according to basin needs. With a focus on efficiency: environmental responsibility, and user-friendliness, (his project holds the promise of Transforming the coconut farming industry, by streamlining the labor-intensive process of trenching around coconut trees in a semi-automated manner. It provides an average fertilizer discharge of 6Kgs/rotation and maximum discharge of 14Kgs/rotation. Also, effectiveness is analyzed theoretically and experimentally, confirming its suitability for small and medium-scale farmers. And it is observed that, under a constant speed of 7 kmph, it is observed that, under a constant speed of 7kmph, we achieve the maximum efficiency for 1 acre of coconut trees (220 trees); Thus, it costs Rs. 3,300 (fuel cost) and takes a duration of 2 days, While, the performance of human when compared is around Rs. 1,000 and 9 days to complete this process for 220 coconut trees.

No. of Pages : 11 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028582 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN AND DEVELOPMENT OF QUADCOPTER DRONE FOR MONITORING CROPS USING IR RAYS

(51) International classification :B64C0039020000, G06Q0050020000, G05D0001000000, G05D0001100000, A01B0079000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :

8.ABSTRACT: Drones are unmanned aerial vehicles controlled remotely or autonomously. They have diverse applications, including aerial photography, surveillance, delivery, and scientific research. The popularity of drones has grown rapidly due to their versatility and accessibility. This versatile platform enables autonomous navigation, mapping agricultural fields, and ensuring safety through features like Return-to-Home and Fail-safe modes. The Drone is built with NIR [Near InfraRed] camera having range of 850 nm and it takes picture in Time Lapse mode which has an interval of sec along with Pixhawk Flight Controller and basic parts of drone. The Drone captures crucial data on crop health, disease detection, and growth assessment: storing geotag images on an SD card for reference. Data is transmitted for analysis, providing farmers with actionable insights for optimizing crop management. This project underscores the potential of drone technology in agriculture, offering a scalable and efficient means of monitoring crops to enhance yield, reduce resource use, and support sustainable farming practices by taking the picture which could be stored in SD card for future use with 70% of efficiency comparison between automation drone reading with a normal man's reading.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028584 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : WEAR AND CORROSION RESISTANCE OF Ti6Al4V ALLOY IMPLANTS: INTEGRATING SHOT PEENING WITH HYDROXYAPATITE-GRAPHENE OXIDE COMPOSITE COATING

(51) International classification :A61L0027300000, A61P0019020000, A61F0002300000, A61L0027060000, B24C0001100000		(71)Name of Applicant : 1)SOUNDARRAJAN KARTHIK Address of Applicant :1/36, Main Road, Mangalam ----- 2)K.Balasubramanian 3)S.Gowthaman 4)R.A.Hari Baalaaji 5)D.Sanjay 6)R.Nallaiya 7)S.Senthilkumar 8)N.Aswidth 9)B.Ajaykumar Name of Applicant : NA Address of Applicant : NA
(86) International Application No	:NA	(72)Name of Inventor : 1)K.Balasubramanian Address of Applicant :Department of Mechanical Engineering, Sri Krishna College of Engineering and Technology, Coimbatore-641008, TamilNadu ----- --
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(57) Abstract :

In the realm of orthopedic implants, the wear and corrosion resistance of materials play critical roles in ensuring long-term performance and patient safety. This study investigates the synergistic effects of shot peening and a composite coating comprising hydroxyapatite (HA) and graphene oxide (GO) on Ti6Al4V alloy implants. Shot peening is employed to modify the surface morphology, followed by the deposition of the HA-GO composite coating to further enhance the material properties. The wear and corrosion behavior of the treated implants are systematically evaluated using various analytical techniques, providing insights into their performance and durability. The results demonstrate significant improvements in wear and corrosion resistance comparing with non-treated Ti6Al4V alloy, indicating the potential of this combined approach for advancing the functionality and longevity of orthopedic implants.

No. of Pages : 7 No. of Claims : 3

(54) Title of the invention : BATTERY OPERATED DUAL AXIS ADJUSTABLE PLANT TRIMMING MACHINE

(51) International classification :A01G0003080000, A01G0003040000, A01G0003000000, A01G0003020000, A01G0017000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

8' ABSTRACT The cost of maintaining gardens on owned and public property is raising these days. In India two types of plant trimming methods are followed, like manual method and mechanized method. The traditional ways of garden trimming requiring manual labour are becoming obsolete. Manually about 10 to 15 labours are required For trimming an acre of plants. This paper depicts the development of battery operated adjustable plant pruning machine for ornamental plants and plants on divider of highways that helps operator having effortlessness of work. In general, manually operated trimmers were just like simple and most common type is shearing of scissors. Manually operated trimmers need more lime and effort from the operator because they are heavier and require more work to get to the proper height, The uniformity of trimming varies from one operator to another operator. Different operator will cut in different way. The main dictum is to trim the plants efficiently and reduce the drudgery to workers. In this work, a wheeled form trimming machine was mainly composed of three parts: a supporting frame, an adjustable system and blades. This machine consists of two blades, horizontal and vertical position. And the blade can be able to adjust up to 3 feet in both the directions. Furthermore, to test the efficiency of the machine three different plants were chosen and trimmed by the machine and results showed that the overall efficiency was above 89%. As a result, the newly created trimming machine could precisely and adaptability satisfy the needs of plant trimming. Key words: Battery operated, Garden trimming, Ornamental plants, Trimming machine, Horizontal, Vertical

No. of Pages : 12 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028599 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : NEXT-GENERATION INTEGRATED SMART HOME AUTOMATION STSTEM FOR ENHANCED MONITORING

(51) International classification :H04L0067120000, G08B0021020000, H04L0012280000, G08B0021180000, G08B0019000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

With unmatched levels of monitoring, control, and security, smart home automation systems have evolved beyond simple convenience to become essential elements of contemporary life. This novel paradigm uses an .advanced network of interconnected sensors and devices to bring environmental, social, and economic monitoring together. This study presents a novel method for automating sman homes by utilizing Internet of Things (IoT) technologies to build an all-encompassing monitoring ecosystem. The system allows for the seamless integration of multiple sensors and communication protocols, including Bluetooth and Zigbee, resulting in real-time monitoring and control of crucial parameters like water levels and flame detection. Moreover, this system's adaptability goes beyond qonventional limits, providing solutions for a variety of situations. As an example, it makes it easier to integrate security systems seamlessly, protecting both people and property. Furthermore, it meets the needs of vulnerable people by offering individualized monitoring and support, such as for elderly people living independently or children returning from school. This next-generation smart home automation system, which offers unmatched flexibility, efficiency, and usability, constitutes a substantial advancement in the industry. It increases safety and security while giving users more control over their surroundings by utilizing the power of IoT.

No. of Pages : 9 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028602 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A TOOL FOR ASSEMBLY AND DISASSEMBLY OF MULTIDIMENSIONAL BEARING CUPS

(51) International classification :F16D0003410000, F16D0003380000, B25B0027060000, F16C0021000000, F16C0035067000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :Research scholar, Department of Automobile Engineering, MIT Campus, Anna University, Chennai – 600 044 Chennai -----

(57) Abstract :

Title: A tool for assembly and disassembly of multidimensional bearing cups The present invention relates to a tool for assembly and disassembly of multidimensional bearing cups which has a base portion which is a metallic circular plate with opening in the middle forms the base of the tool, a pair of stems which serve as the primary contact points for engaging with the bearing cup, a disassembler fitted onto the stem is designed for cup removal in which the disassembler is adjustable, modifiable or adaptable based on the specific dimension or size of the cup being removed and a locking mechanism that locks the disassembler along with the base thereby improving the stability and reliability of the tool during cup or race removal operations. Also the use of the bearing cup removal tool and the hammer allows for controlled and targeted force application thereby minimizing the risk of damage to the machine or other components. Main Illustrative: Figure 1

No. of Pages : 24 No. of Claims : 5

(54) Title of the invention : MUCOADHESIVE PATCH DEVICE WITH MICRONEEDLES FOR ANTIFUNGAL THERAPY IN ORAL ULCER MANAGEMENT

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number	:A61K0009000000, A61M0037000000, A61P0031100000, A61K0009700000, A61K0047360000 :NA :NA : NA :NA :NA	(71)Name of Applicant : 1)Manipal Academy of Higher Education Address of Applicant :Madhav Nagar, Manipal, 576104, Karnataka, India. Manipal ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)SINGH, Aman Pratap Address of Applicant :Intern, Manipal College of Dental Sciences, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 2)PAI, Vasudev Address of Applicant :Associate Professor, Manipal College of Pharmaceutical Sciences, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 3)DATTA, Deepanjan Address of Applicant :Assistant Professor, Manipal College of Pharmaceutical Sciences, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 4)SMRITI, Komal Address of Applicant :Associate Professor, Manipal College of Dental Sciences, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal -----

(57) Abstract :

The present disclosure relates generally to the field of medical devices and drug delivery systems. More specifically the present disclosure relates to a mucoadhesive patch device with microneedles for antifungal therapy in oral ulcer management. The device (100) includes a base layer (102) and an array of microneedles (104) having a set of tip portions (104-1). The patch device (100) introduces a dual-action therapeutic approach, incorporating antifungal agents, local anaesthesia and other formulations into the induced set of medications. The antifungal agents are integrated into the formulation along with the local anaesthesia that addresses inflammation associated with the affected area preferably oral ulcers, exerting inflammatory effects to reduce swelling and irritation. Advantageously, the present disclosure relates to a mucoadhesive patch device with microneedles that promise targeted drug delivery minimizing systemic exposure.

No. of Pages : 23 No. of Claims : 10

(54) Title of the invention : MUCOADHESIVE PATCH DEVICE WITH MICRONEEDLES FOR STEROID THERAPY IN ORAL ULCER MANAGEMENT

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number	:A61K0009000000, A61M0037000000, A61K0009700000, A61P0001040000, A61K0047360000 :NA :NA : NA :NA :NA	(71)Name of Applicant : 1)Manipal Academy of Higher Education Address of Applicant :Madhav Nagar, Manipal, 576104, Karnataka, India. Manipal ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)SINGH, Aman Pratap Address of Applicant :Intern, Manipal College of Dental Sciences, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 2)PAI, Vasudev Address of Applicant :Associate Professor, Manipal College of Pharmaceutical Sciences, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 3)DATTA, Deepanjan Address of Applicant :Assistant Professor, Manipal College of Pharmaceutical Sciences, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 4)SMRITI, Komal Address of Applicant :Associate Professor, Manipal College of Dental Sciences, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal -----

(57) Abstract :

The present disclosure relates generally to the field of medical devices and drug delivery systems. More specifically the present disclosure relates to a mucoadhesive patch device with microneedles for steroid therapy in oral ulcer management. The device (100) includes a base layer (102) and an array of microneedles (104) having a set of tip portions (104-1). The patch device (100) introduces a dual-action therapeutic approach, incorporating steroid agents, local anaesthesia and other formulations into the induced set of medications. The steroid agents are integrated into the formulation along with the local anesthesia that addresses inflammation associated with the affected area preferably oral ulcers, exerting inflammatory effects to reduce swelling and irritation. Advantageously, the present disclosure relates to a mucoadhesive patch device with microneedles that promise targeted drug delivery minimizing systemic exposure.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028675 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A DEVICE TO DISPENSE PERFUME OVER THE BODY OF A USER

(51) International classification	:A61Q0015000000, B05B0017060000, A61B0005318000, H05B0001020000, A61F0007000000	(71)Name of Applicant : 1)VELLORE INSTITUTE OF TECHNOLOGY, CHENNAI Address of Applicant :Vandalur - Kelambakkam Road, Chennai, Tamil Nadu - 600127, India. Chennai -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
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Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

A device 100 to dispense a liquid can include a sensor 102; an atomizer 104; and a microcontroller 106 where the microcontroller 106 is continuously receives body odour of an user sensed by the sensor 102 to compare with a predefined level, and when the odour level goes above a predefined level, the microcontroller 106 activates the atomizer 104 to dispense the liquid drawn by the atomizer 104 from a reservoir 108, over the clothing of the user to maintain a pleasurable odour around the body of the user. The user attach the device 100 with the clothing worn the sensor 102 is a micro-electromechanical system-based sensor for detecting body odour. The atomizer 104 is a piezoelectric ultrasonic atomizer, when activated, converting liquid perfume into vapour for direct spray on the user's clothing. The device 100 is powered through a battery 110 configured with the device 100.

No. of Pages : 15 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028676 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SUPERVISORY AUTOMATIC ACCIDENT-AVOIDANCE SYSTEM IN AN EXTRA HIGH-TENSION SUBSTATION

(51) International classification :G01R31/327, G05B23/02, G08B21/02, H02J13/00 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Manipal Academy of Higher Education Address of Applicant :Madhav Nagar, Manipal, 576104, Karnataka, India. Manipal ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)BUKYA, Mahipal Address of Applicant :Assistant Professor (Senior Scale), Department of Electrical and Electronics Engineering, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 2)KUMAR, Rajesh Address of Applicant :Professor, Department of Electrical Engineering, Malaviya National Institute of Technology Jaipur, Jawahar Lal Nehru Marg, Jhalana Gram, Malviya Nagar, Jaipur - 302017, Rajasthan, India. Jaipur ----- 3)PADMA, Bhukya Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal -----

(57) Abstract :

The present disclosure relates to a supervisory automatic accident-avoidance system (200) in an EHT substation. The system (200) comprises an activation unit (202) to be operable by a user to activate a sensor unit (204). The sensor unit (204) is connected to the activation unit (202), where the sensor unit (204) is configured to detect human presence in an area of operation in proximity to isolators of a feeder bay. The isolators include a bus isolator (102) and a line isolator (106). The system (200) comprises a processing unit (206) coupled to the sensor unit (204). The processing unit (206) is configured to generate an alert signal, based on detection of human presence in the area of operation. The system (200) comprises a locking and un-locking unit (208) to lock the isolators, based on the alert signal received from the processing unit (206).

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028677 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN APPARATUS FOR TRANSPORTING FLUIDS LIGHTER THAN WATER ACROSS WATER BODIES

(51) International classification :B01D0061020000, H04W0052020000, G05D0001020000, C12M0001260000, C02F0001420000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

Embodiments of the present disclosure relate to an apparatus (802) for transporting fluids lighter than water across water bodies with low fuel and power consumption by applying the principle of buoyancy. In an aspect, the apparatus (802) includes a plurality of containers (804) linked with one another and to a ship with one or more chains (806). The plurality of containers (804) is configured to store the fluids lighter than water. The apparatus (802) also includes a plurality of projections (808) provided at a rear end of each of the plurality of containers (804). Further, the apparatus (802) includes a handle (810) linked to an engine (812) of the ship for navigation of the plurality of the containers (804). The plurality of containers (804) floats on water and is maneuvered by the engine (812) of the ship to transport the fluids lighter than water at minimized power.

No. of Pages : 21 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028695 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT AND CLOUD BASED SMART AGRICULTURE DEVICE TO DETECT FLAMES USING WSN AND IMAGE PROCESSING TECHNIQUES

(51) International classification :G06Q0050020000, A01G0025160000, H04W0084180000, G16Y0010050000, G08B0017120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
IoT and Cloud based Smart Agriculture device to Detect Flames using WSN and Image Processing Techniques ABSTRACT: Agricultural output plays a crucial role in the overall economic progress and advancement of a country. The objective of this project is to propose a sophisticated and reliable agricultural system that would enable the farmer to get real-time notifications on soil moisture levels, presence of concealed snakes, and unusual human activity on the farm, all through the utilization of the Internet of Things. The flame sensor and humidity sensor are deployed in agricultural facilities to ascertain humidity levels and detect potential fire hazards. Monitoring the growth of plants becomes challenging when there is a substantial expanse of agricultural land. A potential solution to address this issue involves deploying sensor networks based on the Internet of Things (IoT) to augment the existing methods employed by farmers, hence enhancing operational efficiency. Consequently, implementing this technique will lead to a significant decrease in the carbon emissions produced by agricultural activities, thereby positively contributing to the resolution of our climate change predicament. The Indian economy is willing to tolerate the need for protection against rodent attacks in fields as a form of security. Hence, the objective of this endeavor is to enhance the utilization of automation and Internet of Things technologies in the field of agricultural.

No. of Pages : 10 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028699 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A HERBAL HAND SANITIZER FORMULATION AND PROCESS THEREOF

(51) International classification :A61Q0019100000, A61Q0017000000, A61K0008970000, A61K0036580000, A61K0008979400
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

TITLE: A HERBAL HAND SANITIZER FORMULATION AND PROCESS THEREOF APPLICANT: SREE BALAJI MEDICAL COLLEGE AND HOSPITAL ABSTRACT The present invention discloses a process of preparation of hand sanitizer from plant extracts comprises of following steps; a. mixing 70% ethanolic extract of flowers of Hibiscus rosa-sinensis, 70% ethanolic extract of leaves of Azadirachta indica, Aloe vera gel and 70% ethanolic extract of green seaweed Ulva lactuca followed by boiling to form a mixture; b. blending the mixture with glycerylcaprylate and potassium sorbate to form hand sanitizer. The present invention also discloses a hand sanitizer prepared by the process as described above.

No. of Pages : 12 No. of Claims : 4

(54) Title of the invention : OPTIMIZING WATER RESOURCE ALLOCATION IN VISAKHAPATNAM DISTRICT USING AHP AND MULTI-CRITERIA DECISION-MAKING

(51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date	:G06Q0010060000, G06Q0050060000, G06Q0010040000, G06Q0050260000, A01G0025160000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)Ponnappalli Kasi Viswanadham Address of Applicant :410, VIJAYA SATYA RESIDENCY HYDERGUDA NEAR ATTAPUR PILLAR 144 RAJENDRANAGAR ----- 2)1. Koneru Lakshmaiah Education Foundation 3)Sanjeet Kumar Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Ponnappalli Kasi Viswanadham Address of Applicant :410, VIJAYA SATYA RESIDENCY HYDERGUDA NEAR ATTAPUR PILLAR 144 RAJENDRANAGAR ----- 2)Sanjeet Kumar Address of Applicant :Associate Professor, Department of Civil Engineering, Green Fields, Vaddeswaram, Guntur district, Andhra Pradesh Vijaywada ----- 3)Pawar Praveen Address of Applicant :Research Scholar, Department of Civil Engineering, Green Fields, Vaddeswaram, Guntur district, Andhra Pradesh Vijaywada -----

(57) Abstract :

This patent application presents a novel approach to identifying water-stressed regions within urban areas, focusing on enhancing water sustainability through targeted interventions. The study evaluates key factors such as water infiltration, surface runoff, water yield capacity, population density, water demand, infrastructure capacity, and environmental impacts to assess water vulnerabilities. By employing the Analytic Hierarchy Process (AHP) and Multi-Criteria Decision-Making (MCDM) techniques, this research develops a comprehensive assessment method that categorizes water vulnerabilities based on geographic and anthropogenic activities. The innovative aspect of this approach lies in its ability to integrate various factors and prioritize them based on their relative importance in contributing to water stress. This methodology allows for the identification of specific areas where interventions can be most effective in alleviating water stress, thereby enhancing overall water sustainability in urban settings. The application of AHP and MCDM techniques provides a systematic and quantitative framework for decision-making, ensuring that interventions are based on sound analysis and prioritization. This approach not only contributes to advancing knowledge in urban water management but also offers valuable guidance for policymakers, urban planners, and stakeholders. The proposed method offers a practical tool for identifying and addressing water stress challenges in densely populated cities. By providing a detailed and systematic analysis of water vulnerabilities, this approach enables policymakers and planners to devise effective strategies for sustainable water management, ultimately contributing to the overall resilience of urban water systems.

No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028719 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD OF GROWING BULK SIZE SINGLE CRYSTAL BY UP AND DOWN MOVEMENT OF SEED CRYSTALS

(51) International classification :C30B0023020000, C30B0015360000, B01D0067000000, B01D0071020000, C30B0007080000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention discloses a method of growing bulk size single crystal by up and down movement of seed crystals. This technique comprises of a Stepper motor (101), Stand (102), Shaft (103), Rod (104), Circular Ring (105), Nylon Thread (106), Seed Crystal (107), Glass Beaker (108), Saturated Solution (109) and Base (110). The stepper motor (101) with shaft (102) and the attachment of tiny size rod (104) is used to control the seed crystal (107) up and down motion. The one end of the nylon thread (106) is tied with the seed crystal (107) and the other end is tied with the circular ring (105). The circular ring (105) is freely inserted above the tiny rod (104) with some arrangements of stepper motor (101). The seed crystal (107) dipped inside the glass beaker (108) contained saturated solution (109). The seed crystal (107) is moving up and down with a little amount of speed and the speed is controlled by using eliminator. After few days the seed crystal (107) changes over to the bulk size crystal and the grown crystal suggested for various applications.

No. of Pages : 21 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028724 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : REAL-TIME ACCIDENT DETECTION AND ALERT SYSTEM USING COMPUTER VISION AND YOLOV8 ALGORITHM

(51) International classification :G08B0025010000, H04N0007180000, G08B0027000000, G08G0001010000, G08B0021020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Prasanna Gandhiraj Address of Applicant :no:8-9/35 Magila malar street Mahathma Gandhi nagar ----- 2)Mrs. KOTANA YASHODA 3)DENDETI NEERAJA SAI TRIVENI 4)GUNISSETTY SAI KARTHIK 5)PERABATHULA SAI MANIKANTA 6)CHANDAKA SATYANARAYANA Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Prasanna Gandhiraj Address of Applicant :no:8-9/35 Magila malar street Mahathma Gandhi nagar ----- 2)Mrs. KOTANA YASHODA Address of Applicant :DEPARTMENT OF ECE ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY AND SCIENCES SANGIVALASA BHEEMUNIPATNAM MANDAL VISAKHAPATNAM VISAKHAPATNAM ----- 3)DENDETI NEERAJA SAI TRIVENI Address of Applicant :DEPARTMENT OF ECE ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY AND SCIENCES SANGIVALASA BHEEMUNIPATNAM MANDAL VISAKHAPATNAM VISAKHAPATNAM ----- 4)GUNISSETTY SAI KARTHIK Address of Applicant :DEPARTMENT OF ECE ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY AND SCIENCES SANGIVALASA BHEEMUNIPATNAM MANDAL VISAKHAPATNAM visakhapatnam ----- 5)PERABATHULA SAI MANIKANTA Address of Applicant :DEPARTMENT OF ECE ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY AND SCIENCES SANGIVALASA BHEEMUNIPATNAM MANDAL VISAKHAPATNAM visakhapatnam ----- 6)CHANDAKA SATYANARAYANA Address of Applicant :DEPARTMENT OF ECE ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY AND SCIENCES SANGIVALASA BHEEMUNIPATNAM MANDAL VISAKHAPATNAM visakhapatnam -----

(57) Abstract :

REAL-TIME ACCIDENT DETECTION AND ALERT SYSTEM USING COMPUTER VISION AND YOLOV8 ALGORITHM Introduction: This project delves into the design and implementation of a real-time accident detection and alert system, emphasizing the critical role of the Wi-Fi CCTV cameras and AI & ML technologies. The Integration of YOLOv8, GPS, and associated software undergo the technological framework. Breakthrough in Accident Detection: The use of advanced YOLOv8 techniques represents a major advance in traditional accident detection, allowing rapid and precise identification of incidents from CCTV footage. Integrating GPS and Google Maps into the web app improves accuracy and navigation for responders. The system can quickly analyze video frames, accurately detecting different accident types. Conclusion: The project's analysis and integration of technologies lay strong foundation for real time Accident detection advancements. This innovation holds immense potential to save lives and mitigate the severity of accidents, paving the way for a safer and more secure ecosystem

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028731 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS FOR THE PREPARATION OF AN EDIBLE FILM

(51) International classification :A61K0009000000, B65D0065460000, B65D0085804000, A61K0009700000, C08J0005180000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT A PROCESS FOR THE PREPARATION OF AN EDIBLE FILM The present disclosure relates to a process for the preparation of an edible film. The edible film of the present disclosure provides comparatively better shelf life, thereby providing better shelf life to the food products, is safe and is environmentally friendly, highly feasible, low cost, and chemical-free.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028745 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : VEHICLE DISPLAY ASSEMBLY WITH INTEGRATED DEVICE DOCKING ENCLOSURE

(51) International classification	:G06F0001160000, H02J0007000000, H04M0015000000, H04L0009320000, H02J0050100000	(71)Name of Applicant : 1)OLA ELECTRIC MOBILITY LIMITED Address of Applicant :Regent Insignia, #414, 3rd Floor, 4th Block, 17th Main, 100 Feet Road Koramangala, Bangalore, Karnataka 560034, India -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
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(62) Divisional to Application Number	:NA	2)BASARI, Anusha S
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(57) Abstract :

ABSTRACT VEHICLE DISPLAY ASSEMBLY WITH INTEGRATED DEVICE DOCKING ENCLOSURE The disclosed technology pertains to a vehicle display assembly (100) with an integrated device docking system, such as an enclosure (110). The display assembly (100) includes a display frame (104) which is to be incorporated onto a vehicle and a display panel (106) installed within the display frame (104). The display panel (106) is rotatable between a first position (202) and a second position (204), in response to an actuation mechanism being actuated. When in the second position (204), the display panel (106) exposes an enclosure (110) present beneath the display panel (106) and within the display frame (104) to house a portable device. The enclosure (110) may comprise a charging mechanism for enabling charging of the portable device. <>

No. of Pages : 19 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028746 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : HIGHLY OXYGENATED ADVANCED CLOSED SYSTEM INCENTIVE SPIROMETER.

(51) International classification :A61B0005087000, A61M0016040000, A61B0005000000, A61M0016100000, A61M0016000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The invention describes a highly oxygenated advanced closed system incentive spirometer (HOAC-IS) that aspires to address this problem by allowing a high concentration oxygen supply during the incentive spirometry procedure without allowing atmospheric air and providing oxygen both oral and nose inhalation during spirometry exercise at various time of inspiratory period from single oxygen flow meter. Thus, it can be performed on sick patients dependent on low flow oxygen therapy covid-19, tracheotomy and all other patients. This device should use maximum dependent oxygen therapy up to a simple o2 face mask, partially rebreather oxygen mask (max 10 liters per minute of o2) and tracheostomy t piece (max 5 Liters per minutes of O2 -their respiratory rate and pattern to be considered). This spirometry is non-electrical. Single patients use the device, and it has separate electrical appliances like a voiced remainder alarm clock, finger pulse oximetry and digital thermometer. It also helps provide incentive spirometry benefits to heart, lungs, abdominal pre & postoperative surgical patients and all other patients without interruption of their low flow oxygen therapy. It can even reduce the rate of ICU psychosis and device using negligence by keeping a voice reminder alarm clock in the incentive spirometer. This incentive spirometer component can convert and use in multiple ways like as a normal open system incentive spirometer, simply oxygen facemask, NRBM and nebulization mask with oxygen supply.

No. of Pages : 25 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028758 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ASSOCIATION RULE MINING ALGORITHM FOR ENHANCED PERSONAL INFORMATION PROTECTION IN CLOUD-ENCRYPTED DATA

(51) International classification :G06F0021620000, G06F0021600000, H04K0001000000, H04L0009000000, G06F0021500000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. Nandini N Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Dr Ambedkar Institute of Technology, Bengaluru, Karnataka, 560056, India. ----- ----- 2)Dr.P Vanajakshi 3)Mrs. Nandini Gowda P 4)Mrs. Vani B A Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Nandini N Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Dr Ambedkar Institute of Technology, Bengaluru, Karnataka, 560056, India. ----- ----- 2)Dr.P Vanajakshi Address of Applicant :Professor and Head, Department of Information Science and Engineering, Vivekananda Institute of Technology, Kumbalaguda, Bengaluru, Karnataka, India. ----- ----- 3)Mrs. Nandini Gowda P Address of Applicant :Research Scholar, East Point College of Engineering and Technology, Assistant Professor, Department of Information Science and Technology, Sapthagiri College of Engineering, Bangalore, Karnataka, 560057, India. ----- ----- 4)Mrs. Vani B A Address of Applicant :Assistant Professor, Department of Information Science and Technology, Sri Krishna Institute of Technology, Bengaluru, Karnataka, 560090, India. ----- -----

(57) Abstract :

The present invention introduces a pioneering association rule mining algorithm designed to safeguard users' personal information while utilizing encrypted data in cloud computing environments. This algorithm uniquely combines advanced encryption techniques with sophisticated data mining processes, allowing for the analysis of encrypted data without the need for decryption. As a result, it ensures the protection of personal information against unauthorized access and breaches, addressing a critical challenge in the field of data security and privacy. Tailored specifically for cloud services, this invention enables businesses and individuals to harness the full potential of cloud computing resources while maintaining strict adherence to privacy regulations and security standards. By facilitating secure data analysis in encrypted formats, the algorithm represents a significant technological advancement, offering enhanced data privacy and security in an increasingly digitized world. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :08/04/2024

(21) Application No.202441028759 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT-BASED ASSET TRACKING AND MANAGEMENT SYSTEM FOR SUPPLY CHAINS

(51) International classification :G06Q0010080000, G06Q0010060000, H04W0076100000, G06K0019070000, G06N0005040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The proposed IoT-Based Asset Tracking and Management System revolutionizes supply chain operations by offering real-time visibility, control, and optimization of assets. Leveraging IoT technology, the system integrates RFID tags, GPS trackers, and wireless sensors to capture data on asset location, condition, and utilization. This data is transmitted to a cloud-based platform for analysis, empowering stakeholders with actionable insights to improve inventory management, mitigate risks, and enhance operational efficiency. By providing end-to-end visibility across the supply chain ecosystem, the system fosters collaboration and integration among stakeholders, driving innovation and resilience. Furthermore, it enables new business models and revenue streams through value-added services such as predictive maintenance and asset sharing. With its scalable and adaptable design, the system addresses critical concerns related to risk management, compliance, and sustainability, paving the way for a more efficient, transparent, and sustainable supply chain.

No. of Pages : 22 No. of Claims : 10

(54) Title of the invention : INTEGRATING SENSOR-BASED POSITION TRACKING AND AI-ENABLED TICKETING

(51) International classification :G06Q0010040000, G06Q0050300000, G08G0001123000, G08G0001000000, G06Q0010060000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)P.E.S College of Engineering Address of Applicant :Mandya, Pin code: 571 401, Karnataka, India ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. H M Nanjundaswamy Address of Applicant :Professor, Department of Industrial & Production Engineering, P.E.S College of Engineering, Mandya, Karnataka, 571401, India ----- 2)Dr. Vinay S Address of Applicant :Professor, Department of Computer Science and Engineering, P.E.S College of Engineering, Mandya-571 401, Karnataka, India ----- 3)Dr. Sadashiva M Address of Applicant :Assistant Professor, Department of Mechanical Engineering, P.E.S College of Engineering, Mandya-571 401, Karnataka, India ----- 4)Mr. Deekshith M V Address of Applicant :Student, Department of Mechanical Engineering, P.E.S College of Engineering, Mandya-571 401, Karnataka, India ----- 5)Mr. Arjun Address of Applicant :Student, Department of Mechanical Engineering, P.E.S College of Engineering, Mandya-571 401, Karnataka, India ----- 6)Mr. Gourab Samajdar Address of Applicant :Student, Department of Mechanical Engineering, P.E.S College of Engineering, Mandya-571 401, Karnataka, India -----

(57) Abstract :
[06] The increasing number of vehicles contributes significantly to environmental pollution through the emission of harmful gases, mainly due to the rise in private car usage. However, relying more on public transportation can alleviate this issue. Unfortunately, waiting times at public transport stops often diminish customer satisfaction. Passengers spend considerable time waiting for buses, highlighting the importance of efficient transport services. Access to real-time information, including bus locations, schedules, fares, and routes, is crucial for passengers. To address this need, a proposed application aims to provide tracking and scheduling services for buses across various locations. Passengers can check bus schedules, monitor their status (such as On Travel, Arrived, Delayed, or Cancelled), and track their current locations through this application, ensuring a more convenient and informed commuting experience. Accompanied Drawing [FIG. 1] [FIG. 2][FIG. 3]

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028761 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN AND ANALYSIS OF SMALL HYDRO POWER FOR RURAL ELECTRIFICATION

(51) International classification :F03B0017060000, F03B0013080000, F03B0003120000, H02J0003380000, E02B0009040000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)P.E.S College of Engineering Address of Applicant :Mandya, Pin code: 571 401, Karnataka, India ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Madhusudhan M.S Address of Applicant :Assistant Professor, Department of Civil Engineering, P.E.S College of Engineering, Mandya, Karnataka, 571401, India ----- 2)Dr. Chowdegowda H.C Address of Applicant :Associate Professor and Head, Department of Civil Engineering, P.E.S College of Engineering, Mandya, Karnataka, 571401, India ----- 3)Ramya S Address of Applicant :Student, Department of Civil Engineering, P.E.S College of Engineering, Mandya, Karnataka 571401, India - ----- 4)Sahana Address of Applicant :Student, Department of Civil Engineering, P.E.S College of Engineering, Mandya, Karnataka 571401, India - ----- 5)Ranjith B J Address of Applicant :Student, Department of Civil Engineering, P.E.S College of Engineering, Mandya, Karnataka 571401, India - -----

(57) Abstract :

[06] Hydropower, large and small, remains by far the most important of the renewable for electrical power production worldwide. Small-scale hydro is in most cases run-of-river, with no dam, and is one of the most cost-effective and environmentally benign energy technologies to be considered both for rural electrification in less developed countries and developed countries for further hydro developments countries(like India). This work addresses power generation for rural applications by means of small hydropower plants by using cross-flow turbine systems .The cross-flow turbine is suitable for installing small hydro-electric power plants in case of low head and flow rate. Using mathematical analysis a complete design of such turbines has been done in this work. Accompanied Drawing [FIG. 1] [FIG. 2][FIG. 3] [FIG. 4] [FIG. 5][FIG. 6] [FIG. 7] [FIG. 8][FIG. 9] [FIG. 10]

No. of Pages : 29 No. of Claims : 7

(54) Title of the invention : ECO-FRIENDLY WATER-SOLUBLE WRAPPER COMPRISING POLYVINYL ALCOHOL (PVOH) FOR MARINE APPLICATIONS

(51) International classification :C09D0005160000, C09D0129040000, C08L0029040000, D21H0017360000, G06Q0010100000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. V. Sivamurugan Address of Applicant :Department of Chemistry, Pachaiyappa's College, Chennai 600030 ----- 2)Dr. P. Priya 3)Dr. S. Iyyam Pillai 4)Dr. R. Prasath 5)Dr. C. Joel 6)Dr. R. Biju Bennie Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. V. Sivamurugan Address of Applicant :Department of Chemistry, Pachaiyappa's College, Chennai 600030 ----- 2)Dr. P. Priya Address of Applicant :Assistant Professor, PG and Research Department of Zoology, Pachaiyappa's College, Chennai - 60030 - ----- 3)Dr. S. Iyyam Pillai Address of Applicant :Department of Chemistry, Pachaiyappa's College, Chennai 600030 ----- 4)Dr. R. Prasath Address of Applicant :Department of Chemistry, Pachaiyappa's College, Chennai 600030 ----- 5)Dr. C. Joel Address of Applicant :Postgraduate Department of Chemistry, St. John's College, Tirunelveli- 627002 ----- 6)Dr. R. Biju Bennie Address of Applicant :Postgraduate Department of Chemistry, St. John's College, Tirunelveli- 627002 -----

(57) Abstract :
The proposed invention introduces Eco-Friendly Water-Soluble Wrappers comprising polyvinyl alcohol (PVOH), offering a sustainable solution to mitigate plastic pollution in marine environments. These wrappers leverage the biodegradability and water solubility of PVOH, ensuring harmless dissolution in aquatic ecosystems. Through interdisciplinary collaboration and advanced manufacturing techniques, the wrappers are optimized for durability, flexibility, and environmental compatibility. Comprehensive testing protocols validate their performance, biodegradability, and minimal ecological impact under simulated marine conditions. The adoption of PVOH-based wrappers across industries promises to revolutionize packaging practices, aligning with principles of circular economy and responsible resource management. By addressing the urgent need for eco-friendly packaging solutions, this invention contributes to a cleaner, healthier, and more sustainable future for marine ecosystems and society at large.

No. of Pages : 21 No. of Claims : 10

(54) Title of the invention : EFFICIENT GRID-TO-VEHICLE COMMUNICATION PROTOCOL UTILIZING ARTIFICIAL INTELLIGENCE FOR DEMAND RESPONSE MANAGEMENT

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(51) International classification	:G06Q0010060000, B60L0053220000, G06Q0050060000, H02J0003380000, G06Q0010040000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
The proposed invention introduces an Efficient Grid-to-Vehicle Communication Protocol Utilizing Artificial Intelligence for Demand Response Management. This innovation optimizes communication between electric vehicles (EVs) and the power grid, enabling dynamic coordination of charging activities based on real-time demand fluctuations and grid conditions. By integrating AI algorithms, the protocol anticipates charging needs, adjusts schedules accordingly, and participates in demand response programs to support grid stability and maximize renewable energy utilization. This adaptive approach enhances energy efficiency, reduces operational costs, and promotes sustainability in transportation and energy sectors. The protocol facilitates bidirectional communication, empowering EV owners to make informed charging decisions while contributing to grid balancing efforts. Overall, this invention represents a transformative solution that addresses key challenges in EV integration and grid management, fostering a cleaner, smarter, and more resilient energy ecosystem.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028766 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A HYBRID NUMERICAL AND ANALYTICAL METHOD FOR SOLVING LINEAR SYSTEMS

(51) International classification :G06F0017120000, G06F0111100000, G02B0021060000, G06F0016245300, G10L0019020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
The proposed invention introduces a novel Hybrid Numerical and Analytical Method for Solving Linear Systems, which revolutionizes computational mathematics by synergizing the strengths of numerical efficiency with analytical precision. This hybrid approach strategically integrates numerical algorithms and analytical procedures to provide accurate and efficient solutions to linear systems, overcoming the limitations of traditional methods. By adaptively transitioning between numerical approximation and analytical derivation, the method ensures robustness across diverse problem settings, from well-conditioned systems to those with irregularities. Offering increased computational efficiency and deeper insights into problem structures, the hybrid method holds promise for various applications across engineering, physics, economics, and beyond. Its versatility and adaptability make it a powerful tool for addressing complex, real-world problems and driving innovation in computational mathematics.

No. of Pages : 21 No. of Claims : 10

(54) Title of the invention : METHOD AND SYSTEM FOR SIMULATING FRACTIONAL ORDER SYSTEMS USING ADVANCED COMPUTATIONAL ALGORITHMS

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(51) International classification	:G16B0020000000, G16B0005000000, G06F0017100000, G06F011100000, G06F0030200000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
The proposed invention introduces a novel method and system for simulating fractional order systems using advanced computational algorithms. Leveraging techniques from fractional calculus and computational engineering, the system offers unparalleled accuracy and efficiency in modeling complex dynamics with non-integer order derivatives and integrals. Key components include sophisticated numerical algorithms tailored for fractional order systems, advanced optimization techniques for computational efficiency, and an intuitive user interface for ease of use. The system finds applications across diverse fields, including control theory, signal processing, finance, biology, and materials science, where accurate modeling of fractional dynamics is crucial for understanding and optimizing system behavior. By bridging the gap between theoretical understanding and practical implementation, the proposed invention promises to revolutionize how engineers and scientists approach the analysis and design of complex systems in real-world applications.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028769 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ENHANCED SECURITY MODEL AND ROUTING STRATEGY FOR WIRELESS SENSOR NETWORKS

(51) International classification	:H04W0084180000, H04L0009300000, H04L0009080000, G06F0021310000, H04W0004700000	(71)Name of Applicant : 1)Chaya P Address of Applicant :Assistant Professor, Department of Information Science and Engineering, GSSS Institute of Engineering and Technology for Women, Mysuru KRS Main Road, Mettagalli, Mysuru- 570016, India -----
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Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
(61) Patent of Addition to Application Number	:NA	1)Chaya P Address of Applicant :Assistant Professor, Department of Information Science and Engineering, GSSS Institute of Engineering and Technology for Women, Mysuru KRS Main Road, Mettagalli, Mysuru- 570016, India -----
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(62) Divisional to Application Number	:NA	-----
Filing Date	:NA	

(57) Abstract :

The present invention presents a novel approach to enhancing the security of Wireless Sensor Networks (WSN) through a cost-effective security model and an innovative secure routing strategy. By addressing the unique challenges posed by resource constraints and dynamic cyber threats, particularly in IoT contexts, this invention provides a robust solution for ensuring data security and network resilience. The use of enhanced public key encryption within this secure routing strategy marks a significant advancement in the field, offering a balance between security and performance that is critical for the widespread adoption and reliability of WSNs in various sectors. Accompanied Drawings [Figures 1-2]

No. of Pages : 12 No. of Claims : 3

(54) Title of the invention : ALUMINIUM-INFUSED METAL MATRIX COMPOSITES

(51) International classification :C22C0001100000, C04B0035565000, C22C0032000000, C22C0049140000, C22C0047080000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)SOUNDARRAJAN KARTHIK Address of Applicant :1/36, Main Road, Mangalam ----- 2)K Balasubramanian 3)R.A.Hari Baalaaji 4)K. ArunKumar 5)RAJA RAJAN C 6)NAVEEN KUMAR M 7)VIJAY KRISHNA G 8)MAHENDRAN G Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)K Balasubramanian Address of Applicant :Department of Mechanical Engineering, Sri Krishna College of Engineering and Technology, Coimbatore-641008, TamilNadu ----- 2)R.A.Hari Baalaaji Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 3)K. ArunKumar Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 4)RAJA RAJAN C Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 5)NAVEEN KUMAR M Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 6)VIJAY KRISHNA G Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 7)MAHENDRAN G Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu -----

(57) Abstract :
Aluminium-infused metal matrix composites (MMC) represent a cutting-edge class of materials with broad industrial applications. Featuring aluminium as the matrix material, these composites integrate various reinforcing elements to enhance performance. Popular reinforcements include silicon carbide (SiC), alumina (Al2O3), boron carbide (B4C), graphite, and carbon nanotubes (CNTs). This amalgamation results in superior properties such as increased strength, stiffness, thermal conductivity, and wear resistance compared to conventional aluminium alloys. Fabrication techniques like powder metallurgy, stir casting, infiltration, and liquid phase sintering are employed to produce aluminium-infused MMCs. However, challenges persist, including high manufacturing costs and difficulties in achieving uniform dispersion of reinforcements within the matrix. These composites find wide application across industries. In aerospace, they're utilized for lightweight structural components and thermal management systems. However, despite their potential, aluminium-infused MMCs encounter several challenges that hinder their widespread adoption. One significant issue is the difficulty in achieving a uniform dispersion of the reinforcement materials within the aluminium matrix during fabrication processes. This uneven distribution can lead to localized areas of weakness, reducing the overall mechanical properties of the composite and compromising its structural integrity. Additionally, the mismatch in thermal expansion coefficients between the aluminium matrix and the reinforcement materials can result in internal stresses, leading to delamination and decreased reliability over time. These challenges not only affect the performance of aluminium-infused MMCs but also contribute to increased fabrication costs and limited scalability, hindering their practical implementation in various industrial sectors.

No. of Pages : 7 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028773 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN AND FABRICATION OF BATTER MACHINE

(51) International classification :A21C0001140000, A21C0001020000, A21D0010040000, A22C0017000000, A23P0020170000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SOUNDARRAJAN KARTHIK Address of Applicant :1/36, Main Road, Mangalam ----- 2)Kondusamy V 3)K.Balasubramanian 4)R.A.Hari Baalaaji 5)Dinesh P S 6)Hariprasath S 7)Kabilan P 8)Rahul PL Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Kondusamy V Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 2)K.Balasubramanian Address of Applicant :Department of Mechanical Engineering, Sri Krishna College of Engineering and Technology, Coimbatore-641008, TamilNadu ----- 3)R.A.Hari Baalaaji Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 4)Dinesh P S Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 5)Hariprasath S Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 6)Kabilan P Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 7)Rahul PL Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu -----

(57) Abstract :

The demand for efficient and consistent batter mixing in various food processing industries has prompted the development of advanced machinery to streamline production processes. This paper presents the design and implementation of an automated batter mixing machine aimed at enhancing productivity and ensuring uniform quality. The proposed batter machine integrates cutting-edge technologies such as programmable logic controllers (PLCs) and precision sensors to achieve optimal mixing performance. Its modular design allows for flexibility in adapting to different batter recipes and production scales. Additionally, safety features are integrated to ensure operator well-being and compliance with industry standards. Through rigorous testing and optimization, the batter machine demonstrates superior performance in terms of mixing efficiency, accuracy, and reliability. Comparative analysis with traditional manual methods showcases significant improvements in consistency and throughput, thereby offering a competitive edge to food processing businesses. Overall, the automated batter mixing machine presented in this paper represents a significant advancement in food processing technology, offering enhanced efficiency, consistency, and scalability to meet the evolving demands of the industry.

No. of Pages : 5 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028775 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : POWER DRIVEN HYDRAULIC JACK WITH ENHANCED TORQUE CAPABILITIES THROUGH BEAM ENGINE MECHANISM

(51) International classification :B66F0013000000, B66F0003240000, B66F0003460000, B66F0001080000, E01D0019040000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SOUNDARRAJAN KARTHIK Address of Applicant :1/36, Main Road, Mangalam ----- - 2)Arulmurugan R 3)K Balasubramanian 4)R.A.Hari Baalaaji 5)Rajanithi R 6)Mugunthan LK 7)Sabari M 8)Chandru S Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Arulmurugan R Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- ---- 2)K Balasubramanian Address of Applicant :Department of Mechanical Engineering, Sri Krishna College of Engineering and Technology, Coimbatore-641008, TamilNadu ----- ---- 3)R.A.Hari Baalaaji Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- ---- 4)Rajanithi R Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- ---- 5)Mugunthan LK Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- ---- 6)Sabari M Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- ---- 7)Chandru S Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- ----

(57) Abstract :

Power-driven hydraulic jacks play a pivotal role in lifting heavy loads in various industrial and automotive applications. However, challenges arise when encountering exceptionally heavy loads or when requiring enhanced torque capabilities beyond conventional jack designs. This article proposes an innovative approach to augmenting the torque capabilities of hydraulic jacks through the integration of a beam engine mechanism. The beam engine mechanism is inspired by classical engineering principles, leveraging the mechanical advantage provided by a pivoting beam to amplify the force applied to the hydraulic system. By incorporating this mechanism into the design of hydraulic jacks, significant enhancements in torque capabilities are achieved, allowing for the lifting of heavier loads with greater ease and efficiency.

No. of Pages : 7 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028777 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : CRAFTING OF SILIVER FILAMENT WITH COMPOSITION OF NANOSILVER & PLA RESIN PETTETS

(51) International classification :B33Y0070000000, C08L0067040000, B29C0048000000, B29C0064118000, D01F0006620000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The filament is then extruded after being melted to test how the GO is dispersed into the ABS matrix. The filament with 2% GO produced by solvent mixing can be printed into a 3D model. However, the filament produced by dry mixing fails to print because the GO aggregates, which clogs the die and prevents the printing process. The amount of nano-silver in polylactic acid (PLA) can vary depending on the desired properties of the final product. For example, a study by the Polymer Technology Group found that melt mixing PLA with 0.01, 0.07, or 0.12 wt % of silver nanoparticles resulted in composites with different properties. Their size ranges from in between 5–85 nm (Fig. 1.2), and the size distribution histogram of DLS indicated that the average size was 30.5 nm (Fig. 1). The XRD pattern indicated that the nanoparticles had a face-centered cubic structure. Therefore, the effectiveness of natural fiber reinforced PLA composite as an alternative material to substitute the non-renewable petroleum-based materials has been examined by researchers. crafted by combining nano silver particles and PLA (Polylactic Acid) resin pellets. The nano silver particles, reduced to the nanoscale, possess excellent antimicrobial properties due to their high surface area to volume ratio. PLA, a biodegradable and bioactive thermoplastic aliphatic polyester, is derived from renewable resources and is widely used in 3D printing. The crafting process involves mixing the nano silver particles with the PLA resin pellets and extruding the mixture to form the filament. This filament can then be used in a 3D printer to create objects with antimicrobial properties. This combination of properties opens up new possibilities for applications, especially in areas where antimicrobial properties are desired.

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028778 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DEVELOPMENT OF AUTOPILOT DELIVERY DRONE

(51) International classification :B64C0039020000, G06Q0010080000, G05D0001100000,
G05D0001000000, G06Q0030060000
(86) International Application :NA
No :NA
Filing Date :NA
(87) International Publication : NA
No :NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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(57) Abstract :

The rapid increase in usage of online ordering has increased the requirement of manpower to deliver in multiple folds. Drone based technology is being used to meet this requirement. A quadcopter can achieve vertical flight in a stable manner and be used to monitor or collect data, delivery in a specific region. as the demand for commercial deliveries increases within cities, companies face a fundamental limitation in surface road capacity. Drone delivery aims to overcome that limitation by exploiting the vertical dimension above city streets. With advancing drone technologies and increasing commercial usage, we believe the last mile shipping industry is ripe for disruption by delivery drones. Drones can significantly accelerate delivery times and reduce the human cost associated with the delivery. UAV has been designed which is an unmanned aerial vehicle that have reduced the cost and increase the performance of the low power microcontrollers that allowed the general public to develop quadcopter. The goal of this project is to design the brushless direct current (BLDC) motor and its driving circuits, for quadcopter kit to obtain stable flight, gather and store GPS data, and perform auto commands, such as auto-landing.

No. of Pages : 14 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028779 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : INVESTIGATIN OF COPPER FILAMENT WITH COMPOSITION OF NANOCOPPER & PLA GRANUALS

(51) International classification :B82Y0040000000, B82Y0030000000, C08J0003200000, C08J0009000000, D01F0001100000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The investigation examined the composition of polylactic acid (PLA) in combination with nano copper particles. Various analytical techniques were employed to characterize the properties of the composite material, including spectroscopic analysis, microscopy, and mechanical testing. The study aimed to elucidate the effects of nano copper incorporation on the structural, thermal, and mechanical behavior of PLA. Results indicate potential applications in fields such as biomedicine, packaging, and electronics, highlighting the material's enhanced properties and potential environmental benefits. the copper material is clean and free from contaminants. Also, prepare the PLA material in its desired form, such as pellets or filament. If using PLA pellets, the mixture can be melted and compounded using techniques such as extrusion or injection molding. Copper particles should be uniformly dispersed throughout the PLA matrix. If using PLA filament, copper particles or fibers can be incorporated into the filament during the extrusion process. This ensures an even distribution of copper within the filament. the composite material (PLA with copper) is prepared Control the reaction conditions carefully to ensure the formation of nano-sized copper particles. Factors like temperature, pH, and stirring rate can influence particle size and morphology. Characterize the produced nanoparticles using techniques like TEM (Transmission Electron Microscopy) or SEM (Scanning Electron Microscopy) to determine size, shape, and distribution.

No. of Pages : 13 No. of Claims : 6

(54) Title of the invention : UTILIZING MACHINE LEARNING ALGORITHMS FOR ROAD ACCIDENT ANALYSIS AND CATEGORIZATION

(51) International classification :G06K0009620000, E01F0015040000, G08G0001095000, E01C0001000000, G06Q0040080000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)HINDUSTHAN INSTITUTE OF TECHNOLOGY Address of Applicant :VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. C. Natarajan Address of Applicant :Principal-HITECH, HINDUSTHAN INSTITUTE OF TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. ----- 2)Dr.M.Thangamani Address of Applicant :Professor/CSE, HINDUSTHAN INSTITUTE OF TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. ----- 3)Dr.B.Paulchamy Address of Applicant :Professor& Head —ECE, HINDUSTHAN INSTITUTE OF TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. ----- 4)S.Tamizharasu Address of Applicant :Assistant Professor/ CSE, HINDUSTHAN INSTITUTE OF TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. ----- 5)S. Satheesh Address of Applicant :Assistant Professor/ CSE, Arjun College of Technology, HINDUSTHAN INSTITUTE OF TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. ----- 6)LAVANYA K Address of Applicant :Assistant Professor/ CSE, Arjun College of Technology, HINDUSTHAN INSTITUTE OF TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. ----- 7)Dr.J. Thilagavathi Address of Applicant :Professor & Head—AIDS, Arjun College of Technology, HINDUSTHAN INSTITUTE OF TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. ----- 8)Dr. A. Mohanraj Address of Applicant :Professor/Science & Humanities Sri Krishna College of Engineering and Technology, HINDUSTHAN INSTITUTE OF TECHNOLOGY, VALLEY CAMPUS, POLLACHI HIGHWAY, COIMBATORE, TAMILNADU, INDIA-641032. -----

(57) Abstract :

There are lots of studies about preventing or detecting the car accidents. Most of them include sensing objects which might cause accident or statistics about accidents. In this study, a system which detects happening accidents will be studied. The system will collect necessary information from neighbour vehicles and process that information using machine learning tools to detect possible accidents. Machine learning algorithms have shown success on distinguishing abnormal behavior than normal behavior. This study aims to analyze traffic behavior and consider vehicles which move different than current traffic behavior as a possible accident. Results showed that clustering algorithms can successfully detect accidents. The problem of deaths and injuries as a result of accidents is to be a global phenomenon. Traffic safety has been a serious concern since the start of the automobile age, almost one hundred years ago. It has been estimated that over 300,000 persons die and 10 to 15 million persons are injured every year in road accidents throughout the world. Statistics have also shown that mortality in road accidents is very high among young adults that constitute the major part of the work force. In order to overcome this problem, there is need of various road safety strategies and measure. Losses in road accidents are unbearable, to the society as well as a developing country like us. So, it has become an essential requirement to control and arrange traffic with an advanced system to decrease the number of road accidents in our country. By taking simple precautions, based on prediction of a sophisticated system may prevent traffic accidents. Moreover, to tackle this situation where every day so many people were killed in a traffic accident. and day by day this rate is getting increased. The implementation of machine learning is a functional and a great approach to take an accurate decision with the experience to manage the current situation and the findings of the analysis part which we are suggested to traffic authorities. Of the project's primary 0211. Future efforts may bring about the next developments.

No. of Pages : 11 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028784 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : OPTIMIZING PENTANOIC ACID CONCENTRATIONS IN BIODEGRADABLE PLASTIC TEXTILES THROUGH MACHINE LEARNING PREDICTIONS

(51) International classification :G06N0020000000, G06N0005040000, B01J0035100000, C08K0005000000, G06N0005020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr.M.Sudha Rani Address of Applicant :Assistant Professor, Department of Chemistry, Gurunanak Institutions Technical Campus, Ibrahimpatnam-501506 ----- ----- 2)Dr.Jonnala Sandhya 3)Dr. Pawanjeet Kaur 4)Dr. Anil Kumar 5)Mrs.A.Nithya 6)Mr.A.Dineshkumar 7)Dr. Anuja Mishra 8)Dr.P.Meenalochini 9)Dr.R.Karthick Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.M.Sudha Rani Address of Applicant :Assistant Professor, Department of Chemistry, Gurunanak Institutions Technical Campus, Ibrahimpatnam-501506 ----- 2)Dr.Jonnala Sandhya Address of Applicant :Associate Professor, Department of Chemistry, Vaageswari College of Engineering, Karimnagar, 505527 ----- 3)Dr. Pawanjeet Kaur Address of Applicant :Assistant Professor, Department of Chemistry, Shri Venkateshwara University, Amroha- 244236 ----- 4)Dr. Anil Kumar Address of Applicant :Head of the Department and Asst. Prof.,P.G. Dept. of Chemistry, Sahibganj College Sahibganj-816109 ----- 5)Mrs.A.Nithya Address of Applicant :Department of Information Technology, St. Joseph's Institute of Technology, OMR, Chennai -119 ----- 6)Mr.A.Dineshkumar Address of Applicant :Department of Electronics and Communication Engineering, St. Joseph's Institute of Technology, OMR, Chennai -119 ----- 7)Dr. Anuja Mishra Address of Applicant :GLA University, Mathura, UP, India - 281406 ----- ----- 8)Dr.P.Meenalochini Address of Applicant :Associate Professor, Department of Electrical and Electronics Engineering, Sethu Institute of Technology, Pulloor, Kariapatti 626115 ----- 9)Dr.R.Karthick Address of Applicant :Associate Professor, Department of Computer Science Engineering, K.L.N. College of Engineering, Pottapalayam, Sivagangai-630612 --- -----

(57) Abstract :

The proposed invention presents a novel approach to optimizing the concentration of pentanoic acid in biodegradable plastic textiles through machine learning predictions. Leveraging the unique properties of pentanoic acid, our system offers a data-driven framework for accelerating the development of sustainable plastics with enhanced biodegradability and mechanical performance. By analyzing vast datasets encompassing material properties, environmental conditions, and degradation kinetics, our predictive models can accurately forecast the optimal concentrations of pentanoic acid required to achieve desired material properties. This approach streamlines the materials optimization process, reducing time, cost, and resource expenditure associated with traditional trial-and-error methods. Furthermore, our system holds broader implications for sustainability, innovation, and global environmental stewardship, contributing to the transition towards a circular economy where materials are designed to minimize waste and environmental impact. Through interdisciplinary collaboration and convergent technologies, the proposed invention offers a transformative solution to the pressing challenges of plastic pollution and environmental degradation.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028785 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ESTIMATING CROWDS AT BUS STOPS FOR PUBLIC TRANSIT AND ENHANCING DEPARTURE MANAGEMENT IN BUS SERVICES

(51) International classification	:G06Q0050300000, G06N0003080000, G06Q0050260000, G06Q0010060000, G01C0021340000	(71)Name of Applicant : 1)Ajay V G Address of Applicant :Rajanukunte, Sai vidya institute of technology,Yelahanka, Bangalore,Karnataka-560064. ----- 2)Rahul P 3)Varun E 4)Kishore P J 5)Chethan P J Name of Applicant : NA Address of Applicant : NA
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Filing Date	:NA	-----

(57) Abstract :

With the rapid advancements in sensing, communication, and management technologist, there's a growing feasibility to enhance the efficiency of traditional transportation systems through advanced technological applications. Consequently, intelligent transportation systems have become a global focus for transportation development. The goal of determining the crowding coefficient on buses is to promptly and reliably identify passenger crowding, allowing for efficient measures to reduce potential safety hazards 'and improve passenger com fort.Crowd density at bus stops is evaluated using deep Convulsion through a controller linked to a camera module. These Convents extract features directly and map them to various crowd density levels, such as very low, moderate, heavy, and extremely high. The number of . individuals in each range and the total number ofranges may vary based on the application and local conditions' Passengers can indicate their departure area by clicking a bunion. The dashboard displays buses reaching the specified area along with timing and seat availability. If the indicated bus is full, the transport service receives a message to send or reroute nearby empty buses.This system empowers passengers by bridging the information gap between them and bus operators, facilitating better decision-making. Additionally, it aids in planning and implementing transport systems in sman cities nationwide. To associate crowd density information with specific segments of bus lines, we enhance the existing transport information system with three web services. The first service lists available routes, the second provides detailed route information including bus stops and connecting lines, and the third exposes real-time data about bus locations and operating routes.

No. of Pages : 16 No. of Claims : 9

(54) Title of the invention : A THERMOSTABLE PIGMENT COMPOSITION FOR ENHANCED CANDLE DYEING AND METHOD THEREOF

(51) International classification :C12N0001140000, C09B0061000000, A61K0008970000, C11C0005000000, C07K0007640000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

7. ABSTRACT OF THE INVENTION: TITLE: A thermostable pigment composition for enhanced candle dyeing and method thereof

The present invention relates to the extraction and application of a newly discovered yellow pigment derived from the marine endophytic fungus >Malbranchea chrysosporioidea, primarily found within Sargassum tenerrimum. The invention focuses on utilizing this pigment as a dye in various industrial sectors, with a specific focus on its integration into the candle manufacturing industry. The pigment offers unique biological properties, including antibacterial, anticancer, and antioxidant activities, rendering it suitable for use in pharmaceuticals, food, and cosmetics. The thermostable pigment composition obtained from the present invention is nonflammable and non-combustible nature ensures safety, particularly in candle manufacturing. The extraction and purification process involves utilizing an acetone extract of the fermented fungus, underscoring the pigment's potential as an eco-friendly and non-toxic dye alternative. This invention explores the untapped potential of marine endophytic fungi in providing sustainable colorants with exceptional properties.

No. of Pages : 19 No. of Claims : 8

(54) Title of the invention : NEURAL NETWORK BASED APPROXIMATE MULTIPLIER DESIGN FOR IMAGE PROCESSING APPLICATIONS

(51) International classification :G06N0003040000, G06N0003080000, G06F0007544000, G06F0007487000, G06F0007523000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :Associate Professor, ECE Department, DVR & Dr.HS MIC College of Technology, Kanchikacherla, India. Kanchikacherla -----

(57) Abstract :

The application relates to the design of an approximate multiplier using a Neural Network, an approximate multiplier, wherein the method comprises the following steps: replacing a half adder for partial product accumulation in the precise 4-bit Dadda tree multiplier with a full adder and replacing a lower 4-bit calculation circuit in the precise 4-bit Dadda tree multiplier with an approximate addition circuit to obtain an approximate 4-bit multiplier. Wherein the approximate addition circuit comprises a logical OR circuit for obtaining the value of the 2nd bit from the LSB of the final product of the approximate 4-bit multiplier. Based on the values of the 2nd to 4th columns from the LSB of the partial product accumulation result in the approximate 4-bit multiplier and the output value of the approximate addition circuit, an error detection and correction circuit is designed to eliminate the error of the final product output from the approximate 4-bit multiplier. The method structurally improves the multiplier substantially, reduces the use amount of hardware resources on one hand, and provides an error correction mechanism on the other hand, so that the calculation result of the approximate multiplier is more accurate. In the neural networking processing device including a plurality of neural processors and operating based on at least one piece of input data and a plurality of weights according to an embodiment of the present disclosure, at least one of the neural processors may comprise: an arithmetic logic unit having an approximate multiplier receiving first and second values and performing approximation multiplication based on the first and second values; and an activation function unit having a rounder performing statistical round off based on output of the arithmetic logic unit. The figure associated with the abstract is Fig. 1.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028794 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SMART INFRA-RED SPIKY BALL (SISBA)

(51) International classification :G06Q0050200000, H01R0013717000, H01R0013660000, B65D0005600000, B62B0005000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)SRI BALAJI VIDYAPEETH Address of Applicant :SRI BALAJI VIDYAPEETH PONDICHERRY-CUDDALORE MAIN ROAD, PILLAIYARKUPPAM PUDUCHERRY PUDUCHERRY PUDUCHERRY INDIA 607 402 Puducherry ----- 2)KASTURBA GANDHI NURSING COLLEGE 3)MAHATMA GANDHI MEDICAL COLLEGE AND RESEARCH INSTITUTE Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)BAIRAVI S Address of Applicant :M.SC., (NURSING) SECOND YEAR, KASTURBA GANDHI NURSING COLLEGE SBV CAMPUS, PILLAIYARKUPPAM, PUDUCHERRY PUDUCHERRY PUDUCHERRY INDIA 607 402 Puducherry ----- 2)PROF. DR.KRIPA ANGELINE A Address of Applicant :PROFESSOR CUM NURSING SUPERINTENDENT MAHATMA GANDHI MEDICAL COLLEGE AND RESEARCH INSTITUTE SBV CAMPUS, PILLIYARKUPPAM, PUDUCHERRY PUDUCHERRY PUDUCHERRY INDIA 607402 Puducherry -----

(57) Abstract :

TITLE: SMART INFRA-RED SPIKY BALL (SISBA) APPLICANT: 1. SRI BALAJI VIDYAPEETH 2. KASTURBA GANDHI NURSING COLLEGE 3. MAHATMA GANDHI MEDICAL COLLEGE AND RESEARCH INSTITUTE ABSTRACT The present invention discloses a smart infra-red spiky ball (SISBA)[1] for decreasing the level of neuropathic pain. The smart infra-red spiky ball (SISBA) of the present invention comprises of a 'C' shaped holder[2] integrated to an handle[3] characterized in that a. the 'C' shaped holder[2] comprises of electrical plug[4] at curved side of the 'C' shaped holder[2] and IR light[5] encompassed spiky ball[6] disposed on open ends of the 'C' shaped holder[2] through connecting rods[7] and b. the handle[3] adapted to receive the electrical plug[4] of the 'C' shaped holder[2] and comprises of i. an indicator light[8] disposed on top of the handle[3]; ii. a rechargeable battery[9] housed inside the handle[3] and adapted to be operated by ON/OFF switch[10] disposed on middle of the handle[3] and iii. a charging port[11] disposed on bottom of the handle[3].

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028795 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYNTHESIS OF IL/NI-MOF/CO3O4 NDS NANOCOMPOSITE AND ITS SENSING APPLICATION

(51) International classification :G01N0027480000, G01N0027300000, G01N0027327000, A23L0027300000, A61K0009200000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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(72)Name of Inventor :

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2)SUWARDHAN KANCHI

Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF CHEMISTRY, CHRIST (DEEMED TO BE UNIVERSITY), HOSUR MAIN ROAD, BHAVANI NAGAR, S.G. PALAYA, BENGALURU, KARNATAKA, INDIA-560029. -----

(57) Abstract :

TITLE OF THE INVENTION: Synthesis of IL/Ni-MOF/C0304 NDs nanocomposite and its sensing application A novel electrochemical sensor was developed for the quantitative detection of aspaname, a widely used artificial sweetener, in food samples. The nanocomposite was synthesized by combining diamond-shaped cobalt oxide nanoparticles, obtained through coriander seed extract, and nickel-metal organic framework (Ni-MOF) via solvothennal synthesis. The resulting nanocomposite was further enhanced by incorporating 1-bulyl-3-methylimidazolium methyl sulfate ionic liquid dispersed in ethanol. The nanocomposite was then deposited onto a graphite electrode using the doctor blade method. The electrochemical behavior of aspartame was investigated using differential pulse voltammetry (DPV) and square wave voltammetry (SWV), revealing a linear dynamic range of 1.2-6.0 pM. The limit of detection (LOD) and limit of quantification (LOQ) were determined as 0.34 pM and 1.05 pM and $R^2=0.99>7$ for DPV, and 0.5 pM and 1.7 1.1M and $R^2=0.996$ for SWV, following standard voltammetry methods. Comparative analysis indicated that DPV outperformed SWV in terms of sensitivity and correlation coefficient (R^2). Real samples, including sugar-free gold tablets and sugar-free gold sachets, were successfully analyzed using DPV, with additional peaks showing no interference with the aspartame peak. The concentration of aspartame in the sugar-free gold tablet and sugar—free gold sachet was found to be 60 pM and 36 pM, respectively. Given the potential carcinogenicity of aspartame declared by the WHO in 2023, this developed sensor holds promise for accurately assessing aspartame content in various food products, contributing to food safety and public health.

No. of Pages : 21 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028796 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : MULTIPURPOSE AGRICULTURE UTILITY VEHICLE (EV)

(51) International classification :C10M0169040000, G06Q0010100000, B62D0049000000, H01L0051000000, B01D0053140000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Electric tractor equipped with a specialized front attachment designed to enhance agricultural efficiency and versatility. The abstract outlines the key features and benefits of this innovative design, including improved maneuverability, increased productivity, and reduced environmental impact. It discusses the integration of electric propulsion technology with the unique front attachment, highlighting the potential for enhanced performance and reduced operating costs compared to traditional diesel- powered tractors. Additionally, the abstract addresses challenges such as battery capacity and charging infrastructure requirements specific to this advanced agricultural machinery. The abstract concludes by emphasizing the importance of further research and development to optimize the design and functionality of electric tractors with special front attachments, paving the way for sustainable and efficient farming practices.

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028801 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN AND FABRICATION OF AUTOMATED SOLAR SEED BROADCASTING MACHINE

(51) International classification :F21S0009030000, H02J0007350000, A01C0017000000, A01C0007080000, A01C0001080000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

ABSTRACT Agriculture being the backbone of India has been attaining tremendous evolution using the recent technologies. This paper depicts the development of solar powered seed broadcaster that helps farmer having effortlessness of work. The machine derives its energy source from the sun, which is renewable and eco-friendly source of fuel. The main dictum is to sow the seeds efficiently and reduce the drudgery to farmer. The 12v solar panel then converts solar energy to electrical energy. The microcontroller guides the machine to move through the entire field. With the help of this machine various seeds such as maize, sorghum, millets, etc. can be spread evenly and the ploughing is done simultaneously after sowing. As the result suggest, the seed sowing time had been effectively decreased by 1.3% and the yield had been increased by 1.5%. This machine makes the farmers to work easy and can save more time and investment. Key words: Seed sowing, Broadcasting, Solar broadcaster, Automatic,

No. of Pages : 10 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028804 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AEROGEL-INFUSED NATURAL FIBER BASED METAMATERIAL POLYMER COMPOSITES FOR ENHANCED ANECHOIC PROPERTIES

(51) International classification :G10K0011162000, E04B0001840000, G10K0011160000, H04S0007000000, G01N0029090000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The proposed invention deals with the measurement of acoustic properties of any Natural fibers reinforced PEEK composites as meta-material which consists of encapsulation chamber made of NF reinforced polymer composite of 40 mm thick for 90 mm diameter with bored hole depth of 30 mm. Swirl diffusing chamber of thermoplastic Polyurethane Anechoic material of 80mm diameter with 20 mm thick with infused aerogel. An acoustic experiment was conducted to determine the sound absorption coefficient according to ASTM E1050-10 employing three micro phones impedance tube having a length of 1200 mm and 90mm diameter for both standing wave ratio method and transfer function method. The acoustic test rig plays a supporting role in this each specimen were tested at four frequency ranges from 250 Hz to 1000 Hz for standing wave ratio method and frequency ranges from 2KHz to 8KHz for transfer function method. The sound received by sample fiber was received by receiver. Acoustic properties such as sound absorption coefficient, transmission loss, transmission ratio, tortuosity, impedance value, time of flight, anechoic coefficient, attenuation constant and sound energy dissipation.

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028806 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SOLAR PV SYSTEM USING BSCA BASED MPPT FOR ON AND OFF GRID

(51) International classification :G05F1/67, G06N3/006, H02M3/00
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The photovoltaic (PV) maximum power point tracking (MPPT) based on biological swarm chasing behavior is proposed to increase the MPPT performance for a module-integrated PV power system. Each Module is viewed as a particle, and as a result, the maximum power point is viewed as the moving target. Thus, every PV module can chase the maximum power point (MPP) automatically. Comparing with a typical perturb and observe (P&O) MPPT method, the MPPT efficiency (?-MPPT) is improved about 12.19% in transient state by the proposed MPPT as theoretical prediction. One of the most popular swarm intelligence paradigms is the particle swarm optimization (PSO), which is basically developed through the simulation of social behavior of bird flocking and fish schooling. PSO is a global optimization algorithm for dealing with problems on which a point or surface in an n-dimensional space represents a best solution. Particles move through the problem space, then, a certain fitness criterion evaluates them. Several areas have adopted the idea that swarms can solve complex problems. The PV module can automatically chase the MPP by proposed bio-MPPT algorithm. One sampling time is required to decide accurately the MPP tracking direction. The bio-MPPT algorithm build in the master controller runs and command operating voltages. Irradiation and temperature are automatically recorded in the bio-MPPT controller. The MPPT behavior of the proposed bio-MPPT is still confused with partial shadow effect.

No. of Pages : 7 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028823 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : LINE TRASING ROVER WITH OBSTACLE DETECTION

(51) International classification :G05D0001020000, G01S0017931000, G05D0001120000, G05D0001100000, G01S0013935000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SOUNDARRAJAN KARTHIK Address of Applicant :1/36, Main Road, Mangalam ----- 2)Krishnaraj C 3)Balasubramanian K 4)R.A.Hari Baalaaji 5)Karthik Priyadarshan A 6)Lingeshwar K 7)Ragulnath A 8)Tamilselvam R Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Krishnaraj C Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 2)Balasubramanian K Address of Applicant :Department of Mechanical Engineering, Sri Krishna College of Engineering and Technology, Coimbatore-641008, TamilNadu ----- 3)R.A.Hari Baalaaji Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 4)Karthik Priyadarshan A Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 5)Lingeshwar K Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 6)Ragulnath A Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu ----- 7)Tamilselvam R Address of Applicant :Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore-641032, TamilNadu -----

(57) Abstract :

In the realm of autonomous roverics, the integration of line tracing capabilities with obstacle detection represents a significant advancement towards enhancing navigation efficiency and safety. This paper presents the design, implementation, and evaluation of a Line Tracing Rover equipped with real-time obstacle detection functionality. The rover employs sensors for line following and obstacle avoidance, enabling it to autonomously navigate predefined paths while dynamically adjusting its trajectory to avoid obstacles encountered in its environment. The system's design architecture, including hardware components and software algorithms, is detailed to demonstrate the integration of these essential features. Experimental trials conducted in various scenarios showcase the effectiveness and reliability of the integrated Line Tracing Rover with Obstacle Detection system. Results and analysis highlight the system's performance metrics, providing insights into its practical applicability and potential for industrial automation and logistics. This research contributes to the advancement of autonomous roverics by showcasing a robust and versatile roveric platform capable of efficient and safe navigation in dynamic environments.

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028828 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ENHANCING CUSTOMER SATISFACTION IN INSURANCE SERVICES: THE IMPACT OF FINANCIAL ANTECEDENTS AND MEDIATING EFFECT OF SERVICE QUALITY AND CUSTOMER EXPERIENCE

(51) International classification :G06Q0040080000, G06Q0030020000, G06Q0040000000, G06Q0010060000, G06Q0040020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The aim of the exploratory research study was to investigate the mediating role of customer experience and services provided by the agents and brokers for high customer satisfaction in the competitive world. It is witnessed from the research that the antecedents of financial services of insurance products and services include: Risk Assessment, Products and coverage, pricing and premiums, claims management have shown significant relationship with the customer experience and services rendered by the brokers and agents and the path coefficients and p-values (<.000) have shown significant relationship with the dependent factor and all the path co-efficients are positive have shown Applied various types of descriptive and inferential statistics to analyse the data. All the measures of fit indices like: GFI, AGFI, TLI, NFI values have shown moderate measurements. The outcome of the research can be generalized under any circumstances where need arises to assess the customer satisfaction with the help of antecedents of financial services for insurance products and services with respect to high customer satisfaction. The model has proved partial mediation with respect to various mediating factors like: customer experience and services rendered by the brokers and agents.

No. of Pages : 14 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028834 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN SYSTEM OF MACHINE VISION IN RECOGNITION AND LOCALIZATION OF FRUITS AND VEGETABLES FOR AUTOMATED HARVESTING ROBOTS

(51) International classification :A01D0045000000, G06K0009620000, G05D0001020000, A01D0046300000, G06N0003020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :

The present invention relates to a novel design system incorporating machine vision technologies for enhancing the precision and efficiency of fruit and vegetable harvesting robots. The system encompasses several interconnected components, such as high-resolution cameras, image processing units, object detection and feature extraction modules, localization and tracking algorithms, and path planning and motion control systems. Through the integration of sophisticated computer vision techniques and smart robotics, this innovative design allows for reliable identification and localization of different kinds of fruits and vegetables amidst variable external factors. Test outcomes exhibit superior performance when contrasted with conventional approaches, underscoring the immense potential of blending machine vision in large-scale agriculture for fostering eco-friendly farming solutions.

No. of Pages : 8 No. of Claims : 2

(54) Title of the invention : INTELLIGENT WEARABLE NECK PATCH TO ASSIST VOCALLY IMPAIRED PEOPLE TO SPEAK

(51) International classification :A61B0005000000, A61F0002200000, G06N0003040000, H02N0002180000, G06N0003080000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to :NA

Application Number :NA

Filing Date :NA

(62) Divisional to Application :NA

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(57) Abstract :

One of the basic and most effective methods of communication among human beings is verbal communication. However, a large number of people across the globe are affected by oropharyngeal cancer every year leading to deficiencies in speaking and linguistics ability. Apart from cancer, there are a number of clinical conditions that may lead to voice disorders which include, vocal fold polyps, vocal fold paralysis, keratosis, vocal fold nodules, adductor spasmodic dysphonia and many more. Proposed is an Intelligent Wearable Neck Patch to Assist Vocally Impaired People to Speak. Capacitive Sound Sensors which work by applying bias voltage to the load plates. Vibration in neck muscles indicate the difference in capacitance between movable and fixed plates. Changes in capacitance is converted to voltage variation by transforming vibration of neck muscles to signals sensed by capacitance sensing circuit. Piezoelectric sound sensor works under the principle of piezoelectric effect to generate electrical charge by applying mechanical stress. Electromagnetic sound sensors which comprise of a diaphragm, coil and magnet to detect the vibrations of vocal cord. Convolutional Neural Networks consisting of input layers, convolution layers, fully connected layers and output layers is used to train the test data.

No. of Pages : 16 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028858 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A MODULAR WALKING STICK WITH RETRACTABLE CLOTHING HOOK

(51) International classification :A45B0003000000, A61H0003020000, A45B0009020000, A61H0003000000, A45B0009000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Mr. Vivek Thashnath Address of Applicant :Founder, Huma, Bengaluru, Karnataka, India Bangalore Urban ----- 2)Dr. Mritunjay Kumar 3)Dr. Amit Kundal 4)Mr. Shamit Shrivastava Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr. Vivek Thashnath Address of Applicant :Founder, Huma, Bengaluru, Karnataka, India Bangalore Urban ----- 2)Dr. Mritunjay Kumar Address of Applicant :Assistant Professor, Department of Design, Art, and Performances, FLAME University, Pune, Maharashtra, India Pune ----- 3)Dr. Amit Kundal Address of Applicant :Associate Professor, Department of Design, Art, and Performances, FLAME University, Pune, Maharashtra, India Pune ----- 4)Mr. Shamit Shrivastava Address of Applicant :Associate Professor of Practice, Department of Design, Art, and Performances, FLAME University, Pune, Maharashtra, India Pune -----

(57) Abstract :

The present invention relates to a modular walking stick with retractable clothing hook. The walking stick is designed to aid individuals with mobility challenges and facilitate reaching objects. It features an ergonomic handle for enhanced grip, a telescopic body with adjustable length for personalized support, and secure connectors to maintain stability. The highlight is an integrated retractable hook mechanism, operated by a button, for efficient object retrieval. This L-shaped hook is adept at grasping items, such as clothing from top-loading washing machines, while remaining flush with the stick when not in use. The stick's design prioritizes user comfort, ease of use, and durability, with materials capable of withstanding walking support and object retrieval tasks. Additionally, its modular construction allows for component replacement or repair, enhancing longevity and user convenience.

No. of Pages : 21 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028859 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A TURTLE TRAJECTORY DISRUPTOR DEVICE

(51) International classification :A01K0075040000, F21L0004020000, A61K0035586000, C09D0005160000, A01K0075000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Mr. Vivek Thashnath Address of Applicant :Founder, Huma, Bengaluru, Karnataka, India Bangalore Urban ----- 2)Dr. Mritunjay Kumar 3)Dr. Amit Kundal 4)Mr. Shamit Shrivastava Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr. Vivek Thashnath Address of Applicant :Founder, Huma, Bengaluru, Karnataka, India Bangalore Urban ----- 2)Dr. Mritunjay Kumar Address of Applicant :Assistant Professor, Department of Design, Art, and Performances, FLAME University, Pune, Maharashtra, India Pune ----- 3)Dr. Amit Kundal Address of Applicant :Associate Professor, Department of Design, Art, and Performances, FLAME University, Pune, Maharashtra, India Pune ----- 4)Mr. Shamit Shrivastava Address of Applicant :Associate Professor of Practice, Department of Design, Art, and Performances, FLAME University, Pune, Maharashtra, India Pune -----

(57) Abstract :

The present invention relates to a turtle trajectory disruptor device. In more particular manner the present invention provides a multifunctional device designed for use in marine environments, particularly for influencing the behavior of sea turtle (Cheloniidae) populations. The device features a transparent component for optimized light transmission, a tethering mechanism for attachment to fishing nets, and a distinctive superior segment for identification and maintenance access. The modular, articulated assembly enables structural adaptability, while the various segments - head, neck, and body - serve specific operational roles. Key innovations include a photoluminescent distal body unit, an electronic component hub with efficient LED lights and power storage, and considerations for portability, ergonomics, and performance in aquatic conditions. With a mass range of 2.5-2.9 kg, the compact and durable apparatus is optimized for marine use, supporting conservation efforts through the targeted manipulation of turtle trajectories.

No. of Pages : 23 No. of Claims : 7

(54) Title of the invention : A COLD FORMED MODULAR BUILT-UP COLUMN MEMBER ASSEMBLY

(51) International classification	:H01L0023498000, H05K0003340000, H05K0001020000, H01L0023000000, A47B0009200000	(71)Name of Applicant : 1)INDIAN INSTITUTE OF TECHNOLOGY HYDERABAD Address of Applicant :Kandi, Sangareddy-502285, Hyderabad, Telangana, India Hyderabad -----
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Filing Date	:NA	

(57) Abstract :
ABSTRACT A COLD FORMED MODULAR BUILT-UP COLUMN MEMBER ASSEMBLY The present invention discloses a modular built-up column member assembly (100), comprising of one or more column elements having a first column element (102) oriented at an angle of 0 degree, a second column element (104) at the angle of 90 degrees, a third column element (106) at the angle of 180 degrees, a fourth column element (108) at the angle of 270 degrees, a column base plate (110) to house the column elements (102, 104, 106, 108) along designated position by means of welding of an inner core (802) and an outer core (804) of each of the column elements (102, 104, 106, 108) with that of the column base plate (110). Herein, the column elements (102, 104, 106, 108) are assembled to form a column member (112) by sliding through each other to define a self-stiffened cold formed interlocking structure (114) throughout length of the column member (112). {Figure 2 and Figure 6}

No. of Pages : 24 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028872 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : BLOCK CHAIN BASED NETWORKS SECURITY AND AUTHENTICATION

(51) International classification :H04L0009320000, H04L0009080000, G06Q0020060000, G06Q0020380000, H04L0009060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
ABSTRACT Block Chain based Networks Security and Authentication The advancement of technology has brought about new challenges in the field of network security and authentication. As the digital world becomes increasingly interconnected, there is a growing need for secure and reliable systems that protect sensitive information and ensure the authenticity of its users. In response to this, the emergence of blockchain-based networks has gained significant attention due to its potential to revolutionize the way security and authentication are approached. Blockchain technology, which underpins popular cryptocurrencies such as Bitcoin and Ethereum, is a decentralized and distributed ledger system that allows for the secure storage and transfer of digital assets. Its key features, such as its immutability, transparency, and decentralized nature, make it a promising solution for addressing the vulnerabilities that exist in traditional centralized networks. In a blockchain-based network, data is stored in blocks that are cryptographically linked to one another, making it nearly impossible for hackers to alter or manipulate the data without being detected. This ensures the integrity and reliability of the information, providing a strong foundation for secure communication and transactions. Moreover, blockchain technology offers robust authentication mechanisms through its use of digital signatures and public-key cryptography. This enables individuals or organizations to prove their identity and validate the authenticity of transactions without the need for a trusted third party. This not only reduces the risk of fraudulent activities but also eliminates the need for intermediaries, making processes more efficient and cost-effective. Furthermore, blockchain technology also addresses the issue of password-based authentication, which is prone to data breaches and can lead to identity theft. Through the use of blockchain-based identity management systems, users can securely store and manage their credentials, eliminating the need for multiple passwords and creating a more convenient and secure authentication process. In conclusion, the utilization of blockchain-based networks offers a promising solution to enhance security and authentication in the digital world. With its decentralized and immutable nature, it provides a robust framework for protecting sensitive information and ensuring the authenticity of users and transactions. As the technology continues to evolve, it is expected to have a significant impact on the future of network security and authentication.

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028875 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ENGLISH AMPLIFIED: HARNESSING TECHNOLOGY FOR ENHANCED LANGUAGE LEARNING

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(51) International classification	:G09B0019060000, G09B0005060000, G09B0005020000, G09B0007000000, G09B0019040000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
ABSTRACT The English Amplified program is a cutting-edge language learning platform designed to enhance the learning experience through the use of technology. This innovative program harnesses the power of technology to provide learners with a dynamic and immersive learning environment. Through interactive activities, tailored exercises, and personalized feedback, English Amplified enhances language learning by promoting active engagement and boosting motivation. Learners are able to access a wide range of resources, from audio and video materials to virtual reality simulations, to improve their reading, writing, listening, and speaking skills. With its user-friendly interface and adaptable curriculum, English Amplified empowers learners to take control of their own learning, making it a highly effective and efficient tool for improving English proficiency. This approach not only provides learners with access to a vast array of resources but also allows them to personalize their learning journey according to their individual needs and preferences. Through the English amplified, learners can improve their reading, writing, listening, and speaking skills while also gaining a better understanding of the English language and culture. With technology at its core, the English amplified offers a modern and effective solution for those seeking to enhance their English proficiency.

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028947 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : THERMOSECURE: BIOMETRIC AUTHENTICATION SYSTEM USING BODY TEMPERATURE AS NEXT-GENERATION APPLICATION PASSWORD

(51) International classification :G06F0021320000, H04L0009320000, H04L0009080000, G06Q0020380000, A61B0005000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Manas Kumar Yogi Address of Applicant :Assistant Professor, Computer Science and Engineering Department, Pragati Engineering College(Autonomous), Surampalem, East Godavari District, Andhra Pradesh India ----- 2)Yamuna Mundru Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Manas Kumar Yogi Address of Applicant :Assistant Professor, Computer Science and Engineering Department, Pragati Engineering College(Autonomous), Surampalem, East Godavari District, Andhra Pradesh India ----- 2)Yamuna Mundru Address of Applicant :Assistant Professor, Computer Science and Engineering –AI &ML Department, Pragati Engineering College(Autonomous), Surampalem, East Godavari District, Andhra Pradesh India -----

(57) Abstract :

ThermoSecure: Biometric Authentication System Using Body Temperature as Next-Generation Application Password Abstract: The present invention relates to a novel method and system for enhancing security in digital authentication by utilizing body temperature as a biometric parameter. Traditional password-based authentication systems are vulnerable to various security threats such as phishing, brute-force attacks, and password leakage. Biometric authentication methods offer increased security by leveraging unique physiological characteristics. In this invention, we propose a system that utilizes body temperature as a biometric identifier for authentication purposes. The system measures the user's body temperature through contactless sensors and employs advanced algorithms to authenticate the user based on their unique thermal signature. The utilization of body temperature as an authentication factor offers enhanced security, convenience, and user-friendliness in various applications, including smartphones, computers, access control systems, and online services.

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028985 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : MINI RICE MILL FEED INDUCER

(51) International classification :G06Q0010060000, B02B0007020000, B02B0003060000, B02B0007000000, B02B0005020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

The feed inducer in mini rice mills is a critical component responsible for regulating the flow of grains into the milling chamber, thus influencing milling efficiency and product quality. This abstract explores the significance of feed inducer design and operation in optimizing milling processes. Efficient feed induction is essential for ensuring a uniform and consistent grain flow, which maximizes equipment utilization and minimizes strain on milling machinery. By preventing overloading and underfeeding, the feed inducer helps maintain optimal milling conditions, enhancing efficiency and productivity. Moreover, the design of the feed inducer directly impacts grain processing quality and resource utilization. Features such as adjustable gates, baffles, or chutes minimize grain losses during feeding, maximizing the yield of milled rice and reducing waste. The feed inducer and adaptability to different grain varieties ensures versatility in processing, allowing for efficient milling of various grain types without sacrificing quality. Ease of maintenance and cleaning is another critical aspect of feed inducer design. Incorporating features such as quick-release mechanisms or removable panels facilitates accessibility for maintenance tasks, ensuring minimal downtime and sustained performance. In conclusion, the feed inducer role in mini rice milling operations cannot be overstated. Its design influences milling efficiency, product quality, and resource utilization. By prioritizing design optimization and operational effectiveness, millers can maximize milling efficiency, achieve high-quality milled rice output, and enhance overall productivity in mini rice milling operations.

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202441028992 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : CHITINASE BASED FORMULATION FOR ENHANCING ANTIFUNGAL PROTECTION IN PIPER NIGRUM AND METHOD OF PREPARATION THEREOF

(51) International classification :C12N0009420000, A61K0036670000, C12N0001200000, A61P0031100000, C12R0001050000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present disclosure relates to a chitinase based formulation for enhancing antifungal protection in Piper nigrum comprising: a chitinase enzyme; a yeast extract; a chitin powder; and rest being sea water. The present disclosure also relates to a method of preparation of a chitinase based formulation for enhancing antifungal protection in Piper nigrum comprising: a) isolating Alcaligenes faecalis from marine sediments for chitinase production; b) growing the Alcaligenes faecalis in sea water with 1 to 2% of yeast extract and 2 to 4 % chitin powder under condition followed by arresting the culture growth and centrifuged under condition to obtain a chitinase based formulation.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028993 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A LEAN-READINESS ASSESSMENT SYSTEM, AND METHOD THEREOF

(51) International classification :G06Q0010100000, G06F0016280000, G06F0016951000, G06Q0010060000, G06Q0030060000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Present disclosure discloses a lean-readiness assessment system (102), and method thereof. System identifies one or more attributes of lean-readiness related to at least one organization by at least one user and provides the attributes identified to one or more computing devices to develop at least one weight for the criteria. Further, the system incorporates the weight developed with the attributes identified. The system defines at least one score range for the attributes based on the weight incorporated with the attributes, and assign at least one score for the attributes. System records the score based on the score for the attributes within each criterion. Further, the system assesses the lean-readiness of the organization against each criterion and determine the integrated lean-readiness of the organization by combining the score for all of the criteria by an assessment application. The system displays the integrated lean-readiness of the organization.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028995 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DYNAMIC VEHICULAR PLUG-AND-PLAY CONTROL SYSTEM AND METHOD THEREOF

(51) International classification :B60R0016023000, B60R0016030000, G06Q0010060000, B60R0016037000, G07C0005080000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present disclosure relates generally to the field of automobile control systems. More specifically the present disclosure relates to a dynamic vehicular plug-and-play control system. The system (102) includes a wearable device (202) to be worn by a primary user (204-1) and by at least one secondary user (204-2), a vehicle on-board diagnosis (OBD) device (206) to access and analyze a plurality of vehicle parameters (206-1), a display unit (208) connected to a vehicle (210) through a universal serial bus (USB) port (212) and a processor (220). Further, the present disclosure relates to a method of operating a dynamic vehicular plug-and-play control system. Advantageously, the present invention relates to a system that identifies potential risks related to mental fatigue and health emergencies but also provides a robust foundation for pre-emptive safety measures.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441028996 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A LIGHT WEIGHT REVOLUTIONARY AIRCRAFT DEVICE AND METHOD THEREOF

(51) International classification :G16H0030200000, G06F0001160000, A61K0031424500, B64C0003560000, B64F0005600000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

The present disclosure relates generally to the field of aviation industry. More specifically the present disclosure relates to a light weight revolutionary aircraft device. The device (200) includes an axel (102), a fuselage (104) mounted on a lightweight chassis (106) along with a set of miniature wings (108), a set of engines (110), and a tailpiece and a motor (112) mounted on an axis either above or below the fuselage (104). The fuselage (104) is rotated in an anti-clockwise direction such that an angular momentum works in a direction opposite to a direction of gravity, thereby making it significantly weightless. Further, the present disclosure relates to a method of working of the light weight revolutionary aircraft device. Advantageously the present disclosure relates to a revolutionary aircraft device that eliminates the weight of flight by using the principle of gyroscopic effect and angular momentum thus making it exponentially fast and efficient.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029000 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DISPLAYING CONTENT IN A PREFERRED LANGUAGE

(51) International classification :G06F0040580000, H04N0021472000, H04N0021475000, H04L0043081100, G06T0005000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Embodiments of the present disclosure relates to a method and system for content management on a device, and in particular smart mobile phones. An embodiment includes receiving as input content on a device, whether the content is in the default language of the user and if not translating the conte in real time and providing the translated content with an indicator and a link to the original content. Figure 4

No. of Pages : 25 No. of Claims : 12

(54) Title of the invention : METHOD OF FABRICATION OF HIGHLY RESILIENT ORGANIC ACID CROSSLINKED CARBOMER BASED HYDROGEL FILMS

(51) International classification :A61K0008810000, A61K0009000000, A61K0047320000, A61K0009060000, C08J0003075000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Chaitanya Bharathi Institute of Technology Address of Applicant :Gandipet, Hyderabad, Telangana-500075, India Hyderabad ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)KOODALINGAM, Dharmalingam Address of Applicant :Department of Biotechnology, Chaitanya Bharathi Institute of Technology, Hyderabad - 500075, Telangana, India Hyderabad ----- 2)CHITTEPU, Obula Reddy Address of Applicant :Department of Biotechnology, Chaitanya Bharathi Institute of Technology, Hyderabad - 500075, Telangana, India Hyderabad ----- 3)MALLEBOYINA, Sai Sahithi Address of Applicant :Department of Biotechnology, Chaitanya Bharathi Institute of Technology, Hyderabad - 500075, Telangana, India Hyderabad ----- 4)CHERUKU, Samhitha Address of Applicant :Department of Biotechnology, Chaitanya Bharathi Institute of Technology, Hyderabad - 500075, Telangana, India Hyderabad -----

(57) Abstract :

The present disclosure provides a method of fabrication of highly resilient organic acid crosslinked carbomer based hydrogel films from a carbomer polymer and an organic acid based crosslinker. The method includes the steps of adding a carbomer polymer to water in an amount of 0.5-2.5 % by weight of the carbomer polymer based on the total weight of water to form a polymer solution, adding an organic acid into the polymer solution in an amount of 5-60% by weight of the organic acid based on the total weight of carbomer polymer to form a homogeneous solution, drying the homogeneous solution at 40-80 °C until the complete evaporation of the moisture to form the hydrogel film. Typically, the drying time can be 8 - 24 hours to form the hydrogel film.

No. of Pages : 17 No. of Claims : 4

(54) Title of the invention : ADVANCED ENCRYPTION ALGORITHM BASED ON ELLIPTIC CURVE CRYPTOGRAPHY

(51) International classification :H04L0009080000, H04L0009300000, H04L0009320000, H04L0009060000, H04L0009000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The invention relates to an advanced encryption algorithm leveraging elliptic curve cryptography (ECC) for secure data communication and cryptographic operations. The algorithm generates elliptic curve key pairs and facilitates encrypted data transmission between sender and recipient using public-private key encryption. Multi-factor authentication (MFA) techniques may be employed for enhanced security. Key management mechanisms, including rotation and revocation, further bolster security. Specialized optimizations cater to diverse application scenarios, ensuring efficient performance. This invention contributes to the advancement of information security by providing a robust and flexible encryption solution adaptable to various environments and use cases.

No. of Pages : 16 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029013 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ADVANCEMENTS IN TUNNEL SAFETY: A DEEP LEARNING APPROACH FOR UNANTICIPATED ACCIDENT DETECTION

(51) International classification :G06N0003040000, G06N0003080000, G06K0009620000, G06N0020000000, G06N0020100000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This system uses deep learning algorithms to deliver a novel method for unanticipated accidents in tunnels. The problem of accident classification in tunnel environments which present special difficulties like restricted visibility and cramped quarters is tackled in this study with a novel method. Efficient identification of accidents is crucial for guaranteeing prompt action and security in these settings. This system main focus is the requirement for an effective and dependable system for categorizing tunnel accident incidents. In these intricate contexts, traditional methods frequently fail to reliably identify and categorize issues, which causes a delay in reaction times and raises the danger to tunnel users and infrastructure. In order to overcome these obstacles, this system develops a strong accident categorization system using deep learning algorithms, a subset of machine learning techniques that can recognize complex patterns from big datasets. This system trained and assessed several deep learning models, such as convolutional neural networks (CNNs) and DenseNet and Mobile Net models, by utilizing an extensive dataset that included a variety of tunnel incidents.

No. of Pages : 16 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029014 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : BUILDING A DYNAMIC AND EFFICIENT WEBSITE: OPTIMIZING CONTENT MANAGEMENT FOR STREAMLINED ADMINISTRATION

(51) International classification :G06Q0010100000, G06Q0050200000, G09B0005000000, G06Q0010060000, G06F0003048000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Developing a dynamic and efficient web-based administrative management application involves crafting a comprehensive system for displaying individual administrative profiles. This application facilitates a deep understanding of each faculty member's academic and professional background, empowering users with detailed insights into their expertise, contributions, and areas of specialization. By providing personalized profiles encompassing information such as names, designations, departments, contact details, educational qualifications, publications, research projects, memberships, and more, the platform enhances transparency, collaboration, and communication within educational institutions. Leveraging technologies like HTML, CSS, JavaScript, Bootstrap, PHP, and MySQL, the system ensures an intuitive interface and seamless navigation, enabling efficient exploration of faculty profiles for students, administrators, and other stakeholders. This optimization of content management fosters a conducive environment for academic excellence and research endeavors, ultimately enhancing the overall administration of educational institutions.

No. of Pages : 22 No. of Claims : 7

(54) Title of the invention : INTELLIGENT RESOURCE ALLOCATION: LEVERAGING BACKTRACKING FOR FLEXIBLE AND STREAMLINED BOOKING

(51) International classification :G06Q0010020000, G16H0040200000, F21W0131406000, A63B0001000000, E04H0003220000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Subbarayudu Birla .C Address of Applicant :Madanapalle Institute of Technology &Science, Post Box N0:14, Kadiri Road Angallu(V), Madanapalle- 517325 Annamayya District, Andhra Pradesh, India. ----- 2)Mr.V.Naveen 3)M.Praharsha 4)Settypalli poojith Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Subbarayudu Birla .C Address of Applicant :Madanapalle Institute of Technology &Science, Post Box N0:14, Kadiri Road Angallu(V), Madanapalle- 517325 Annamayya District, Andhra Pradesh, India. ----- 2)Mr.V.Naveen Address of Applicant :Madanapalle Institute of Technology & Science, Post Box N0:14, Kadiri Road Angallu(V),Madanapalle- 517325 Annamayya District, Andhra Pradesh, India. ----- 3)M.Praharsha Address of Applicant :Madanapalle Institute of Technology & Science, Post Box N0:14, Kadiri Road Angallu(V), Madanapalle- 517325 Annamayya District, Andhra Pradesh, India. ----- 4)Settypalli poojith Address of Applicant :Madanapalle Institute of Technology & Science, Post Box N0:14, Kadiri Road Angallu(V),Madanapalle- 517325 Annamayya District, Andhra Pradesh, India. -----

(57) Abstract :

The Studio Booking System stands as a cutting-edge online platform meticulously architected to revolutionize the reservation and management dynamics of creative studio spaces, tailored for diverse artistic endeavors like photography, music recording, and dance rehearsals. At its core, the system is fortified by a robust infrastructure incorporating secure authentication and a meticulously organized database, providing a secure and efficient foundation for users. The system intricately defines distinct user roles, allocating tailored permissions to administrators and users, creating a structured hierarchy that optimizes user experience. Driven by a backend framework, notably PHP, the system seamlessly executes essential CRUD operations, endowing administrators with the ability to efficiently manage studios, reservations, and user profiles, thereby ensuring the fluid functioning of the platform. The user experience is further elevated through a suite of features meticulously designed to provide comprehensive information and foster seamless interactions.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029029 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : PERFORMANCE ANALYSIS OF UNIFIED POWER QUALITY CONDITIONER IN A GRID CONNECTED WIND & PV GENERATED SYSTEM USED TO IMPROVE POWER QUALITY

(51) International classification :H02J0003010000, H02J0003380000, H02J0003460000, H02J0003320000, A61B0006000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT The technology-based electronic conditioner can be a solution for improving the quality of the distributed system's power supply. UPQC is a custom power devices designed to compensate imperfections in both source and load voltage. This approach proposes the concept of a combined system of a single quality conditioner and a hybrid power generation. The UPQC is a power electronics depending compensator that operates on the active filtering principle. It is a mixture of shunt (SHUC) and series (SERC) compensator, cascaded through a DC condenser. Two configurations of an UPQC are possible based on the location of the SHUC and SERC. The proposed system consists of series and shunt inverters, solar array and wind connected to DC connection which can compensate for the voltage sag, swell, harmonics and interruption of the voltage. In addition to its ability to improve the power quality in the distribution system, the proposed system is able to inject the active power into the grid.

No. of Pages : 7 No. of Claims : 3

(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED AUDIO ENABLED ENERGY METER SYSTEMS

(51) International classification :G06Q0010060000, G06N0020000000, H04L0069329000, G06Q0050060000, G06Q0030020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SAVEETHA ENGINEERING COLLEGE Address of Applicant :SAVEETHA NAGAR, THANDALAM,CHENNAI,TAMIL NADU, INDIA-602105. ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)D. SRIPRIYA RANGANATHAN Address of Applicant :ASSOCIATE PROFESSOR- EEE, SAVEETHA ENGINEERING COLLEGE, CHENNAI,TAMIL NADU, INDIA-602105. Priya_emmkay@yahoo.com ----- ----- 2)V.SAVITHA Address of Applicant :ASSISTANT PROFESSOR(SG)- EEE, SAVEETHA ENGINEERING COLLEGE, CHENNAI, TAMIL NADU, INDIA-602105. savinalan25@gmail.com ----- ----- 3)NADAR AKILA P MOHAN Address of Applicant :ASSISTANT PROFESSOR - ECE, SAVEETHA ENGINEERING COLLEGE, CHENNAI, TAMIL NADU, INDIA-602105. akila.est@gmail.com ----- ----- 4)SHANMUGA PRIYA S Address of Applicant :ASSISTANT PROFESSOR AIDS, SAVEETHA ENGINEERING COLLEGE, CHENNAI, TAMIL NADU, INDIA-602105. spriyasenthil2009@gmail.com ----- ----- 5)MAHALAKSHMI M Address of Applicant :ASSISTANT PROFESSOR -AIDS, SAVEETHA ENGINEERING COLLEGE, CHENNAI, TAMIL NADU, INDIA-602105. mahalakshmi.offl3@gmail.com ----- -----

(57) Abstract :
AI-based audio energy meter systems offer a revolutionary alternative. Imagine a system that listens to your appliances, not wires. By capturing the unique sounds produced by each device, advanced algorithms can identify them and estimate their energy usage. This eliminates the need for physical installation on every appliance, a major advantage. This can be cumbersome and lacks detailed data. Furthermore, it allows for appliance disaggregation, providing a breakdown of which device is using the most energy. This empowers users with real-time insights into their energy habits. Imagine finally knowing‘ which appliance is secretly guzzling power. Background noise can interfere with the AI's listening abilities, potentially impacting accuracy. Additionally, ensuring user privacy when collecting and analyzing audio data is crucial. Despite these hurdles, AI-based audio energy meters hold immense promise. [n a future of smarter energy management, these systems could play a key role in promoting sustainable living by empowering users to make informed choices about their energy consumption. Keywords: Energy Meters, Power Meters, Artificial Intelligence, Audio Recorder, User Interface.

No. of Pages : 7 No. of Claims : 4

(54) Title of the invention : ARTIFICIAL INTELLIGENCE BASED MULTI-MATHEMATICAL MODELLING FOR MANUFACTURING SYSTEM AND BUSINESS SAFETY GUARD

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(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
Introduces a novel AI—powered system for manufacturing that utilizes multiple mathematical models. This system acts as a safety guard for both the physical production processes and the financial health of the business. Through various mathematical models, the system analyzes aspects like production flow, inventory levels, financial trends, and quality control. An AI core integrates these models and analyzes the data they generate. This allows the system to predict potential problems, recommend corrective actions, and optimize overall performance for improved safety, efficiency, cost reduction, and data-driven decision making. Predict potential issues: Anticipate equipment failures, supply chain dismptions, and market shifts before they occur. . Recommend corrective actions: Suggest adjustments to production schedules, inventory levels, or financial plans to mitigate risks. Optimize performance: Identify areas for improvement in efficiency, cost reduction, and overall business health. This AI-based multi-mathematical modeling system offers significant benefits for manufacturers, including: Enhanced safety: Reduced risk of accidents, equipment breakdowns, and production disruptions. Improved efficiency: Optimized resource utilization, reduced lead times, and increased output. Reduced costs: Minimized waste, optimized inventory levels, and improved financial predictability. _ . Data-driven decision-making: Real-time insights to support strategic planning and proactive management. This abstract provides a high-level overview of the proposed system. The detailed utility model will delve deeper into the specific mathematical models employed, the AI algorithms used for analysis, and the architecture for integrating the system within a manufacturing environment.

No. of Pages : 7 No. of Claims : 5

(54) Title of the invention : A MULTIBAND MINKOWSKI FRACTAL BASED METAMATERIAL ANTENNA AT 3 GHZ / 3.4 GHZ FOR WIRELESS APPLICATIONS

(51) International classification	:H01Q0001380000, H01Q0009040000, H01Q0015000000, H01Q0001500000, H01Q0001360000	(71)Name of Applicant : 1)RAKSHEEDA BIBI Address of Applicant :55, MARIAMMAN KOIL STREET, MUTHIRAPALAYAM, PUDUCHERRY, INDIA-605009. ----- ----- 2)KALAIYARASAN .R 3)NAGARAJAN . G Name of Applicant : NA Address of Applicant : NA
(86) International Application No	:NA	(72)Name of Inventor :
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(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The innovation presents a Minkowski fractal structure that is based on a metamaterial antenna. The fractal dimensions have extensively applied this technology to various applications. The; metamaterial antenna is a simple and efficient antenna that is constructed utilising the Minkowski fractal structure. The split ring resonator is selected due to its inductive and capacitive resonance characteristics. The patch incorporates a Minkowski fractal structure that emits electromagnetic waves with wider range of frequencies. The utilisation of a fractal technique is to improve the performance of the antenna. The prime design considerations for a patch antenna are its dimensions and feed. The dimensions of the antenna are 40 X 40 X 2 rmm3. The numerical investigations rely on the iterative process of the Minkowski fractal curve. The antenna that is designed has been subjected to testing, reveals that it resonates at frequencies of 3 GHz and 3.4 GHz when using the Rogers 5880 substrate. The substrate has a dielectric constant (8,) of 2.2 and a loss tangent (8) of 0.0009. The design incorporates the coaxial feed technique which offers enhanced impedance matching. The High Frequency Structure Simulator (HFSS 15.0) is utilised for the purpose of designing the simulated antenna. The projected antenria demonstrates significant improvements compared to prior work, for Band-I frequencies which include 20% increase in bandwidth, 8% better return loss and 4% improved VSWR. For Band-II frequencies which include 66% increase in bandwidth, 9% better return loss and 11% improved VSWR. The projected antenna operates at frequencies of 3 GHz and 3.4 GHz, specifically designed for wireless applications. The measured outcome of the fabricated antenna indicates that the antenna design resonates at the identical frequency as the simulated antenna results.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029036 A

(19) INDIA

(22) Date of filing of Application :10/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PORTABLE PLANT CARE DEVICE FOR MONITORING PLANTS' REAL-TIME CONDITIONS WITH AI INTEGRATION

(51) International classification :H04R0003000000, G16H0020300000, G02B0021000000, G01N0027040000, A01G0025160000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

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(57) Abstract :

The present invention relates to a portable smart plant care device, hereinafter referred to as the Tars Portable. Tars Portable is designed to revolutionize indoor gardening by offering a compact, portable, and comprehensive solution for monitoring and optimizing plant health. Tars Portable is a compact and portable device that seamlessly integrates into any planter, eliminating the need for repotting. It features a suite of sensors to monitor temperature, humidity, soil moisture, and light intensity, providing real-time data to users from anywhere on any device via a companion web application. This patent application discloses the design, utility, and functionality of Tars Portable, including its hardware components, software features, and method of operation, along with detailed drawings, flowcharts and claims.

No. of Pages : 30 No. of Claims : 10

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(21) Application No.202441029038 A

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(54) Title of the invention : REAL TIME AUTOMATIC WATER LEVEL INDICATOR AND CONTROLLER FOR SMART CITIES

(51) International classification :E04H0004120000, H04W0084120000, H04W0004700000,
H02S0020200000, A61P0037040000
(86) International Application No :NA
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Application Number :NA
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(62) Divisional to Application :NA
Number :NA
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(57) Abstract :

*ABSTRACT OF THE INVENTION > We're developing IoT solutions to address issues with traditional water management systems, particularly in urban areas. Our project focuses on an automatic water level monitoring and control system modified for smart cities. By utilizing WiFi connectivity and microcontrollers, we can instantly monitor and regulate water levels in various applications, like water tanks. In our system, water level depth sensors are strategically placed throughout the infrastructure to continuously gather data. This data is then processed by a microcontroller equipped with a WiFi module. If the water level exceeds a certain threshold, the system notifies users via WiFi and activates the water pump to alleviate excess water, thus ensuring safety and preventing potential damage. This approach offers simplicity, automation, and versatility across multiple applications. We anticipate that our solution will deliver reliable, efficient, and effective water level management, contributing to sustainable urban water management practices.

No. of Pages : 8 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029039 A

(19) INDIA

(22) Date of filing of Application :10/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : GROUNDWATER MANAGEMENT WITH IOT-BASED SMART WELLS FOR ENHANCED MONITORING AND CONTROL

(51) International classification :B09C0001000000, E21B0049080000, H04L0012540000, H04W0024100000, G01V0009020000

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(62) Divisional to Application Number :NA
Filing Date :NA

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Abstract Sustainable use of water resources is dependent on effective groundwater management, which is especially important in areas where water pollution and shortages are. on the rise. Manual interventions and periodic measurements are common in traditional groundwater monitoring and management methods, however they aren't always precise or accurate. Using Internet of Things (IoT) technology to build smart wells that can better monitor and regulate groundwater supplies is a new approach that this research suggests as a response to these problems. IoT smart wells include a network of sensors that can measure a number of variables in real- time, including water level, quality, temperature and pressure. By monitoring groundwater dynamics in real_ time these sensors reveal any irregularities or problems, paving the way for preventative measures in management. In addition by connecting various IOT devices data can be sent remotely and monitored centrally. This allows for more informed decisions and better use-of resources. The smart wells include controls and actuators that let you automate pumping operations which means you can optimize groundwater recharging and extraction. This system ensures Sustainable groundwater management while reducing operating costs and energy consumption by combining cloud techniques. It can adaptively modify pumping rates depending on real- time data and specified targets.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

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(21) Application No.202441029040 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ARDUINO BASED INVERTER POWER BACKUP FOR THE HOME APPLIANCES

(51) International classification :G07C0013000000, H04L0009320000, A61B0017000000,
G06F0011180000, G06Q0050260000
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Application Number :NA
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(62) Divisional to Application :NA
Number :NA
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(57) Abstract :

*ABSTRACT OF THE INVENTION: In the present scenario, most of elections are conducted in Electronic Voting Machine (EVM), Where voter registered their vote with help of an Electronic Machine without using ballot paper. In this process, it is possible for a person to vote twice, even by checking their ID proofs. And-there will be an issue of overlapping of voter details from a person to person. We can sort out this issue by implementing Fingerprint at Voting Access. The domain of the project is Arduino, which is an open—source electronic platform to create interactive electronic objects. As we know that the small detailing features on a finger of each person's are different and the voter can easily be authenticated by Fingerprint-Sensor. The registration will take care of a voter with voter's finger pattern by verifying their details. At the. time of voting, admin will authenticate the voter by verifying their voting status. Once confirmed, the admin will allow to vote at booth stand. Also, the system ensures the right to vote a voter only once, thus not allow the voter to vote for the second time. In the end, the results will not be overlaps with fake votes.

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(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029041 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT BASED HEALTH MONITORING SYSTEM

(51) International classification :A61B0005000000, A61B0005024000, A61B0005020500,
A61B0005145000, A61B0005080000
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to :NA
Application Number :NA
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(62) Divisional to Application :NA
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*ABSTRACT OF THE INVENTION: > Health monitoring-systems has evolved over the years, with various phases and technologies contributing to their developments. > The conventional health monitoring systems such as traditional medical checkups, medicine, paper-based records played a crucial role in human life. > However, the limitations of conventional health monitoring systems like infrequent monitoring, reactive approach, limited functionality, and accuracy made to concentrate for better improvements, which lead for proposing the health monitoring system using Node MCU and ESP8266 wifi module. > The proposed work utilizes various sensors such as pulse sensor and temperature sensor to measure essential signs like heart rate and body temperature. The Node MCU processes this data and securely sends it to a remote server via ESP8266. > The main objective of this proposed work is for conveying the live track record of the old-age patients to their doctors and relatives in case of abnormal readings, ensuring timely intervention.

No. of Pages : 8 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029042 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN OF SMART WALKING STICK FOR VISUALLY IMPAIRED PEOPLE

(51) International classification :A61H0003060000, G09B0021000000, G08G0001005000,
G01S0005020000, A61F0009080000
(86) International Application No :NA
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(87) International Publication No : NA
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(57) Abstract :

*ABSTRACT OF THE INVENTION The Path Finder Cane is a new walking aid designed to improve navigation for visually impaired people. Here, we offer a curtain that allows visually impaired people to use advanced technology easily. Blinds are combined with proximity sensors and lights. Our pre-planning system uses proximity sensors to detect problems before using ultrasonic waves. When a problem is detected, the sensor transmits this information to the Arduino controller. Totally blind or visually impaired people often have difficulty identifying? themselves in the outside environment. The World Organization for Accessibility for the Blind explains that mobility is, in fact, one of the biggest challenges faced by blind people. Commuting to work or simply walking down a crowded street can cause serious problems. For this reason, many people with poor eyesight take a sighted friend or family member with them to help them find an unknown location. This project aims to solve the navigation problem. It has a blind post equipped with a proximity sensor. The Arduino controller then processes this information and calculates whether the interference is close enough. If the problem is not imminent the circuit does nothing. If the problem is imminent, the microcontroller sends a signal to enable sound. It also makes different sounds when it sees an object and warns the blind person. It is worth saying that in this study, the aim of creating and using a smart cane for the visually impaired was fully achieved. Smart Stick provides a simple platform for next-generation add-on devices to help visually impaired people navigate safely indoors and outdoors. It is useful and cheap. It achieves good results in detecting some problems in the user's path. The project provides a low-cost, reliable, portable, low-power consuming and powerful navigation technology with a short response time. Different types of sensors and other different devices were used in this project. It also includes Global Positioning System (GPS) to find the exact location of the blind person. Other features include Global System for Mobile Communications (GSM) modules that help send locations to members in case the blind person falls or is in danger.

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

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(54) Title of the invention : VOTING ACCESS THROUGH FINGERPRINT

(51) International classification :H02J0009060000, H05B0047130000, H05B0047110000, H04W0024040000, G08B0013193000
(86) International Application No :NA
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(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :
ABSTRACT OF THE INVENTION The Arduino based inverter power backup system' is a cutting—edge project designed to provide a reliable and efficient solution for uninterrupted power supply. In today's world power outages are inevitable, leading to disruptions in various sectors. This project aims to address the issue by seamlessly integrating Arduino technology with an inverter system, enshrine a smooth transition to backup power during electrical failures. This system employs passive infrared (PIR) sensor to monitor human motion through infrared radiation and utilizes this data to make informed decisions regarding the activation and deactivation of power appliances. This project enables the automation of various home applications, such as lighting, fans, or other electrical devices. The Arduous and PIR devices will activate and turn on the lighting system when there is a presence of human. This automation not only minimises energy consumption but also extends battery life, contributing to a more sustainable approach to backup power. Beyond resilience and peace of mind, this project opens doors to automated home applications, promoting comfort and convenience in your living space.

No. of Pages : 8 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029044 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SMART OTP BASED WIRELESS LOCKING SYSTEM USING ARDUINO

(51) International classification :G07C0009000000, E05B0047000000, A47G0029140000, H04L0009320000, G06F0008200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
Number :NA
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(57) Abstract :

*ABSTRACT OF THE INVENTION: In a rapidly evolving technological landscape, the need for secure and convenient access control systems has grown significant role in our life. Nowadays, home security has become one of many people's key concerns. This project presents an innovative solution for enhancing the security and accessibility of locker and wi- Fi are combined to create a fantastic powerful system along with a mobile application.This system operates with a mobile application by sending an OTP as a secure password. As a result, only owners or authorised person can be permitted access through the locker. The OTP received in the mobile is used on user click and opening the attached lock if the entered code is correctly verified Key features of the system include the ability to grant or revoke access remotely, monitor entry and exit events, and receives instant notifications of locker activities. This system uses OTP authentication and Arduino Smart Phone based design to create a wireless OTP locking system that allows users to ;live a more convenient and secure life free of the fear of theft and other crimes

No. of Pages : 8 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029047 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : PARKING MANAGEMENT SYSTEM USING ARDUINO

(51) International classification :G08G0001140000, G06Q0010060000, G06Q0050260000,
G06Q0050300000, G07B0015020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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(57) Abstract :

*ABSTRACT OF THE INVENTION The abstract of a car parking management system using Arduino and IoT involves the integration of smart technology to efficiently manage parking spaces. In this system, Arduino-based hardware is employed to monitor and control parking slots, while IoT connectivity enables real-time data exchange. Sensors placed in each parking space detect the presence of vehicles and relay this information to the Arduino, which communicates with a cloud-based platform through IoT protocols. Users can access a mobile application to check the availability of parking spaces in real time, navigate to vacant spots, and even reserve a slot. The system optimizes parking utilization, reduces congestion, and provides a seamless and user-friendly experience for both drivers and parking facility managers. Additionally, it offers insights into parking patterns, contributing to effective urban planning and resource management.

No. of Pages : 8 No. of Claims : 5

(54) Title of the invention : REVOLUTIONIZING HEALTHCARE SUPPLY CHAIN TRACEABILITY THROUGH BLOCKCHAIN TECHNOLOGY

(51) International classification :G06Q0010060000, H04L0009320000, G06Q0010080000, G06Q0020400000, H04L0009060000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Karnati Radha Rani Neha Address of Applicant :BTECH,NMREC Divyanagar, Kachivanisingaram Near Narapally Ghatkesar Mandal, Medchal District-500088. Hyderabad,Telangana, India. ----- 2)Kunduru Sahasra 3)Thumma Shriya 4)G.Srikanth Reddy 5)SUNILTEKALE Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Karnati Radha Rani Neha Address of Applicant :BTECH,NMREC Divyanagar, Kachivanisingaram Near Narapally Ghatkesar Mandal, Medchal District- 500088. Hyderabad,Telangana, India. ----- 2)Kunduru Sahasra Address of Applicant :BTECH,NMREC Divyanagar, Kachivanisingaram Near Narapally Ghatkesar Mandal, Medchal District- 500088. Hyderabad,Telangana, India. ----- 3)Thumma Shriya Address of Applicant :BTECH,NMREC Divyanagar, Kachivanisingaram Near Narapally Ghatkesar Mandal, Medchal District~ 500088. Hyderabad,Telangana, India. ----- 4)G.Srikanth Reddy Address of Applicant :ASSISTANT PROFESSORNMREC Divyanagar, Kachivanisingaram Near Narapally Ghatkesar Mandal, Medchal District— 500088. srikanth.cse@nmrec.edu.in Hyderabad,Telangana, India. ----- 5)SUNILTEKALE Address of Applicant :PROFESSOR,NMREC Divyanagar, Kachivanisingaram Near Narapally Ghatkesar Mandal, Medchal District-500088. Hyderabad,Telangana, India. -----

(57) Abstract :

Abstract of the Invention: Healthcare supply chain involves a lot of complexity. It has :1 larger impact on human health. One of the major concerns in the current healthcare supply chain is drug counterfeiting. Supply chain management is an activity responsible for moving commodities and services from one point to another through a variety stakeholders. The traditional SCM is based on El centralized approach managed at the central headquarter, and all other sub-offices get insmlctions from the main office. Some major issues with present supply chain management systems are security, transactional transparency, traceability, stakeholder involvement, product counterfeiting, additional delays, fraud, and instabilities. Therefore, it is very essential for the consumer to know whether the drug has come from the rightful source. So in such scenarios, a blockchain application can be used since it provides (he features in such a way that a consumer can track and Krace the drug in [he supply chain with the help of smart contracts which provides an immutable history of transitions to all the stakeholders thereby eliminating the involvement of unauthorised people. We propose a mechanism for the safe distribution of medications throughout the whole supply chain. Each product in the chain can be moved between chain associates who have been confirmed using an event request-response approach. A product may be traced back to its source thanks to sman contrails, which are used In record all transactions between entities onto the blockchain' A DApp is made using the Ram Framework. On a local blockchain that Panache provided, the smart contracts were pill into scallion. The blockchain connection between the Depp and Website is made possible by the Truffle framework, the DApp is connected K0 the blockchain..We have modified the smart contract by providing the 11' asking through id and digital authentication at customer level so that it gives better results.

No. of Pages : 10 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029050 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : VOICE - CONTROLLED ELECTRIC WHEELCHAIR WITH ENHANCED MOBILITY

(51) International classification :A61G0005100000, A61G0005040000, G10L0015260000, G10L0015220000, H04M0001270000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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ABSTRACT OF THE INVENTION This project explores the development of a speech-based wheelchair control system, aiming to provide a more intuitive and efficient means of mobility for individuals with physical disabilities. Traditional methods for wheelchair control have often relied on manual interfaces like joysticks, which can be challenging to use for those with limited dexterity. To address these shortcomings, the proposed method introduces a solution by integrating Google speech recognition technology, a Voice-Controlled Wheelchair is being designed to provide a newfound level of independence and autonomy to these individuals. This system relies on a NodeMCU ESP8266 microcontroller and a voice recognition module to interpret voice commands, translating them into precise movements of the wheelchair.

No. of Pages : 9 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029051 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : WHEEL CHAIR DIRECTION CONTROL WITH GESTURE RECOGNITION (MEMS ACCELEROMETER)

(51) International classification :A61G0005100000, G06F0003010000, A61G0005040000,
A61G0003060000, A61G0005020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to :NA
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(57) Abstract :
*ABSTRACT OF THE INVENTION > Wheelchairs are used by the people who cannot walk due to physiological ' or physical illness; injury or any disability. > Recent development promises a wide scope:in developing smart wheelchairs. this article presents a gesture based Wheelchair which controls the wheelchair using hand movements. ' > The system is divided into two main units MEMS sensor and wheel chair control l the MEMS sensor is connected to hand is a 3 axis accelerometer with digital output (12C) l that provides hand gesture detection, converts it into the 6 —bitdig1a| values and gives it to the Arduino controller. > The wheelchair control unit is a wireless unit that is developed using other controller

No. of Pages : 10 No. of Claims : 1

(54) Title of the invention : SOLAR POWERED AUTONOMUS MULTIPURPOSE AGRICULTURAL ROBOT USING BLUETOOTH

(51) International classification :H04W0004800000, B25J0011000000, A01G0022000000, G06Q0010060000, A01C0007020000 (86) International Application No :NA (86) International Application No Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA (61) Patent of Addition to Filing Date :NA (62) Divisional to Application Number :NA (62) Divisional to Application Filing Date :NA	(71)Name of Applicant : 1)G. Priyanka Address of Applicant :Assistant Professor, Department of EEE, RGM College of Engineering and Technology, Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh-518211. ----- 2)RGM College of Engineering and Technology (Autonomous) 3)P. Sai Sampath Kumar 4)P. Sesi Kiran 5)K. Prahlada Reddy 6)Dr. J. Surya Kumari 7)S. Md. Minhazuddin 8)T. Shiny Kaanuka 9)N. Ajay 10)A. Imam shahul 11)G. ShivaKumar 12)J. Vimala Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)G. Priyanka Address of Applicant :Assistant Professor, Department of EEE, RGM College of Engineering and Technology, Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh-518211. ----- 2)RGM College of Engineering and Technology (Autonomous) Address of Applicant :RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- 3)P. Sai Sampath Kumar Address of Applicant :RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- 4)P. Sesi Kiran Address of Applicant :Assistant Professor, Department of EEE, RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- ---- 5)K. Prahlada Reddy Address of Applicant :Assistant Professor, Department of EEE, RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- ---- 6)Dr. J. Surya Kumari Address of Applicant :Assistant Professor, Department of EEE, RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- ---- 7)S. Md. Minhazuddin Address of Applicant :Assistant Professor, Department of EEE, RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- ---- 8)T. Shiny Kaanuka Address of Applicant :UG-Student, Department of EEE, RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- ---- 9)N. Ajay Address of Applicant :UG-Student, Department of EEE, RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- ---- 10)A. Imam shahul Address of Applicant :UG-Student, Department of EEE, RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- ---- 11)G. ShivaKumar Address of Applicant :UG-Student, Department of EEE, RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- ---- 12)J. Vimala Address of Applicant :UG-Student, Department of EEE, RGM College of Engineering and Technology (Autonomous) Nerawada Post, Panyam Mandal, Kurnool District, Andhra Pradesh — 518211. ----- ----

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Abstract of the invention: Abstract: Nearly 70% of the population in India depends on agriculture. The agricultural field is used for a variety of tasks like watering and seeding. The equipment required for the aforementioned operationé is pricy and cumbersome to operate. Therefore, by creating a system that will save time and labour, the agricultural system in India should be supported. Developing a robot that can sow seeds and spray water while being fully powered by solar energy is the objective. The built robot is run by a solar panel and is signalled by an Android or Bluetooth app to operate the essential mechanisms and movement. This boosts increases the effectiveness of seed sowing and lessens the difficulty of manual planting. The goal is to create a robot that can carry out tasks like mechanized spraying, dispensing seeds. The Arduino Nano, which controls everything here, is the key element. Thé robot only uses human operation outside of the field; it runs in automated mode inside. The robot may be manually controlled using a Bluetooth pairing app, which also éids in navigating the robot outside of the field.

No. of Pages : 7 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029053 A

(19) INDIA

(22) Date of filing of Application :10/04/2024

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(54) Title of the invention : ENHANCING ELECTRIC VEHICLE'S BATTERY MONITORING SYSTEM WITH IOT

(51) International classification :B60L0058120000, H04L0067120000, H02J0013000000, B60L0053680000, B60L0058240000
(86) International Application No :NA
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(61) Patent of Addition to :NA
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(62) Divisional to Application :NA
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(57) Abstract :
Abstract of the Invention: The invention is an Arduino-based Electric Vehicle Battery Monitoring System with IoT, designed to enhance the efficiency, safety, and management of electric vehicle (EV) batteries. The system integrates Arduino microcontroller technology with Internet of Things (IoT) connectivity, allowing real-time monitoring of battery parameters such as voltage, current, temperature, and state of charge (SOC). Advanced algorithms optimize battery performance, extending its lifespan, and enabling early fault detection. The system prioritizes energy efficiency, providing recommendations for optimal charging and driving practices. A user friendly interface offers accessible data visualization, customizable alerts, and remote control options. Integration with IoT platforms facilitates seamless communication, data exchange, and potential analytics. Adherence to safety standards, scalability across EV models, and adaptability to future technologies make this system a comprehensive solution for improving EV performance and sustainability.

No. of Pages : 8 No. of Claims : 6

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(21) Application No.202441029060 A

(19) INDIA

(22) Date of filing of Application :10/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : NEXT-GEN WATER QUALITY ANALYSIS INTERNET OF THINGS AND MACHINE LEARNING

(51) International classification :G01N0033180000, G06K0009620000, C02F0001000000, G16H0040670000, H04L0067120000

(86) International Application No :NA
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(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

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Filing Date :NA

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(57) Abstract :

.Abstract of the Invention: This study uses machine learning and the Internet of Things to provide an innovative method of assessing water quality. Acknowledging the vital significance of uncontaminated drinking water, especially in regions affected by . industry and urbanisation, the initiative seeks to surmount the constraints of conventional monitoring techniques. Real-time data on the quality of the water can be obtained through the installation of a network of sensors, including ones that detect turbidity, pH, and total dissolved solids (TDS). The data is processed using the Arduino IDE before being sent to the Thingspeak cloud platform. The system uses machine learning techniques, specifically the Random forest | Classifier, to assess water quality based on sensor data. Additional sensors for variables like dissolved oxygen, conductivity, and heavy metals could be incorporated to increase . the project's efficacy even more. While the installation of a real-time warning system would provide prompt warnings of breaches from acceptable water quality norms, geospatial analysis may identify potential t sources of contamination and pinpoint regions with degraded water quality. Furthermore, the development of a mobile application would enable users to access alerts, current data, and educational resources, promoting community engagement and informed decision-making. This project aims to use IoT, machine learning, and community involvement to revolutionize the monitoring of water quality. Communities and people will be able to safeguard public health and advance environmental sustainability as a result.

No. of Pages : 15 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029063 A

(19) INDIA

(22) Date of filing of Application :10/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DEVELOPING AN AI POWERED VIRTUAL ASSISTANT USING PYTHON

(51) International classification :G10L0015220000, G06N0020000000, G06F0003160000, G06K0009620000, G10L0015300000

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(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
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(57) Abstract :

Artificial intelligence technologies are increasing 3 and instantly integrating into day—to-day life, derived by the advent and : widespread adoption of the Internet of Things (IoT). These autonomous devices are becoming more sophisticated in their interactions with humans and each other. Consequently, various solutions have emerged for incorporating smart devices into IoT Social Networks. A significant trend in artificial intelligence is the advancement of naLural' language recognition, which holds promise for revolutionizing human—machine interaction. Voice assistants, a prominent example of this technology, can be seamlessly integrated into diverse intelligent systems. This paper elucidates the fundamentals of voice assistant functionality, along, , with its notable shortcomings and constraints. Additionally, it offers a method for establishing a local voice assistant, independent of cloud services, thereby expanding the scope of potential applications.

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029065 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT AND CLOUD&NBSP;BASED MONITORING AND CONTROLLING OF SUBSTATION

(51) International classification :H04L0067120000, A61B0005000000, H02H0003000000,
G08B00021020000, H04L0012120000
(86) International Application No :NA
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(87) International Publication No : NA
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(62) Divisional to Application :NA
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(57) Abstract :

As complexity of distribution network has grown automation of substation has become a need every utility company. To Improve the quality of power it is necessary to be familiar with what sort of constraint has occurred. Additionally if there is any inadequacy in the protection, monitoring an control of a power system thereof it necessitates a monitoring system that will be able to automatically detect, monitor, and classify the existing constrains on electrical lines. the purpose of this project is to acquire the remote electrical parameters like voltage current and send these real time values over network along with temperature at power station this project is also designed to protect the electrical circuitry by operating a relay. This relay gets activated whenever the electrical parameters exceed the predefined values. This system can automatically update the real time electrical parameters periodically (based on time settings). This system can be designed to send alerts whenever the relay trips or whenever the voltage or current exceeds the predefined limits. This project makes use of a microcontroller, as this is a prototype of the proposed project, for demonstration purpose we have used Arduino. The controller can efficiently communicate with the different sensors being used.

No. of Pages : 8 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029066 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : GSM AND GPS BASED ALCOHOL SENSING AND ACCIDENT ALERTING USING ARDUINO

(51) International classification :B60K0028060000, G07C0005080000, G08G0001010000, E01F0015040000, G07C0005000000
(86) International Application No :NA
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(57) Abstract :
Road safety is a crucial concern in today's world, with accidents and incidents of drunk driving leading to numerous fatalities and injuries. To address these challenges, this project aims to develop and implement an integrated system that combines accident detection and alcohol locking/unlocking features for vehicles. The system will utilize advanced technology and sensors to enhance driver safety and promote responsible behaviour on the road. The current scenario shows that the most of the road accidents are occurring due to drunk-driving. The drivers who drink alcohol are not in a stable condition and so, rash driving occurs on highway which can be risky to the lives of the people on road. The proposed system is a comprehensive and innovative approach to enhancing road safety by integrating alcohol detection technology with vehicle control systems and accident detection mechanisms. This system aims to prevent individuals under the influence of alcohol from operating vehicles, thus reducing the risk of accidents caused by impaired driving. Additionally, it incorporates advanced accident detection features to enhance overall road safety. The project aims to design and implement an ignition interlock system (IIS) equipped with an advanced breathalyzer that accurately measures the driver's blood alcohol concentration (BAC) before granting access to the vehicle's ignition. In parallel, the system includes an accident detection module that utilizes a combination of sensors and algorithms to monitor the vehicle's speed, acceleration, various other factors indicative of a collision. Therefore, loss of life and property is avoided. Alcohol sensor is installed on the steering of the car, with the end goal that when the level of liquor crosses a reasonable farthest point, where the start of vehicle will kill and the motor will stop.

No. of Pages : 8 No. of Claims : 6

(54) Title of the invention : DESIGN & IMPLEMENTATION OF A SMART FLOOR CLEARNER USING ARDUINO CONTROLLER

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(51) International classification	:A47L0011400000, G05D0001020000, A47L0011240000, A47L0011180000, B25J0011000000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	:NA	
(61) Patent of Addition to	:NA	
Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application	:NA	
Number	:NA	
Filing Date	:NA	

(57) Abstract :
*Abstract of the Invention The floor cleaning robot IS an assembly of sevela] vital components, each playing a crucial role 1n its functionality. Among these components are the Arduino Nano microcontroller, which acts as the blain of the robot, controlling its movements and operations. Coupled with a servo motor, the robot can execute actions and adjustments as required during the cleaning process. A DC motor integrated with an ultrasonic sensor forms another integral pan of the robot, enabling it to navigate its surroundings autonomously by detectingpbstacles in its path. The ultrasonic sensor, acts like the robot's eyes. It's always seaming around, looking out for things that might get in the way. When it spots an obstacle, it sends a quick message to the Arduino microcontroller. This microcontroller figures out the best way for the robot to move, so it can avoid crashing the obstacles. It's like having a navigator inside the robot, making sure it stays safe and doesn't bufnp into anything. It can switch on a regular motor and a DC pump t6 do some wet cleaning. The regular motor helps the robot move across the floor smoothly, while the DC pump sprays water or cleaning solution onto the dirty spots. This way, the robot can clean. With all these components working together, the floor cleaning robot can clean around your home, avoiding obstacles, and keeping your floors spotless without any mess.

No. of Pages : 8 No. of Claims : 10

(54) Title of the invention : FLEXIBLE COPPER TAPE FUNCTIONALIZED WITH SILVER NANO ARRAYS&NBSP;AS A LOW-COST SENSOR FOR THE DETECTOR J

(51) International classification :G01N0021650000, C02F0101300000, C02F0001280000, C02F0103300000, C02F0003340000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Mohamed Shameer P Address of Applicant :Department of Physics, Sathyabama Institute of Science & Technology, Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai — 600 119, Tamil Nadu, India ----- 2)K. Vijai Anand 3)Soumya Columbus 4)K.Govindaraju Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mohamed Shameer P Address of Applicant :Department of Physics, Sathyabama Institute of Science & Technology, Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai — 600 119, Tamil Nadu, India ----- 2)K. Vijai Anand Address of Applicant :Department of Physics, Sathyabama Institute of Science & Technology, Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai —600 119, Tamil Nadu, India ----- 3)Soumya Columbus Address of Applicant :Kurisunkal, Arthunkal, Cherthala— 688530, Alappuzha, Kerala, India. ----- 4)K.Govindaraju Address of Applicant :Centre for Ocean Research, Sathyabama Institute of Science & Technology, Jeppiaar Nagar, Rajiv Gandhi Salai, Chennai — 600 119, Tamil Nadu, India -----

(57) Abstract :

Wastewater is one of the most common issues faced by most countries in the world. This is due to industrialization, and this cannot be avoided as it is a major economy for many countries. Textile industries use different dyes for their clothes which will be disposed of in their water drainage system. Commonly found pollutants in wastewater produced from the textile industries are the dyes of alizarin and methylene blue which are potentially harmful to human beings in many ways. Hence the detection of these pollutants in wastewater is very important. Raman spectroscopy can be used in the detection of these pollutants. But the signals can be very weak which limits the detection at lower concentrations. Hence, we deposited silver nanoparticles on flexible copper tape using the thermal evaporation method and this can be used as a substrate for Raman spectroscopy as an application of SERS (surface enhanced Raman spectroscopy); As an alternative to a conventional chromatography method for detecting trace level pollutants, we have developed a low-cost optical sensing device for rapid and real-time monitoring of organic pollutants for environmental remediation applications. Micro molar concentrations of alizarin and methylene blue were detected from wastewater using the developed sensors which exhibit fingerprint specificity in sensing.

No. of Pages : 9 No. of Claims : 8

(54) Title of the invention : DEVELOPING SUSTAINABLE METHODS FOR PRODUCING ALUMINA FROM ALUMINIUM LOW MAGNESIUM SCRAP DROSS FOR CATALYTIC APPLICATIONS

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number	:C22B0021000000, C01F0007020000, H01L0021768000, C01F0007260000, C22B0007000000 :NA :NA : NA :NA :NA :NA	(71)Name of Applicant : 1)BHAGYANATHAN C Address of Applicant :SRI RAMAKRISHNA ENGINEERING COLLEGE VATTAMALAI PALAYAM COIMBATORE-641022. coimbatore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)SATHIYASEELAN G Address of Applicant :SRI RAMAKRISHNA ENGINEERING COLLEGE VATTAMALAI PALAYAM COIMBATORE-641022. COIMBATORE ----- 2)BHAGYANATHAN C Address of Applicant :SRI RAMAKRISHNA ENGINEERING COLLEGE VATTAMALAI PALAYAM COIMBATORE-641022. COIMBATORE ----- 3)SRINATH P Address of Applicant :SRI RAMAKRISHNA ENGINEERING COLLEGE VATTAMALAI PALAYAM COIMBATORE-641022. COIMBATORE ----- 4)GOTTMYERS MELWYN J Address of Applicant :SRI RAMAKRISHNA ENGINEERING COLLEGE VATTAMALAI PALAYAM COIMBATORE-641022. COIMBATORE ----- 5)IJEYALAKSHMI Address of Applicant :105A,Mullai Thottam, Thirumurugan Nagar, Tamil Nadu 641034 COIMBATORE -----

(57) Abstract :

This study introduces an ecologically sustainable method for making high-quality alumina from aluminium low-magnesium alloy waste dross. Traditional alumina extraction methods like the Bayer process struggle with low-magnesium dross. This document's novel method uses aluminium scrap dross as a profitable asset. The technique involves many crucial processes to maximize alumina extraction efficiency and minimize environmental impact. The first stage is salt removal from low magnesium scrap dross using a magnetic stirrer to ensure alumina product integrity. Preheating the dross sludge in a box furnace removes moisture, allowing chemical treatments. A 3M NaOH solution alkalizes the dross sludge after preheating. Add sulfuric acid (H2SO4) to precipitate aluminium hydroxide. The solution pH is carefully controlled to enhance precipitation. Filtering removes precipitated aluminium hydroxide from the solution, producing a pure product. Filtered aluminium hydroxide is calcinated at 900 degrees Celsius to produce alumina. In conclusion, the unique method produces alumina for many industrial purposes, utilizes waste resources efficiently, and is environmentally friendly. This innovative alumina production method offers a sustainable alternative to existing extraction methods.

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029178 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DIRECTED ULTRASOUND WAVE BASED REMOVAL OF OBJECTS IN A REGION OF INTEREST

(51) International classification :G01S0013931000, B60W0050140000, G06N0005000000, G01S0013340000, A61B0017000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)INDIAN INSTITUTE OF SCIENCE Address of Applicant :C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DEBASISH ROY Address of Applicant :INDIAN INSTITUTE OF SCIENCE, C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore -- ----- 2)RAM MOHAN VASU Address of Applicant :INDIAN INSTITUTE OF SCIENCE, C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore -- ----- 3)SRIRAM CHANDRAN RESIKENDRAN Address of Applicant :INDIAN INSTITUTE OF SCIENCE, C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore -- ----- 4)GINJALA RAMACHANDRA REDDY Address of Applicant :INDIAN INSTITUTE OF SCIENCE, C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore -- -----

(57) Abstract :

ABSTRACT DIRECTED ULTRASOUND WAVE BASED REMOVAL OF OBJECTS IN A REGION OF INTEREST

Embodiments of the present disclosure relate to a method and system for in-vivo pulverizing a first object located within a second by detecting a resonant frequency (f_0) associated with a first object, wherein the first object located within a second object, and the second object being larger than the first object by using ultrasound waves. Figure 1.

No. of Pages : 26 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029179 A

(19) INDIA

(22) Date of filing of Application :10/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AUTOMATIC MODULATION CLASSIFICATION FOR ORTHOGONAL FREQUENCY DIVISION MULTIPLEXING SYSTEMS

(51) International classification	:H04L0005000000, H04L0001000000, H04L0027340000, H04L0027380000, H04L0027200000	(71)Name of Applicant : 1)INDIAN INSTITUTE OF SCIENCE Address of Applicant :C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore -----
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(87) International Publication No	: NA	(72)Name of Inventor : 1)SUDHAN MAJHI Address of Applicant :INDIAN INSTITUTE OF SCIENCE, C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore --
(61) Patent of Addition to Application Number	:NA	-----
Filing Date	:NA	2)ANAND KUMAR Address of Applicant :INDIAN INSTITUTE OF SCIENCE, C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore --
(62) Divisional to Application Number	:NA	-----
Filing Date	:NA	

(57) Abstract :

ABSTRACT AUTOMATIC MODULATION CLASSIFICATION FOR ORTHOGONAL FREQUENCY DIVISION MULTIPLEXING SYSTEMS Embodiments of the present disclosure relate to a method and system for determining a modulation scheme associated with a signal received at a receiver. An embodiment includes receiving a signal at a receiver, wherein the signal includes an orthogonal frequency division multiplexed signal including at least in-phase, quadrature, amplitude and phase samples. A further embodiment includes determining a modulation scheme for the received signal by a module classification unit based on a spatial attribute and/or a temporal attribute along with attention weight wherein the modulation scheme belong to at least one of a BPSK, a QPSK, a 8-PSK, a MSK, a 16-QAM, a 64-QAM, a 128-QAM, a 512-QAM, and a 1024-QAM.

No. of Pages : 37 No. of Claims : 17

(54) Title of the invention : MACHINE LEARNING-BASED APPROACHES FOR DIRECT-TO-CONSUMER (D2C) ECOMMERCE DATA STRATEGY AND SALES PREDICTION

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(51) International classification	:G06Q0030020000, G06N0020000000, G06Q0030060000, G06Q0010060000, G06N0003040000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
MACHINE LEARNING-BASED APPROACHES FOR DIRECT-TO-CONSUMER (D2C) ECOMMERCE DATA STRATEGY AND SALES PREDICTION The method for the development of the burgeoning direct-to-consumer (D2C) business model has completely changed and upended the ecommerce sector. A growing number of businesses are managing their own product design, production, marketing, sales, and delivery. The D2C ecommerce business model depends on having a solid grasp of customer behavior and being able to successfully target marketing efforts to the right audience. In order to comprehend the literature reviews based on comparable studies and systems that are relevant to the researcher project, research was being done. In order to choose some of the top machine learning models for this study, the researcher will do a literature analysis to determine which machine learning model was employed by previous studies. From data loading to processing, schema design, pattern calculation, data reporting, and sharing with stakeholders to swiftly assess performance, the entire process is extremely efficient. FIG.1

No. of Pages : 17 No. of Claims : 1

(54) Title of the invention : ULTRA WIDEBAND TERAHERTZ ANTENNA DEVICE FOR WIRELESS COMMUNICATION SYSTEMS

(51) International classification :H01Q0001380000, H01Q0001480000, H01Q0001500000, H01Q0021000000, H01Q0001240000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Manipal Academy of Higher Education Address of Applicant :Madhav Nagar, Manipal, 576104, Karnataka, India. Manipal ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)PRAVEEN KUMAR Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 2)GOUTHAM SIMHA G D Address of Applicant :Associate Professor, Department of Electronics and Communication Engineering, Manipal Institute of Technology, Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal -----

(57) Abstract :
The present disclosure relates generally to the field of antennas used in wireless communication systems. More specifically the present disclosure relates to an ultra wideband terahertz antenna device for wireless communication systems. The device (100) includes a substrate (102), a conducting material (104), at least one feed line formed on the substrate (102), a ground plane (100b) and a radiator (100a) formed on the substrate (102) and coupled to the at least one feed line. The substrate (102) is designed with a relative permittivity of 4.3 and an overall dimension of 20 μm × 20 μm × 2 μm to realize the radiator (100a) and the ground plane (100b). Advantageously the present disclosure relates to a device that provides perfect impedance matching between the antenna and the feeding network to optimize power transmission while minimizing reflection losses.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029205 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A STUDY TO ASSESS THE IMPACT OF FINTECH ON CUSTOMER'S ATTITUDE AND BEHAVIOR TOWARDS THE INTENTION TO USE AND RETENTION IN BANKING INDUSTRY

(51) International classification	:G06Q0030020000, G16H0010200000, G06Q0040040000, G06Q0040060000, G06Q0040020000	(71)Name of Applicant : 1)Shamini S D Address of Applicant :Assistant Professor, Department of Management Studies, SNS College of Technology, Coimbatore-641 035 Coimbatore ----- 2)Dr. Mary Metilda R 3)Prabakaran V Name of Applicant : NA Address of Applicant : NA
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(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

A study to assess the impact of Fintech on customer's attitude and behavior towards the intention to use and retention in Banking Industry is the proposed invention. The financial industry is changing rapidly by offering different services with latest technologies to meet the expectations of the end users. Fintech is rapidly emerging in this digitization process, and financial companies are reaping huge benefits from applying the same. Current studies on this topic are limited and further research is needed on this topic. This is the main motive behind this study and fixed its objective is to find out the factors influencing the banking customers' in adopting Fintech, by keeping Tamil Nadu as the research study location. The present study is an analytical in nature in which banking customers are the respondents. A sample of 200 respondents is selected randomly and collected their opinion using a structured questionnaire. Tools like Mean, Standard Deviation, Factor Analysis, Kaiser-Meyer-Olkin [KMO] Measure and Bartlett's Test of Sphericity, Correlation and Regression were used to analyse the collected data.

No. of Pages : 23 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029211 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SELF GATHERING AIRPORT TROLLEY: ROBOTIZED SELF MOVING TROLLEY IN AIRPORTS USING LINE FOLLOWING TECHNIQUES

(51) International classification :B62B0003140000, G05D0001020000, B62B0005000000, A45C0013380000, A45C0005140000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Self-gathering airport trolley: robotized self-moving trolley in airports using line following techniques is the proposed invention. Nowadays, people love to travel anywhere. Airports mainly never run out of bustling crowds of travelers. They are carrying heavy luggage which is one of the biggest travel hassles. It is indispensable that airports offer luggage carts to ease such burden. Theses luggage carts are largely found in airports, large bus stations, hotels, or train stations. However, extra effort is required to navigate especially those individuals with disability or the elders. Thus, the researchers proposed an automatic human following robot. The main objective of this project is to create a luggage cart robot that being following the human and also carries the luggage put by the person. Specifically, it aims the following: (1) to construct a luggage cart that can carry some amount of weight of luggage; (2) to run in its path using line following sensors and Microcontroller, (3) to navigate the wheels of the luggage cart using a relay, dc motor and driver circuit.

No. of Pages : 10 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :10/04/2024

(21) Application No.202441029220 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SMART DUST BIN OVERFLOW AND TOXIC GAS DETECTION SYSTEM USING IOT

(51) International classification :B65F0001140000, B65F0001160000, B65F0001000000, G06Q0050260000, H04W0084180000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Smart dust bin overflow and toxic gas detection system using IOT is the proposed invention. In the modern world, trash cans and dust bins are usually found in public areas and cities because of the daily increase in waste. This leads to the creation of an unhygienic atmosphere for people and a bad smell in the neighborhood, which promotes the spread of fatal illnesses and diseases in people. The study suggests a Smart Dustbin Using IoT Monitoring solution to deal with the problem of trash that overflows in public areas, creating unhygienic conditions and dispersing illnesses. The government's SWACHH BHARAT ABHIYAN project, which aims to enhance public health and hygiene, benefits from this approach. The system monitors garbage levels and sends notifications to the municipality web application using ultrasonic waves sensors coupled to an Arduino Uno (UNO). The removal process may be remotely monitored and alarms can be sent with an Android application, which removes the need for physical inspection and confirmation. The garbage bin fullness, level, and gas levels are detected by the system through a wireless sensor network that is integrated into an Arduino Uno board. For effective waste management, the coordinator node wirelessly gathers data on variables like waste bin level and odour, and the Blynk application store stores it in a database. Timely cleaning and effective trash disposal are guaranteed by this technique.

No. of Pages : 13 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029251 A

(19) INDIA

(22) Date of filing of Application :10/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : 1,2 PROPANEDIOL 1 ACETATE : AN ADEPT BACTERICIDAL BIOACTIVE DRUG FROM HERBS

(51) International classification :A61P0031040000, A61K0036185000, A61P0031100000, A61P0031060000, C09D0005140000
(86) International Application No :NA
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(61) Patent of Addition to Application Number :NA
Filing Date :NA
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Filing Date :NA

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(57) Abstract :

1,2 Propanediol 1 acetate : an adept bactericidal bioactive drug from herbs Abstract Currently, multidrug resistance in microorganisms is rapidly spreading over the world, as are related medical concerns for the treatment of infectious diseases, which researchers believe could return to pre-antibiotic era levels. Medicinal plants have the potential to play a multifaceted role in the development of medications to treat microbial diseases. The goal of this research was to isolate and investigate a new bioactive compound from *Plumbago zeylanica* L leaf extracts, as well as assess their antibacterial activity. Ethyl acetate extracts were applied to evaluate the phytochemistry and bacterial activity. The various characterization studies such as GC-MS, TLC, HPLC, FTIR, and NMR spectra were used to identify a new bioactive compound. Using GC-MS analysis, ten chemical substances were found in the ethyl acetate sample. By using TLC analysis on the ethyl acetate extract, the ten compounds with ten fractions were identified. Of them, HPLC analysis was used to detect a single compound in the active fraction. The identified bioactive molecule 1,2 Propanediol 1 acetate was used to measure the excellent antibacterial activity against *S. pneumoniae* showed the largest zone of inhibition (27 mm) at 10 µg/ml for antibacterial activity, followed by *M. tuberculosis* (25 mm), *B. cereus* (23 mm), *S. enteritidis* (21 mm), and *A. baumannii* (20 mm). At 10 µg/ml, *A. fumigatus* showed promising antifungal efficacy, with a measurement of 26 mm. The novelty of this study comes from the fact that it was able to isolate a bioactive molecule with a strong antibacterial effect from the herbal source mentioned.

No. of Pages : 15 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029254 A

(19) INDIA

(22) Date of filing of Application :10/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : UNLOCKING NEUROLOGICAL RELIEF: A NOVEL LC-MS/MS APPROACH FOR ZOLMITRIPTAN DRUG QUANTIFICATION

(51) International classification :G01N0030020000, G01N0030060000, G01N0030720000, G01N0030860000, G01N0030880000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)AGALA VENKATA SURESH BABU Address of Applicant :6-13-80 GOLLAALLEM GATTU, KOTHAPETA, VIJAYAWADA ----- 2)Shaik. Dilshad Begum 3)Gangavath Kalpana Devi 4)Thadikamalla Susan srujana 5)Prof Averineni Ravi Kumar 6)Dr. Swapna Bongoni Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)AGALA VENKATA SURESH BABU Address of Applicant :6-13-80 GOLLAALLEM GATTU, KOTHAPETA, VIJAYAWADA ----- 2)Shaik. Dilshad Begum Address of Applicant :24_69, Near station center, kondapalli, N. T. R District, 521228 ----- 3)Gangavath Kalpana Devi Address of Applicant :OPP SBI, Gandhampalli, Kothapeta Post, Bayyaram Mandal, Mahbubabad District, Telangana State, 507211 ----- 4)Thadikamalla Susan srujana Address of Applicant :Sai nagar 2, Street no 4, Khammam District, Telangana state ----- 5)Averineni Ravi Kumar Address of Applicant :Nimra College of Pharmacy, Nimranagar, Jupudi , Ibrahimptnam-521456 AP India ----- 6)Dr. Swapna Bongoni Address of Applicant :Bhaskar pharmacy college Moinabad, Hydrabad -----

(57) Abstract :

This study presents the development and validation of a liquid chromatography-tandem mass spectrometry (LC-MS/MS) method for the quantification of Zolmitriptan, a pharmaceutical compound used for neurological relief. The method utilized an Alliance 2695 separation module coupled with a MICRO MASS Quattro micro mass spectrometer from Waters, equipped with an electrospray ionization (ESI) interface. Chromatographic conditions were optimized through systematic studies, varying factors such as mobile phase composition, flow rate, and column temperature. The optimized method employed a Symmetry C-18 column with a mobile phase consisting of acetonitrile, Milli-Q water, and formic acid. Calibration curves were established, demonstrating linearity over a concentration range of 30-1000 ng/ml, with a correlation coefficient (R^2) of 0.999. Accuracy and precision were evaluated through recovery studies, yielding results within acceptable limits. The method exhibited high sensitivity with a limit of detection (LOD) of 0.5 ng/ml and a limit of quantification (LOQ) of 1 ng/ml. System suitability, solution stability, and robustness were also assessed to ensure method reliability. The developed LC-MS/MS method proved to be simple, sensitive, and reliable, suitable for routine quantification of Zolmitriptan in pharmaceutical formulations. In conclusion, this method offers a rapid and efficient approach for the analysis of Zolmitriptan, contributing to its pharmaceutical research and development.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029294 A

(19) INDIA

(22) Date of filing of Application :10/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : PORTABLE RAGI-BALL MAKING MACHINE

(51) International classification :A23P0030000000, C21D0006000000, A23L0007100000, F16D0003223000, B21B0003020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

[05] A portable ragi ball (type of food made out of flour of Ragi, Maize, Jowar, and other millets) making machine is designed and fabricated. The specified machine is capable of producing 5 to 15 of ragi balls in an hour. This machine is useful for domestic usage, aged people, and also for small hotels. Ragi ball, a lump of boiled; perfectly kneaded food made out of flours of Ragi, Jowar, Rice, and other millets is very nutritional. The conventional method of preparation of ragi balls is laborious and time-consuming. To ease the preparation of the ragi balls and to save time, a simple machine is designed and fabricated. This machine mainly consists of a stainless-steel tube that houses a stainless-steel screw conveyor. The stainless-steel tube assembly rests on a mild steel stand. The other components of the machine are; a shaft stirrer, pusher plate, handle, exit pipe, ball bearings, SS table, and parting plate. An electromagnetic induction coil is used to supply heat to the stainless-steel tube. Then get fine and well prepare ragi balls.

No. of Pages : 10 No. of Claims : 9

(54) Title of the invention : SKIN DISEASE DETECTION USING DEEP LEARNING

(51) International classification :G06N0003040000, G06K0009620000, A61B0005000000, G16H0050200000,
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
This invention is extremely beneficial to the medical industry since it can help physicians and specialists diagnose patients accurately and make the most beneficial decisions. They have an impact on individuals of all ages and genders from all nations and ethnic groups. The core functionality revolves around image classification, where the input image undergoes comparison with the dataset images to determine the most probable disease diagnosis. Upon execution, it employs state-of-the-art deep learning architectures such as convolutional neural networks to extract meaningful features from the input image. These features are then fed into the classification model trained on the dataset comprising various skin disease categories. By utilizing transfer learning or training from scratch methodologies, the model learns to differentiate between different skin conditions with high accuracy, providing reliable diagnostic predictions. The result shows that detected skin disease name along with relevant information, aiding healthcare professionals and individuals in timely diagnosis and treatment.

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(54) Title of the invention : STRESS DETECTION BASED ON EMOTION USING A CONVOLUTIONAL NEURAL NETWORK IN DEEP LEARNING

(51) International classification :G10L0015260000, G10L0015220000, G06F0040300000, G06N0003080000, G06N0003040000
(86) International Application No :NA
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(87) International Publication No : NA
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(57) Abstract :
STRESS DETECTION BASED ON EMOTION USING A CONVOLUTIONAL NEURAL NETWORK IN DEEP LEARNING This invention core functionality revolves around audio processing, speech-to-text conversion, and natural language processing (NLP) techniques. Upon execution, the application initiates an audio stream listener, which captures the user's speech input. Utilizing libraries such as Speech Recognition, the spoken words are transcribed into text format, forming the basis for subsequent analysis. Once the speech is converted into text, the project leverages NLP methodologies to discern the underlying emotion within the captured sentences. Techniques like sentiment analysis and emotion detection are employed to analyse the textual content. Sentiment analysis algorithms evaluate the polarity of the text, determining whether it expresses positive, negative, or neutral sentiment. Furthermore, emotion detection algorithms categorize the sentiment into specific emotions such as happiness, sadness, anger, or surprise, providing a nuanced understanding of the user's emotional state. The graphical user interface (GUI) of the project, built using Tkinter, serves as the medium for displaying the transcribed text and the detected emotion. Figure 1.

No. of Pages : 15 No. of Claims : 2

(54) Title of the invention : VEHICLE-TO-VEHICLE COMMUNICATION USING LIGHT FIDELITY (LI-FI) TECHNOLOGY

(51) International classification :H04B0010110000, H04W0004460000, G01S0005000000, H04B0010110000,
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
VEHICLE-TO-VEHICLE COMMUNICATION USING LIGHT FIDELITY (Li-Fi) TECHNOLOGY The twenty-first century is characterized by technological advancements and automation, enhancing comfort and convenience in life. Smart cars have gained popularity due to advancements in automation and embedded systems. Traditional automotive patterns are being modernized by smart cars, leading businesses worldwide to invest in their development and manufacturing. A Li-Fi transmitter and receiver circuit communicate data between cars, with the receiver circuit on the front side and the transmitter on the tail lights of the leading vehicle. The second car's receiver circuit receives the calculated speed transmitted by the transmitter via visible light communication, adjusting its speed to prevent collisions. This invention proposes a method to identify and prevent car collisions and accidents. Figure 7.

No. of Pages : 23 No. of Claims : 2

(54) Title of the invention : INTEGRATING IOT FOR SEAMLESS ENERGY MANAGEMENT AND THEFT PROTECTION

(51) International classification :G06Q0050060000, H02J0013000000, G01R0022060000, G06Q0020140000, G01R0021133000 (86) International Application No :NA (87) International Publication No :NA (61) Patent of Addition to Application Number :NA (62) Divisional to Application Number :NA	(71)Name of Applicant : 1)M. Jothimani Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 2)P. Giridharan 3)R. Jayaprakash 4)P. Karthick Raja 5)D. Navachithu Ponkumar 6)V. Srinivasan 7)S. Vishnu 8)K. Yasvanthika 9)V. Udhika 10)D. Swetha 11)K. Sowmika 12)U. Indra Kumar 13)S. Sangaragomathi 14)S. Dhivakar Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)M. Jothimani Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 2)P. Giridharan Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 3)R. Jayaprakash Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 4)P. Karthick Raja Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 5)D. Navachithu Ponkumar Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 6)V. Srinivasan Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 7)S. Vishnu Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 8)K. Yasvanthika Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 9)V. Udhika Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 10)D. Swetha Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 11)K. Sowmika Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 12)U. Indra Kumar Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 13)S. Sangaragomathi Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode ----- 14)S. Dhivakar Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, TamilNadu, India. Tiruchengode -----

(57) Abstract :
INTEGRATING IOT FOR SEAMLESS ENERGY MANAGEMENT AND THEFT PROTECTION Smart and automated meters are among the gadgets that can track power users' energy usage in real time. They are regarded as the primary technology facilitators of the smart grid because of their ability to gather real-time consumption data and facilitate the creation of innovative, complex billing systems. It might make the operation of the power distribution system more efficient and lead to the development of several value-added services. By using power monitoring techniques, information can be received remotely and in connection to time and coordinates by power monitoring systems. Notifying the electrical board of instances of electric power theft is the primary goal of this project. It is maintained by embedded technology. Power transmitted across the load and power consumed by the load over time can both be measured by this system. IOT is used to monitor parameters. Through the user, this system will notify the user about the payment. The system will automatically trip if the user fails to pay the bill. Figure 1.

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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029333 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT BASED SMART WAREHOUSE MANAGEMENT USING MACHINE LEARNING

(51) International classification :G06Q0010080000, G06N0020000000, H04L0067120000, G06Q0010060000, H04N0007180000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
IoT BASED SMART WAREHOUSE MANAGEMENT USING MACHINE LEARNING Warehouse Monitoring Using IoT encapsulates the essence of a cutting-edge system designed to revolutionize warehouse management. In this innovative approach, Internet of Things (IoT) technology serves as the backbone, seamlessly integrating physical devices and digital systems to create a smart and efficient warehouse environment. The system employs a network of interconnected sensors, surveillance system and other IoT devices strategically placed throughout the warehouse to monitor various parameters such as inventory levels, temperature, humidity, and motion. These real-time data streams are then relayed to a central control hub, where advanced analytics and machine learning algorithms process the information. The insights gained from this analysis enable proactive decision-making, optimizing inventory management, reducing operational costs, and enhancing overall efficiency. Moreover, the implementation of IoT in warehouse monitoring enhances security by providing continuous surveillance and timely alerts for any anomalies. This abstract promises a paradigm shift in warehouse management, ushering in a new era of precision, responsiveness, and intelligence through the fusion of IoT and warehouse operations. Figure 1.

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(54) Title of the invention : EXPOSING FACIAL EXPRESSIONS THROUGH NEURAL NETWORKS AND LANDMARK DETECTION

(51) International classification :G06K0009620000, G06N0003040000, G06N0003080000, G06N0020000000,
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(57) Abstract :
EXPOSING FACIAL EXPRESSIONS THROUGH NEURAL NETWORKS AND LANDMARK DETECTION Facial expression recognition is an integral component of facial recognition, and its importance and demand are rapidly increasing. While there are existing methods that utilize machine learning and artificial intelligence techniques to identify expressions, this project aims to employ deep learning and image classification methods for expression recognition and categorization based on the available data. Various forms of data are explored and analyzed to train the expression recognition model. The implementation of Local Binary Patterns Histograms is utilized for accurate expression recognition. The Local Binary Patterns Histograms receptive field, which represents the extent of connectivity, is a hyperparameter. Figure 2.

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(54) Title of the invention : VEHICLE THEFT IDENTIFICATION AND DETECTION OF ROAD ACCIDENT THROUGH CCTV SURVEILLANCE

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(57) Abstract :
VEHICLE THEFT IDENTIFICATION AND DETECTION OF ROAD ACCIDENT THROUGH CCTV SURVEILLANCE In this invention a comprehensive system leveraging Optical Character Recognition (OCR), Tensorflow, and RF technology to address these crucial aspects efficiently. Leveraging OCR algorithms, the system swiftly scans numerous camera feeds for the reported license plate number, expediting the identification process of the stolen vehicle. Once identified, the system proceeds to the next critical phase. In the event of a vehicle accident, Tensorflow's advanced neural network models play a pivotal role. The system utilizes Tensorflow to analyze and identify accidents involving the reported stolen vehicle. Upon detection, both the vehicle owner and the nearest police station are promptly notified, ensuring immediate response and action. Integral to this system is the incorporation of RF technology. Upon vehicle identification or accident detection, RF facilitates the instantaneous sharing of the vehicle's location with the nearest police station. Simultaneously, an SMS alert is dispatched to the vehicle owner, ensuring they are informed promptly. By seamlessly integrating OCR, Tensorflow, and RF technologies, this system aims to bridge the gap between theft occurrence, accident detection, and timely response, ultimately minimizing losses and enhancing safety for vehicle owners and communities. Figure 2.

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(54) Title of the invention : WIRELESS CHARGING SYSTEM FOR ELECTRIC VEHICLE

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(57) Abstract :
WIRELESS CHARGING SYSTEM FOR ELECTRIC VEHICLE In this invention an inductive wireless charging is a promising technology that has the potential to simplify the charging process for electric vehicles, making it more convenient and efficient for users. Usually, electric vehicle systems are based on various modules that should ensure the high power and stability of the vehicle on the track. The majority of these components are linked to the charging mechanism. In this regard, dynamic wireless power transfer is a practical method to solve electric vehicle range anxiety and reduce the cost of onboard batteries. Wireless recharging has long been common with pure electric vehicles and is designed to allow charging even when the vehicle is in motion. The report discusses the implementation of inductive wireless charging in electric vehicles, including the technical requirements and the potential impact on vehicle design and infrastructure. Inductive wireless charging is a technology that allows electric vehicles to be charged without the need for a physical connection to a charging station. In the proposed system, receiver coils have been added to maximize charging power by offering a dynamic mathematical model that can describe and measure source-to-vehicle power transmission even though it is in motion. Figure 4.

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(54) Title of the invention : DESIGNING OF INSERT FEED BROADBAND MICROSTRIP PATCH ANTENNA WITH DEFECTED GROUND STRUCTURE

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H01Q0001240000
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Filing Date :NA
(87) International Publication No : NA
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(57) Abstract :
DESIGNING OF INSERT FEED BROADBAND MICROSTRIP PATCH ANTENNA WITH DEFECTED GROUND STRUCTURE In this invention the design, simulation, and analysis of a novel high gain inset feed broadband microstrip antenna suitable for modern wireless communication systems. By using an inset feed structure, the antenna is intended to provide improved impedance matching and wideband performance. The proposed antenna structure consists of a microstrip patch radiator with an inset feed line, providing efficient coupling and improved bandwidth characteristics. To find the ideal antenna dimensions and specifications, the design process uses sophisticated electromagnetic simulation and optimization tools. To obtain the desired broadband performance, factors including feed line dimension, radiator shape, and substrate material selection are carefully taken into account. HFSS is used to extensively assess performance measures such as gain, radiation pattern, impedance bandwidth, and radiation pattern. The suggested antenna design high S11 values, which span the frequency range of 1.75 GHz to 3GHz, range from -30 dB to -40 dB, making it appropriate for a variety of wireless communication applications. The antenna's low profile and small size make it even more ideal for integration into contemporary communication devices that need broadband capabilities. Figure 1.

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(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT BASED SMART HEALTHCARE MONITORING SYSTEM FOR THE PARALYSES AND MUTE PERSON

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(57) Abstract :
IOT BASED SMART HEALTHCARE MONITORING SYSTEM FOR THE PARALYSES AND MUTE PERSON This invention includes temperature and pulse rate monitoring, and it transmits and displays real-time data updates via Internet of Things to an LCD. The brain of the system is an Arduino or CPU, which gathers and processes input from several sensors and coordinates all of the system's functions. It displays vital sign data, interpreted requirements, and any alarms or messages that the patient or caregivers may observe in real time. Because of its Internet of Things (IOT) characteristics, this system can send gathered data to distant servers or devices over the internet. This makes it possible for caregivers or healthcare professionals to view the patient's data remotely for tracking and prompt action. In the event that any sensor readings exceed predetermined thresholds indicating critical circumstances, an alarm system is included to rapidly contact caretakers or medical personnel. Figure 1.

No. of Pages : 21 No. of Claims : 2

(54) Title of the invention : SMART AGRICULTURE SYSTEM USING MACHINE LEARNING

(51) International classification :A01G0025160000, G06Q0010060000, G06N0020000000, G06K0009620000,
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ABSTRACT SMART AGRICULTURE SYSTEM USING MACHINE LEARNING The most significant and abecedarian assiduity in India is husbandry, which contemporaneously balances global food demands and inventories the raw accouterments demanded for numerous other businesses. Innovative husbandry ways are gradationally perfecting crop yields, crop profitability, and irrigation waste reduction. This model is an intelligent irrigation system that predicts crop water conditions using a machine learning algorithm. The three main variables determining the water quantum needed for any agrarian crop are moisture, temperature, and humidity content. With this system comprising temperature, moisture, and humidity detectors set in an agrarian field and transferring data through a microprocessor, an Internet of Effects device with pall functionality is being constructed. When applied to field data, the decision tree system is a machine learning (ML) fashion that seems to be efficient in soothsaying results. growers can arrange their water force ahead of time with the help of a correspondence alert that contains the decision tree algorithm's results. Figure 1.

No. of Pages : 20 No. of Claims : 2

(54) Title of the invention : ELECTRICITY CONSUMPTION PREDICTION AND CONTROL USING MACHINE LEARNING IN SMART HOME

(51) International classification :H04L0012280000, G06N0020000000, G05B0015020000, H04W0004380000, G06Q0010040000
(86) International Application No :NA
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(61) Patent of Addition to :NA
Application Number :NA
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(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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(57) Abstract :
ELECTRICITY CONSUMPTION PREDICTION AND CONTROL USING MACHINE LEARNING IN SMART HOME This invention discloses the innovative approach to electricity consumption prediction and control within a smart home environment, utilizing Raspberry Pi as the central platform for automation. The architecture of the smart home automation system consists of multiple components, including sensors for monitoring various parameters such as temperature, light intensity, and occupancy. These sensors continuously collect data from different zones within the home, providing valuable insights into user behavior and environmental conditions. The data collected is then processed and analyzed using machine learning algorithms running on the Raspberry Pi. The user interface of the system is designed to be intuitive and user-friendly, allowing homeowners to monitor energy consumption in real time, set preferences, and override automated controls if needed. Additionally, the system provides detailed insights and analytics to help users understand their energy usage patterns and identify areas for improvement. Figure 1.

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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029341 A

(19) INDIA

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(54) Title of the invention : ENHANCING MIMO-NOMA SYSTEM PERFORMANCE: DEEP LEARNING-ENABLED OPTIMIZATION OF SUM DATA RATE AND ENERGY EFFICIENCY

(51) International classification :G06N0003080000, G06N0003040000, H04B0007042600, H04W0072040000, H04B0007045600
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
ENHANCING MIMO-NOMA SYSTEM PERFORMANCE: DEEP LEARNING-ENABLED OPTIMIZATION OF SUM DATA RATE AND ENERGY EFFICIENCY The growing demand for massive connectivity, low latency and high reliability of future communication networks requires new technologies. Multiple-input-multiple-output-non-orthogonal multiple access (MIMO-NOMA), which incorporates the concept of NOMA in MIMO, is an attractive technique to improve system performance and energy efficiency. This invention discloses the design of an efficient communication deep neural network (CDNN) that contains multiple convolutional layers and multiple hidden layers. Thanks to the impressive or inefficiency of deep learning technology, the CDNN framework solves the problem of MIMO NOMA power allocation with higher data rate and energy efficiency using acceleration algorithms. In addition, simulation results confirm that the proposed CDNN framework can well improve the performance of MIMO-NOMA power allocation conditions, and extensive simulations show that we realize the sum of higher data rate and energy efficiency compared with traditional strategies. Figure 1.

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(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029342 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AUTOMATIC FARE COLLECTION IN PUBLIC TRANSPORT

(51) International classification :G06Q0020320000, G06Q0010020000, G07B0015020000, G06Q0050300000, G07B0015000000
(86) International Application No :NA
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(57) Abstract :
AUTOMATIC FARE COLLECTION IN PUBLIC TRANSPORT In public transportation, the Automatic Fare Collection (AFC) system has experienced a revolutionary change. Improvement by combining a web application with QR code technology. The goal of this creative effort is to simplify the ticketing procedure so that commuters may utilize it more effectively and conveniently. Passengers can now pay for and pick up their tickets using their smartphones by simply scanning a QR code produced by the online application, in place of conventional paper tickets or physical cards. This digital method improves the overall speed and ease of the fare collection procedure while also lessening the environmental impact of paper tickets. The online application functions as a centralized platform that facilitates the seamless management of travel-related transactions, trip histories, and real-time updates for users. Figure 1.

No. of Pages : 19 No. of Claims : 2

(54) Title of the invention : EMERGENCY TELE-SURGERY OPERATION FOR MILITARY PEOPLE DURING WARTIME THROUGH IOT

(51) International classification :G16H08000000, A61B0034300000, G16H0040200000, B25J0009160000, G16H0050200000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)S. Krishna Kumar Address of Applicant :Associate Professor, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 2)M. Mukunthan 3)S. Naresh Kumar 4)P. Logesh 5)M. Subash 6)S. Ugeshraj 7)M. Vasanth 8)K. Thivakar 9)A. Vignesh 10)K. Vishal 11)B. Madanraj 12)S. Naveen kumar 13)K. Aakash 14)S. Amal Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)S. Krishna Kumar Address of Applicant :Associate Professor, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 2)M. Mukunthan Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 3)S. Naresh Kumar Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 4)P. Logesh Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 5)M. Subash Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 6)S. Ugeshraj Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 7)M. Vasanth Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 8)K. Thivakar Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 9)A. Vignesh Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 10)K. Vishal Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 11)B. Madanraj Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 12)S. Naveen kumar Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 13)K. Aakash Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 14)S. Amal Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode -----

(57) Abstract :
EMERGENCY TELE-SURGERY OPERATION FOR MILITARY PEOPLE DURING WARTIME THROUGH IOT A staggering number of life-saving innovations are made in the rapidly expanding field of modern medicine. Today, instead of searching for a doctor, everyone is searching for a place to live and medication. We are aware of and have access to rapid medical care via internet services. We are unveiling a robotic system that represents the pinnacle of this evolution—one that can do surgery while listening to directions from a clinician via the Internet. This robotic device was created just for the warriors that protect the nation. When soldiers sustain war injuries, this robotic technology can be utilised to conduct any urgent surgery on them. By using the web platform to communicate with the system and following the doctor's instructions, the surgery can be carried out remotely. It is possible to use this machine in any field. Figure 2.

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(21) Application No.202441029344 A

(43) Publication Date : 19/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : EXPERIMENTAL EVALUATION OF DIABETIC RETINOPATHY AND RELATED EYE DISEASE IDENTIFICATION USING INTELLIGENT DEEP LEARNING PRINCIPLES

(51) International classification :G06K0009620000, G06N0003040000, A61P0027020000, G06N0003080000, A61B0005000000 (86) International Application No :NA Filing Date :NA (87) International Publication No :NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)S. Sridevi Address of Applicant :Associate Professor, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 2)R. Jinu 3)C. Saran 4)A. Vignesh 5)T. Prasad 6)K.K. Jhanani 7)E. Naveena 8)S. Madhumitha 9)B. Meithiru Prakash 10)R. Kabilan 11)E. Karthikeyan 12)D. Pravin 13)B. Praveenkumar Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)S. Sridevi Address of Applicant :Associate Professor, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 2)R. Jinu Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 3)C. Saran Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 4)A. Vignesh Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 5)T. Prasad Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 6)K.K. Jhanani Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 7)E. Naveena Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 8)S. Madhumitha Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 9)B. Meithiru Prakash Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 10)R. Kabilan Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 11)E. Karthikeyan Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 12)D. Pravin Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode ----- 13)B. Praveenkumar Address of Applicant :UG Student, Department of Electronics and Communication Engineering, K.S.R. College of Engineering, Tiruchengode-637215, Namakkal, Tamil Nadu, India. Tiruchengode -----

(S7) Abstract : EXPERIMENTAL EVALUATION OF DIABETIC RETINOPATHY AND RELATED EYE DISEASE IDENTIFICATION USING INTELLIGENT DEEP LEARNING PRINCIPLES Reducing the occurrence and development of diabetic retinopathy (DR) requires strict management of blood glucose and blood pressure. Protocols, rather than symptoms alone, dictate how often individuals with diabetes mellitus are monitored. An elevation of the intraocular pressure within the retina causes the neurodegenerative eye disease known as glaucoma. As the second leading cause of blindness globally, it can progress to total blindness in the absence of prompt medical attention. Modified Learning for Diabetic Retinopathy Prediction (MLDRP) is a new deep learning algorithm that we presented in this paper. It intelligently predicts diabetic retinopathy and is cross-validated with two conventional algorithms, Support Vector Machine (SVM) and Convolutional Neural Network (CNN), to assess its efficacy. Inspired by the visual cortex, MLDRP's design is similar to the way neurons in the human brain connect, and the algorithm it proposes. MLDRP can make more accurate and faster predictions. Figure 2.

No. of Pages : 29 No. of Claims : 2

(54) Title of the invention : DESIGN AND IMPLEMENTATION OF HIGH-ACCURACY FIR-BASED APPROXIMATE MULTIPLIER

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(57) Abstract :
DESIGN AND IMPLEMENTATION OF HIGH-ACCURACY FIR-BASED APPROXIMATE MULTIPLIER Area optimization and power consumption reduction are the two most crucial design and implementation requirements for DSP processors. The multiplier is the slowest block of all and has a significant impact on the FIR Filter's performance. The Array multiplier and the Booth multiplier are the two multipliers that have been used to propose the Finite Impulse Response Filter in this work. The suggested FIR filters have been compared over a range of parameters. This project offers methods based on Vedic mathematics to increase processor performance. In probabilistic mathematics, booth and array multiplication are comparable. Compared to other multipliers, the gate delay and area rise more slowly as the number of bits increases. This project offers a way to use certain currently used techniques to change the design of the probabilistic multiplier in order to speed up the processor. The suggested filters are implemented using Xilinx 14.2 ISE tools and are developed in Verilog HDL. There has been progress in terms of both area and delay. The booth multiplier's low power consumption, together with its reduced delay and operating frequency, makes it an excellent choice for building FIR filters for low voltage and low power VLSI application. Figure 2.

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(54) Title of the invention : PREDICTIVE ANALYSIS OF BIG MART SALES USING MACHINE LEARNING ALGORITHM

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(57) Abstract :
PREDICTIVE ANALYSIS OF BIG MART SALES USING MACHINE LEARNING ALGORITHM The Big Mart Sales dataset contains data on the products sold in various Big Mart stores. We want to use a variety of features like store size, location, item type, price, and other relevant variables in this project to predict the sales of various items. SVM (Support Vector Machines) and Ridge Regression are the two machine learning algorithms we use to predict sales. Cleaning the data and dividing it into training and testing sets are the first steps in preparing the dataset. After that, we select Ridge Regression and SVM as the task-appropriate algorithms. Ridge Regression is a model of linear regression that can deal with data with multiple collinearities. The models are then trained using the training set, and their performance is evaluated using the testing set. The models' performance is evaluated using metrics like R-squared (R2) and mean squared error (MSE). In order to improve performance, we also fine-tune the models by adjusting the hyper parameters. Last but not least, we use the trained models to forecast the sales of new products based on their characteristics. The SVM and Ridge Regression models can be used to gain valuable insight into Big Mart stores' sales patterns and assist in making decisions about pricing, marketing, and inventory management. Figure 1.

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(57) Abstract :
DRAINAGE BLOCKAGE DETECTION AND CONTROL SYSTEM USING IOT This system includes sensors strategically positioned inside the drainage network, using Internet of Things (IoT) technology to continuously monitor the flow and identify any possible obstructions. Through real-time data analysis, abnormalities or blockages in the system are quickly found. This early detection capacity allows for quick action, averting possible infrastructure damage or floods. Because of the system's connection, timely maintenance and remote monitoring are made possible, guaranteeing effective and dependable drainage operations. This project uses Internet of Things (IoT) technology to monitor drainage blockages in an innovative way. A vast sensor network with IoT integration is put into place, complete with gas and fire sensors, water flow sensors, and water level sensors. The technology makes use of real-time data gathering and processing to find any drainage system obstructions. A built-in gas exhaust fan helps to reduce any potentially dangerous gas accumulation. By means of an Internet of Things-based technology, the drainage system guarantees safe and effective operations by means of proactive maintenance measures and timely alarms. This project exemplifies how IoT may improve the dependability and resilience of urban infrastructure systems. Figure 1.

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(54) Title of the invention : AN AI BASED REAL – TIME ROAD ANALYSIS SYSTEM USING MEMS DATA WITH IOT APPLICATION

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Filing Date	:NA	

(57) Abstract :
AN AI BASED REAL – TIME ROAD ANALYSIS SYSTEM USING MEMS DATA WITH IOT APPLICATION For the smooth operation of daily commutes, asphalt pavement issues are the primary concern of both developing and developed nations. Numerous studies have been conducted on the detection of potholes, which pose a danger to automobiles and passengers and have the potential to cause an accident. The purpose of this work is to investigate the potential of deep learning models and implement three exceptional deep learning models for pothole detection on edge devices. A low-cost system for real-time detection of road pavement surface conditions is proposed in this work. In order to obtain data regarding the state of the road surface, the time–frequency domain processing of the MEMS signals that are provided by on-car sensors is carried out. High classification rates indicate that the proposed system is effective at identifying the type and presence of distress. Figure 3.

No. of Pages : 16 No. of Claims : 2

(54) Title of the invention : MOTORCYCLE HELMET AND TRIPLE RIDING COMPLIANCE DETECTIONS USING DEEP LEARNING

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(57) Abstract :
MOTORCYCLE HELMET AND TRIPLE RIDING COMPLIANCE DETECTIONS USING DEEP LEARNING This invention discloses the pervasive problem of traffic law infractions in India, with a focus on motorbikes. Presenting the Traffic Infraction and Alert System for Two- wheelers using Deep Learning and YOLO v3, this suggested approach makes use of deep learning and real-time security cameras to send out SMS notifications or challans to motorcyclists who are not wearing helmets or triple riders. The system uses object segmentation and background removal to identify motorcycle riders, classify infractions using an object classifier, and promote helmet wearing to lower the chance of harm. In addition to improving traffic safety, automation expedites the enforcement procedure and lessens the effort required of traffic control staff. Figure 1.

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(54) Title of the invention : SOLID POLYMER ELECTROLYTE AND SODIUM BATTERY EMPLOYING THE SAME

(51) International classification :H01M0010052500, H01M0010056500, H01M0004620000, H01M0050411000, H01M0006220000

(86) International Application No :NA

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(61) Patent of Addition to Application Number :NA

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(62) Divisional to Application Number :NA

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(57) Abstract :

In this patent, different molecular weight compositions of sodium tetrafluoroborate (NaBF₄) and polyacrylonitrile (PAN) are used to prepare sodium (Na) ion-conducting solid polymer electrolytes (SPEs). Solid polymer electrolytes are made by solution casting, in which dimethyl formamide serves as the solvent. TGA results show that the 80 PAN: 20 NaBF₄ SPE has high thermal stability. Utilizing impedance spectroscopy, the ionic conductivity at 1.02×10^{-4} S/cm for a blend of 80 PAN: 20 NaBF₄ was examined and optimized. Linear sweep voltammetry for 80 PAN: 20 NaBF₄ demonstrates good electrochemical stability at 3.22 V. The Na⁺ ion battery with configuration Na /PAN + NaBF₄/ (I₂+ C + electrolyte) is built using the best-conducting sample; an open circuit voltage (OCV) of 2.83 V is reached, and the battery exhibits good discharge characteristics.

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(12) PATENT APPLICATION PUBLICATION

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(54) Title of the invention : AUTOMATIC OVERSPEED CONTROL OF ELECTRIC VEHICLE USING IOT

(51) International classification :G07C0005000000, G06Q0010040000, G08G0001054000, G08G0001052000, F01D0021020000
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(61) Patent of Addition to :NA
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(57) Abstract :
AUTOMATIC OVERSPEED CONTROL OF ELECTRIC VEHICLE USING IOT The overspeed controller for electric vehicles, employing a sophisticated combination of a color sensor, RF transmitter, and IoT technology, holds significant importance in revolutionizing road safety and optimizing vehicle performance. The primary objective of this innovative system is to actively monitor and control the vehicle's speed, preventing it from surpassing predetermined limits. The color sensor plays a crucial role by recognizing speed limit signs and road markings, providing real-time data that informs the overspeed controller. The RF transmitter facilitates seamless communication between the vehicle and the control system, enabling swift responses to speed-related information. The overarching goal is to enhance safety on the roads by curbing instances of overspeeding, reducing the risk of accidents and ensuring compliance with speed regulations. Figure 1.

No. of Pages : 14 No. of Claims : 2

(54) Title of the invention : COMBINATION OF INTERLEAVED SINGLE INPUT MULTIPLE OUTPUT DC TO DC CONVERTERS

(51) International classification :H02M0003158000, H02M0001000000, H02M0001140000,
H02M0003280000, H02M0007480000
(86) International Application No :NA
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(62) Divisional to Application :NA
Number :NA
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(57) Abstract :
COMBINATION OF INTERLEAVED SINGLE INPUT MULTIPLE OUTPUT DC TO DC CONVERTERS The combination of interleaved single input multiple output (SIMO) DC to DC converters represents a promising approach to improve the efficiency, power density, and reliability of power conversion systems. By interleaving multiple converters, this technique distributes the workload among individual converters, reducing switching losses and improving overall system efficiency. The developed prototype has been used in single-input multiple-output (SIMO) applications. This combined converter allows obtaining dual output voltages of the same value, from a single input DC voltage and with only a power switch. Multiphase interleaved DC-DC converters achieve a better dynamic response and low ripple, maintaining their efficiency. Each converter is connected in parallel, thereby managing their losses by distributing them between more components, which facilitates the thermal management of the multiphase converter and allows handling high power values in small sizes with respect to solutions for a single phase. Two control strategies were applied: synchronous operation mode (SOM) and interleaved operation mode (IOM). The simulation results allow the comparison of both operational modes, verifying that the IOM presents advantages with respect to the ripple at the input and output currents. Figure 1.

No. of Pages : 12 No. of Claims : 2

(54) Title of the invention : GSM AND RFID BASED AUTOMATIC RATION MATERIAL AND DIGITAL TOKEN DISTRIBUTION

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(57) Abstract :
GSM AND RFID BASED AUTOMATIC RATION MATERIAL AND DIGITAL TOKEN DISTRIBUTION The GSM and RFID based automatic ration material and digital token distribution system is a comprehensive and advanced solution designed to optimize the distribution process of essential goods. This system combines the capabilities of GSM technology for seamless communication and RFID technology for efficient tracking and monitoring. Through the integration of GSM technology, the system enables real-time communication between the distribution centers and the recipients, ensuring timely and accurate delivery of ration materials. The use of RFID technology allows for the unique identification and tracking of each ration package, enhancing the security and transparency of the distribution process. Furthermore, the system generates digital tokens that serve as secure and tamper-proof records of the distribution transactions. These digital tokens provide a transparent and auditable trail of the distribution activities, ensuring accountability and preventing fraud or misuse. Overall, the GSM and RFID based automatic ration material and digital token distribution system offers a sophisticated and reliable solution for optimizing the distribution of essential goods, improving efficiency, accuracy, and accountability in the process. Figure 1.

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(51) International classification :H02J0007000000, G01R0031392000, H02J0003380000, H01M0010420000, H02J0007350000
(86) International Application No :NA
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(62) Divisional to Application :NA
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Filing Date :NA

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(57) Abstract :
INTELLIGENT ENERGY MANAGEMENT STRATEGY FOR ELECTRIC VEHICLE In this invention sophisticated Intelligent Energy Management Strategy (IEMS) for EVs, which is centered on a dual battery management system designed to enhance both efficiency and reliability. The IEMS incorporates an intelligent switching mechanism that is responsive to temperature, charge levels, and battery health, ensuring seamless operation while safeguarding battery longevity. It features an innovative charging scheme that alternates between fast and normal modes, with an automatic transition to a secondary battery to mitigate the risk of thermal overload. The system is further enriched by the integration of renewable energy charging options, including solar panels and piezoelectric plates, which users can manage through intuitive system interfaces. The driving modes are engineered to adapt to various driving conditions, switching between batteries to maintain optimal temperature and charge levels, while also issuing timely notifications to the driver. Additionally, the IEMS introduces a unique home load mode, which utilizes the EV's batteries to power household appliances when the vehicle is not in use. Figure 1.

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/04/2024

(21) Application No.202441029374 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A LI-FI BASED COMMUNICATION SYSTEM

(51) International classification :H04B0010116000, H04L0025490000, A61B0005316000, H04B0001100000, H03G0003300000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Disclosed herein is a Li-Fi based communication system (100) comprises a digital transmission module (102) converts ASCII data to binary data. The system includes an Open-source IoT development board (104) configured to facilitates transmission of the binary data. The system also includes a receiver (106) to convert received light energy to electrical energy. The system also includes an output LED (108) configured to receive and transmit the binary data as varying intensity light signals. The system also includes an amplifier (110) configured to amplify the received varying voltage. The system also includes a speaker (112) configured to extract the audio signal. The system also includes a threshold logic module (114) configured to convert the received intensity into appropriate bits. The system also includes a darker environment (116) to enhances noise reduction at the audio output. The system also includes a driver (118) for audio amplification to reduce system complexity and improve performance.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029379 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN ONLINE REVIEW SUMMARIZATION SYSTEM USING GENERATIVE ARTIFICIAL INTELLIGENCE

(51) International classification	:G06F0016340000, G06N0003040000, G06F0040300000, G06Q0030020000, G06N0003080000	(71)Name of Applicant : 1)NITTE (DEEMED TO BE UNIVERSITY) Address of Applicant :6TH FLOOR, UNIVERSITY ENCLAVE, MEDICAL SCIENCES COMPLEX, DERALAKATTE, MANGALURU, KARNATAKA 575018 ----- ----- Name of Applicant : NA Address of Applicant : NA
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(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

Disclosed herein is a generative artificial intelligence powered online review summarization system (100) comprising an input module (102) configured to receive online reviews (104) as input data. The system further includes a text processing module (106) configured to split the input online reviews (104) into individual reviews, and pre-process the individual reviews to prepare them for analysis. The system further includes a text analysis module (112) configured to analyse the pre-processed (110) reviews to identify key information, such as product features, user sentiment, and important points in correspondence to customer reviews. The system further includes a large language model (120) (LLM) module comprising of a large language model (120) (LLM) trained on a dataset of online reviews (104) and corresponding summaries and a model loading module configured to load the LLM for summarization. The system further includes a summary generation module (116) configured to receive analysed text data (118).

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029382 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : RADIAL BASIS FUNCTION NEURAL NETWORK BASED LINEARIZATION FOR THERMISTORS USING INSTRUMENTATION AMPLIFIER

(51) International classification :H03F0001320000, H01C0007040000, G06N0003040000, G06N0003080000, G06K0009620000

(86) International Application No :NA
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(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(57) Abstract :

Radial basis function neural network-based linearization for thermistors using instrumentation amplifier. The linearization based on Radial Basis Function Neural Networks (RBFNN) based thermistor (100) with an instrumentation amplifier signal conditioning circuit (IASCC) (FIG. 1) with voltage-temperature relation exhibiting at a significant nonlinearity error $\pm 8.68\%$ to $\pm 10.44\%$ wherein the Radial Basis Function Neural Networks produce non-linear curves using Gaussian curves to be superimposed to form a complex curve wherein the RBFNN based modelling technique is used for estimation of percentage non-linearity in IASCC and to further improve the linearity wherein the output produced from the IASCC (Voltage) is used as input to the RBFNN to fit to the temperature line wherein the input voltage and the temperature have been normalized in the range [0-1] before training to get better results with generic output data tables for a 10K NTC thermistor with β value of 3977 and 80% data points from the 134 total points in the dataset.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029389 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS FOR THE PREPARATION OF SALICYLANILIDE SULFONATE COMPOUNDS

(51) International classification :C07C0381040000, A01N0037400000, A61K0031609000, C07D0333780000, C09K0008584000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT A PROCESS FOR THE PREPARATION OF SALICYLANILIDE SULFONATE COMPOUNDS The present disclosure relates to a process for the preparation of salicylanilide sulfonate compounds. The process is simple, efficient, environment friendly and provides salicylanilide sulfonate compounds with a comparatively high yield and high purity. The process of the present disclosure does not employ a metal catalyst.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/04/2024

(21) Application No.202441029416 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : VERTICAL TAKEOFF AND LANDING FOR UAV USING REMOTE CONTROLLER MECHANISM

(51) International classification :B64C0039020000, B64C0029000000, G05D0001000000, B64C0003420000, B64C0027280000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Abstract: The present invention is a vertical takeoff and landing for UAV using remote controller mechanism comprises of, a set of rotors for vertical lift during takeoff and landing, coupled with a retractable wing assembly for horizontal flight and by combining these elements, the aircraft achieves enhanced aerodynamic efficiency and stability across different flight phases, therein, can be operated using RC remote control which provides more safety and UAV.

No. of Pages : 6 No. of Claims : 1

(54) Title of the invention : ROBUST FINANCIAL TRANSACTION PROTECTION METHOD USING RHOTRICES

(51) International classification :G06Q0020380000, G06Q0040020000, G06Q0020400000, G06Q0020100000, G06T0001000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. P. GNANACHANDRA Address of Applicant :Centre for Research and PG Studies in Mathematics Ayya Nadar Janaki Ammal College Sivakasi-626124, Virudhunagar District Tamil Nadu, India sivakasi ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)B. ANANDA PRIYA Address of Applicant :Centre for Research and Post Graduate Studies in Mathematics Ayya Nadar Janaki Ammal College, Sivakasi-626124, Virudhunagar District, Tamil Nadu, India Sivakasi ----- ----- 2)Dr. B. VINOTHKUMAR Address of Applicant :Department of Computer Applications Ayya Nadar Janaki Ammal College Sivakasi-626124, Virudhunagar District, Tamil Nadu, India. Sivakasi ----- ----- -----

(57) Abstract :

A secure monetary transaction method between banks with the use of rhotrices is established as follows: When a user initiates a transaction involving multiple banks, the initiating bank and the receiving bank create a secure channel for OTP exchange. The initiating bank generates a size 3 rhotrix using the user's bank details (account number, date of birth, etc.), while the receiving bank generates its own. Both banks perform computations on these rhotrices to create a new one. They calculate rank, determinant, and heart, exchanging these metrics to form a key rhotrix. The sending bank encrypts this rhotrix, applying modulo 10 for 2-digit entries, and sends it as a 5-digit OTP to the user. After user input, the receiving bank decrypts the OTP. If the resulting rhotrix matches the key, the transaction is completed. This method employs rhotrices, a dynamic approach over static matrices, enhancing security against various attacks.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029447 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN SCALABLE MACHINE LEARNING INFRASTRUCTURE FOR LARGE SCALE DATA ANALYSIS

(51) International classification :G06N0020000000, G06F0009500000, G06N0003080000, G06N0003040000, G06F0009540000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. Anand Bihari Address of Applicant :Assistant Professor, School of Computer Science and Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu - 632014 ----- 2)Dr. C.L.P. Gupta 3)Dr. Sudhakar Tripathi 4)Dr. Lokesh Kumar Yadav 5)Dr. Sanjay Agrawal 6)Dr. Puneet Joshi Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Anand Bihari Address of Applicant :Assistant Professor, School of Computer Science and Engineering, Vellore Institute of Technology, Vellore, Tamil Nadu - 632014 ----- 2)Dr. C.L.P. Gupta Address of Applicant :Professor, Department of Information Technology, Bansal Institute of Engineering & Technology, Lucknow, Uttar Pradesh, India - 226201 ----- 3)Dr. Sudhakar Tripathi Address of Applicant :Associate Professor, Information Technology Department, Rajkiya Engineering College Ambedkar Nagar, Uttar Pradesh 224122 ----- 4)Dr. Lokesh Kumar Yadav Address of Applicant :Assistant Professor, Electrical Engineering Department, Rajkiya Engineering College Ambedkar Nagar, Uttar Pradesh 224122 ----- 5)Dr. Sanjay Agrawal Address of Applicant :Assistant Professor, Electrical Engineering Department, Rajkiya Engineering College Ambedkar Nagar, Uttar Pradesh 224122 ----- 6)Dr. Puneet Joshi Address of Applicant :Assistant Professor, Electrical Engineering Department, Rajkiya Engineering College Ambedkar Nagar, Uttar Pradesh 224122 -----

(57) Abstract :

The present invention relates to an scalable machine learning infrastructure for large scale data analysis. The scalable machine learning comprises of a distributed computing framework, a distributed data storage layer, a support, a real-time and near-real-time data, a dynamic resource allocation, and user-friendly interfaces. The distributed computing framework configured to parallelize data processing tasks across a cluster of interconnected machines. The distributed data storage layer for reliable and fault-tolerant storage of large datasets, partitioned and distributed across multiple nodes within the cluster. The support for a wide range of machine learning algorithms and frameworks, including traditional statistical methods, deep learning models, and neural networks. The real-time and near-real-time data analysis capabilities for processing streaming data streams as they are generated. The dynamic resource allocation mechanisms for optimizing resource utilization and minimizing operational expenses. The user-friendly interfaces for simplified deployment, configuration, and management of the infrastructure

No. of Pages : 11 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029450 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : INFORMATION SYSTEM FOR CONTAMINATION WATER QUALITY MONITORING USING CLOUD BASED IOT

(51) International classification :G01N0033180000, G06Q0010060000, G06N0020000000, G06Q0050060000, H04L0067120000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Our proposed invention introduces an Information System for Contamination Water Quality Monitoring using Cloud-Based IoT technology, revolutionizing conventional approaches to water quality monitoring. Through a network of sensor nodes deployed in various water bodies, real-time data on key parameters such as temperature, pH, dissolved oxygen, and turbidity is collected and transmitted to a centralized cloud platform for processing and analysis. Leveraging advanced data analytics and predictive modeling, stakeholders gain valuable insights into water quality dynamics, enabling proactive interventions to safeguard public health and environmental integrity. The user-friendly interface facilitates easy access to actionable information, fostering collaboration and informed decision-making among stakeholders. Moreover, the system's scalability, cost-effectiveness, and environmental sustainability make it a versatile and invaluable tool for water resource management.

No. of Pages : 22 No. of Claims : 10

(54) Title of the invention : MODIFIED CASCADED H-BRIDGE MULTILEVEL INVERTER FOR THE MINIMIZATION OF THD USING SPARROW SEARCH ALGORITHM

(51) International classification :H02J0003380000, H02M0001120000, G06Q0050060000, H02M0001000000, H02M0007490000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. J. Kesavan Address of Applicant :Assistant Professor / Mechanical Engineering, Periyar Maniammai Institute of Science and Technology, Vallam, Thanjavur ----- 2)Ajay M 3)V.Balasubramanian 4)Ravindran K 5)P.Senthilkumar Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. J. Kesavan Address of Applicant :Assistant Professor / Mechanical Engineering, Periyar Maniammai Institute of Science and Technology, Vallam, Thanjavur ----- 2)Ajay M Address of Applicant :Assistant Professor / Electronics and Communication, Rajarajeswari College of Engineering, Bangalore ----- 3)V.Balasubramanian Address of Applicant :Assistant Professor / EEE, St. Joseph's College of Engineering, OMR, Chennai 119 ----- 4)Ravindran K Address of Applicant :AP / Information Technology, Easwari Engineering College, Bharathi Salai, Ramapuram, Chennai-600089 ----- 5)P.Senthilkumar Address of Applicant :Assistant Professor, ECE & Communication Systems, Velalar College of Engineering and Technology, Erode -----

(57) Abstract :
Our proposed invention presents a novel approach to optimize multilevel inverters for reduced Total Harmonic Distortion (THD) using the Sparrow search Algorithm. By modifying the cascaded H-Bridge multilevel inverter topology and integrating the Sparrow search Algorithm, our system achieves significant THD reduction while maintaining high efficiency and reliability. Through rigorous experimentation and simulation studies, we demonstrate the effectiveness of our approach in various applications, including renewable energy systems, industrial motor drives, and grid-tied inverters. The Sparrow search Algorithm's iterative optimization process enables efficient exploration of solution spaces, leading to near-optimal solutions even in highly nonlinear environments. Our invention offers practical benefits such as smoother integration of renewable energy sources, enhanced motor performance, and compliance with grid standards, contributing to a more sustainable energy ecosystem.

No. of Pages : 21 No. of Claims : 10

(54) Title of the invention : CLUSTER ELECTRIC VEHICLE CHARGING BEHAVIOUR OPTIMIZATION METHOD BASED ON DEEP REINFORCEMENT LEARNING

(51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date	(71)Name of Applicant : 1)Dr. J. Kesavan Address of Applicant :Assistant Professor / Mechanical Engineering, Periyar Maniammai Institute of Science and Technology, Vallam, Thanjavur ----- 2)Dr. S.S. Sethuraman 3)S. Rajasulochana 4)Siddhardhan R 5)M.Suresh 6)Nachimuthu S Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. J. Kesavan Address of Applicant :Assistant Professor / Mechanical Engineering, Periyar Maniammai Institute of Science and Technology, Vallam, Thanjavur ----- 2)Dr. S.S. Sethuraman Address of Applicant :Associate Professor, Department of Electrical and Electronics Engineering, Sri Venkateswara College of Engineering, Pennalur, Sriperumbudur 602117 ----- 3)S. Rajasulochana Address of Applicant :Assistant Professor / Information Technology, SNS College of Technology, SNS Kalvi Nagar, Sathy Main Road, NH-209, Vazhiyampalayam, Saravanampatti, Coimbatore – 641035 ----- ----- 4)Siddhardhan R Address of Applicant :Assistant Professor / EEE, St. Joseph's College of Engineering, OMR, Chennai 119 ----- 5)M.Suresh Address of Applicant :Assistant Professor / ECE, Rajarajeswari College of Engineering, #14, Ramohalli Cross, Kumbalagodu, Mysore Road, Bangalore-560074 ----- 6)Nachimuthu S Address of Applicant :AP / ECE, Velalar College of Engineering and Technology, Erode -----

(57) Abstract :

The proposed invention presents a novel approach to optimizing electric vehicle (EV) charging behavior through the application of Deep Reinforcement Learning (DRL) techniques. By leveraging DRL algorithms, the system dynamically adapts charging strategies based on real-time data, user preferences, and environmental feedback. This adaptive approach enables the system to maximize rewards such as minimizing charging costs, reducing grid impact, and enhancing user convenience. The invention operates within the broader context of sustainable transportation and energy management, aiming to accelerate the transition to electric mobility while promoting environmental sustainability and social equity. Through its scalability, adaptability, and versatility, the proposed system offers a transformative solution to the challenges facing EV adoption and charging infrastructure deployment. Its potential applications span across residential, commercial, and public charging networks, with implications for urban planning, transportation policy, and energy regulation. Overcoming technical and regulatory barriers will be essential for realizing the full potential of the invention in advancing the sustainability and resilience of the transportation sector.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/04/2024

(21) Application No.202441029457 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM FOR DETERMINATION OF SERUM GLUTAMIC PYRUVIC TRANSAMINASE FORM FRACTAL DIMENSION OF LIVER IMAGE

(51) International classification :A61B0005000000, G06T0007480000, A61B0005055000, A61B0006000000, G01R0031280000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
TITLE: A SYSTEM FOR DETERMINATION OF SERUM GLUTAMIC PYRUVIC TRANSAMINASE FORM FRACTAL DIMENSION OF LIVER IMAGE
APPLICANT: SREE BALAJI MEDICAL COLLEGE AND HOSPITAL ABSTRACT The present invention discloses an apparatus for determining serum glutamic pyruvic transaminase (SGPT) level from Fractal dimension of liver image of a subject under test. The apparatus of the present invention comprising of a. an input device, for inputting fractal dimension of the liver image of the subject under test in which the fractal dimension computed using an electrically connected ultra-sonogram; b. a characterized microcontroller electrically connected to the input device configured for processing the fractal dimension of the liver image and calculating the SGPT level of the subject under test by the following characterized processing steps; i. $SGPT = g(fd) = -7.842 * e^{(-192.11 * fd)} + 21.22$, where g is a function of one variable fractal dimension; c. a digital output device receives the processed data from the microcontroller and display the calculated SGPT level values; d. a power supply providing the power to the input, micro controller, ultra-sonogram and the output device.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029458 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A NOVEL FISH FEED FORMULATION FOR VIBRIOSIS CONTROL

(51) International classification :A23K0050800000, A23K0020174000, A23K0010300000, A23L0033135000, A61K0036906600

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

TITLE: A NOVEL FISH FEED FORMULATION FOR VIBRIOSIS CONTROL APPLICANT: SREE BALAJI MEDICAL COLLEGE AND HOSPITAL ABSTRACT The present invention discloses a process of preparation of bio-fortified fish feed formulation for Vibriosis Control in fish. The process of the present invention comprises of following steps; a. mixing Dry Fish powder, Corn/Maize Flour, Soya Chunks powder, Garlic powder, Ginger powder, Starch powder, Gelatin powder, Cyanoglossus fish epidermal mucus, Agar powder, Multivitamins, Sodium Chloride powder, Cumin powder, Probiotic powder and Turmeric powder to form a mixture; b. adding Double distilled water and kneading to form a dough followed by extruding to form noodle like structure; c. drying the noodle like structure in a hot-air oven and drying in sunlight followed by crushing to a size suitable for fish mouth to form bio-fortified fish feed formulation. The present invention also discloses a bio-fortified fish feed formulation for Vibriosis Control in fish prepared by the process as described above.

No. of Pages : 19 No. of Claims : 4

(54) Title of the invention : A SYSTEM FOR DETERMINATION OF SERUM GLUTAMIC OXALOACETIC TRANSAMINASE FROM FRACTAL DIMENSION OF LIVER IMAGE

(51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date :G06T0007480000, A61B0005000000, A61B0005055000, A61B0006030000, G01R0031280000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)SREE BALAJI MEDICAL COLLEGE AND HOSPITAL Address of Applicant :NO 7, WORKS ROAD, CHROMEPET, CHENGALPATTU CHENNAI TAMIL NADU INDIA 600 044 Chennai ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DR. KANNAN Address of Applicant :NO.17, FIRST MAIN ROAD, NAGAPPA NAGAR, CHROMPET, CHENGALPATTU CHENNAI TAMIL NADU INDIA 600064 Chennai ----- 2)DR. P. SASI KUMAR Address of Applicant :PLOT NO: 1 BHUVANESHWARI NAGAR, 1st CROSS STREET, VELACHERY, CHENNAI CHENNAI TAMIL NADU INDIA 600042 Chennai ----- 3)DR. G. MURUGAN Address of Applicant :PROFESSOR AND HOD, DEPARTMENT OF RADIOLOGY, SREE BALAJI MEDICAL COLLEGE AND HOSPITAL, NO 7, WORKS ROAD, CHROMEPET, CHENGALPATTU CHENNAI TAMIL NADU INDIA 600044 Chennai ----- 4)DR. SHANTHI Address of Applicant :H-103 F-1, 3 RD WAARD ROAD, VALMIKI NAGAR, THIRUVANMIYUR CHENNAI CHENNAI TAMIL NADU INDIA 600 041 Chennai ----- 5)DR. FRANKLIN Address of Applicant :CEO, ANNA MEDICAL COLLEGE, MONTAGNE BLANCHE, MAURITIUS Not Applicable ----- 6)DR. JANAKI Address of Applicant :NO. 2C, KAMAKODI NAGAR, 1st MAIN ROAD, OPP. TO BALAJI DENTAL COLLEGE, CHENNAI CHENNAI TAMIL NADU INDIA 600 100 Chennai ----- 7)DR. KUMARAVEL Address of Applicant :DEAN INFORMATION TECHNOLOGY, BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH 173 AGHARAM ROAD SELAIYUR, CHENGALPATTU CHENNAI TAMIL NADU INDIA 600 073 Chennai ----- 8)DR. PRABHU Address of Applicant :5, RAGAVENDRA COLONY, NERKUNDRUM ROAD, VIRUGAMBAKKAM, CHENNAI CHENNAI TAMIL NADU INDIA 600092 Chennai ----- 9)DR. S. PARIJATHAM Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF PHYSIOLOGY, SREE BALAJI MEDICAL COLLEGE AND HOSPITAL, NO 7, WORKS ROAD, CHROMEPET, CHENGALPATTU CHENNAI TAMIL NADU INDIA 600044 Chennai -----

(57) Abstract :
TITLE: A SYSTEM FOR DETERMINATION OF SERUM GLUTAMIC OXALOACETIC TRANSAMINASE FROM FRACTAL DIMENSION OF LIVER IMAGE
APPLICANT: SREE BALAJI MEDICAL COLLEGE AND HOSPITAL
ABSTRACT The present invention discloses an apparatus for determining serum glutamic oxaloacetic transaminase (SGOT) level from Fractal dimension of liver image of a subject under test. The apparatus of the present invention comprising of a. an input device, for inputting fractal dimension of the liver image of the subject under test in which the fractal dimension computed using an electrically connected ultra-sonogram; b. a characterized microcontroller electrically connected to the input device configured for processing the fractal dimension of the liver image and calculating the SGOT level of the subject under test by the following characterized processing steps; i. $SGOT = g(fd) = -459.61 * e^{(-0.0599 * fd)} + (-379.06)$; where g is a function of one variable fractal dimension; c. a digital output device receives the processed data from the microcontroller and display the calculated SGOT level values; d. a power supply providing the power to the input, micro controller, ultra-sonogram and the output device.

No. of Pages : 13 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029460 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS OF BIO-CONVERSION OF CHOLECALCIFEROL INTO CALCITRIOL BY PROMICROMONOSPORA SP.

(51) International classification :A61K0031593000, A61K0031590000, A61K0035100000, A61K0008030000, A61P0019100000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)JACINTHA JASMINE DOSS Address of Applicant :NO:51, WOMEN'S CHRISTIAN COLLEGE, COLLEGE ROAD, CHENNAI CHENNAI TAMIL NADU INDIA 600006 Chennai ----- 2)DR. ANITA ROSEMARIE JOSEPH SINGH Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)JACINTHA JASMINE DOSS Address of Applicant :NO:51, WOMEN'S CHRISTIAN COLLEGE, COLLEGE ROAD, CHENNAI CHENNAI TAMIL NADU INDIA 600006 Chennai ----- 2)DR. ANITA ROSEMARIE JOSEPH SINGH Address of Applicant :NO:51, WOMEN'S CHRISTIAN COLLEGE, COLLEGE ROAD, CHENNAI CHENNAI TAMIL NADU INDIA 600006 Chennai -----

(57) Abstract :

TITLE: A PROCESS OF BIO-CONVERSION OF CHOLECALCIFEROL INTO CALCITRIOL BY PROMICROMONOSPORA SP. APPLICANT: 1. JACINTHA JASMINE DOSS 2. DR. ANITA ROSEMARIE JOSEPH SINGH ABSTRACT The present invention discloses a process of bio-conversion of Cholecalciferol into calcitriol, for use in bone-related disorders especially with kidney and liver failure. The process of the present invention comprises of following steps; a. inoculating Promicromonospora sp., strain JA246 with accession No: OK161022 in a formulated medium containing yeast extract, Alanine, Arginine, asparagine, starch, distilled water, agar followed by incubating to form a broth; b. dissolving Cholecalciferol (vitamin D3) in ethanol and adding to the broth followed by agitation to form a bio-converted medium; c. centrifuging the bio-converted medium to obtain supernatant and mixing the supernatant with Dichloromethane:Methanol and shaking in a rotating shaker to form organic layer and aqueous layer followed by separating and the organic layer and subjecting to evaporation to obtain white residue of calcitriol followed by air-drying and storing in an amber colored bottle.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029461 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS OF EXTRACTION OF ANTI-CANCER ACTIVITY EXHIBITING 1H-INDENE, 1-METHYLENE COMPOUND FROM CALOTROPIS GIGANTEA FLOWER AND PRODUCT THEREOF

(51) International classification :A61K0036270000, A61P0035000000, C07J0075000000, A61P0039060000, A01H0005020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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Address of Applicant :NO:51, WOMEN'S CHRISTIAN COLLEGE COLLEGE ROAD, CHENNAI CHENNAI TAMIL NADU INDIA 600006 Chennai -----

(57) Abstract :

TITLE: A PROCESS OF EXTRACTION OF ANTI-CANCER ACTIVITY EXHIBITING 1H-INDENE, 1-METHYLENE COMPOUND FROM CALOTROPIS GIGANTEA FLOWER AND PRODUCT THEREOF APPLICANT: 1. SRI PADMAPRIYA .R
2. DR. ANITA ROSEMARIE JOSEPH SINGH ABSTRACT The present invention discloses a process of extraction of anti-cancer activity exhibiting 1H-Indene, 1-methylene compound from flowers of Calotropis gigantea. The process of the present invention comprises of following steps; a. dissolving dried and powdered flowers of Calotropis gigantea in methanol to form Calotropis gigantea methanolic extract; b. loading the Calotropis gigantea methanolic extract into a column packed with silica gel; c. charging solvent system of chloroform:methanol:formic acid into the column of step(b) collecting eluent from the column; d. evaporating the eluent to obtain white residue of 1H-Indene, 1-methylene compound. The present invention also discloses an anti-cancer activity exhibiting 1H-Indene, 1-methylene compound from flowers of Calotropis gigantea prepared by the process as described above.

No. of Pages : 24 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/04/2024

(21) Application No.202441029466 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Wheel hub assembly

(51) International classification :F16C0019520000, B60B0027000000, F16C0033660000, F16C0019540000, B60B0027020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention discloses a wheel hub assembly designed to enhance stability and safety in vehicle operations. The assembly includes a wheel hub (104) rotatably mounted on a spindle (108), supported by a unitized bearing (109) consisting of inner and outer rings and roller bearing (303). The assembly further comprises a thrust washer (106), lock nut (105), and retaining ring (107) to secure the assembly in place, ensuring reliable attachment and preventing separation of components, even in the event of bearing failure. Further, the outer diameter of the thrust washer (Ds) maintained greater than that of the inner diameter of the outer ring (Db), effectively limiting outward movement of the bearing outer ring (301) through strategic overlapping. (Figure 1b)

No. of Pages : 14 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029468 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : An assembly structure for high voltage components of electric vehicles

(51) International classification :B60L0050640000, H01M0050200000, H01M0010647000, H01M0010613000, B60L0058200000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

The present invention relates to an assembly structure for high voltage components of electric vehicles, comprising a framed structure (100) supported on chassis long members (101) through front (102,104) and rear support brackets (103,105). The structure includes multiple storage portions (a, b, c) for accommodating HV components, with at least one raised storage compartment, preferably in the middle portion (b). All liquid-cooled e-components are positioned below the deaeration tank level for efficient coolant flow and heat dissipation. Additionally, the invention features structured compartments based on cooling and connectivity requirements, ensuring efficient placement of components while minimizing complexity. Furthermore, rigid rear support brackets provide stability for a battery storage cage placed alongside the assembly structure. (Figure 1)

No. of Pages : 15 No. of Claims : 8

(54) Title of the invention : VEHICLE IDENTIFICATION AND TRACKING SYSTEM AND METHOD THEREOF

(51) International classification :G06K0009620000, H04N0007180000, G06N0003120000, G06Q0010080000, G08G0001017000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

VEHICLE IDENTIFICATION AND TRACKING SYSTEM AND METHOD THEREOF Disclosed is a vehicle identification and tracking system 100 designed for highways, employing a multi-camera surveillance approach. The system utilizes closed-circuit television (CCTV) cameras 102A-N strategically positioned along the highway, each with a known field of view (FOV). Through a combination of advanced techniques including Support Vector Machine (SVM) classification and Genetic Algorithm (GA) optimization, the system identifies overlapping regions between camera FOVs to enhance vehicle detection accuracy and tracking capabilities. Real-time monitoring and anomaly detection features further contribute to improved highway safety and security. The present disclosure also relates to a method for identifying and tracking vehicles on highways. FIG. 1 will be the reference figure.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/04/2024

(21) Application No.202441029485 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHOD AND SYSTEM FOR DYNAMIC INTEGRATION OF VIRTUAL INFORMATION LAYERS IN REAL ENVIRONMENTS

(51) International classification :G06T0019000000, G06N0020000000, G06F0003010000, G06K0009620000, H04L0067520000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

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(57) Abstract :

METHOD AND SYSTEM FOR DYNAMIC INTEGRATION OF VIRTUAL INFORMATION LAYERS IN REAL ENVIRONMENTS ABSTRACT The invention discloses a system and method for dynamic integration of virtual information layers in real environments utilizing machine learning. The system (100) includes a sensor module (108) designed to collect real-world environmental data, a machine learning module (110) configured to analyze the acquired data and generate virtual information layers, and a display device (112) presenting the real environment overlaid with machine learning-enhanced virtual information layers. The method involves obtaining real-world environmental data from sensors, employing machine learning algorithms for analysis and processing, generating virtual information layers based on the machine learning analysis, and dynamically overlaying these layers onto the real environment in real-time. The innovative system and method enhance user experiences by seamlessly integrating machine learning-driven virtual information layers, adapting to changes in the environment, and providing a versatile interface for user interaction. Applications span various fields, including augmented reality, navigation, and collaborative information sharing in dynamic real-world settings.

No. of Pages : 20 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029486 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : BLOCKCHAIN FABRIC FOR PROVIDING DECENTRALIZED INFRASTRUCTURE FOR IMMUTABLE AND TRUSTWORTHY INFORMATION MANAGEMENT

		(71)Name of Applicant : 1)CMR COLLEGE OF ENGINEERING & TECHNOLOGY Address of Applicant :KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401. HYDERABAD ----- 2)CMR TECHNICAL CAMPUS 3)CMR INSTITUTE OF TECHNOLOGY Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. E. Gurumoorthi Address of Applicant :Associate Professor Information Technology CMR College of Engineering & Technology KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401 Hyderabad ----- 2)Mr. Gouri Sainath Chinta Address of Applicant :Assistant Professor Information Technology CMR College of Engineering & Technology KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401 Hyderabad ----- 3)Ms. P. Tulasi Reddy Address of Applicant :Assistant Professor Information Technology CMR College of Engineering & Technology KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401 Hyderabad ----- 4)M. Sivajyothi Address of Applicant :Assistant Professor CMR TECHNICAL CAMPUS Information Technology KANDLAKOYA VILLAGE, MEDCHAL MANDAL, R. R DISTRICT, HYDERABAD 501401 TELANGANA, INDIA Hyderabad ----- ----- 5)Ravi Regula Gadda Address of Applicant :Assistant Professor CMR TECHNICAL CAMPUS Information Technology KANDLAKOYA VILLAGE, MEDCHAL MANDAL, R. R DISTRICT, HYDERABAD 501401 TELANGANA, INDIA Hyderabad ----- ----- 6)V Rajesh Address of Applicant :Assistant Professor CMR TECHNICAL CAMPUS Information Technology KANDLAKOYA VILLAGE, MEDCHAL MANDAL, R. R DISTRICT, HYDERABAD 501401 TELANGANA, INDIA Hyderabad ----- ----- 7)M. Ravi Address of Applicant :Assistant Professor, Computer Science and Engineering, CMR Institute of Technology, Hyderabad Hyderabad ----- 8)Ahmed Ali Address of Applicant :Assistant Professor, Computer Science and Engineering, CMR Institute of Technology, Hyderabad Hyderabad -----
(51) International classification	:H04L0009320000, H04L0009060000, G06F0021600000, G06F0021640000, G06F0021570000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
BLOCKCHAIN FABRIC FOR PROVIDING DECENTRALIZED INFRASTRUCTURE FOR IMMUTABLE AND TRUSTWORTHY INFORMATION MANAGEMENT ABSTRACT The invention introduces a pioneering approach to information systems. Leveraging blockchain technology, the invention establishes a decentralized network of nodes interconnected through a secure blockchain fabric. This fabric ensures transparent and tamper-resistant recording of information transactions, fostering trust and reliability. Consensus mechanisms verify and validate transactions, enhancing the network's integrity. Cryptographic techniques fortify security, safeguarding information transactions from unauthorized access and manipulation. The method systematically creates immutable records, offering a robust solution for transparent, secure, and decentralized information management. With applications across diverse industries, the invention presents a paradigm shift toward trustworthiness and efficiency in information systems.

No. of Pages : 18 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/04/2024

(21) Application No.202441029487 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : QUANTUM DOT INTEGRATION IN MOSFETS: ULTRA-SCALED NANO-ELECTRONICS FOR ENERGY-EFFICIENT CIRCUITRY DESIGN

(51) International classification :H01L0029660000, B82Y0010000000, H01L0029780000, H01L0029423000, H01L0029510000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)CMR COLLEGE OF ENGINEERING & TECHNOLOGY Address of Applicant :KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401. Hyderabad ----- -- ----- 2)CMR TECHNICAL CAMPUS 3)CMR INSTITUTE OF TECHNOLOGY Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)K Soujanya Address of Applicant :Professor, Electrical & Electronic Engineering, CMR College of Engineering & Technology Hyderabad ----- ----- 2)Dr M Vijayashanthi Address of Applicant :Associate Professor Electrical & Electronic Engineering, CMR College of Engineering & Technology Hyderabad ---- ----- 3)M Suneel Kumar Address of Applicant :Assistant Professor, Electrical & Electronic Engineering, CMR College of Engineering & Technology Hyderabad ---- ----- 4)J Ratna Babu Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- 5)P Praveen Kumar Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- 6)BSH Suresh Kumar Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- 7)Dr. Fareesa Firdouse Address of Applicant :Assistant Professor, Electrical & Electronics Engineering, CMR Institute of Technology, Hyderabad Hyderabad ----- ----- 8)V. Manisha Address of Applicant :Assistant Professor, Electrical & Electronics Engineering, CMR Institute of Technology, Hyderabad Hyderabad ----- -----

(57) Abstract :

QUANTUM DOT INTEGRATION IN MOSFETS: ULTRA-SCALED NANO-ELECTRONICS FOR ENERGY-EFFICIENT CIRCUITRY DESIGN ABSTRACT The invention relates to a metal-oxide-semiconductor field-effect transistor device (100), consisting of a semiconductor substrate (102), a gate dielectric layer (104) formed on the semiconductor substrate, a gate electrode (106) formed on the gate dielectric layer, and a source-drain region. Quantum dots are integrated into the gate dielectric layer, identified by reference numeral (104), thereby significantly enhancing device performance through improved charge carrier confinement and tunability. The fabrication method for these quantum dot-integrated MOSFETs involves distinct steps with corresponding reference numerals: (a) forming a semiconductor substrate (102); (b) depositing a gate dielectric layer (104) on the semiconductor substrate; (c) introducing quantum dots into the gate dielectric layer; (d) forming a gate electrode (106) on the gate dielectric layer; and (e) creating source-drain regions. This method ensures the production of MOSFET devices with integrated quantum dots (104), marked by reference numerals, resulting in superior performance and energy efficiency for ultra-scaled nano-electronics.

No. of Pages : 22 No. of Claims : 9

(54) Title of the invention : METHOD AND SYSTEM FOR HARNESSING QUANTUM ENTANGLEMENT FOR BREAKNECK OPTICAL DATA TRANSMISSION

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number	:H04L0009080000, H04B0010700000, H04B0010116000, H04B0010114000, H04B0010118000 :NA :NA : NA :NA :NA	(71)Name of Applicant : 1)CMR COLLEGE OF ENGINEERING & TECHNOLOGY Address of Applicant :KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401. Hyderabad ----- 2)CMR TECHNICAL CAMPUS 3)CMR INSTITUTE OF TECHNOLOGY Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. B. Premalatha Address of Applicant :Associate Professor, Electronics & Communication Engineering, CMR College of Engineering & Technology Hyderabad ---- 2)Dr. E. N. V. Purnachandra Rao Address of Applicant :Professor, Electronics & Communication Engineering, CMR College of Engineering & Technology Hyderabad ---- 3)Mr. P. Ravindra Babu Address of Applicant :Associate Professor, Electronics & Communication Engineering, CMR College of Engineering & Technology Hyderabad ---- 4)Ch Narender Address of Applicant :Associate Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- 5)A Vamshidhar Reddy Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- 6)B Thanuja Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- 7)Radha Krishna Karne Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Institute of Technology, Hyderabad Hyderabad ----- 8)Survi Samatha Goud Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Institute of Technology, Hyderabad Hyderabad -----

(57) Abstract :
METHOD AND SYSTEM FOR HARNESSING QUANTUM ENTANGLEMENT FOR BREAKNECK OPTICAL DATA TRANSMISSION
ABSTRACT The invention presents a breakthrough in optical data transmission by leveraging quantum entanglement. The method involves generating entangled photon pairs through a dedicated quantum entanglement source. Information is then transmitted using one or more entangled photons, enabling instantaneous communication. To ensure the security of the transmitted data, the method employs a Quantum Key Distribution (QKD) protocol. The system supporting this innovation, denoted as system 100, consists of a quantum entanglement source (108) designed to produce entangled photon pairs. Optical communication modules (110) encode, transmit, and decode data using entangled photons, while a Quantum Key Distribution (QKD) mechanism (112) guarantees secure data transmission. This invention marks a significant advancement in optical communication, offering unparalleled speed and security through the harnessing of quantum entanglement. FIG. 1

No. of Pages : 22 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/04/2024

(21) Application No.202441029489 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ADAPTIVE PHASOR MEASUREMENT UNITS WITH INTELLIGENT CONTROL FOR ENHANCED POWER GRID SYNCHRONIZATION

(51) International classification :H04W0052020000, G01R0031080000, G06Q0050060000, G01R0019250000, H04W0052360000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)CMR COLLEGE OF ENGINEERING & TECHNOLOGY Address of Applicant :KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401 Hyderabad ----- ----- 2)CMR TECHNICAL CAMPUS 3)CMR INSTITUTE OF TECHNOLOGY Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr G Devadasu Address of Applicant :Professor, Electrical &Electronic Engineering, CMR College of Engineering & Technology Hyderabad ----- ----- 2)Dr S Muthubalaji Address of Applicant :Professor, Electrical &Electronic Engineering, CMR College of Engineering & Technology Hyderabad ----- ----- 3)Dr G Srinivasa Rao Address of Applicant :Associate Professor, Electrical & Electronic Engineering, CMR College of Engineering & Technology Hyderabad ---- ----- 4)Dr S Srinivasan Address of Applicant :Associate Professor, Electrical & Electronic Engineering, CMR College of Engineering & Technology Hyderabad ---- ----- 5)Dr Venkateswarlunayak Address of Applicant :Associate Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- ----- 6)P Kranthi Rathan Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- ----- 7)M. Venkatesham Address of Applicant :Assistant Professor, Electrical & Electronics Engineering, CMR Institute of Technology, Hyderabad Hyderabad ----- ----- 8)P. Rajashekhar Address of Applicant :Assistant Professor, Electrical & Electronics Engineering, CMR Institute of Technology, Hyderabad Hyderabad ----- -----

(57) Abstract :

ADAPTIVE PHASOR MEASUREMENT UNITS WITH INTELLIGENT CONTROL FOR ENHANCED POWER GRID SYNCHRONIZATION
ABSTRACT The present invention discloses a power grid synchronization system and a method for enhancing power grid synchronization. The system comprises Adaptive Phasor Measurement Units (PMUs) distributed across the power grid, equipped with sensors for real-time measurement of electrical parameters. A central processing unit receives and processes phasor data from the PMUs, while an adaptive control module within each PMU dynamically adjusts measurement parameters based on real-time grid conditions. The method involves receiving real-time phasor data from grid-associated sensors, analyzing the data to determine grid conditions, and dynamically adjusting measurement parameters of a Phasor Measurement Unit (PMU) accordingly. This invention enables improved synchronization by adaptively responding to dynamic grid conditions, ensuring enhanced reliability and efficiency in power grid operations.

No. of Pages : 22 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/04/2024

(21) Application No.202441029490 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHOD AND SYSTEM FOR NEURAL NETWORK-DRIVEN DYNAMIC SPECTRUM ACCESS FOR INTELLIGENT COMMUNICATION NETWORKS

(51) International classification :H04W0016140000, H04W0072040000, G06N0003080000, H04W0024020000, H04W0016100000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)CMR COLLEGE OF ENGINEERING & TECHNOLOGY Address of Applicant :KANDLAKOYA, MEDCHAL ROAD, HYDERABAD, TELANGANA, INDIA, 501401. Hyderabad ----- -- ----- 2)CMR TECHNICAL CAMPUS 3)CMR INSTITUTE OF TECHNOLOGY Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr. Abdul Subhani Shaik Address of Applicant :Associate Professor, Electronics & Communication Engineering, CMR College of Engineering & Technology Hyderabad ---- ----- 2)Dr. P. Ravi Kiran Address of Applicant :Associate Professor, Electronics & Communication Engineering, CMR College of Engineering & Technology Hyderabad ---- ----- 3)Dr. M. Nagaraju Naik Address of Applicant :Professor, Electronics & Communication Engineering, CMR College of Engineering & Technology Hyderabad ---- ----- 4)Y Lakshman Kumar Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- 5)M Sravanthi Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- 6)Sk Dilshad Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Technical Campus Hyderabad ----- 7)Sundala Gopla Krishna Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Institute of Technology, Hyderabad Hyderabad ----- ----- 8)Appisetty Venkata Lakshmi Address of Applicant :Assistant Professor, Electronics & Communication Engineering, CMR Institute of Technology, Hyderabad Hyderabad ----- -----

(57) Abstract :
METHOD AND SYSTEM FOR NEURAL NETWORK-DRIVEN DYNAMIC SPECTRUM ACCESS FOR INTELLIGENT COMMUNICATION NETWORKS ABSTRACT The invention presents a method and system for dynamic spectrum access in intelligent communication networks. The method involves employing a neural network-driven system to conduct real-time analysis of spectrum conditions. Utilizing the insights gained, the system determines optimal frequency bands for communication, considering factors such as signal strength, interference, and traffic load. Subsequently, the system dynamically adjusts spectrum allocation, optimizing overall communication performance. The system, comprising a neural network module for spectrum analysis, an adaptive spectrum allocation module for dynamic frequency adjustments, and a communication interface for seamless transitions, provides a comprehensive solution. This neural network-driven approach enhances adaptability to varying network conditions, ensuring efficient spectrum utilization and improving the overall quality of communication in intelligent networks.

No. of Pages : 21 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029510 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : PERFORMANCE EVALUATION OF BIOMASS COOKING STOVE THERMAL EFFICIENCY WITH VERMICULITE AND GLASS WOOL COMPOSITE AS AN INSULATION MATERIAL

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(51) International classification	:F24B0001020000, F24B0001200000, F24C0003120000, F24B0013020000, F24S0020300000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

ABSTRACT In developing countries, energy demand from biomass has increased due to exponential population growth. This has translated into voluminous quantities of wood being used. The situation is exacerbated by the popular use of inefficient stoves with low thermal insulation, hence contributing to deforestation. In this study, the performance of a cooking stove improved with Vermiculite as an insulation material was assessed. The developed stove was tested using a water boiling test to establish its operating performance. The thermal efficiency of the stove was assessed using indigenous wood fuels used in rural Tamilnadu. This study introduces an innovative design for an improved biomass cooking stove, aiming to address the challenges associated with traditional cooking methods in households. Focused on sustainability and efficiency, the enhanced stove incorporates advanced combustion technology and materials to optimize biomass utilization. Key features include a novelty in insulation materials for improved efficiency, resulting in reduced emissions and lower fuel consumption. The stove's design also prioritizes user safety through heat management mechanisms. Additionally, the use of locally-sourced, cost-effective materials enhances affordability and accessibility, making it suitable for diverse communities. This research underscores the potential of the improved biomass cooking stove as a sustainable solution for households, emphasizing the importance of practical, community-oriented innovations in addressing energy challenges in developing regions.

No. of Pages : 9 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029515 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AI-POWERED MOVING TARGET DEFENSE FOR SECURE CONNECTED AND AUTONOMOUS VEHICLES AGAINST ADVANCED PERSISTENT THREATS

(51) International classification	:G06N0020000000, G06F0021620000, G06T0007000000, H04W0028020000, G06F0021550000	(71)Name of Applicant : 1)Manipal Academy of Higher Education Address of Applicant :Madhav Nagar, Manipal, 576104, Karnataka, India. Manipal ----- Name of Applicant : NA Address of Applicant : NA
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(61) Patent of Addition to Application Number	:NA	
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(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

Embodiments of the present disclosure relates to a system (102) and method (300) for enhanced threat detection and security of CAVs in real-time by applying AI-powered Moving Target Defence (MTD) techniques. The system (102) includes a processor (202) and a memory (204) coupled to the processor (202). The memory (204) includes processor-executable instructions, which on execution, causes the processor (202) to collect data from one or more sources and analyse the collected data to identify potential attack threats and predict an impact of the identified threats. Further, the processor (202) is configured to select an optimal MTD strategy based on the identified threats and the predicted impact and adjust one or more CAV parameters based on the selected MTD strategy. The MTD strategy is selected by applying optimization techniques and the selected MTD strategy is implemented by applying human-in-the-loop techniques.

No. of Pages : 29 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029516 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM FOR ENABLING ENCRYPTION AND DECRYPTION OF ONE OR MORE IMAGES FOR ATTAINING SECURED TRANSMISSION

(51) International classification :H04L0009000000, H04L0009320000, H04N0007167000, H04L0009080000, H04L0009060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A system for enabling encryption and decryption of one or more images/videos for attaining secured transmission includes a processing unit (102) in communication with an Euler module (104) and a circuit-based chaotic module (106). The processing unit (102) coupled to a memory (108) storing instructions executable by one or more processors (110) is configured to scramble at least an extent of one or more images using an Euler module (104) upon receiving the one or more input from an user. The input includes a pattern determining the extent of scrambling for encryption by generating one or more pseudo-random sequence using a chaotic module (106) generate a key token for the generated pseudo-random sequence using the processing unit (102) and decrypt the encrypted image using the key token using the chaotic module (106) and Euler module (104).

No. of Pages : 26 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029517 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SCOOTER BOARD DEVICE FOR USE WITH CEREBRAL PALSY PATIENTS AND METHOD THEREOF

(51) International classification :B62K0003000000, A61K0031424500, B63B0025160000, H04M0001180000, F02F0001240000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present disclosure relates generally to the field of medical devices. More specifically the present disclosure relates to a scooter board device for use with cerebral palsy patients. The device (100) includes a box housing (102) comprising a rectangular opening (104), at least four movable and lockable castor wheels (106), at least four rectangular plywood plates, a waterproof plywood, a fabric covering and at least four straps (108). The rectangular plywood plates are provided to surround the sides of the box housing (102). The waterproof plywood is cut in a shape of the box housing (102) having top and bottom plywood plate units joined with the aid of four rectangular plywood plates covering the box housing (102). Advantageously the present disclosure relates to a scooter board device having easy procurable parts and repair capability that incorporates a simplistic frame on which child can be placed in a belly down position.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029518 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : CONSTANT VOLTAGE REGULATION SYSTEM FOR SUPER CAPACITOR

(51) International classification :B60L3/00, B60R16/033, B60W10/26, G05F1/12, G05F1/14, G05F1/45, H02M7/42, H02M7/527

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A constant voltage regulation system for super capacitor, comprises of a supercapacitor 1 for supplying electrical output for operating a load in EV/HEV, a voltage sensor to facilitate continuous monitoring of supercapacitor's voltage level, an inverter 2 for inverting incoming DC voltage into AC voltage, a controller 7 for analyzing range voltage level is falling, a voltage boosting circuit for selectively adjusting voltage level in accordance with received signal required for driving the load 9, a step-up transformer 3 composed of a primary winding 4 and secondary winding 5 having plurality of tap out 6 terminals in connection with load 9 via corresponding number of relays 8 for selectively tapping tap out terminal 6, a voltage level detection unit for sensing output voltage post tapping operation, a PWM control unit 10 adjusts duty cycle for precise voltage adjustments of boosted voltage and match required voltage to drive/handle the load 9.

No. of Pages : 24 No. of Claims : 8

(54) Title of the invention : AN EDIBLE EVENT-RESPONSIVE PHOTODETECTOR FOR LIGHT INTENSITY DETECTION AND METHOD OF OPERATION THEREOF

(51) International classification :H01L0051420000, H01L0051000000, H04B0010540000, B65D0085000000, H01L0031113000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT: Title: An Edible Event-Responsive Photodetector for Light Intensity Detection and Method of Operation Thereof The present disclosure proposes an edible event-responsive photodetector (100) fabricated on edible substrates along with all edible components (conductive channel, electrodes, host medium, active element) to offer a unique and potentially impactful approach to light-intensity detection. The edible event-responsive photodetector (100) comprises a substrate layer (102), a charge-conductive channel (104), a pair of electrodes (106, 108), and a photoactive layer (110). The edible event-responsive photodetector (100) is capable of detecting changes in light intensity without requiring continuous power input. The edible event-responsive photodetector (100) can function without an external power source, thereby simplifying design and reducing energy consumption. The edible event-responsive photodetector (100) focuses on using edible materials that decompose naturally, thereby minimizing the environmental impact associated with device fabrication and disposal. The edible event-responsive photodetector (100) emphasizes the use of readily available edible materials and a straightforward process, thereby enabling wider adoption and potential cost-effectiveness.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :11/04/2024

(21) Application No.202441029533 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND METHOD TO MODEL ROBOTIC VACUUM CLEANER

(51) International classification :G06F0011360000, A47L0009280000, G06Q0010060000, G06F0008100000, A47L0009040000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

The development of a robotic vacuum cleaner entails a systematic approach beginning with an investigation into customer requirements, guiding the specification and design phases. This initial exploration informs the selection of necessary components and dimensions crucial for prototype development. Subsequent stages involve iterative design improvements, where initial prototypes are refined based on functionality evaluations. Through this iterative process, a fully functional prototype emerges, meeting customer expectations and operational requirements. The abstract underscores the methodical progression from requirement analysis to prototype refinement, culminating in the creation of an efficient robotic vacuum cleaner.

No. of Pages : 12 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029537 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : MACHINE LEARNING BASED HEART ATTACK ANALYSIS & PREDICTION

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(51) International classification	:A61B0005000000, G06K0009620000, G16H0010600000, G16H0050200000, G06N0020000000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to	:NA	
Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application	:NA	
Number	:NA	
Filing Date	:NA	

(57) Abstract :
Cardiovascular diseases, including heart attacks, remain a leading cause of mortality worldwide. Early detection and accurate risk assessment are critical for preventing these life-threatening events. In recent years, the integration of machine learning techniques has shown promising results in predicting the occurrence of heart attacks. The study reviews a range of data sources, including electronic health records, medical imaging, and wearable devices, that contribute to a rich dataset for analysis. The paper discusses the significance of feature selection, data preprocessing, and model optimization in enhancing prediction accuracy. Several machine learning algorithms, such as logistic regression, decision trees, support vector machines, and neural networks, are investigated for their effectiveness in predicting heart attacks. Comparative analyses of these algorithms highlight their strengths and limitations in different clinical scenarios. Moreover, the paper delves into ensemble techniques and deep learning architectures that aim to capture complex relationships within the data. The implications of heart attack prediction using machine learning extend beyond individual patient care. This process explores the potential impact on healthcare systems, including cost reduction through preventive strategies and resource allocation informed by risk assessment. In conclusion, the integration of machine learning techniques for heart attack prediction holds great promise in revolutionizing cardiovascular care. Therefore, it involves developing a model or system that can accurately predict the likelihood of an individual experiencing a heart attack based on various risk factors, medical history, lifestyle choices, and other relevant information. The goal is to create a reliable tool that can help identify individuals at higher risk of a heart attack, enabling timely interventions and preventive measures to reduce the incidence of cardiovascular events using Machine learning. In this study, we use Machine learning to analyze the characteristics of the patient's heart to recognize a heart attack. This research led to the creation of a SVM model that can predict heart attacks based on features derived from relevant data. We hope that the Machine learning based analysis and prediction will help reduce the death rate of heart patients. The accuracy of the model is 89.55%.

No. of Pages : 8 No. of Claims : 4

(54) Title of the invention : ANALYZE THE PROCESS OF CUSTOMER SATISFACTION TOWARDS THE SERVICE PROVIDED BY BANKS

(51) International classification :G06Q0010060000, G06Q0030020000, G06Q0030000000, G06Q0050120000, G16H0010600000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SAVEETHA ENGINEERING COLLEGE Address of Applicant :Saveetha Nagar, Thandalam, Chennai - 602105, Tamilnadu, India Chennai ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. P. Periasamy Address of Applicant :Associate Professor, Department of Management Studies, Saveetha Engineering College Saveetha Nagar, Thandalam, Chennai - 602105, Tamilnadu, India Chennai - ----- 2)Dr. Ramasundaram Address of Applicant :Professor, Department of Management Studies, Saveetha Engineering College Saveetha Nagar, Thandalam, Chennai - 602105, Tamilnadu, India Chennai -----

(57) Abstract :
Analyzing customer satisfaction towards banking services involves a multifaceted process. It begins with understanding customer expectations, including efficient service delivery, personalized offerings, and transparent communication. Technological advancements play a crucial role, with digital transformation, AI-powered solutions, and data analytics enhancing service efficiency and customer experiences. Regulatory compliance ensures fair treatment and data privacy, contributing to customer trust. Effective feedback mechanisms and employee training are essential for addressing customer concerns and delivering high-quality service. Innovation and customization further enhance customer satisfaction by providing value-added solutions. A customer-centric approach, supported by continuous improvement initiatives, fosters long-term relationships and loyalty. Overall, the process of customer satisfaction in banking integrates various elements to meet evolving customer needs and enhance overall service quality.

No. of Pages : 13 No. of Claims : 10

(54) Title of the invention : DESIGN AND PERFORMANCE ANALYSIS FOR SUPPLY CHAIN FINANCE MANAGEMENT USING BLOCK CHAIN

(51) International classification	:H04L0009320000, G06Q0010080000, G06Q0040020000, G06Q0020400000, G06Q0010060000	(71)Name of Applicant : 1)SAVEETHA ENGINEERING COLLEGE Address of Applicant :Saveetha Nagar, Thandalam, Chennai - 602105, Tamilnadu, India Chennai -----
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(57) Abstract :
This work presents a comprehensive design and performance analysis for supply chain finance management using blockchain technology. Blockchain's distributed ledger system offers transparency, security, and efficiency in managing financial transactions across supply chains. The design involves implementing smart contracts to automate payment processes, track inventory levels, and facilitate seamless collaboration among stakeholders. Performance analysis includes evaluating transaction speeds, data integrity, cost-effectiveness, and overall supply chain visibility. The work examines blockchain's impact on reducing fraud, improving trust among participants, and streamlining financial operations. Real-world case studies and simulations are used to assess the feasibility and effectiveness of blockchain-based supply chain finance management. Key metrics such as transaction processing time, error rates, and cost savings are analyzed to measure the system's performance. The findings provide valuable insights into the benefits and challenges of adopting blockchain in supply chain finance, offering recommendations for optimizing its implementation and enhancing financial management practices.

No. of Pages : 12 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029563 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : GSM BASED WATER QUALITY AND WATER LEVEL MONITORING SYSTEM WITH DAM GATE CONTROL

(51) International classification :E02B0007200000, E02B0003100000, E02B0007440000, E03F0001000000, G07C0009000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
GSM BASED WATER QUALITY AND WATER LEVEL MONITORING SYSTEM WITH DAM GATE CONTROL Based on current problems in rural areas and the economy, a new and workable automatic control system can be created to help handle dams. The main goal of this invention is to use a GSM-based DWM system for farming and to keep people safe from flooding when the dam reaches a certain level. In this invention, a Global System for Mobile Communications (GSM)-based DWM system that will automatically send the collected flood water from the dams into the canal. Far-field communication is used in this method to send the water level to the base station. This data will be linked to the cloud, and a command centre will keep an eye on it. This command centre can make the choice and give the orders to open all the gates at the same time. When the water level rises over the predetermined threshold, an alarm will go out and the shutters will open automatically to keep the water level where it should be. Reducing the risks of loss of life and disasters can be achieved by timely warnings to all residents of the area and the prompt opening of shutters. With the help of an ultrasonic sensor, a GSM module, and a motor, the locals and the government can see the dam system in a new light, which improves their ability to devise mitigation strategies. Figure 1.

No. of Pages : 13 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029564 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SMART BOREWELL CHILD RESCUE AND WIRELESS MONITORING USING AI

(51) International classification :A61B0005160000, G08B0021020000, G09B0019000000, B01D0067000000, G08C0017020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to :NA
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(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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(57) Abstract :
SMART BOREWELL CHILD RESCUE AND WIRELESS MONITORING USING AI In recent years, many cases have been reported of children getting trapped in bore wells which take life of the children and are a nightmare for parents. There is a definite need for developing a security and rescue system for children to rescue from bore well. The current rescue systems are time taking, and are not at all accurate as involve manual help where there are many chances of human error. The bore well cases have taken many lives of innocent children while playing in that area. To overcome this problem, in this project a hardware module is designed using a raspberry pi as a processing module and a camera module. The facial emotion from the child is recognized by using emotional vggnet algorithm to check if the child is in distress and a music is played to keep the child calm. The child is asked questions through an audio output and is checked if it is conscious if it responds to the questions by using VGGISH algorithm. The temperature of the child is measured using thermal sensors to verify that the child is alive. A web application using reactJS is developed to display the status of the emotional state of the child. Thus, the invention successfully provides an effective technological solution in rescuing the child. Figure 1.

No. of Pages : 19 No. of Claims : 2

(54) Title of the invention : WEEDING SYSTEM IN AGRICULTURE USING IOT

(51) International classification :G06Q0050020000, H04L0067120000, H04W0004380000, H04W0004700000, A01M0021040000
(86) International Application No :NA
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(61) Patent of Addition to :NA
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Number :NA
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(57) Abstract :
WEEDING SYSTEM IN AGRICULTURE USING IOT This invention introduces an IoT-based Weeding System for agriculture. The system leverages Internet of Things (IoT) technologies to enhance efficiency in weed management and crop protection. It incorporates sensors for real-time data collection on crop health and weed presence, enabling automated decision-making. The system integrates with a precision spraying mechanism, optimizing the use of pesticides. Through IoT connectivity, farmers can remotely monitor the status of their crops and initiate spraying actions through a user-friendly interface. This feature enhances flexibility and allows for timely responses to changing agricultural conditions. Figure 1.

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(21) Application No.202441029566 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SOLAR BASED SMART ELECTRIC FENCE AND AUTOMATIC IRRIGATION SYSTEM

(51) International classification :A01G0025160000, A01K0003000000, H05C0001040000, A01G0009240000, H02S0020300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to :NA
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(62) Divisional to Application :NA
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(57) Abstract :
SOLAR BASED SMART ELECTRIC FENCE AND AUTOMATIC IRRIGATION SYSTEM The design and implementation of a smart electric fence built on solar with an automatic irrigation system presents a cutting-edge solution for enhancing agricultural security and efficiency. This system integrates advanced technologies to create a sustainable and intelligent farming environment. The smart electric fence utilizes solar power as its primary energy source, making it environmentally friendly and cost-effective. The solar panels harness sunlight to generate electricity, ensuring continuous and independent operation. The electric fence is designed to provide a robust security measure, protecting crops and livestock from unauthorized access. It employs sensors to detect any breach or tampering, triggering immediate alerts to the farmer. Figure 1.

No. of Pages : 13 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029574 A

(19) INDIA

(22) Date of filing of Application :11/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : PHOTOMETRIC RESIDUAL BASED VIRTUAL BRONCHOSCOPY NAVIGATION AND REGISTRATION WITH 3D CT GROUND TRUTH DATA FOR ACCURATE OBSTRUCTION DETECTION AND TREATMENT PLANNING

(51) International classification	:A61B0001267000, A61B0001000000, A61B0006000000, A61B0034200000, G01C0021200000	(71)Name of Applicant : 1)CHENNAI INSTITUTE OF TECHNOLOGY Address of Applicant :Chennai Institute of Technology, Sarathy Nagar Kundrathur Chennai – 600069 Chennai ----- Name of Applicant : NA Address of Applicant : NA
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(57) Abstract :

Bronchoscopy, a vital tool for examining lungs, presents a challenge: navigating the intricate bronchial tree. Traditional methods rely on fluoroscopy, which exposes patients to radiation. While minimally invasive, bronchoscopies can be time-consuming due to navigational difficulties. Statistics indicate a substantial increase in bronchoscopies performed worldwide, with an estimated growth rate of 6.4% expected from 2020 to 2027. This highlights the need for safer and more efficient navigation techniques. This project proposes a new approach to virtual bronchoscopy navigation using Simultaneous Localization and Mapping (SLAM) technology. SLAM constructs a real-time 3D map of the airways from the bronchoscope's camera feed, eliminating the need for pre-procedural CT scans, which can cost upwards of \$1,200 per scan according to a 2023 study by FAIR Health, and reducing radiation risks. This innovative system has the potential to revolutionize bronchoscopy procedures, offering a safer, faster, and more cost-effective method for navigating the bronchial tree and diagnosing lung diseases.

No. of Pages : 11 No. of Claims : 5

(54) Title of the invention : RESIDENTIAL ENERGY MANAGEMENT SYSTEM USING IOT

(51) International classification :H02J0003380000, H02J0013000000, H02J0007350000, H02J0003320000, H02S0020300000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Dr. R.MAGESWARAN Address of Applicant :S.A.ENGINEERING COLLEGE , ASSISTANT PROFESSOR, DEPARTMENT OF EEE, POONAMALLEE AVADI MAIN ROAD, VEERARAGAVAPURAM, THIRUVERKADU, CHENNAI, TAMILNADU, INDIA-600077. ----- ----- 2)K.S.MARGARET 3)R.MADHANA 4)J.S.THEPTHA 5)S.A.ENGINEERING COLLEGE Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. R.MAGESWARAN Address of Applicant :S.A.ENGINEERING COLLEGE , ASSISTANT PROFESSOR, DEPARTMENT OF EEE, POONAMALLEE AVADI MAIN ROAD, VEERARAGAVAPURAM, THIRUVERKADU, CHENNAI, TAMILNADU, INDIA-600077. ----- 2)K.S.MARGARET Address of Applicant :S.A.ENGINEERING COLLEGE , ASSISTANT PROFESSOR, DEPARTMENT OF EEE, POONAMALLEE AVADI MAIN ROAD, VEERARAGAVAPURAM, THIRUVERKADU, CHENNAI, TAMILNADU, INDIA-600077. ----- 3)R.MADHANA Address of Applicant :S.A.ENGINEERING COLLEGE , ASSISTANT PROFESSOR, DEPARTMENT OF EEE, POONAMALLEE AVADI MAIN ROAD, VEERARAGAVAPURAM, THIRUVERKADU, CHENNAI, TAMILNADU, INDIA-600077. ----- 4)J.S.THEPTHA Address of Applicant :S.A.ENGINEERING COLLEGE , ASSISTANT PROFESSOR, DEPARTMENT OF EEE, POONAMALLEE AVADI MAIN ROAD, VEERARAGAVAPURAM, THIRUVERKADU, CHENNAI, TAMILNADU, INDIA-600077. -----

(57) Abstract :
TITLE: RESIDENTIAL ENERGY MANAGEMENT SYSTEM USING IOT This protect develop into the challenges facing the adoption of renewable energy, particularly rooftop solar panels, in India. Factors such as high costs, vulnerability to weather conditions, and inefficient distribution systems hinder widespread implementation. To address these inefficiencies, the study proposes leveraging hybrid microgrid technology and advanced energy management systems. In this approach, solar photovoltaic (PV) technology is integrated with conventional power systems, and IoT is employed to create a Residential Energy Management System (EMS). This system aims to optimize energy usage, decrease reliance on traditional energy sources, and enhance overall efficiency. Key components include solar PV panels, battery storage, AC power supply, and an Energy Management System controlled by Arduino technology. By utilizing components like the ESP8266 energy management system with Wi-Fi module, relay, voltage, and current sensors, the proposed system is designed to Offer enhanced protection and control over energy consumption. This not only maximizes the utilization of renewable energy but also ensures cost-effectiveness and durability. Ultimately, the system provides users with the means to manage their energy consumption effectively and reduce their environmental footprint. Keywords — Solar Power, Sensors, Arduino Software (IOT), ESP8266 and WiFi Module.

No. of Pages : 11 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029584 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DYNAMIC INTRUSION DETECTION SYSTEM FOR IOT NETWORKS USING MACHINE LEARNING AND NATURAL LANGUAGE PROCESSING

(51) International classification :G06N0020000000, H04L0067120000, G06N0003040000, G06F0009500000, G06F0021600000		(71)Name of Applicant : 1)Saveetha Engineering College Address of Applicant :Saveetha Engineering College, Saveetha Nagar, Thandalam, Chennai-602105, Tamilnadu, India -- -----
(86) International Application No	:NA	Name of Applicant : NA Address of Applicant : NA
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Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The invention relates to a system and method for dynamic intrusion detection system tailored for Internet of Things (IoT) networks. Leveraging edge computing capabilities and lightweight machine learning models deployed on distributed edge nodes, the system enables real-time analysis of network traffic at the network's edge. Federated learning techniques are employed to collaboratively train and update machine learning models across multiple edge nodes while preserving data privacy. Dynamic edge selection and load balancing techniques optimize performance and resource utilization, ensuring efficient operation of the intrusion detection system. By adapting to local network conditions and device configurations, the system provides personalized intrusion detection capabilities tailored to each edge node's environment. This innovative approach offers scalable, efficient, and resilient security protection for IoT networks, addressing the critical cybersecurity challenges facing the IoT ecosystem.

No. of Pages : 18 No. of Claims : 8

(54) Title of the invention : SYSTEM AND METHOD FOR DETECTING AND UTILIZING DISTINCT GESTURES FOR EMERGENCY ASSISTANCE

(51) International classification :G06F0003010000, G06N0020000000, H04W0004900000, G06N0003040000, G06N0003080000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SR University Address of Applicant :SR University, Warangal, Ananthasagar, Telangana- 506371, India (IN) Email ID: patent@sru.edu.in Mb: 08702818333 Warangal ----- - Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. P Praveen Address of Applicant :SR University, Warangal, Ananthasagar, Telangana- 506371, India (IN) Warangal ----- 2)Dr. Mohammed Ali Shaik Address of Applicant :SR University, Warangal, Ananthasagar, Telangana- 506371, India (IN) Warangal ----- 3)Dr. T Sampath Kumar Address of Applicant :SR University, Warangal, Ananthasagar, Telangana- 506371, India (IN) Warangal ----- 4)Dr. R Ravi Kumar Address of Applicant :SR University, Warangal, Ananthasagar, Telangana- 506371, India (IN) Warangal -----

(57) Abstract :
SYSTEM AND METHOD FOR DETECTING AND UTILIZING DISTINCT GESTURES FOR EMERGENCY ASSISTANCE
ABSTRACT The present invention discloses a system (100) for detecting and utilizing distinct gestures for emergency assistance. The system (100) comprises a camera (102) for capturing live feed focusing on user gestures, a processing unit (104) configured to identify data points from the captured live feed using an artificial intelligence engine (108), a dataset (106) for recognizing a signal for help gesture, and an output unit (114) triggering a response mechanism (116) based on estimated temporal parameters. The system leverages advanced technologies such as machine learning, and neural networks for precise gesture recognition and effective emergency response. Claims: 10, Figures: 4 Figure 1A is selected.

No. of Pages : 25 No. of Claims : 10

(54) Title of the invention : HYBRID INVERTER WITH INTEGRATED LEVEL-DOUBLING NETWORK (LDN)

(51) International classification :H02M1/00, H02M7/483 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)SR University Address of Applicant :SR University, Ananthasagar, Warangal, Telangana-506371, India (IN) Email ID: patent@sru.edu.in Mb: 08702818333 Warangal ----- - Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Sathya Vani Bandela Address of Applicant :2-7-1232/3/103, Gayatri Residency, Excise Colony, Hanamkonda-506001 Hanamkonda ----- 2)Tarakalyani. S Address of Applicant :Director, Directorate of Affiliations and Academic Audit, JNTUH, Kukatpally, Hyderabad-500085, Telangana Hyderabad ----- 3)Durgam Rajababu Address of Applicant :2-7-999, Kanakadurga Colony, Hanamkonda-506001 Hanamkonda -----

(57) Abstract :
HYBRID INVERTER WITH INTEGRATED LEVEL-DOUBLING NETWORK (LDN) ABSTRACT The present invention discloses a hybrid inverter system (100) comprising a multilevel inverter (102) designed to operate with a specific number of switches for generating predetermined voltage levels. Integrated with the multilevel inverter (102) is a level-doubling network (LDN) (104), which consists of a series combination of two switching devices across a single Direct Current (DC) voltage source. Additionally, the hybrid inverter system (100) includes a controller (106) responsible for controlling the operation of the system to achieve double output voltage steps compared to the predetermined voltage levels generated by the multilevel inverter (102) alone. This innovative configuration enhances the versatility and efficiency of power conversion, making it suitable for various applications requiring flexible voltage output levels. Claims: 10, Figures: 2 Figure 1 is selected.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029591 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : BROADBAND RADIO FREQUENCY (RF) POWER AMPLIFIER AND METHOD FOR FABRICATION OF THE SAME

(51) International classification :H01L0029778000, H01L0029200000, H01L0029660000, H01L0029423000, H01L0021020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

BROADBAND RADIO FREQUENCY (RF) POWER AMPLIFIER AND METHOD FOR FABRICATION OF THE SAME

ABSTRACT A broadband Radio Frequency (RF) power amplifier (100) and a method (200) for fabrication of the same are disclosed. Initially, Direct Current (DC) specifications, Radio Frequency (RF) characteristics, high output current density, and enhanced linearity requirements for the power amplifier (100) are defined. A double-channel High Electron Mobility Transistor (HEMT) (112) is fabricated on a substrate (110) chosen from Aluminum Nitride (AlN) or Gallium Nitride (GaN). A barrier layer, incorporating transmission gates (T-Gates) within the High Electron Mobility Transistor (HEMT) (112) structure, is positioned between a first channel and a second channel to enhance gate control, ensuring increased linearity and efficiency in RF amplification. A source region (114) and a drain region (116) are formed adjacent to the channels within the substrate (110). A biasing circuitry is configured to supply optimal bias voltages and currents to the High Electron Mobility Transistor (HEMT) (112). Claims: 10, Figures: 2 Figure 1 is selected.

No. of Pages : 19 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029617 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN OF BANDWIDTH ENHANCED COMPACT MILLIMETER WAVE MIMO ANTENNA FOR FUTURE WIRELESS COMMUNICATION

(51) International classification	:H04L0027260000, H01Q0021280000, H04B0007041300, H01Q0001520000, H01Q0001380000	(71)Name of Applicant : 1)SHIDDANAGOUDA.F.BYANIGOUDRA Address of Applicant :DEPT.OF COMPUTER SCIENCE AND INFORMATION SCIENCE SRINIVAS UNIVERSITY SRINIVAS NAGAR, MUKKA, SURATHKAL, MANGALORE-575001. KARNATAKA, INDIA. -----
(86) International Application No	:NA	2)P.S.AITHAL Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
(61) Patent of Addition to Application Number	:NA	1)SHIDDANAGOUDA.F.BYANIGOUDRA
Filing Date	:NA	Address of Applicant :DEPT.OF COMPUTER SCIENCE AND INFORMATION SCIENCE SRINIVAS UNIVERSITY SRINIVAS NAGAR, MUKKA, SURATHKAL, MANGALORE-575001. KARNATAKA, INDIA. -----
(62) Divisional to Application Number	:NA	2)P.S.AITHAL
Filing Date	:NA	Address of Applicant :DEPT.OF COMPUTER SCIENCE AND INFORMATION SCIENCE SRINIVAS UNIVERSITY SRINIVAS NAGAR, MUKKA, SURATHKAL, MANGALORE-575001. KARNATAKA, INDIA. -----

(57) Abstract :

Abstract: Due to [dwer lakency and high speed data transmission and connecting lnillioné' of devices, advance wireless networks are better Khan present wireless technologies' In this work, a precise methodology is used for the design of a two-element millimeter-wave Multiple Input Multiple Output (MIMO) antenna for future wireless communication system The millimeter-wave MIMO antenna is designed using high-frequency simulation software (HFSS). Initially the 38GH2 single millimeter-wave antenna is designed with dimensions of 202.6. l2mm2 and is 0.8mm thicker RT/duroid 5880LZ substrate. Further, a two-element millimeter-wave MIMO antenna is designed by duplicating 'a single millimeter-wave antenna with a N4 distance to avoid coupling effects between the antenna elements. To improve the performance and compactness of the millimeter wave MIMO antenna, the size of the t\vo antenna eiements was modified from 2.02 mm x 3.12mm to 1.6mm x 0.4mm This was achieved by decreasing the length and width in steps of [mm and the ground plane was altered with a outset rectangular split ring slot defected ground structure (ORSRSDGS). Further investigation was carried out on antenna structure by etching the ground plane \vith'seven ORSRSDGS'unil cells, so that the antenna resonate at 3SGHz with a return loss of -40.20dB, a bandwidth of 3.656Hz, a-data rate of 36.316bps and a total peak gain of 5.03dB along with 96.19% of physical size reductions (PSR) are achieved' The parameters of the'millimeters wave MIMO antenna, such as envelope correlation coefficients (ECC), total peak gain (TPG), diversity gain (DG), volmge standing wave ratio (VSWR) and radiation pattern perfonnance, are verified. The results of the proposed compact two-element millimeters wave MIMO antenna displays that it is well suited for future generation wireless communication systems

No. of Pages : 17 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029618 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : NOVEL PROCESS FOR THE PREPARATION OF AZOXYSTROBIN AND ITS INTERMEDIATE THEREOF

(51) International classification :A01N0043540000, C07C0067310000, C07C0067327000, C07C0069734000, C07D0239520000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)DR GINDAM NARENDER Address of Applicant :Flat No 404, GNR's WHealth Pearls, Doctors Colony, Opp: Medha Servo Drives, Street No 9, POCHARAM, HYDERABAD, INDIA HYDERABAD ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DR GINDAM NARENDER Address of Applicant :Flat No 404, GNR's WHealth Pearls, Doctors Colony, Opp: Medha Servo Drives, Street No 9, POCHARAM, HYDERABAD, INDIA HYDERABAD ----- ----- 2)Komarraju Pavan Kumar Address of Applicant :2-2-20/21, Krishna Teja kingdom apartments, D.D. Colony, Bagh Amberpet, Hyderabad- 500007, Telangana, India HYDERABAD ----- ----- 3)Boddu Kavya Address of Applicant :8-3-228/974, Rahamath nagar, Yusufguda, Hyderabad-500045, Telangana, India HYDERABAD ----- -----

(57) Abstract :

Abstract Title of the Invention: NOVEL PROCESS FOR THE PREPARATION OF AZOXYSTROBIN AND ITS INTERMEDIATE THEREOF The present invention relates to a novel process for the preparation of Azoxystrobin of formula-1. Formula-1 The present invention also relates to a novel compound of formula-4 and its preparation, which is useful in the preparation of Azoxystrobin of formula-1 Formula-4 wherein, W is methyl (E)-2-(3-methoxy)acrylate group $C(CO_2CH_3)=CHOCH_3$ or methyl 2-(3,3-dimethoxy)propanoate group $C(CO_2CH_3)CH(OCH_3)-2$, or a mixture of the two groups. The process present invention provides higher yields and purity of the azoxystrobin than the conventional methods and this is simple, safe, economic, eco-friendly process and suitable on commercial scale with high reproducibility.

No. of Pages : 17 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029629 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DEVELOPMENT OF PROCESS TECHNOLOGY FOR FORTIFICATION OF RICE STARCH BASED EDIBLE FILMS WITH CARROT AND BEETROOT JUICES FOR PAPER SWEET (POOTHAREKULU)

(51) International classification :A23L0033160000, A23L0033150000, C08J0005180000, A23L0005440000, A23L0033155000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)ACHARYA N.G. RANGA AGRICULTURAL UNIVERSITY, LAM, GUNTUR Address of Applicant :LAM, GUNTUR, ANDHRA PRADESH, INDIA – 522034 ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DR. P. SIVAMMA Address of Applicant :ICAR-INDIAN INSTITUTE OF SEED SCIENCE, MAU, UTTAR PRADESH - 275103 ----- 2)DR. P.V.K. JAGANNADHA RAO Address of Applicant :AICRP ON POST HARVEST ENGINEERING & TECHNOLOGY CENTRE, REGIONAL AGRICULTURAL RESEARCH STATION, ANGRAU, ANAKAPALLE, ANDHRA PRADESH- 531 001 ----- 3)DR. K. APARNA Address of Applicant :MFPI- QUALITY CONTROL LABORATORY, PJTSA UNIVERSITY, RAJENDRANAGAR, HYDERABAD, TELANGANA -500 030. ----- 4)DR. B.V.S. PRASAD Address of Applicant :AICRP ON POST HARVEST ENGINEERING & TECHNOLOGY CENTRE, GRICULTURAL COLLEGE CAMPUS, ANGRAU, BAPATLA, ANDHRA PRADESH - 522 101 ----- ---- 5)DR. D.D. SMITH Address of Applicant :DR. NTR COLLEGE OF AGRICULTURAL ENGINEERING, ANGRAU, BAPATLA, ANDHRA PRADESH - 522 101 ----- 6)DR. L. PRASANTHI Address of Applicant :DIRECTOR OF RESEARCH, ACHARYA N G RANGA AGRICULTURAL UNIVERSITY, LAM, GUNTUR-522 034(AP) -----

(57) Abstract :

DEVELOPMENT OF PROCESS TECHNOLOGY FOR FORTIFICATION OF RICE STARCH BASED EDIBLE FILMS WITH CARROT AND BEETROOT JUICES FOR PAPER SWEET (POOTHAREKULU) Fortification of rice starch based edible films used in the preparation of paper sweet was carried out using carrot (Kuroda) and beetroot (Ruby Queen) at different total soluble solids i.e., 7, 8 and 9 °Brix and concentrations i.e., 5, 8.75, 12.5, 16.25 and 20% mixed in the Jaya variety bold rice batter (80% moisture content) separately, produced the film using hot earthen pot at 120-135 °C and optimized the process parameters based on compressive strength of film. The optimized conditions carrot and beetroot juice fortification were 7 °Brix & 12.788% and 7 °Brix & 12.699%, respectively. Puncture strength of carrot juice fortified film, beetroot juice fortified film and film without fortification was 44.3, 58.9 and 100.698 g, respectively. Tensile strength of carrot juice fortified film, beetroot juice fortified film and film without fortification was 59.417, 67.852 and 146.231 g, respectively. Compressive strength of carrot juice fortified film, beetroot juice fortified film and film without fortification was 54.587, 60.153 and 112.965 g, respectively. Water solubility of carrot juice fortified film, beetroot juice fortified film and film without fortification was 20.753, 19.589 and 15.015%, respectively. Fortification of films enhanced the nutrition quality of the final paper sweet i.e., vitamin-A, lycopene, beta cyanins, beta carotenoids, total carotenoids, phenols and flavonoids. High water solubility of the fortified films contributed to easily melt in mouth nature of final sweet. Sensory qualities of fortified paper sweet were superior to paper sweet without fortification. The best packaging material to store the fortified films was HDPE>LDPE>PP.

No. of Pages : 29 No. of Claims : 10

(54) Title of the invention : CAMPUS NOTIFIER:REAL-TIME MONITORING,OPTIMIZATION&IOT BASED MANAGERIAL PRESENCE SOLUTIONS

(51) International classification :G06Q0010060000, G06F0009500000, A61B0005080000, H04L0067010000, G06F0011000000 (86) International Application No Filing Date :NA :NA (87) International Publication No : NA (61) Patent of Addition to Application Number Filing Date :NA :NA (62) Divisional to Application Number Filing Date :NA :NA		(71)Name of Applicant : 1)KKR & KSR Institute of Technology and Sciences Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017. ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Chittineni Aruna Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 2)P. G. K. SIRISHA Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 3)Naga Pavan Narne Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 4)Srinivasu Pullipati Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 5)Mahendra Nath Ponduri Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 6)Anand Raju Manchala Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 7)Jayaram Mamidipalli Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 8)Velangini Raju Patibandla Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 9)Vinay Ravuri Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 10)Sonika Gurram Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 11)Sneha Gosi Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 12)Aashritha Marri Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 -----

(57) Abstract :
Abstract our project focuses on management availability, integrating sensor technology to monitor and display availability statuses in real- time through a mobile application. By leveraging sensors, we track the availability of resources equipment or personnel, providing users with instantaneous access to crucial information. Through the mobile application interface, users can easily view the availability status of various assets, facilitating efficient decision- making and resource allocation. This system enhances organisational productivity by enabling proactive management of resources, minimizing downtime, and optimizing operational workflows. m Z

No. of Pages : 6 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029667 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ALCOHOL SENSING, VEHICLE TRACKING AND ACCIDENT PROCLAMATION USING INGENIOUS HELMET

(51) International classification :H04W0004020000, H04W0004029000, G08G0001160000, A42B0003040000, G08G0001000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)KKR & KSR Institute of Technology and Sciences Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. ---- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr.K.Mallikarjuna Rao Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 2)Chittineni Aruna Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 3)N.Adinarayana Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 4)Sk.Nazeer Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 5)K.Bharadwaj Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 -----

(57) Abstract :

The present invention relates to a novel helmet design integrating multiple functionalities including alcohol sensing, vehicle tracking, and accident proclamation. The ingenious helmet incorporates advanced sensor technology to detect alcohol levels in the vicinity of the wearer, ensuring road safety by alerting both the wearer and nearby vehicles in case of intoxication. Additionally, the helmet is equipped with GPS tracking capabilities, enabling real-time vehicle tracking and monitoring. In the event of an accident, the helmet automatically transmits distress signals and location data to emergency services, facilitating prompt response and assistance. This patent application outlines the design, functionality, and potential applications of the innovative helmet.

No. of Pages : 6 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029672 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PERSONALIZED TINNITUS MANAGEMENT SYSTEM INTERGRATING ADAPTIVE MUSIC THERAPY FOR SOOTHING RELIEF AN

(51) International classification	:A61M0021000000, A61M0021020000, A61K0031122000, G16H0020700000, A61P0027160000	(71)Name of Applicant : 1)KKK & KSR Institute of Technology and Sciences Address of Applicant :Vinjanampadu, Vatticherukuru Mandal, Guntur, Andhra Pradesh-522017. ----- Name of Applicant : NA Address of Applicant : NA
(86) International Application No	:NA	(72)Name of Inventor : 1)Dr.Chittineni Aruna Address of Applicant :Professor & Head Administration Department of CSE, KKR & KSR institute of Technology and Sciences, Vinjanampadu, Vatticherukuru Mandal, Guntur, Andhra Pradesh-522017. -----
Filing Date	:NA	2)K.MallikarJuna Rao Address of Applicant :Assistant Professor, Department of ECE, KKR & KSR institute of Technology and Sciences, Vinjanampadu, Vatticherukuru Mandal, Guntur, Andhra Pradesh-522017. -----
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(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

Abstract The Personalized Tinnitus Management System Integrating Adaptive Music Therapy presents a novel approach to alleviate the symptoms of tinnitus through personalized and adaptive music therapy. Tinnitus, characterized by persistent ringing, buzzing, or humming sounds in the ears, affects millions of individuals worldwide and can significantly impact quality of life. Traditional treatments often provide limited relief, necessitating the development of innovative solutions. This system utilizes advanced algorithms to analyze individual tinnitus characteristics and generate» personalized music therapy sessions tailored to each user's needs. These sessions are designed to mask the perceived sounds of tinnitus and promote relaxation. With real-time monitoring and feedback mechanisms, the system ensures ongoing effectiveness and empowers users to take control of their tinnitus management journey. This abstract outlines the comprehensive and personalized approach offered by the system, which has the potential to significantly improve the quality of life for individuals suffering from tinnitus.

No. of Pages : 6 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029675 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SMART STALP:EFFICIENT LED STREET LIGHT SYSTEMS ARE CRUCIAL FOR ENERGY CONSERVATION,WHILE INSTANT ACC

(51) International classification :F21Y0115100000, F21W0131103000, A61P0043000000, C02F0011121000, G08G0001000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :
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(57) Abstract :

Abstract In rural areas, two pressing is lights and delayed response to accident sues demand immediate attention: energy consumption by street 5. While modem LED street lights only uses 80 watts, replacing older systems with LEDs can significantly improve energy efficiency. Furthermore, the lack of efficient accident reporting due to traffic congestion in rural areas leads to delayed preventable loss of life. Therefore, implementing an instant emergency response and, tragically, tion system becomes crucial to promptly notify emergency services and potentially . accident detect save lives.

No. of Pages : 6 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029676 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ARCHI-DRAW

(51) International classification :G06F0003010000, G06T0019000000, G06Q0010060000, G06Q0010100000, G06Q0050080000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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-

(57) Abstract :

Abstract Our invention presents a revolutionary system for enhancing construction project visualization and customization. Utilizing robotics and CAD technology, the system enables onsite printing of 2D construction plans from CAD files, alongside real-time conversion of these plans into dynamic 3D renderings. Clients can remotely view and customize these plans, facilitating better decision—making and collaboration. The system's high-precision printing capabilities, coupled with user-friendly interfaces, offer clients unparalleled control over design elements such as wall colors, flooring materials, and furniture arrangements. Additionally, the system provides immersive virtual reality experiences for clients to explore and interact with the constructed space. Overall, our invention represents a significant advancement in construction project management and client engagement.

No. of Pages : 6 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029682 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : INTEGRATED CARBON EMISSION CALCULATION AND CERTIFICATION SYSTEM WITH BLOCK-CHAIN BASED CARBON CREDIT

(51) International classification	:G06Q0030000000, G06Q0050260000, G06Q0010040000, H04L0047520000, G06K0007100000	(71)Name of Applicant : 1)KKR & KSR Institute of Technology and Sciences Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. 9014156267 principaljr@gmail.com ----- Name of Applicant : NA Address of Applicant : NA
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Filing Date	:NA	

(57) Abstract :

Abstract Due to emission of carbon from various sources in the environment affecting the climate change, we face big problems such as the seasonal changes and unusual rainfalls. In order to overcome such issues we have proposed a solution to find the carbon emission within a small area. This includes calculation of carbon emission of each and every organization present in that area with the help of emission factor and sensors. The severity of the carbon emission is predicted by the Machine Learning model and a certificate is generated which includes time indicating the expiry of the carbon credits with the help of block chain technology.

No. of Pages : 6 No. of Claims : 5

(54) Title of the invention : METHOD AND SYSTEM FOR CLASSIFYING DATA ASSOCIATED WITH AN OBJECT MANOEUVRE

(51) International classification :A61B0005000000, G06T0007215000, H04L0051000000, A61B0006000000, G06N0020000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)INDIAN INSTITUTE OF SCIENCE Address of Applicant :C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)RATHNA G N Address of Applicant :INDIAN INSTITUTE OF SCIENCE, C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore -- ----- 2)PRASHANT C MURAL Address of Applicant :INDIAN INSTITUTE OF SCIENCE, C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore -- ----- 3)VIRAT BHOLA Address of Applicant :INDIAN INSTITUTE OF SCIENCE, C V Raman Avenue, Bangalore 560012, Karnataka, India Bangalore -- -----

(57) Abstract :
ABSTRACT METHOD AND SYSTEM FOR CLASSIFYING DATA ASSOCIATED WITH AN OBJECT MANOEUVRE A method and system of classifying data associated with an object manoeuvre is disclosed. The method comprises obtaining 110 as input data for an object manoeuvre 110, wherein the data is obtained at plurality of locations of the object, when the object is in motion; selecting 120 data associated with at least one area of interest from the plurality of locations of the object, wherein the data is an imbalanced set; pre-process 130 the selected data by generating a class balanced dataset from the selected data, and classifying the data into a pre-defined class/category; and generating 140 a class balanced dataset from the pre-processed data. By performing the above steps, a class balanced dataset from a class unbalanced dataset is obtained that can be utilized to classify incoming data. Figure to be published: Figure 1A

No. of Pages : 35 No. of Claims : 15

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029684 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SMART AGRI-BOT

(51) International classification :A01M0007000000, G06Q0010060000, G06Q0050020000, A01B0079000000, B64D0001180000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT The smart agribot is an innovative agricultural solution integrating a pesticide detector, pesticide spraying and mirchi picking to advance precision farming. Employing advanced sensors and autonomous navigation, the agribot optimizes resource usage by providing real-time data on pest levels. This enables farmers to make informed decisions, minimizing environmental impact, reducing operational costs, and promoting sustainable agriculture. The Agri-bot's user-friendly interface delivers actionable insights for precise and efficient crop management, contributing to increased yield and ecological sustainability

No. of Pages : 6 No. of Claims : 6

(51) International classification :G06Q0010080000, G06Q0030060000, G05D0001000000, G06Q0010060000, B65G0001040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Abstract : In the dynamic landscape of retail, warehousing, and various service industries, the current manual processes of shopping, groceries, and logistics within hospitals present substantial challenges. Existing systems lack the versatility required to provide a unified and technologically advanced solution for these diverse sectors. The need for an innovative robotic assistant arises from the limitations of traditional methods, hindering efficiency, accuracy, and adaptability in various operational environments. Customers in shopping, grocery, and healthcare sectors encounter obstacles in terms of time efficiency, accessibility, and personalized assistance. The absence of a comprehensive solution contributes to a less-than-optimal experience for both customers and personnel in these sectors. The robot functions as a smart trolley or basket in retail environments, it autonomously navigating through aisles and retrieving items from the provided shopping list. with the help of the robot arm it automatically take the items according to the list and automatically generates the bill. In conventional warehousing and shopping environments, manual labor is extensively used for the picking and placing of items, Autonomous trolleys can assist in inventory management, picking, and packing tasks, streamlining operations and reducing labor costs. This process is time- consuming, labor-intensive, and prone to errors, leading to inefficiencies in various industries.

No. of Pages : 6 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029689 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ENHANCED AGRICULTURAL MANAGEMENT APPROACH FROM SUSTAINABLE CROP PRODUCTION TO SELLING INCLUDING CROP INSURANCE AND STUBBLE UTILIZATION FRAMEWORK USING BLOCK CHAIN SECURITY WITH IOT & MACHINE LEARNING ALGOIRITHMS

(51) International classification :H04L0009320000, G06Q0050020000, G06Q0010080000, G06Q0040080000, G06N00200000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This innovation focuses on the transformative role of blockchain technology in diverse agriculture industry such as Indian agriculture industry. Despite being a crucial sector, existing challenges 'include inefficient supply chain management and a lack of data transparency. Leveraging blockchain's attributes of immutability, transparency, and security, the study explores its potential to revolutionize the sector. By minimizing intermediaries in the supply chain, blockchain reduces transaction costs, enhancing farmer profit margins. The integration of 101 sensors captures vital crop data, analyzed through machine learning algorithms for disease prediction. Organized content is stored in blockchain ledgers, ensuring transparency through smart contracts. This not only streamlines supply chain management but also simplifies insurance claims for farmers. The proposed methodology, combining blockchain and agriculture, emerges as a catalyst for efficiency and growth in the sector, addressing contemporary challenges and unlocking the industry's untapped potential.

No. of Pages : 6 No. of Claims : 6

(54) Title of the invention : AUTONOMOUS TRAFFIC CONTROL SYSTEM UTILIZING GENERATIVE AI FOR REAL-TIME OPTIMIZATION IN SMART CITIES

(51) International classification :G08G0001010000, G08G0001080000, G06N0020000000, G08G0001096800, G08G0001081000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr.S.S.Darly Address of Applicant :Assistant Professor, University College of Engineering Tindivanam, Tindivanam, Tamilnadu ----- ----- 2)Mrs. Shanthi.N 3)Dr. Lilly Raamesh 4)Dr.M.Vijayaragavan Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.S.S.Darly Address of Applicant :Assistant Professor, University College of Engineering Tindivanam, Tindivanam, Tamilnadu ----- ----- 2)Mrs. Shanthi.N Address of Applicant :Assistant Professor, Department of Electrical and Electronics Engineering, Sri Sai Ram Institute of Technology, Chennai, 600044 ----- 3)Dr. Lilly Raamesh Address of Applicant :Professor, Department of AML, St. Joseph's College of Engineering, OMR, Chennai-600119 ----- ----- 4)Dr.M.Vijayaragavan Address of Applicant :Professor/EEE, Mailam Engineering College, Mailam, Tindivanam, Tamilnadu -----

(57) Abstract :
Our proposed invention introduces an Autonomous Traffic Control System (ATCS) that leverages Generative Artificial Intelligence (AI) to optimize traffic flow in smart cities. Traditional traffic control systems struggle to adapt to the dynamic nature of urban mobility, leading to congestion and inefficiency. The ATCS integrates data from various sources such as traffic sensors, surveillance cameras, and GPS devices to inform its decision-making processes. Through advanced machine learning algorithms, it predicts future traffic conditions and dynamically adjusts traffic signals, lane assignments, and routing in real-time to minimize congestion and maximize efficiency. The system prioritizes safety, environmental sustainability, and equity, aiming to enhance the overall quality of life for city residents. By offering a dynamic, adaptive, and scalable solution to urban traffic management, the ATCS represents a transformative innovation that has the potential to reshape the future of urban transportation.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029717 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : BRAND DETECTION AND ANALYSIS-P.A.S.H

(51) International classification :G06Q0030020000, G06N0020000000, G06F0016953500, G06Q0010000000, A61K0036730000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

Market analysis is vital for businesses to understand, identify trends and to efficiently manage stock. In this project, we have a versatile machine learning model for market analysis using platforms like Roboflow to pre process the dataset and YOLOv8 platform that uses PyTorch framework. This model can be easily deployed using a Raspberry Pi 4 and a USB camera module. From the collected data businesses can extract valuable insights 'such as brand popularity, product preferences, and stock availability. These insights benefit both customers, who experience improved availability and satisfaction, and sellers, who can optimize their strategies and enhance brand image. Ultimately, this project aims to foster a more efficient and responsive market ecosystem, benefiting all stakeholders involved. Businesses may adjust to shifting market dynamics, improve their strategy, and build a more responsive and effective market ecosystem by putting market analysis solutions into practice.

No. of Pages : 12 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029719 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : PARALYZED PATIENT HEALTH MONITORING, STRESS RELIEF AND SAFETY USING STRESS BALL TRIBOELECTRIC NANOGENERATOR

(51) International classification :H02N0001040000, A61B0005000000, A61B0005024000, A61B0005020500, A61B0005160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :

The present invention provides a paralyzed patient health monitoring, stress relief and safety using stress ball triboelectric nanogenerator. The Stress Ball Triboelectric Nanogenerator (TENG) integrated with an Arduino Nano 33 IoT microcontroller, creating a sophisticated technological solution for paralyzed patient health monitoring and stress relief. The TENG, embedded within the stress ball, exploits triboelectric effects during manipulation, generating electrical energy for simultaneous health parameter monitoring. The Arduino Nano 33 IoT orchestrates the system, enabling real-time data processing and wireless communication. Health monitoring, muscle tension, and stress levels, offering a comprehensive understanding of the user's physiological state. The stress ball's adaptive triboelectric mechanisms respond in real-time to user feedback, providing personalized therapeutic interventions. Wireless communication capabilities facilitate seamless data transmission to external devices, ensuring interoperability.

No. of Pages : 32 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029720 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR REMOTE CONTROLLING AND MONITORING OF IOT BASED VEHICLE

(51) International classification :G07C0005000000, G07C0005080000, H04L0067120000, G06Q0030020000, B60R0025102000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)R.M.K. Engineering College Address of Applicant :R.S.M. Nagar, Kavaraipettai, Gummidipoondi Taluk, Tiruvallur District, Pin Code: 601206, Tamil Nadu ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.T.Mahalingam Address of Applicant :Associate Professor, Department of Information Technology, R.M.K Engineering College, RSM Nagar, Kavaraipettai – 601206, Gummidipoondi Taluk, Thiruvallur Dist., Chennai, India. ----- 2)Dr.Rajitha Jasmine R Address of Applicant :Associate Professor, Department of Information Technology, R.M.K Engineering College, RSM Nagar, Kavaraipettai – 601206, Gummidipoondi Taluk, Thiruvallur Dist., Chennai, India. ----- 3)Dr.K.Saravanan Address of Applicant :Associate Professor, Department of Information Technology, R.M.K Engineering College, RSM Nagar, Kavaraipettai – 601206, Gummidipoondi Taluk, Thiruvallur Dist., Chennai, India. ----- 4)Dr. J.Sathiamoorthy Address of Applicant :Professor, Department of Computer Science and Design, R.M.K Engineering College, RSM Nagar, Kavaraipettai – 601206, Gummidipoondi Taluk, Thiruvallur Dist., Chennai, India. -----

(57) Abstract :

The present invention relates to a novel system and method designed to revolutionize the way vehicles are controlled and monitored remotely, leveraging the advancements in Internet of Things (IoT) technology. This invention introduces an integrated system that enables users to remotely control various vehicle functions such as engine starting or stopping, climate control, and locking or unlocking, among others, via a user-friendly interface accessible from a smartphone or computer. Furthermore, it provides real-time monitoring capabilities for vehicle diagnostics, location tracking, and emergency reporting, enhancing vehicle safety, efficiency, and user convenience. The system is comprised of a network of sensors, actuators, and communication modules installed in the vehicle, working in conjunction with a central processing unit that interprets user commands and vehicle data. Data transmission is secured with advanced encryption protocols to protect user privacy and vehicle security. This invention addresses existing gaps in remote vehicle management by offering a comprehensive, secure, and intuitive solution for the automotive industry and vehicle owners alike, marking a significant advancement in IoT applications within vehicular technology. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029721 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : HUMAN DETECTION AND POSE ESTIMATION USING WIFI SIGNALS

(51) International classification :G06T0007730000, G06N0020000000, G08B0013196000, H04N0007180000, H04L0012280000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

[045] Our proposed invention introduces a novel system for human detection and pose estimation using WiFi signals. Leveraging the ubiquity of WiFi infrastructure and advanced machine learning algorithms, our system offers real-time insights into human presence and activity within various environments. By analyzing the unique characteristics of WiFi signals, our system accurately detects the presence of humans and estimates their poses with high precision. This non-invasive sensing solution holds promise for a wide range of applications, including smart home automation, healthcare monitoring, security surveillance, retail analytics, and urban planning. Our system addresses key challenges such as privacy concerns and accessibility issues, offering a scalable and cost-effective solution that can be seamlessly integrated into existing WiFi networks. Furthermore, our system lays the groundwork for future advancements in sensing technologies and human-computer interaction, paving the way for smarter, more responsive environments tailored to human needs and preferences. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 23 No. of Claims : 10

(54) Title of the invention : DYNAMIC GRID INTERACTION PROTOCOL ENHANCED WITH ARTIFICIAL INTELLIGENCE FOR ELECTRIC VEHICLE INTEGRATION

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number Filing Date Filing Date Filing Date Filing Date Filing Date	:G06Q0050060000, H02J0003000000, H02J0003380000, G06Q0010040000, G06Q0010060000 :NA :NA :NA :NA :NA :NA :NA :NA :NA	(71)Name of Applicant : 1)Mr.Ch Srisailam Address of Applicant :Assistant Professor, Guru Nanak Institutions Technical Campus, Hyderabad ----- 2)Mrs.A.Sujatha Priyadharshini 3)Mr. Madhusudhan G. 4)Dr.Pappula Sampath Kumar 5)Mrs.Shanthi.N 6)Mr. Abdul Haleem Medattil Ibrahim 7)Mr.G.Prabu 8)Dr.P.Meenalochini 9)Dr.R.Karthick Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr.Ch Srisailam Address of Applicant :Assistant Professor, Guru Nanak Institutions Technical Campus, Hyderabad ----- 2)Mrs.A.Sujatha Priyadharshini Address of Applicant :Parisutham Institute of Technology and Science, Kamaraj Nagar, NH-67 Ring Road, Nanjikottai, Thanjavur - 613 006, Tamil Nadu, India ---- 3)Mr. Madhusudhan G. Address of Applicant :Assistant Professor, ETE Dept., Savalanga Road, Navule, JNNCE, Shivamogga-577204 ----- 4)Dr.Pappula Sampath Kumar Address of Applicant :Assistant Professor, EEE Department, Bapatla Engineering College, Bapatla-522101, Bapatla District, Andhra Pradesh, India ----- 5)Mrs.Shanthi.N Address of Applicant :Assistant Professor, Department of Electrical and Electronics Engineering, Sri Sai Ram Institute of Technology, Tambaram, Chennai-600044 ----- 6)Mr. Abdul Haleem Medattil Ibrahim Address of Applicant :‘Swabeehas’, Medattil House, Pazhaya Lakkidi, Akalur-Post, Palakkad-Dist., Kerala, Pin: 679302 ----- 7)Mr.G.Prabu Address of Applicant :Assistant Professor, Department of Information Technology, Sri Manakula Vinayagar Engineering College (An Autonomous Institution), Madagadipet, Puducherry-605107 ----- 8)Dr.P.Meenalochini Address of Applicant :Associate Professor, Department of Electrical and Electronics Engineering, Sethu Institute of Technology, Pulloor, Kariapatti 626115 ----- 9)Dr.R.Karthick Address of Applicant :Associate Professor, Department of Computer Science Engineering, K.L.N. College of Engineering, Pottapalayam, Sivagangai-630 612 --

(57) Abstract :

Our proposed invention introduces a groundbreaking Dynamic Grid Interaction Protocol Enhanced with Artificial Intelligence (AI) for Electric Vehicle Integration. This innovative system revolutionizes the management of energy systems and transportation networks by enabling real-time coordination and optimization of electric vehicle charging and discharging. By integrating dynamic grid interaction protocols with AI algorithms, our invention empowers users to efficiently manage energy consumption while providing grid operators with valuable insights into energy demand patterns and grid conditions. Through predictive modeling and optimization, the system anticipates future energy demand, maximizes the utilization of renewable energy sources, and enhances grid stability. Moreover, by democratizing access to clean energy and empowering communities to actively participate in energy management, our invention fosters economic growth, environmental sustainability, and social equity. Our invention represents a transformative leap forward in the pursuit of a cleaner, smarter, and more resilient energy future.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029731 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM AND DEVICE TO CAPTURE CARBON FROM AUTOMOTIVE EXHAUSTS

(51) International classification :B01D0053620000, C10G0002000000, F01N0003080000, B01D0053180000, F01N0013080000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention relates to a carbon capture and storage system designed for two-wheelers to mitigate carbon dioxide (CO₂) emissions. Two-wheelers, particularly those powered by fossil fuels, contribute significantly to CO₂ emissions, posing environmental challenges. Our innovative system addresses this issue by integrating a carbon capture tailpipe into the exhaust system of two-wheelers. The tailpipe employs solid adsorbent material, specifically zeolites in pellet form, to capture and retain CO₂ molecules from the exhaust gases. This system marks a significant advancement in automotive emission control, providing a dynamic solution to reduce CO₂ emissions and combat climate change effectively.

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029738 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : BAMBOO BASED BIOINK PREPARATION METHOD AND THEREOF

(51) International classification :A61L0027380000, B33Y0070000000, B33Y0080000000, G06F0013420000, C12N0005000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)J.BINDHU Address of Applicant :SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, SRI SHAKTHI NAGAR, L&T BYPASS, CHINNIYAMPALAYAM POST, COIMBATORE-641062. ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)S.M .Anbuselvan Address of Applicant :SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, SRI SHAKTHI NAGAR, L&T BYPASS, CHINNIYAMPALAYAM POST, COIMBATORE-641062. ----- 2)A.Mohamed Aasik Address of Applicant :SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, SRI SHAKTHI NAGAR, L&T BYPASS, CHINNIYAMPALAYAM POST, COIMBATORE-641062. ----- 3)R.Manoj Address of Applicant :SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, SRI SHAKTHI NAGAR, L&T BYPASS, CHINNIYAMPALAYAM POST, COIMBATORE-641062. ----- 4)A.A.Sanjeev Address of Applicant :SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, SRI SHAKTHI NAGAR, L&T BYPASS, CHINNIYAMPALAYAM POST, COIMBATORE-641062. ----- 5)J.Bindhu Address of Applicant :SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY, SRI SHAKTHI NAGAR, L&T BYPASS, CHINNIYAMPALAYAM POST, COIMBATORE-641062. -----

(57) Abstract :

There is provided a bioink suitable For preparing bio printed vascularized [issue constructs: the bioink comprising xanthan gum and collagen, wherein The bioink does not comprise a cross linker.

No. of Pages : 5 No. of Claims : 8

(54) Title of the invention : EARTHQUAKE EARLY PREDICTION SYSTEM WITH DEEP LEARNING AND IOT INTEGRATION BASED ON ANIMAL EEG DATA PATTERNS

(51) International classification	:E04H0009020000, G01V0001000000, G06N0003080000, A61B0005000000, G08B0021100000	(71)Name of Applicant : 1)Mr. Balakrishna Kancherla Address of Applicant :D.NO: 15-14-132, The Shop Employees Colony-5th Lane, Kakani Road, Guntur-522001 ----- 2)Dr. Hemantkumar Sonkusare 3)Dr. Anil Kumar 4)Mr. Shanmugapriyan R 5)Mrs. Sowmiya B 6)Dr. Rakesh Kumar 7)Dr. Ratan Sarkar 8)Dr.P.Meenalochini 9)Dr.R.Karthick Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr. Balakrishna Kancherla Address of Applicant :D.NO: 15-14-132, The Shop Employees Colony-5th Lane, Kakani Road, Guntur-522001 ----- 2)Dr. Hemantkumar Sonkusare Address of Applicant :Prathmesh Residency 2nd Floor, 201, Shilpa Society Plot no. 6 & 7 ear UCO Bank, Manish Nagar, Nagpur, (M.S.) - 440015 ----- 3)Dr. Anil Kumar Address of Applicant :HOD, P.G. Dept. of Chemistry, Sahibganj College Sahibganj 816109, Jharkhand, India ----- 4)Mr. Shanmugapriyan R Address of Applicant :Assistant Professor, Department of Civil Engineering, Nadar Saraswathi College of Engineering and Technology, Theni-625531 ----- 5)Mrs. Sowmiya B Address of Applicant :Assistant Professor, Department of Civil Engineering, Nadar Saraswathi College of Engineering and Technology, Theni- 625531 ----- 6)Dr. Rakesh Kumar Address of Applicant :Scientist, Division of Livestock and Fishery Management, ICAR-RCER Patna-800014 ----- 7)Dr. Ratan Sarkar Address of Applicant :Assistant Professor of Education, Department of Teachers' Training (B.Ed.), Prabhat Kumar College, Karkuli, Contai, Purba Medinipur, West Bengal-721404 (India) ----- 8)Dr.P.Meenalochini Address of Applicant :Associate Professor, Department of Electrical and Electronics Engineering, Sethu Institute of Technology, Pulloor, Kariapatti 626115 ----- 9)Dr.R.Karthick Address of Applicant :Associate Professor, Department of Computer Science Engineering, K.L.N. College of Engineering, Pottapalayam, Sivagangai-630612 -----
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
The proposed Earthquake Early Prediction System integrates Deep Learning algorithms, IoT sensors, and animal EEG data analysis to forecast seismic events with unprecedented accuracy. By leveraging real-time environmental monitoring and studying animal behavior patterns, the system identifies subtle precursors to earthquakes, enabling timely warnings and proactive disaster preparedness measures. This interdisciplinary approach advances our understanding of seismic processes and enhances societal resilience to earthquakes, mitigating risks and minimizing the impacts on vulnerable communities.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029740 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT-BASED OXYGEN SUPPLY SYSTEM

(51) International classification :A61M0016000000, A61M0016060000, H04W0084180000, H04L0067120000, A61M0016100000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)R.M.K. Engineering College Address of Applicant :R.S.M. Nagar, Kavaraipettai, Gummidipoondi Taluk, Tiruvallur District, Pin Code: 601206, Tamil Nadu ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.M.Jayaprakash Address of Applicant :Associate Professor, Department of Information Technology, R.M.K Engineering College, RSM Nagar, Kavaraipettai - 601206, Gummidipoondi Taluk, Thiruvallur Dist., Chennai, India. ----- 2)Dr.A.Vijayaraj Address of Applicant :Associate Professor, Department of Information Technology, R.M.K Engineering College, RSM Nagar, Kavaraipettai - 601206, Gummidipoondi Taluk, Thiruvallur Dist., Chennai, India ----- 3)Dr. S. Selvakanmani Address of Applicant :Associate Professor, Department of Information Technology, R.M.K Engineering College, RSM Nagar, Kavaraipettai - 601206, Gummidipoondi Taluk, Thiruvallur Dist., Chennai, India. ----- 4)Dr. A. Anna Lakshmi Address of Applicant :Associate Professor, Department of Information Technology, R.M.K Engineering College, RSM Nagar, Kavaraipettai - 601206, Gummidipoondi Taluk, Thiruvallur Dist., Chennai, India. -----

(57) Abstract :

The IoT-based Oxygen Supply System represents a ground-breaking innovation in the field of medical oxygen delivery. This system leverages Internet of Things (IoT) technology to provide seamless, efficient, and intelligent oxygen delivery to individuals requiring respiratory support. By integrating an oxygen generator unit, an IoT gateway, a sensor network, a cloud based IoT platform, and a user-friendly interface, the system offers real-time monitoring, remote control, and intelligent optimization of oxygen supply parameters. This abstract encapsulates the essence of the invention, highlighting its transformative potential in enhancing healthcare delivery and improving the quality of life for patients in need of oxygen therapy. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 18 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029743 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : COMPACT AND VERSATILE MINI EXTRUDER FOR SMALL-SCALE MANUFACTURING APPLICATIONS

(51) International classification :B29C0048030000, B01J0019000000, G06Q0010060000, B29C0048800000, B29C0048250000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Subramani N Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 2)Haridass R 3)Hasen A 4)Vishnu J 5)Loganathan D 6)Sharun P Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Subramani N Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 2)Haridass R Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 3)Hasen A Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 4)Vishnu J Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 5)Loganathan D Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 6)Sharun P Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore -----

(57) Abstract :

The Design and Fabrication of Mini Extruder project introduces a novel approach to address the limitations of conventional extrusion machines by developing a compact and efficient extruder tailored for small-scale manufacturing applications. Extrusion, a widely employed manufacturing process across diverse industries, often faces constraints regarding size, cost, and adaptability for research or production purposes at smaller scales. In response, this project endeavors to design and fabricate a mini extruder capable of processing various materials while maintaining high efficiency and versatility. The proposed mini extruder features a compact frame, an adaptable extrusion screw, integrated heating and cooling elements, a motor assembly with variable speed control, and a user-friendly control system. Through meticulous design and fabrication processes, the mini extruder promises to revolutionize small-scale manufacturing, enabling enhanced flexibility, affordability, and efficiency in material processing endeavors.

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029745 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : BIOINK PREPARATION METHOD AND THEREOF

(51) International classification :A61L0027520000, A61L0027380000, B33Y0070000000, A61L0027460000, A61K0031722000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Abstract Bioink compositions comprising a biomaterial (mammalian, plant based, synthetically derived, or microbially derived) such as a hydrogel and a microbial-, fungal-, or plant-produced polysaccharide, with or without cells, for use in the 3D bioprinting of human tissues and scaffolds are described. The bioink compositions have excellent printability and improved cell function, viability and engraftment. Furthermore, the bioink compositions can be supplemented through the additional of auxiliary proteins and other molecules such as growth factors including extracellular matrix components, Laminins, super affinity growth factors and morphogens. The bioink compositions can be used under physiological conditions related to 3D bioprinting parameters which are cytocompatible (e.g. temperature, printing pressure, nozzle size, bioink gelation process). The combination of a biogum-based biomaterial together with mammalian, plant, microbial or synthetically derived hydrogels exhibited improvement in printability, cell function and viability compared to tissues printed with bioink not containing biogums.

No. of Pages : 6 No. of Claims : 7

(54) Title of the invention : METHOD FOR DESIGNING MICROSTRIP ANTENNAS WITH PLANAR PATCH STRUCTURES USING AXONOMETRIC PROJECTIONS

(51) International classification	:H01Q0009040000, H01Q0001380000, G06K0019077000, H01Q0001480000, B43L0013140000	(71)Name of Applicant : 1)THE PRINCIPAL,MEPCO SCHLENK ENGINEERING COLLEGE
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Filing Date	:NA	Name of Applicant : NA
(87) International Publication No	: NA	Address of Applicant : NA
(61) Patent of Addition to Application Number	:NA	(72)Name of Inventor :
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(57) Abstract :
A method for designing microstrip antennas with planar patch structures using axonometric projections of three—dimensional shapes (100) is disclosed. The method encompasses generating axonometric projections that accurately represent the geometry of the planar patch structure (100) (200), ofthe microstrip antenna. As an example, axonometric projection of a three-dimensional cylindrical that is convened into planar shape of the patch 10 of a microstrip antenna (300) (400) is disclosed. These projections enable visualization and analysis of the antenna's geometry and performance characteristics (500), (600), (700) in two dimensions while preserving the relative sizes and shapes of the antenna's features. Through modification guided by the analysis of axonometric projections, the antenna design is optimized to achieve desired performance metrics such as resonant frequency, gain, and 15 impedance matching. The method facilitates the conceptualization, visualization, and accurate representation of the microstrip antenna's complex geometry, aiding in the design process applied on the design of microstrip antennas for wireless communication systems.

No. of Pages : 22 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029751 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A DEVICE, METHOD AND SYSTEM TO MITIGATE MICROPLASTIC SHREDDING FROM POLYETHYLENE TEREPHTHALATE (PET) BOTTLES

(51) International classification :B29K0067000000, B32B0027080000, C08L0067020000, B29C0055120000, C09D0005000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

Polyethylene terephthalate (PET) bottles are widely used for packaging beverages and liquid products due to their lightweight, durability, and recyclability. However, concerns have emerged regarding the release of micro plastics into the environment from these bottles. Micro plastics, defined as plastic particles smaller than 5 mm, pose ecological and human health risks. This patent presents a method and apparatus for reducing micro plastic shedding from PET bottles. The method involves applying a barrier coating composition to the inner surface of PET bottles, forming a protective layer that diminishes the shedding of micro plastics. The apparatus includes units for coating application and curing, controlled by a central system. This innovation offers a sustainable solution to mitigate micro plastic contamination from PET bottles, addressing environmental concerns while maintaining the integrity of packaged products.

No. of Pages : 21 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029754 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SOLAR-POWERED MODULAR FOOD DEHYDRATOR FOR SMALL-SCALE APPLICATIONS

(51) International classification :F25D0017040000, A23B0004240000, A23L0003346300, A23L0003341800, A23L0003000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This invention relates to a solar-powered food dehydrator designed for small-scale applications, addressing the need for efficient food preservation in regions with limited access to electricity. The dehydrator incorporates a modular housing structure accommodating various food products, coupled with solar panels for energy capture. It integrates efficient heat transfer mechanisms and optimal airflow patterns to enhance dehydration efficiency. The design offers scalability and customization, catering to diverse user requirements and environmental conditions. This innovative system presents a sustainable solution for food preservation, utilizing abundant solar energy to dehydrate perishable goods effectively.

No. of Pages : 18 No. of Claims : 6

(54) Title of the invention : BACTERIAL DIVERSITY ANALYSIS BY RIBOSOMAL RNA GENE POLYMORPHISM METHOD

(51) International classification :C12Q0001689500, G16C0020500000, C12Q0001688300, A61K0031537700, C12Q0001689000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr.J. BINDHU Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore, 641062. ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr.A. Bala Murugan Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore, 641062. ----- 2)Mr.S.Sangeerthan Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore, 641062. ----- 3)Ms.A.Nancy Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore, 641062. ----- 4)Mr.N.Gowtham Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore, 641062. ----- 5)Mr.S.Sai Sri Krishna Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore, 641062. ----- 6)Dr.J. Bindhu Address of Applicant :Sri Shakthi Institute of Engineering & Technology, Coimbatore, 641062. -----

(57) Abstract :

Abstract The ability of rumen microorganisms to use fibrous plant maner plays an important role in ruminant animals; however, little information about rumen colonization by microbial populations after weaning has been reported. In this study, high-throughput sequencing was used to investigate the establishment of this microbial population in 75-l IO day-old goats. Illumine sequencing of goat rumen samples yielded 101,356,610 nucleotides that were assembled into 256,868 reads with an average read length of 394 nucleotides. Taxonomic analysis of metagenomic reads indicated that the predominant phyla were distinct at different growth stages. The phyla Firmicutes and Synergistetes were predominant in samples taken from 80 to 100-day-old goals, but Bacteroidetes and Fimicutes became the most abundant phyla in samples from 110-day-old animals. There was a remarkable variation in the microbial populations with age; Firmicutes and Synergistetes decreased after weaning, but Bacteroidetes and Proteobacteria increased from 75 to 110 day of age. These findings suggested that colonization of the rumen by microorganisms is related In their function in the rumen digestive system. These results give a better understanding of the role of rumen microbes and the establishment of the microbial population, which help to maintain the host's health and improve animal performance.

No. of Pages : 6 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029760 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ESTIMATION OF LACTOSE CONCENTRATION IN A BIOPROCESS AND ITS METHOD THEREOF

(51) International classification	:G06N0003080000, G06N0003040000, G06N0003063000, C12M0001000000, G10L0015160000	(71)Name of Applicant : 1)Presidency University Address of Applicant :Itgalpur, Rajanakunte, Bengaluru, Karnataka – 560 064, India Bengaluru ----- Name of Applicant : NA Address of Applicant : NA
(86) International Application No	:NA	(72)Name of Inventor : 1)Dr V S Vijaya Krishna V Address of Applicant :Presidency University, Itgalpur, Rajanakunte, Bengaluru, Karnataka – 560 064, India Bengaluru --- -----
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Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

ABSTRACT ESTIMATION OF LACTOSE CONCENTRATION IN A BIOPROCESS AND ITS METHOD THEREOF The present disclosure discloses an Embedded Soft Sensor (ESS) (100) for real-time estimation of lactose concentration in bioprocesses, leveraging a Deep Neural Network (DNN) architecture (102) and a versatile hardware platform (106). The DNN architecture (102) receives input parameters from a bioreactor mathematical model (104) and generates an output indicative of lactose concentration, facilitated by the output layer (112) within the neural network. Through meticulous exploration of DNN parameters and rigorous simulation, the effectiveness of the ESS (100) is demonstrated. Realization on a System on Chip (SoC) emphasizes the innovation's adaptability, with alternative configurations showcasing diverse implementation possibilities. Overall, the ESS (100) offers a scalable and efficient solution for bioprocess monitoring and control, promising enhanced accuracy and performance in lactose concentration estimation. The present disclosure also discloses a method (200) for estimating lactose concentration in a bioprocess using the ESS (100). Refer Figure 1

No. of Pages : 24 No. of Claims : 8

(54) Title of the invention : MECHANICAL SYSTEM FOR EFFICIENT CLEANING OF DOMESTIC CYLINDRICAL WATER TANKS

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number :B08B0001000000, E03B0011020000, B08B0009087000, B08B0001040000, B08B0005040000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)Haridass R Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 2)Subramani N 3)Mathan Kumar M 4)Viknesh S 5)Vignesh G 6)Anikshan R 7)Santhosh Maran M 8)Masilamani R Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Haridass R Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 2)Subramani N Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 3)Mathan Kumar M Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 4)Viknesh S Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 5)Vignesh G Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 6)Anikshan R Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 7)Santhosh Maran M Address of Applicant :III Year Student, Department of Production Engineering, PSG College of Technology, Coimbatore – 641004, Tamil Nadu, India. Coimbatore ----- 8)Masilamani R Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore -----

(57) Abstract :

This invention presents a mechanical cleaning system designed specifically for domestic cylindrical water tanks. The system comprises a bevel gear and belt drive mechanism, which, driven by a motor shaft, powers brushes attached to the ends of the bevel gear linkage. These brushes rotate to effectively clean the inner surface of the water tank, including hard-to-reach areas such as the upper surface. The bevel gear mechanism enhances cleaning flexibility by enabling a 360-degree rotation of the brushes, ensuring thorough cleaning. This innovative system offers a practical solution for maintaining cleanliness and hygiene in domestic water storage facilities.

No. of Pages : 20 No. of Claims : 6

(54) Title of the invention : ENHANCING STREET LIGHT EFFICIENCY THROUGH WASTE HEAT CONVERSION USING THE SEEBACK EFFECT AND MONOCRY

(51) International classification :F21Y0115100000, F21W0131103000, F21S0008080000, F01N0005020000, C10G0001100000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Mr. Balaji Arumugam Address of Applicant :No.14 , Prabhu Nagar, Thoraipakkam, Chennai, Tamil Nadu, India. Pin code-600097. ----- 2)Mr. Gowtham.M 3)Ms. Abirami.RK 4)Ms. Aathrayee.S 5)Ms. Sree Lakshmi.G 6)Mr. Pravin Kumar.PR 7)Mr. Roshan Kumar.M 8)Mr. Suraj.S 9)Mr. Naresh Kumar.A Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr. Balaji Arumugam Address of Applicant :No.14 , Prabhu Nagar, Thoraipakkam, Chennai, Tamil Nadu, India. Pin code-600097. -----

(57) Abstract :

ENHANCING LED STREET LIGHT EFFICIENCY THROUGH WASTE HEAT CONVERSION USING THE SEEBECK EFFECT AND MONOCRYSTALLINE SOLAR PANEL. ABSTRACT: Traditional LED street lights are known for their energy efficiency, but they still face a significant challenge: a considerable portion of the input electricity is wasted as heat, leading to reduced efficiency and shortened lifespan. Approximately 60% of the input electricity results in a heat signature, while only 40% is utilized for light illumination. This waste heat not only decreases the effectiveness of the LED lights but also damages materials, ultimately reducing their lifespan. To address this issue, we propose a novel solution that leverages the Seebeck Effect to convert waste heat produced by LED lights into usable electricity. By capturing and converting this waste heat, we aim to mitigate damage to the LED light materials and extend the overall lifespan of LED street lights. For instance, with 3 20-watt LED light producing 12 watts of waste heat energy, we can generate 4 watts of electricity from this waste heat, thereby increasing energy efficiency and promoting sustainability in urban lighting infrastructure. Through this innovative approach, we seek to optimize energy utilization, reduce environmental impact, and enhance the longevity of LED street lights, contributing to a more sustainable and efficient lighting solution for urban environments.

No. of Pages : 12 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029791 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR INDEX-BASED UNIVERSAL POWER MANAGEMENT

(51) International classification :H02J3/32, H02J3/36, H02J3/38,
H02J5/00, H02M1/10

(86) International Application
No :NA

Filing Date :NA

(87) International Publication
No : NA

(61) Patent of Addition to
Application Number :NA

Filing Date

(62) Divisional to Application
Number :NA

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(57) Abstract :

The present invention provides system and method for Index-based Universal Power Management. The system comprises of an interlinking converter, one or more voltage and current sensors (10A,10B), a Universal Power Management Module (UPMM) (6), wherein the UPMM (6) comprises of a hybrid volatile energy index (HVEI) calculation module (11), a virtual synchronous machine (VSM) reference generation module (12), a virtual synchronous machine (VSM) based power controller (13), a voltage controller (14), a current controller (15), and a control signal generation module (16). The system further comprises of a hybrid energy storage system connected to the DC link of the interlinking converter through a bidirectional DC/DC converter (5). The interlinking converter is configured to receive the switching signals form the UPMM (6) and based on the signals the interlinking converter operates as a rectifier or an inverter and the bidirectional DC/DC converter (5) facilitates the charging and discharging of HESS.

No. of Pages : 35 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029822 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : EXPLORING WEAK SOLUTIONS THROUGH VARIATIONAL METHODS IN NONLINEAR BOUNDARY VALUE PROBLEMS OF PARTIAL DIFFERENTIAL EQUATIONS

(51) International classification :G06F0017130000, G06F0030230000, G06K0009620000, G06F0111100000, F02D0041020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
Exploring Weak Solutions through Variational Methods in Nonlinear Boundary Value Problems of Partial Differential Equations is the proposed invention. The proposed invention focuses on understanding the functions of Nonlinear Boundary Value Problems of Differential Equations. The invention focuses on analyzing the parameters of Weak Solutions through Variational Methods of Partial Differential Equations.

No. of Pages : 12 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029832 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHOD AND SYSTEM FOR GENERATING SEQUENCES IN A CODE DIVISION MULTIPLE ACCESS (CDMA) SYSTEM

(51) International classification :H04J0013000000, H04W0072040000, H04L0025020000, H04J0013140000, H04J0013100000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

METHOD AND SYSTEM FOR GENERATING SEQUENCES IN A CODE DIVISION MULTIPLE ACCESS (CDMA) SYSTEM
ABSTRACT The present disclosure discloses a method and a system for generating Zero Correlation (ZC) sequences in a CDMA system. The method comprising receiving, by a processor (202), one or more Zero Correlation (ZC) sequence parameters in a CDMA system. The method comprising generating, by the processor (202), a plurality of ZC sequence sets based on the one or more ZC sequence parameters and one or more Generalized Boolean Function (GBF). The method comprising encoding, by the processor (202), transmission data of a User Equipment (UE) using the plurality of ZC sequences. The method comprising transmitting, by the processor (202), the transmission data to a base station. To be published with Fig. 3.

No. of Pages : 35 No. of Claims : 18

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029834 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A DEEP LEARNING FRAMEWORK FOR MINING OCEAN REMOTE SENSING IMAGES TOWARDS MULTI CLASSIFICATION TOWARDS EFFECTIVE NAVIGATION

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(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

Remote sensing is the technology which enables different applications to gain access to information that is not possible without such technology. It is used to know facts about agricultural lands, forest, ocean and so on. With respect to navigation in ocean there might be number of obstacles that are to be recognized for effective navigation. The current invention is meant for mining ocean images obtained through remote sensing technology. The aim of the invention is to analyze remote sensing data and help people who are responsible in ocean navigation. This invention is based on deep learning model with multi-class classification. An enhanced CNN model is proposed for multiclass classification considering remote sensing images related to ocean. It is a supervised learning approach in which the system is able to identify all possible classes which helps ocean navigators to move in the ocean with well informed decisions. The current invention is beneficial to stakeholders such as ocean transport companies, ocean adventurers, ship owners, Indian navy, governments, researchers and academia.

No. of Pages : 14 No. of Claims : 5

(54) Title of the invention : A SYSTEM AND METHOD ENABLING IMAGE ENCRYPTION AND DECRYPTION BASED ON DISCRETE CHAOTIC MAPS

(51) International classification :H04L0009080000, H04N0007140000, H04W0012041000, G01R0033565000, H04N0005232000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

Present disclosure relates a system (102) and method for enabling image encryption and decryption based on discrete chaotic maps. System (102) receive one or more images from at least one image capturing unit. One or more images pertains to at least one chaotic map. System (102) obtains one or more initial settings from the at least one user (106). System (102) generates one or more security keys based on the one or more initial settings received from the at least one user (106). The one or more initial settings comprises at least one of a parameter set and a variable set, where the one or more security key comprises at least one of a symmetric key, a private key, and a public key. System (102) performs at least one of an encryption process and a decryption process on the received one or more images based on the one or more security keys.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029854 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND METHOD FACILITATING FINANCIAL TRANSACTIONS BASED ON ELECTROENCEPHALOGRAM (EEG) SIGNALS

(51) International classification :A61B0005000000, A61B0005369000, A61B0005291000, A61B0005374000, G06F0003010000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)VIT-AP University Address of Applicant :Inavolu, Amaravati, Andhra Pradesh - 522237, India. Amaravati ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)G. MUNEESWARI Address of Applicant :Professor, SCOPE, VIT-AP University, Inavolu, Amaravati, Andhra Pradesh - 522237, India. Amaravati -- ----- 2)G.S. TARUN Address of Applicant :Student, SCOPE, VIT-AP University, Inavolu, Amaravati, Andhra Pradesh - 522237, India. Amaravati -- ----- 3)PUTCHALA BHUVANENDRA Address of Applicant :Student, SCOPE, VIT-AP University, Inavolu, Amaravati, Andhra Pradesh - 522237, India. Amaravati -- -----

(57) Abstract :

Present disclosure relates a system (102) and method for enabling image encryption and decryption based on discrete chaotic maps. System (102) receive one or more EEG signals from at least one EEG band (150) associated with at least one user, wherein the at least one EEG band (150) is configured to record at least one brain activity of the at least one user. System (102) extract at least one EEG feature from the one or more received EEG signals. System (102) compares the at least one EEG feature with one or more stored EEG signals for enabling authentication of the at least one user. System (102) computes a score based on the at least one EEG features by using one or more classifiers to enable access to one or more financial transactions.

No. of Pages : 29 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029856 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SELF ADMINISTERED ENEMA DEVICE

(51) International classification	:A61M0003020000, B60R0021207000, A47K0011040000, A47K0017020000, G16H0040630000	(71)Name of Applicant : 1)Urosurge Private Limited Address of Applicant :No.13, Magnolia Complex, Nehru Nagar, Jakkur Main Road, Yelahanka, Bangalore - 560064, Karnataka, India. Bangalore ----- Name of Applicant : NA Address of Applicant : NA
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(61) Patent of Addition to Application Number	:NA	4)B, Varun Address of Applicant :S/o Bhaskar N, #31, 7th Cross, Jai Maruthi Nagar, Nandini Layout, Bengaluru - 560096, Karnataka, India. Bengaluru -----
Filing Date	:NA	
(62) Divisional Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present disclosure relates to a device (100) designed seat with enema device (104) attached to a commode base (102), wherein the device (100) comprises a fluid container (106) configured to mount at a wall behind the commode seat (104), and positioned at a pre-defined height from the device (100), wherein the fluid container (106) comprises a fluid line (108) configured to facilitate fluid flow, wherein the fluid line (108) is connected to the fluid container (106) at the first end of the fluid line (108). The device (100) further includes a seat (200) is positioned atop of the commode base (102), a base seat with side support wall of seat (202), an injector part (208), an L-shape nozzle (300) attached to the injector part (208) and soft silicon cover (600). The hand operated slot and groove mechanism facilitates the comfortable passage of stool into the commode, providing a user-friendly and efficient enema experience.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029860 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN AI ENABLED IOT INTEGRATED SMART FARMING SYSTEM

(51) International classification :G06Q0050020000, G06N0003080000, G06N0003040000, G06N0020000000, G06N0005040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

With the technological innovations like Internet of things (IoT) and artificial intelligence (AI) it is possible to explore more on precision agriculture which is nothing but technology driven agriculture. With the help of IoT technology, it is possible to capture crop details from a remote place. With the help of AI, it is possible to analyze crop to monitor its health and find possible diseases or even estimation of crop yield. The current invention is meant for supporting smart forming with the help of IoT and AI technologies towards precision agriculture. The system has provision to capture data from agricultural fields using IoT technology and to process the data to know different indicators related to crop health and other agricultural statistics. It is based on deep learning where enhanced UNet model is designed to support processing of image data to have valuable insights. The current invention is beneficial to stakeholders such farmers, agricultural departments, governments, precision farming organizations, agricultural scientists, researchers and academia.

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029874 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN AND DEVELOPMENT OF SHREDDER FOR ITS USE IN THE SEPARATION OF ARECA PODS

(51) International classification :A61K0036889000, G06Q0050020000, A61K0036480000, G06Q0010000000, A23N0012080000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT The Areca nut palm belongs to the family palmae under the tribe Areccae and genus Areca, which contains 76 species, including Areca catechu L. Cultivation of Areca nut is concentrated in South Western and North Eastern regions of the country. Areca nut (Areca catechu L) is a major cash crop in the humid tropics of India. Areca nut processing is a long process involving harvesting bunch from trees, separating the nut from the bunch, moving the areca nut to ground for drying, bagging the dried nuts, de-husking and etc. The requirement for areca nut is increasing day by day. However, the separation of areca pods from the bunch is a tedious, painful, and time-consuming process. Thus, the target was to create an equipment that is affordable, efficient and reduces the total separation cost. To increase its efficiency, a petrol engine is used to power the rotary shaft, reducing the amount of manual effort needed to separate pods and enabling farmers to separate a larger quantity of areca from its bunch in shorter time. As a safety feature rotating shaft guard is enclosed with the equipment to prevent accidents. The areca shredder makes it an attractive option for small-scale farmers who need a practical solution for separation of areca pods from bunch. The shredder able to handle up to 1.5 – 2 tons of areca in 8 hours. The shredder is ecofriendly and user friendly and does not need any particular skill to operate the equipment. So, the farmer himself can operate the equipment. the stripping efficiency and operating capacity of the equipment were determined as 70 percent and 250 kg ha-1

No. of Pages : 9 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029875 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN AND DEVELOPMENT OF TAPIOCA STEM CUTTER

(51) International classification :A23L0019100000, A01G0022000000, A01D0011020000, C02F0103320000, A01G0022250000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT The world's three main potato crops are tapioca, potatoes, and sweet Potatoes. Widely cultivated in tropical and subtropical regions, cassava serves as A major source of energy in addition to being a staple food in many nations. Guangxi and Hainan have seen a substantial increase in cassava farming in recent Years. Mechanized planting will soon cover the gaps left by artificial cultivation Due to the rising expenses of agricultural labor and the increasing industrial Demand for cassava. Additionally, mechanizing cassava growing helps save Costs, ensure quality, and increase hardening production. Bud cutting is the most Important step in the process and the best way to determine if the cassava Combination planter's design is satisfactory. This design's quality can have an Impact on the rate at which cassava seed buds are damaged, which in turn affects. The plantation's survival rate. In this project, an effective cassava bud cutting Machine to be introduced which replace conventional process.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029876 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : FABRICATION OF SOLAR POWERED SEED AND FERTILIZER BROADCASTER

(51) International classification :A01C0007080000, C08F0218080000, C05D0009020000, F21Y0115100000, C08F0008440000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT A solar-powered device has been developed that can help farmers distribute seeds and fertilizer more effectively and sustainably. The device, which was designed to be powered by sunlight, captures energy from the sun through a solar panel and stores it in a battery. The energy is then used to power a motor that drives a system for dispensing fertilizer and seeds. This system ensures that the seeds and fertilizer are evenly spread throughout the field. Additionally, a control system regulates the motor's activity to ensure that the correct rates of fertilizer and seed are used. The prototype has been successfully constructed and tested, with performance measures such as operational range, energy efficiency, and precision in the distribution of fertilizer and seeds analysed. The device has the potential to provide significant environmental and economic benefits.

No. of Pages : 8 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029877 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : STABILIZATION OF BANANA TREE USING TRIPOD SUPPORT SYSTEM

(51) International classification :E04H0009020000, G06Q0040000000, A61B0005050000, E04H0013000000, C08K0005170000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT Banana tree bracing system using a strong steel stand makes the plant stable and gives good yield. Cost effective and reusable tripod stand can be the answer for the problems regarding stabilization of the banana tree. This system consists of a high graded stainless steel that is stronger and long life. It is the proposed solution for the present problems facing by the farmers in the field and also to overcome the problems addressed by using the traditional methods. So, the method of stabilization of a banana tree using steel rods in arbor brace method is considered as the suitable and effective method. The main advantage of the suggested method is the reusability. To date, there has been very little research evaluating the effectiveness of many different tree stabilization products. This stabilization system is more sophisticated than the old wire-in-garden hose technique.

No. of Pages : 11 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029878 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN AND FABRICATION OF BANANA SWORD SUCKER CUTTING MACHINE

(51) International classification :A01H0004000000, G06Q0010100000, B60T0017220000, A23L0019000000, H04N0005740000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

ABSTRACT Banana sword sucker was removed by the manual process by which work is done. It is a time-consuming process too. Banana is the fourth most important fruit crop, in the world as well as in India. In vitro propagation of bananas provided excellent advantages, including a high multiplication rate, physiological uniformity and the availability of disease-free material all-round the year, faster growth in the earlier stages in comparison with conventional plants. The banana bud removal machine which can adapt to different types of fields was designed in this project work is done, it can not only cut the bud but also broke its root. It works with highly efficient and have the great work for the workers. It is the low- cost operation machinery, and it require minimum maintenance during operation. Furtherly, in order to reduce the probability of accidentally injuring the main stem during the machine operating, the banana bud removal controller was designed too.

No. of Pages : 8 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029888 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN ELECTROCHEMICAL CELL AND A MANUFACTURING METHOD THEREOF

(51) International classification :C02F0001460000, C25B0009730000, C25B0009190000, C25B0011031000, C09K0011060000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT AN ELECTROCHEMICAL CELL AND A MANUFACTURING METHOD THEREOF The present disclosure relates to an electrochemical cell (100) comprising of housing with two compartments. The first compartment (105) contains a cathode (106) and the second compartment (110) contains an anode (111). Both compartments are filled with electrolytes and separated by a membrane (115) that permits ion flow, enabling the electrochemical reaction when electric energy is applied between the cathode and anode. Each compartment features gas inlet ports (120A, 120B) to intake gas and gas outlet ports (125A, 125B) for gas release, for enhancing infusion. These elements optimize ion exchange, crucial for efficient cell operation.

No. of Pages : 31 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029914 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AUTOMATIC SENSOR DRAINAGE DEVICE FOR POST-OPERATIVE SURGICAL NURSING

(51) International classification :A61M0001000000, H04L0069329000, H04L0009400000, A61M0003020000, H02B0001280000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)senthil Address of Applicant :117 Andippalayam Mariyamman koil street, Vanamadavi Post, Kattumannar Koil ----- 2)Dr. Prof shabana Azmi Malik 3)Ms. Priya S 4)N. SASI 5)Ms. Kavipriya. K 6)Mr.Ashutosh Sharma 7). Madhurima. D 8)Dr Shagun Agarwal 9)Ms.Swati Patanwal 10)Mrs.Anitha M, Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.Senthil T Address of Applicant :117 Andippalayam, Mamangalayam Mariyamman koil street, 608701 Kattumannar Koil ----- -----

(57) Abstract :

The Automatic Sensor drainage box is technological medical equipment designed for surgical nursing. It features a hinged storage battery, a drainage box, a box door, and a pressure reducer. The device's four-part design allows for a negative pressure environment to be established and maintained throughout treatment. The box's body, door, and initial handle arrangement make operation simple and quick. The drainage box also allows the patient's wound to drain constantly. The Automatic Sensor drainage box can accommodate various medical devices designed for drainage. The box's body can be easily altered for easy drainage use. After the drainage procedure, the contents can be removed using a pipe and a sealed cap. This innovative model offers numerous benefits for surgical nurses, including the ability to accommodate a wide range of medical devices and the ability to evacuate contents using a pipe and a sealed cap.

No. of Pages : 10 No. of Claims : 2

(54) Title of the invention : SURFACE MODIFIED BINDER FOR DRY ELECTRODE COMPOSITE AND PREPARATIONS THEREOF

(51) International classification :H01M0004040000, H01M0004620000, H01M0010052500, H01M0010052000, H01M0004360000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to :NA Application Number :NA Filing Date :NA (62) Divisional to :NA Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)OLA ELECTRIC MOBILITY LIMITED Address of Applicant :Regent Insignia, #414, 3rd Floor, 4th Block, 17th Main, 100 Feet Road Koramangala, Bangalore, Karnataka 560034, India ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)P, Elamathi Address of Applicant :Regent Insignia, #414, 3rd Floor, 4th Block, 17th Main, 100 Feet Road, Koramangala, Bengaluru, Karnataka 560034, India ----- 2)K, Thirukumaran Address of Applicant :Regent Insignia, #414, 3rd Floor, 4th Block, 17th Main, 100 Feet Road, Koramangala, Bengaluru, Karnataka 560034, India ----- 3)P, Gurunathan Address of Applicant :Regent Insignia, #414, 3rd Floor, 4th Block, 17th Main, 100 Feet Road, Koramangala, Bengaluru, Karnataka 560034, India -----

(57) Abstract :

ABSTRACT SURFACE MODIFIED BINDER FOR DRY ELECTRODE COMPOSITE AND PREPARATIONS THEREOF The present disclosure provides a dry electrode composite for use in electrochemical cells. The composite comprises a thiamine modified fluorinated fibrillating binder; an adhesive binder, an active material, and a conductive carbon. The thiamine modified fluorinated fibrillating binder includes a fluorinated fibrillating binder and a thiamine compound. The adhesive binder, active material, and conductive carbon are mixed to form a mixture, to which the fluorinated fibrillating binder and thiamine compound are added. The resulting composite can be processed into a film and laminated onto a 10 current collector. The composite can be used to form an anode in an electrochemical cell, which also includes a cathode and an electrolyte. 31

No. of Pages : 36 No. of Claims : 19

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029937 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AUTOMATED FOOTREST POSITIONING IN A TWO-WHEELER

(51) International classification :A61G0005120000, G05D0001080000, G08B0021020000, B62J0045400000, F04D0027020000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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4)VISHNU, Gopal

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(57) Abstract :

ABSTRACT AUTOMATED FOOTREST POSITIONING IN A TWO-WHEELER A footrest positioning apparatus 100 for a two wheeled vehicle is described. The apparatus comprises a control unit to determine a change in mode of driving of the two-wheeled vehicle, a curved rail 114 affixed to a frame 102 connected to a chassis of the vehicle and an actuator to be 5 actuated to change a position of a footrest 110 of the vehicle. The curved rail comprises a guide slot 116 along a length of the curved rail. The actuator is mounted on the frame and connected to a slotted block 106 which moves in response to an actuation of actuator configured to be actuated by the control unit based on the determination of change in mode 10 of driving. Footrest is connected to curved rail via a connecting slot 108 formed in slotted block such that footrest is slidable along the guide slot with respect to a movement of slotted block.

No. of Pages : 16 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029945 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM FOR EVALUATING ENTREPRENEURIAL SUCCESS PROBABILITY AND METHOD THEREOF

(51) International classification :H04W0080040000, B25J0009160000, G06T0005000000, H04L0012180000, G06Q0010040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT: Title: System for Evaluating Entrepreneurial Success Probability and Method Thereof The present disclosure proposes a system (100) for evaluating the success or failure of an entrepreneurial endeavour. The system for evaluating entrepreneurial success probability comprises a computing device (102) having a processor (104) and a memory (106) for storing one or more instructions executable by the processor (104). In one embodiment herein, the processor (104) is configured to execute plurality of modules (108) for performing operations. The plurality of modules (108) comprises a registration module (110), a designating module (112), an assigning module (114), a determination module (116) and a score generation module (118). The proposed system (100) provides a structured approach for assessing entrepreneurial ventures. The proposed system (100) considers multiple factors affecting success. The proposed system (100) offers a quantitative score for decision-making.

No. of Pages : 16 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :12/04/2024

(21) Application No.202441029946 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A DIAGNOSIS KIT AND METHOD FOR PREDICTION OF POST-SURGICAL OUTCOMES IN FOCAL CORTICAL DYSPLASIA

(51) International classification :A61B0005000000, A61P0025080000, A61P0025000000, C12Q0001688300, G06N0005040000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. Sujatha Peela Address of Applicant :Senior Professor, Department of Biotechnology, Dr. B. R. Ambedkar University, Etcherla, Srikakulam-532410, Andhra Pradesh, India Srikakulam ----- - ----- 2)Dr. Pradeep Madhamanchi 3)Dr. P.S.P. Dhanunjay Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Sujatha Peela Address of Applicant :Senior Professor, Department of Biotechnology, Dr. B. R. Ambedkar University, Etcherla, Srikakulam-532410, Andhra Pradesh, India Srikakulam ----- - ----- 2)Dr. Pradeep Madhamanchi Address of Applicant :Research Scholar, Department of Biotechnology, Dr. B. R. Ambedkar University, Etcherla, Srikakulam-532410, Andhra Pradesh, India Srikakulam ----- - ----- 3)Dr. P.S.P. Dhanunjay Address of Applicant :Professor, Department of Biotechnology, Janapriya Abodes, 1-4-945 to 950/514, Block- 2, Gandhi Nagar, Hyderabad-500080, Telangana, India Hyderabad ----- - -----

(57) Abstract :

ABSTRACT: Title: A Diagnosis Kit and Method for Prediction of Post-Surgical Outcomes in Focal Cortical Dysplasia The present disclosure proposes a diagnosis kit and method for prediction of post-surgical outcome in a patient with medically intractable epilepsy (MIE) caused by focal cortical dysplasia (FCD). The diagnosis kit focuses on role of CD44 and FAT receptors in post-surgical FCD-MIE patients. The diagnosis kit utilizes well-established molecular biology techniques, making it user-friendly and adaptable to a wider range of clinical settings compared to expensive electrophysiology equipment. The cost-effective diagnosis kit increases accessibility for patients and healthcare providers. The diagnosis kit analyses expression and splicing patterns of CD44 and FAT receptors, thereby provides insights into molecular mechanisms underlying post-surgical seizure recurrence.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/04/2024

(21) Application No.202441029951 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SKIN CANCER DETECTION USING CCDC –HYBRID NEURAL NETWORK

(51) International classification :G06N0003040000, G06N0020000000, G06N0003080000, G06T0007000000, A61B0005318000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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3)Mr.R.Vimal, KIT-Kalaignar Karunanidhi Institute of Technology

4)Mr.M.Harrish, KIT-Kalaignar Karunanidhi Institute of Technology

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(57) Abstract :

Skin cancer affects around 8000 people annually, making it crucial to identify skin types for curing. Machine learning is essential for this, and a platform providing stock images for pre-processing and identifying skin defects is needed. This study uses HNN and 3D-CNN and RNN combinations to identify the most effective algorithms for image processing. The HAM10000 dataset was used for preprocessing and classification, importing over 1000 raw images from the Human Against Machine dataset.

No. of Pages : 11 No. of Claims : 3

(54) Title of the invention : AROMATHERAPY EYE PILLOW - A PILLOW MADE WITH COTTON FABRIC OUTER COVER AND FILLED WITH AROMATIC MATERIALS FOR PROVIDING RELAXATION AND STRESS EASE EFFECT FOR HUMAN EYES.

(51) International classification :A61K0009000000, A61F0007000000, A61M0021000000, A61F0007020000, A47G0009100000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The Aromatherapy Eye Pillow is a therapeutic device to promote relaxation and alleviate stress through the synergistic effects of aromatherapy and gentle eye pressure. This innovative pillow features a soft fabric cover filled with a blend of natural herbs, dried flowers, dried leaves renowned for calming properties. Additionally, dried seeds are filled to provide gentle weight and pressure on the eyes..To experience the therapeutic benefits of the Aromatherapy Eye Pillow, individuals place it over eyes and take deep breaths, allowing the soothing scent of the herbs to promote relaxation. The gentle pressure exerted by the pillow helps alleviate tension and fatigue in the eye area, providing relief from strains like prolonged screen exposure. The eye pillow can be heated for a warm relaxation sensation or chilled for a refreshing cold compress, catering to individual preferences. The removable and washable outer cover allows easy cleaning and maintenance, ensuring hygiene and freshness.

No. of Pages : 9 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029967 A

(19) INDIA

(22) Date of filing of Application :13/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHOD AND SYSTEM FOR CULTURAL DIVERSITY TRAINING IN THE WORKPLACE

(51) International classification :G06Q0010060000, G09B0005020000, G09B0007040000, G06Q0050200000, A63F0013470000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(72)Name of Inventor :

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(57) Abstract :

The present invention discloses a method and system for cultural diversity training in the workplace, aimed at enhancing understanding, appreciation, and effective navigation of cultural diversity within organizational settings. Through interactive modules, virtual simulations, and personalized learning pathways, the invention facilitates comprehensive cultural competence development among employees. By integrating multimedia content, real-world scenarios, and adaptive assessments, the training program promotes active engagement, practical application, and continuous improvement. Performance metrics and analytics provide valuable insights for evaluating training effectiveness and driving strategic decision-making regarding diversity and inclusion initiatives. Overall, the method and system offer a dynamic and immersive approach to fostering a more inclusive and harmonious work environment.

Accompanied Drawing [FIGS. 1-2]

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029968 A

(19) INDIA

(22) Date of filing of Application :13/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : MATHEMATICAL FRAMEWORK FOR PREDICTIVE ANALYTICS IN HEALTHCARE SYSTEMS

(51) International classification :G06N0020000000, G06K0009620000, G16H0050200000, G16H0020100000, G16H0040200000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :Professor, Department of Information Science and Engineering, NMAM Institute of Technology (NITTE Deemed to be University), Nitte, Karkala, Udupi District, Karnataka, Pincode 574110, India -----

(57) Abstract :

The present invention introduces a ground-breaking Mathematical Framework for Predictive Analytics in Healthcare Systems. This framework pioneers a comprehensive approach to leveraging advanced mathematical techniques and machine learning algorithms for analyzing vast healthcare datasets and making accurate predictions of various clinical outcomes. By integrating data pre-processing, feature selection, model training, evaluation, and interpretability, the framework offers a robust foundation for enhancing patient care, optimizing resource allocation, and improving decision-making processes in healthcare settings. With its scalability, adaptability, and focus on improving patient outcomes, this innovative framework represents a significant advancement in predictive analytics and has the potential to revolutionize healthcare delivery and management. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/04/2024

(21) Application No.202441029969 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : OBJECT DETECTION USING LIDAR SENSOR FOR IMPROVING ROAD SAFETY

(51) International classification :G01S0017931000, G01S0007481000, G08G0001160000, G01S0017860000, G06F0009445000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT To improve road safety, the goal of this project is to design an object detection system that makes use of a TF Mini 2D single point Lidar sensor. In order to minimize accidents and enhance overall road safety, the system is made to detect objects or impediments on the road in real-time and provide drivers with vital information. The system's main parts are the TF Mini 2D Lidar sensor, an Arduino Uno board for control and data processing, an LCD display for visual feedback, and an auditory buzzer for alarms. The Lidar sensor is installed on a car and works by constantly scanning the surroundings to find anything that fall within its detection range. The Arduino Uno processes the Lidar data when detecting an object, causing the LCD display and buzzer to provide visual and aural alarms. The system is made to be small, affordable, and simple to install on a range of automobiles. The system architecture, hardware configuration, software implementation, and testing protocols are all covered in depth

No. of Pages : 6 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029970 A

(19) INDIA

(22) Date of filing of Application :13/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DISEASE DETECTION AND CLASSIFICATION IN CHRYSANTHEMUM FLOWERS USING DEEP LEARNING APPROACH

(51) International classification	:G06N0003040000, G06N0003080000, A61K0036287000, G06N0003020000, C23F0011173000	(71)Name of Applicant : 1)P.E.S College of Engineering Address of Applicant :Mandya, Pin code: 571 401, Karnataka, India -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
(61) Patent of Addition to Application Number	:NA	1)Ms. Srujana B J
Filing Date	:NA	Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, P.E.S College of Engineering, Mandya-571 401, Karnataka, India -----
(62) Divisional to Application Number	:NA	2)Dr. Vinay S
Filing Date	:NA	Address of Applicant :Professor, Department of Computer Science and Engineering, P.E.S College of Engineering, Mandya-571 401, Karnataka, India -----

(57) Abstract :

[01] Chrysanthemum farming faces numerous growth factors, including environmental conditions, nutrient adaptation, and resistance to diseases like white rust. Healthy chrysanthemums not only overcome these challenges but also yield significant income for farm owners. White rust disease is particularly problematic worldwide, causing leaves to yellow, burn, and fall prematurely, thus affecting photosynthesis and flower appearance. In Korea, white rust is prevalent during spring and autumn, exacerbated by temperature fluctuations and poor ventilation. To combat this, deep neural networks were employed for plant health assessment. Utilizing a Raspberry Pi 3 module, four neural network models (DenseNet-121, ResNet-50, VGG-19, and MobileNet v2) were tested. The process involved data collection, partitioning, feature extraction, engineering, and prediction modeling. MobileNet v2 exhibited the highest accuracy (>98%), precision, and recall. DenseNet-121 followed closely with 97% accuracy, while ResNet-50 and VGG-19 achieved 95% and 94%, respectively. Using the Raspberry Pi 3 module, all models demonstrated over 91% accuracy, with MobileNet v2 leading at 97%. This system offers cost-effective and efficient white rust detection, aiding in disease prevention and maximizing floral production. In conclusion, deploying the Raspberry Pi 3 module with MobileNet v2 presents a promising solution for chrysanthemum farmers to detect white rust, safeguard plant health, and enhance yields economically. Accompanied Drawing [FIG. 1] [FIG. 2][FIG. 3] [FIG. 4] [FIG. 5][FIG. 6]

No. of Pages : 27 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441029971 A

(19) INDIA

(22) Date of filing of Application :13/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DEVELOPMENT OF BLOCKCHAIN & MACHINE LEARNING BASED GOVERNANCE MODELS ENHANCING CORRUPTION-TRANSPARENCY

(51) International classification	:G06N0020000000, H04L0009320000, G06Q0050260000, G06Q0020380000, G06Q0010060000	(71)Name of Applicant : 1)Dr. Malladi Srinivas Address of Applicant :Professor, Department of Computer Science and Engineering, Koneru Lakshmaiah Education Foundation, Greenfields, Vaddeswaram, Guntur, Andhra Pradesh, India ----- 2)Prof. Sunil Kr Pandey 3)Prince Sood 4)Menaka C N 5)Spoorthi M Name of Applicant : NA Address of Applicant : NA
(86) International Application No	:NA	(72)Name of Inventor : 1)Dr. Malladi Srinivas Address of Applicant :Professor, Department of Computer Science and Engineering, Koneru Lakshmaiah Education Foundation, Greenfields, Vaddeswaram, Guntur, Andhra Pradesh, India -----
(87) International Publication No	: NA	2)Prof. Sunil Kr Pandey Address of Applicant :Professor, Department of Information Technology, Institute of Technology & Science, Ghaziabad, Uttar Pradesh, India -----
(61) Patent of Addition to Application Number	:NA	3)Prince Sood Address of Applicant :Assistant Professor, Departure of Computer Science & Engineering, Swami Vivekanand Institute of Engineering and Technology, Ramnagar, Punjab, India -----
(62) Divisional to Application Number	:NA	4)Menaka C N Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, City Engineering College, Bangalore, India -----
Filing Date	:NA	5)Spoorthi M Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, City Engineering College, Bangalore, India -----

(57) Abstract :

The present invention relates, more particularly, to a novel governance model syncretizing the potentiality brought forward by blockchain technology and machine learning (ML) to ameliorate transparency and reduce corruption within several governance frameworks. A new decentralized blockchain network features advanced ML algorithms to set up unyielding and transparent immovable systems of public record-keeping in decision-making and financial transactions. Another feature of blockchain sure to be there is that all governance actions get recorded into a tamper-proof ledger, providing a visible audit trail. This would guard against corrupt practices, for the manipulation of data is a far-off possibility. It relies on machine-learning algorithms that process enormous amounts of data relating to governance in real-time, detect patterns, predict potential risks for corruption, and advise in the end measures that would avert the corruption eventuality. This further does not just make governance effective and accountable but also is able to help in developing a strong element of public trust, knowing very well that such decisions are always made with an objective, data-driven insight in place. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 21 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/04/2024

(21) Application No.202441029987 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SMART TEMPERATURE DEPENDENT COOLING SYSTEM FOR SOLAR PANEL

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(51) International classification	:G16Y10/35, G16Y40/30, H02S40/30, H02S40/42	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The proposed system is designed with the aim to make an automated temperature-based cooling arrangement for the Solar Panels using Arduino Uno/ Nano. The goal is to lower the operating temperature of PV modules, to increase PV output efficiency due to operation at lower temperatures. This system will shorten the payback period of the investment and increase the longevity of the Solar Panels. The Arduino helps in functioning of the cooling system guided by the code to make it completely automated and hence lead to better energy saving. This system when integrated with IoT helps in better operation management and freedom of control from anywhere. This system is smart as it operates automatically, managing all year weather variations. The objective of the system is to enhance the efficiency of solar panel by maintaining their temperature within the optimal range. The Arduino micro controller receives temperature reading from the sensor and based on the measured temperature, the micro controller determines whether the cooling is required or not and MCU will help to control the fan and to monitor the temperature remotely. When the temperature exceeds a predefined threshold, the micro controller triggers a motor drives module to switch ON the fan which is connected to a CPU. The motor driver control the speed of the fan based on temperature. The fan placed strategically near the solar panel that creates an airflow which helps to dissipate the heat from the solar panel surface. It periodically checks the temperature and controls the fan accordingly.

No. of Pages : 15 No. of Claims : 1

(54) Title of the invention : SECUREBIGDATA: AN AI-ENABLED BLOCKCHAIN FRAMEWORK FOR BIG DATA ANALYTICS WITH ENHANCED CYBERSECURITY

(51) International classification:G06N0020000000, G06F0021620000, H04L0009320000, H04L0009060000, G06F0021310000 (86) International Application No:NA Filing Date:NA (87) International Publication No: NA (61) Patent of Addition to Application Number:NA Filing Date:NA (62) Divisional to Application Number:NA Filing Date:NA		(71)Name of Applicant : 1)Dr. Jayathi M G Address of Applicant :Professor, Department of Computer Science and Engineering, Cambridge Institute of Technology, Bangalore, Karnataka, Pincode: 560036, India ----- 2)Mrs. Sridevi K N 3)Dr. Preethi S 4)Dr. Bharani B R 5)Dr. Suma R 6)Dr. Manjunatha S 7)Dr. Sandeep Kumar 8)Dr. Manjunath KV Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Jayathi M G Address of Applicant :Professor, Department of Computer Science and Engineering, Cambridge Institute of Technology, Bangalore, Karnataka, Pincode: 560036, India ----- 2)Mrs. Sridevi K N Address of Applicant :Assistant Professor, Department of Information Science and Engineering, VEMANA institute of Technology, Bangalore, Karnataka, Pincode: 560034, India ----- 3)Dr. Preethi S Address of Applicant :Professor, Department of Information Science and Engineering, Cambridge Institute of Technology, Bangalore, Karnataka, Pincode: 560036, India ----- 4)Dr. Bharani B R Address of Applicant :Associate Professor, Department of Information Science and Engineering, Cambridge Institute of Technology, Bangalore, Karnataka, Pincode: 560036, India ----- 5)Dr. Suma R Address of Applicant :Associate Professor, Department of Computer Science and Engineering, T.John Institute of Technology, Bangalore, Karnataka, Pincode: 560083, India ----- 6)Dr. Manjunatha S Address of Applicant :Associate Professor, Department of Computer Science and Engineering, Cambridge Institute of Technology, Bangalore, Karnataka, Pincode: 560036, India ----- 7)Dr. Sandeep Kumar Address of Applicant :Professor, Department of Computer Science and Engineering, Cambridge Institute of Technology, Bangalore, Karnataka, Pincode: 560036, India ----- 8)Dr. Manjunath KV Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Presidency University, Bangalore, Karnataka, Pincode: 560064, India -----

(57) Abstract :
SecureBigData is an innovative framework that enhances cybersecurity in big data analytics through the integration of artificial intelligence (AI) and blockchain technology. This framework provides a secure, immutable blockchain network for logging all data transactions, coupled with an AI-enabled analytics engine that optimizes data processing and performs real-time threat detection and response. By combining these technologies, SecureBigData ensures a high level of data integrity, security, and privacy, making it a critical solution for industries facing significant data security and privacy challenges. This system offers a robust approach to safeguarding sensitive information and maintaining operational efficiency in the face of evolving cyber threats. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/04/2024

(21) Application No.202441029991 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AUTOMATED IMAGE RECOGNITION USING CONVOLUTIONAL NEURAL NETWORKS

(51) International classification :G06N0003040000, G06K0009620000, G06N0003080000, G06F0016583000, G06F0016580000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

This invention pertains to an automated image recognition system utilizing convolutional neural networks (CNNs) to enhance accuracy and efficiency in processing and analyzing images. The system is designed with an advanced neural network architecture that incorporates unique layers and training methodologies, specifically optimized for rapid and accurate image analysis. This technology is adaptable to various applications, including but not limited to, facial recognition, autonomous vehicle navigation, and medical diagnostics. The novel use of specific convolutional and pooling layers, combined with a unique training algorithm, allows the system to achieve high levels of recognition accuracy even under varying environmental conditions. The system is characterized by its ability to learn continuously from new data, thereby improving its performance over time without human intervention.

Accompanied Drawing [FIGS. 1-2]

No. of Pages : 16 No. of Claims : 10

(54) Title of the invention : METHOD AND SYSTEM FOR BIDIRECTIONAL LSTM MODELING FOR SOLUBILITY PREDICTION FROM MOLECULAR SMILES

(51) International classification :G06N0003040000, G06N0003080000, G16C0020700000, G06N0020000000, G06N0005040000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Andhra University Address of Applicant :Andhra University, Waltair, Visakhapatnam-530003, Andhra Pradesh, India ----- - Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Kalidindi Venkateswara Rao Address of Applicant :Research Scholar, Department of Computer Science and Systems Engineering, Andhra University, Visakhapatnam, Andhra Pradesh - 530003, India ----- -- 2)Dr. Kunjam Nageswara Rao Address of Applicant :Professor, Department of Computer Science and Systems Engineering, Andhra University, Visakhapatnam, Andhra Pradesh - 530003, India ----- 3)Dr. G. Sita Ratnam Address of Applicant :Professor, Department of Computer Science and Engineering, Chaitanya Engineering College, Visakhapatnam, Andhra Pradesh, India ----- 4)P. Mohan Rao Address of Applicant :Research Scholar, Department of Computer Science and Systems Engineering, Andhra University, Visakhapatnam, Andhra Pradesh - 530003, India ----- --

(57) Abstract :
The present invention discloses a method and system for solubility prediction in drug discovery using Bidirectional Long Short-Term Memory (Bi-LSTM) modeling from molecular Simplified Molecular Input Line Entry System (SMILES) representations. Traditional methods for solubility prediction are time-consuming and costly. Leveraging machine learning techniques, our approach encodes molecular structures into SMILES strings, trains Bi-LSTM models on datasets containing SMILES-encoded molecules, and predicts solubility with superior accuracy. The Bi-LSTM architecture processes input sequences bidirectionally, capturing contextual information effectively. Model parameters are optimized to minimize prediction errors, and validation against established datasets demonstrates superior performance compared to traditional methods. Our innovation offers a streamlined and efficient solution for solubility prediction in drug discovery, potentially expediting the development of safer and more effective medications. Accompanied Drawing [FIGS. 1-3]

No. of Pages : 18 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/04/2024

(21) Application No.202441029993 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : MOBILE ANTI-THEFT DEVICE

(51) International classification :G08B0013140000, G08B0013240000, G06F0021570000, G06F0008200000, G06Q0020100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :

The Mobile Anti-Theft Tracking System introduces an innovative approach to enhancing mobile device security by integrating a specialized smart case equipped with advanced hardware and software components. Key elements include a battery, antenna, and NodeMCU utilizing Blynk IoT. Operating on motion detection capabilities, using an IR sensor to detect motion, triggering alerts upon unauthorized handling of the device. These alerts notify designated emergency contacts and provide real-time tracking information. To empower users with control and mitigate false alarms, a manual switch is integrated into the case, enabling users to deactivate the anti-theft feature as needed. Additionally, the system incorporates a buzzer, further enhancing its functionality. This solution effectively balances security and user convenience, offering an efficient means of safeguarding mobile devices from theft while ensuring uninterrupted usability. With its comprehensive features and design, the Mobile Anti-Theft device establishes a new benchmark for mobile security solutions.

No. of Pages : 21 No. of Claims : 6

(54) Title of the invention : HYBRID MULTI-KEYWORD SEARCH INDEXING SCHEME FOR LARGE CLOUD DATABASES EMPLOYING INTEGRITY VERIFICATION AND MULTI-USER ACCESS CONTROL FRAMEWORK

(51) International classification :G06F0021620000, G06F0021600000, H04L0009320000, G06F0016280000, G06F0021640000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

We present a Hybrid Multi-Keyword Search Indexing Scheme (HMKSI) paired with an Integrity Verification and Multi-User Access Control Framework (IV-MUACF) tailored for large-scale cloud databases. HMKSI combines trie-based and inverted indexing to optimize query processing and multi-keyword searches. IV-MUACF ensures secure, multi-user access through cryptographic methods and granular access controls, safeguarding data integrity and confidentiality. Our experiments confirm the scalability and efficacy of this approach in enabling efficient searches while maintaining robust security in cloud database systems.

No. of Pages : 10 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/04/2024

(21) Application No.202441030000 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ATM THEFT PREVENTING SYSTEM

(51) International classification :G07F0019000000, B60R0025102000, G08B0015020000, G08B0025100000, G01M0013045000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The Idea of ATM theft preventing system is born with the observation in our real-life incidents happening around us. This project deals with prevention of ATM theft from robbery. We came up with an idea that, whenever robbery occurs, accelerometer sensor and microphone sensor will detect the vibration and movement in the ATM machine. Whenever they detect vibrations beep sound will occur from the buzzer, outside the ATM to cause awareness of public. A message will be sent to nearby police station by using GSM Technology and an automatic door closing mechanism will be there, the door will be automatically closed and a gas spraying mechanism by using any motor, which sprays any unharmed gas such as dimethoxyethane(DME) on the thief so that he will be in unconscious state for some time and we can caught the thief. We will use Arduino programming.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/04/2024

(21) Application No.202441030006 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : CROP RECOMMENDATION SYSTEM FOR PRECISION AGRICULTURE USING MACHINE LEARNING AND IOT

(51) International classification :G06Q0050020000, G06N0020000000, C05G0001000000, A01G0025160000, C05D0009000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Jana Bhaskara rao Address of Applicant :Department of ECE Anil Neerukonda Institute of Technology & Sciences ----- 2)Anil Neerukonda Institute of Technology & Sciences 3)Mohan Kumar Devireddy 4)Kovvuri Harsha Vardhan 5)GEDDADA AMAN NISTCHAL 6)P Samitha Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Jana Bhaskara rao Address of Applicant :Department of ECE Anil Neerukonda Institute of Technology & Sciences ----- 2)Mohan Kumar Devireddy Address of Applicant :44-15-81/1/FF, Srinivasa nagar, Thatichetlapalem, Visakhapatnam Visakhapatnam ----- 3)Kovvuri Harsha Vardhan Address of Applicant :36-2-7, Gangannagar,kancharapalem, visakhapatnam Visakhapatnam --- 4)GEDDADA AMAN NISTCHAL Address of Applicant :G-204, Happy Homes, opp. Old ITI junction, Kancharapalem, visakhapatnam Visakhapatnam ----- 5)P Samitha Address of Applicant :DNo 308 2nd floor SK Residence Koppaka Anakapalli Visakhapatnam - ----- 6)A Lakshmi Narayana Address of Applicant :Anil Neerukonda Institute of Technology & Sciences Visakhapatnam --- ----- 7)A Siva Kumar Address of Applicant :Anil Neerukonda Institute of Technology & Sciences Visakhapatnam --- ----- 8)B Ch Kiran Patrudu Address of Applicant :Anil Neerukonda Institute of Technology & Sciences Visakhapatnam --- ----- 9)P Devi Pradeep Address of Applicant :Anil Neerukonda Institute of Technology & Sciences Visakhapatnam --- ----- 10)Lakkimsetti K N V Srinivas Address of Applicant :Dept. of EEE, Anil Neerukonda Institute of Technology & Sciences, Sangivalasa Visakhapatnam -----

(57) Abstract :

Agriculture is the pillar of the country's economy. In India agriculture holds an incredibly predominant position in the expansion of our country's financial system. The production of crops affects the economy of a country to a great extent. Farmers, due to lack of their knowledge about different soil contents and environment conditions, do not opt the exact crop for nurturing, which results into a major hinder in crop production. However, climate change has begun to affect crop yields badly. The process of manually predicting the choice of the right crop/s of land has, more often than not, resulted in failure. Accurate crop prediction results in increased crop production. To eliminate this barrier, we have provided a system which offers a scientific approach to assist farmers in predicting the ample crops to be cultivated based on different parameters which affects the overall production. This is where machine learning playing a crucial role in the area of crop prediction. It also suggests them about several deficiencies of nutrients in the soil to produce a specific crop. We used the pre-defined crop dataset which include parameters like temperature, NPK (Nitrogen, Phosphorous, Potassium) levels, rainfall, pH, and humidity for specific crops and applied K-Nearest Neighbors (KNN) ML technique helps to recommend crops with high accuracy and efficiency. This model helps to minimize the use of excessive fertilizers in soil so as to maximize productivity. The proposed model consists of phases, such as data collection using IoT sensors from cultivation lands, and then pre-processing and periodic analysis of it using K-Nearest Neighbors (KNN) ML technique. In this project we have a robot car with a device it consists three components such as Node MCU, Soil moisture Sensor with comparator, DHT11 sensor the device can be dipped into soil for collecting the data from the cultivation lands and the data will be stored in a datasheet, then the data will be given to the ML model it will recommend the best crop to be grown through a GUI assistant via voice signal. Hence, it can be supportive for farmers to be furthermore extra versatile. This reduces the wrong choice on a crop and increase in productivity.

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/04/2024

(21) Application No.202441030008 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SOLDIER HEALTH MONITORING AND POSITION TRACKING SYSTEM

(51) International classification :A61B0005000000, G16H0050200000, A61B0005110000, H04L0043100000, A61B0005010000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Soldiers are experiencing several challenges while communicating with the control room and obtaining critical medical attention at the appropriate time and location. The Soldier Health Monitoring and Position Tracking System serves as a critical tool for enhancing soldier safety. The proposed device uses GPS to monitor their current position and is made up of sensors that can be worn on the body that are used to monitor health conditions (Temperature, Oxygen level, Heartbeat). The data in our system can be transmitted in two ways- • GSM module • Zigbee transceivers. Data will be sent to the control room when the soldier is in an emergency or critical health condition. Received data can be monitored through a secure web page containing login ID and password by the officers in the control room. Additionally, the power consumption in the soldier's kit can be overcome by solar panel.

No. of Pages : 16 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030016 A

(19) INDIA

(22) Date of filing of Application :13/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SEMI-AUTOMATIC VOICE COMPARISON APPROACH USING SPIKING NEURAL NETWORK FOR FORENSICS

(51) International classification :G06N0003040000, G06N0003080000, G06N0003063000, C07K0016280000, G10L0025180000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)KRUTHIKA S.G. Address of Applicant :RESEARCH SCHOLAR, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, S.J. COLLEGE OF ENGINEERING, JSS SCIENCE AND TECHNOLOGY UNIVERSITY, MYSORE, KARNATAKA, INDIA. Mysore ----- 2)DR. TRISILADEVI C. NAGAVI 3)DR. MAHESHA P. Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)KRUTHIKA S.G. Address of Applicant :RESEARCH SCHOLAR, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, S.J. COLLEGE OF ENGINEERING, JSS SCIENCE AND TECHNOLOGY UNIVERSITY, MYSORE, KARNATAKA, INDIA. Mysore ----- 2)DR. TRISILADEVI C. NAGAVI Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, S.J. COLLEGE OF ENGINEERING, JSS SCIENCE AND TECHNOLOGY UNIVERSITY, MYSORE, KARNATAKA, INDIA. Mysore ----- 3)DR. MAHESHA P. Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING, S.J. COLLEGE OF ENGINEERING, JSS SCIENCE AND TECHNOLOGY UNIVERSITY, MYSORE, KARNATAKA, INDIA. Mysore -----

(57) Abstract :

Semi-automatic voice comparison approach using spiking neural network for forensics is the proposed invention. The invention explores the use of a semi-automatic approach, specifically SNN for FVC. Traditional methods of FVC often involve manual work, which is time-consuming and subjective. However, the semi-automatic approach integrates machine learning and deep learning with human expertise to expedite the process and reduce bias. The SNN, designed to mimic the human brain's processing capabilities, excel at analysing temporal information, making them well-suited for voice analysis. The experimental results presented in the research work invention demonstrate the effectiveness of the SNN-based semi-automatic approach for FVC.

No. of Pages : 25 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030026 A

(19) INDIA

(22) Date of filing of Application :13/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SWEET SAVOURY AND A PROCESS FOR ITS PREPARATION

(51) International classification :A61P0003040000, A61P0009000000, A23L0033135000, A23L0033210000, A23L0033000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :

ABSTRACT A SWEET SAVOURY AND A PROCESS FOR ITS PREPARATION The present disclosure relates to a sweet savoury and the process of its preparation. The present disclosure is a nutria-rich millet savoury. It provides high nutritional content, thus a healthy snack for children and adults. It is a good supplement for therapeutic conditions like diabetes, cardiovascular diseases, obesity, and gut health. The present disclosure helps to achieve and maintain normal body weight and keeps the gut healthy. The process of the present disclosure is simple and economical.

No. of Pages : 25 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030027 A

(19) INDIA

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(54) Title of the invention : A SYSTEM AND A METHOD FOR DETECTING UNDERWATER OBJECTS

(51) International classification :G06N0003040000, G06N0003080000, B63C0011480000, G08B0013196000, G01V0001380000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(57) Abstract :

ABSTRACT A SYSTEM AND A METHOD FOR DETECTING UNDERWATER OBJECTS The present disclosure envisages a system (100) for detecting underwater objects (102). The system (100) comprises a remotely operated vehicle (104), equipped with an underwater visual sensor (106), configured to detect one or more underwater objects (102) in semi-ellipse and parabola patterns, wherein the sensor (106) is further configured to generate images corresponding to the detection of the underwater objects (102), a processor (108) configured to receive the generated images corresponding to the detection of the underwater objects (102) and further configured to analyse the images to identify an object of interest by employing a neural network model, and a display (110) configured to stream the object of interest in real-time in the semi-ellipse and parabola patterns.

No. of Pages : 35 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030028 A

(19) INDIA

(22) Date of filing of Application :13/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A COMPUTING SYSTEM AND A METHOD FOR MANAGING BATCH PROCESSING OF JOBS

(51) International classification :G06F0009480000, G06F0009500000, G06Q0030020000, G06F0011140000, G06F0030200000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

ABSTRACT A COMPUTING SYSTEM AND A METHOD FOR MANAGING BATCH PROCESSING OF JOBS The present disclosure discloses a computing system(100) and a method(200) for managing batch processing of jobs. The system(100) comprises a computing module(102) to calculate a fairness ratio for each job based on predetermined criteria, and determine a time quantum (time slice) for each job that specifies a maximum allowable execution time in a processing cycle; a processing module(104) to execute said jobs, said processing module(104) sorts the jobs into a prioritized queue based on the calculated fairness ratios and executes each job in the queue; a monitoring module(106) to track said execution of the jobs within the processing module(104), identify the expiration of the time quantum for each job, and determine the presence of remaining jobs in the queue; said computing module(102) to update attributes of the jobs in the queue based on their execution status as identified by the monitoring module(106).

No. of Pages : 24 No. of Claims : 10

(54) Title of the invention : A SYSTEM AND A METHOD FOR MULTILINGUAL FAKE NEWS DETECTION IN MULTIMODAL INFORMATION

(51) International classification	:G06F0016951000, G06N0020000000, G06F0016350000, G06F0016953500, G06F0040580000	(71)Name of Applicant : 1)SRM UNIVERSITY Address of Applicant :Amaravati, Mangalagiri, Andhra Pradesh-522502, India Guntur -----
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(57) Abstract :
ABSTRACT A SYSTEM AND A METHOD FOR MULTILINGUAL FAKE NEWS DETECTION IN MULTIMODAL INFORMATION The present disclosure envisages a system (100) and a method (600) for multilingual fake news detection in multimodal information. The system (100) comprises a data storage device (102), and a microprocessor (104) coupled to the data storage device (102). The system (100) further comprises a data collection module (106) to receive user input encompassing multilingual news articles, a language detection module (108) to detect the language of the user input, a categorization module (110) to extract a category of the user input, a search module (112) to search relevant news articles, a web crawler module (114) to gather multilingual multimodal data, a multimodal data processing module (116) to separate the multilingual multimodal data, a caption generation module (118) to generate textual captions, a textual data processing module (120) to generate multilingual embeddings, an evaluation module (122) to assess the authenticity of the news articles, and a classification module (124) to classify the news articles as fake, partially fake, or real.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/04/2024

(21) Application No.202441030052 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : THE ROLE OF EMOTIONAL SELF-REGULATION IN DETERMINING TEACHERS' STRESS LEVELS IN HIGHER EDUCATION

(51) International classification :G09B0019000000, A61B0005160000, A61B0005000000, G09B0005020000, G09B0007020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The invention relates to a system and method for addressing stress levels among educators in higher education through data-driven insights and personalized interventions. By integrating advanced analytics techniques with psychological principles, the system predicts teachers' stress levels and delivers tailored interventions to enhance emotional self-regulation. Through features such as physiological feedback integration and social support networks, the invention empowers educators to proactively manage stress and foster a supportive academic environment, ultimately promoting teacher well-being and enhancing the quality of education in higher education settings.

No. of Pages : 15 No. of Claims : 4

(54) Title of the invention : DEEP LEARNING APPROACHES FOR ASSESSING THE EFFECTIVENESS OF TEACHERS IN HIGHER EDUCATION

(51) International classification :G06Q0050200000, G09B0007020000, G09B0007000000, G06Q0010060000, G06N0003080000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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(57) Abstract :
The invention relates to a system and method for assessing the effectiveness of teachers in higher education using advanced deep learning techniques. Traditional methods of teacher evaluation in higher education often rely on subjective measures, which may lack objectivity and fail to capture the complexity of teaching practices. In contrast, the proposed system integrates diverse data sources, including student performance metrics, classroom observations, and instructional materials, to provide a comprehensive assessment of teaching effectiveness. Central to the invention are sophisticated deep learning algorithms, which analyze the integrated data to extract meaningful insights regarding teaching practices and student outcomes. The system offers an intuitive user interface for educators and administrators to access assessment results and personalized recommendations for professional development. Furthermore, the invention's scalability and efficiency enable higher education institutions to conduct comprehensive teacher assessments at scale, fostering a culture of continuous improvement in teaching quality. Overall, the invention represents a significant advancement in the field of educational assessment, offering a data-driven approach to teacher evaluation that has the potential to enhance teaching practices and improve student learning outcomes in higher education.

No. of Pages : 18 No. of Claims : 9

(54) Title of the invention : INTEGRATION OF MEMORY-RELIANT LEARNING TECHNIQUES FOR COMPREHENSIVE EVALUATION AND FORECASTING OF AIR QUALITY IN INDIA

(51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date	:G06N0003040000, G06N0020000000, G06N0005040000, G06N0003080000, G01N0033000000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)Murugan Mageswari Address of Applicant :Professor, Department of Civil, Panimalar Engineering College, Varadharajapuram, Nazarethpettai, Poonamallee, Chennai ----- 2)P. ELAVENI Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Murugan Mageswari Address of Applicant :Professor, Department of Civil, Panimalar Engineering College, Varadharajapuram, Nazarethpettai, Poonamallee, Chennai ----- 2)P. ELAVENI Address of Applicant :Assistant Professor, Department of ECE, St. Joseph's College of Engineering, OMR, Semmencherry, Chennai Chennai -----

(57) Abstract :

Air quality degradation poses significant health and environmental challenges in India, necessitating effective evaluation and forecasting methods. This study proposes an integration of memory-reliant learning techniques for comprehensive assessment and prediction of air quality parameters across various regions in India. Leveraging historical air quality data spanning several years, a novel framework is developed, combining long short-term memory (LSTM) networks with convolutional neural networks (CNN) to capture temporal and spatial dependencies effectively. Through meticulous validation using comprehensive multi-pollutant datasets covering various pollutants such as particulate matter (PM2.5, PM10), nitrogen dioxide (NO2), sulfur dioxide (SO2), and ozone (O3), we demonstrate the superior predictive performance of our proposed framework compared to conventional forecasting methods. Moreover, our analysis goes beyond mere prediction by delving into the intricate interplay between meteorological factors and air quality fluctuations, offering invaluable insights for the formulation and implementation of targeted pollution mitigation strategies. Utilizing data from monitoring stations, satellite imagery, and various sources, advanced data analytics techniques, including machine learning algorithms, are employed to develop a predictive model. Historical pollution data and meteorological parameters serve as inputs to train the model, aiming to forecast pollution levels across different Indian regions over specific timeframes. The abstract concludes by underscoring the model's potential applications, emphasizing its utility in informing policymakers, urban planners, and environmental agencies. Such models can facilitate informed decision-making, aid in implementing effective pollution control measures, and optimize resource allocation for air quality management, ultimately contributing to mitigating air pollution's adverse effects.

No. of Pages : 10 No. of Claims : 2

(54) Title of the invention : EXPLORING THE MICROBIAL RESISTANCE TO TITANIUM OXIDE NANOPARTICLES

(51) International classification :C12Q0001180000, A61K0009510000, A61P0031040000, A61P0031000000, A61K0033240000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(57) Abstract :
The proposed invention presents a comprehensive exploration of microbial resistance mechanisms to titanium oxide nanoparticles (TiO2 NPs) and endeavors to enhance the efficacy of TiO2 NPs as antimicrobial agents. Utilizing advanced genomics, proteomics, and nanotechnology, this innovative approach seeks to elucidate the molecular pathways underlying microbial resistance at the nanoscale. Environmental modulation of pH, temperature, and organic matter content is investigated to optimize TiO2 NP antimicrobial activity. Novel formulations of TiO2 NPs with tailored physicochemical properties are developed to improve stability and effectiveness across diverse applications. Targeted delivery systems are designed to minimize cytotoxicity and off-target effects, while ecosystem impact assessments guide sustainable antimicrobial intervention development. Screening methods for identifying microbial susceptibility and resistance inform selection of optimal candidates for therapy and surveillance. Real-time monitoring systems track resistance dynamics, guiding adaptive strategies. Automated high-throughput screening platforms accelerate nanoparticle formulation discovery. A centralized database facilitates collaboration and knowledge exchange in antimicrobial research. This invention promises transformative solutions for combatting microbial infections and advancing nanoparticle-based therapies.

No. of Pages : 18 No. of Claims : 10

(54) Title of the invention : A DEEP LEARNING APPROACH FOR ENHANCED EXPIRY DATE DETECTION IN PHARMACEUTICAL QUALITY ASSURANCE

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(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
The proposed invention introduces a deep learning-based system for enhanced expiry date detection in pharmaceutical quality assurance. Leveraging advanced neural network algorithms, the system automates the process of identifying and verifying expiry dates on pharmaceutical product packaging, thereby improving efficiency and accuracy while reducing reliance on manual inspection methods. Through iterative training on diverse datasets of annotated pharmaceutical packaging images, the system learns to recognize expiry date labels amidst complex visual backgrounds and varying packaging formats. Advanced image processing techniques further enhance the system's ability to detect expiry dates under challenging conditions. Once deployed in production environments, the system operates autonomously, seamlessly integrating into existing quality assurance workflows and facilitating proactive measures to rectify labeling errors or discrepancies. Beyond its immediate applications in pharmaceutical manufacturing, the proposed system holds broader implications for regulatory compliance, anti-counterfeiting efforts, inventory management, and patient safety, contributing to the advancement of healthcare quality and safety standards.

No. of Pages : 23 No. of Claims : 10

(54) Title of the invention : MECHANICAL TRANSFORMATION FROM IC ENGINE TO ELECTRIC VEHICLE

(51) International classification :B60L0008000000, B60K0006460000, B60L0015200000, B60L0050600000, B60K0016000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(57) Abstract :

In place of a traditional internal combustion engine, electric motors and controllers power an electric vehicle's propulsion system. Batteries, not a carbon-based fuel, are the source of power. In addition to saving money, this also reduces environmental effect significantly. Additionally, it has several benefits over traditional internal combustion engines, such as reduced local pollutants and improved energy efficiency. A number of factors, such as the high price tag, limited availability of charging stations, and technological constraints with batteries, are preventing the widespread use of electric cars. We will be building an electric car using BLDC motor and lead-acid batteries as part of our project.

No. of Pages : 9 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/04/2024

(21) Application No.202441030066 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SMART AGRICULTURE SOLUTION INCORPORATING AI AND IOT SENSORS

(51) International classification :G06Q0050020000, A01K0029000000, H04L0067120000, H04W0004700000, A01G0009240000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The agricultural sector is vital for human survival, yet challenges like harsh environmental conditions and pest infestations often lead to significant losses. To address this, integrating advanced technologies like advanced sensors with the Internet of Things (IoT) could boost agricultural production and reduce economic losses. Global studies have shown the positive impact of IoT-integrated smart sensors in monitoring crucial environmental factors such as moisture, humidity, temperature, and soil composition, all vital for crop growth. Automated sensors also track greenhouse gases like Carbon dioxide and Methane. Smart farming facilitates nitrogen level measurements in soil, aiding farmers in determining fertilizer quantities accurately. Additionally, IoT devices and drones enhance pest surveillance and disease monitoring in crops. Despite its potential, smart farming faces challenges like high implementation costs, data security concerns, and farmers' limited digital literacy. Addressing these through economic policies, robust data encryption, and digital education can pave the way for widespread adoption of IoT-enabled smart farming.

No. of Pages : 24 No. of Claims : 10

(54) Title of the invention : ADVANCE TECHNIQUES FOR RAILWAY COLLISION AVOIDANCE SYSTEMS

(51) International classification :G06N0020000000, G06K0009620000, B61L0023040000, B61L0025080000, G06N0005020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Murugan Mageswari Address of Applicant :Professor, Department of Civil, Panimalar Engineering College, Varadharajapuram, Nazarethpettai, Poonamallee, Chennai ----- 2)S. DEVIPRIYA Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Murugan Mageswari Address of Applicant :Professor, Department of Civil, Panimalar Engineering College, Varadharajapuram, Nazarethpettai, Poonamallee, Chennai ----- 2)S. DEVIPRIYA Address of Applicant :Assistant Professor, Department of ECE, St. Joseph's College of Engineering, OMR, Semmencherry, Chennai Chennai -----

(57) Abstract :
ABSTRACT In the intricate world of railway operations, the singular focus on safety and reliability is a constant pursuit. This work introduces a pioneering strategy aimed at preventing the potentially catastrophic scenarios of train collisions on the same track, heralding a significant leap forward in railway safety. The innovative approach combines the precision and sensitivity of vibration sensors with the keen vigilance of a camera-based signal light monitoring system to create a formidable collision avoidance system. Traditional collision avoidance systems often operate on reactive measures, responding to incidents after they occur. However, this project endeavors to shift the paradigm towards proactive prevention. By integrating advanced sensor technologies and intelligent decision-making algorithms, the system becomes more than a reactive guardian; it becomes an anticipatory sentinel of safety. What sets this system apart is its intelligence. The decision-making algorithms are designed to not just react to predefined scenarios but to learn and adapt. Machine learning algorithms analyze historical data and continuously refine their predictive models. This means the system becomes more adept at recognizing patterns and foreseeing potential risks, enhancing its efficacy over time. Beyond its immediate safety benefits, this work also represents a significant step towards the future of railway operations. The seamless integration of advanced sensors and intelligent algorithms promises to not only prevent collisions but also optimize train schedules and routes. By reducing the likelihood of delays caused by accidents, the system contributes to the overall efficiency of the railway network. In conclusion, this work is more than a collision avoidance system; it is a testament to the potential of innovative technology and intelligent automation in ensuring the safety and efficiency of railway operations. By embracing proactive prevention and harnessing the power of real-time data analysis, it sets a new standard for railway safety.

No. of Pages : 13 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030069 A

(19) INDIA

(22) Date of filing of Application :14/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ENHANCEMENT OF MECHANICAL PROPERTIES OF NANO CLAY REINFORCED FACE SHEETS AND ALUMINIUM HONEYCOMB CORE SANDWICH PANELS

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(51) International classification	:B32B0003120000, G01N0003080000, G01N0003420000, E04C0002040000, E04C0002296000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

This patent application offers a thorough process intended to improve the mechanical qualities of sandwich panels with an aluminium honeycomb core by strategically integrating nano clay. The process consists of a number of carefully carried out processes, starting with the accurate cutting of the materials into samples with predetermined measurements. After that, these samples go through a series of demanding tests to see how well they function under various mechanical pressures. In order to measure the material's resistance to bending, edgewise compression tests are used to evaluate its compressive properties in a direction parallel to the sandwich face sheet; flexural tests are used to gauge the material's resistance to bending; impact tests are used to determine the material's resilience against sudden shocks; and moisture absorption tests are used to evaluate the material's resistance to water infiltration. The outcomes of these experiments show that adding nano clay to the materials significantly improves their mechanical properties. More specifically, notable gains in impact, flexural, and tensile strength are seen, indicating improved structural robustness and load-bearing capability. In addition, the sandwich panels' flexural strength and edge compression show significant improvements due to the addition of nano clay, which strengthens their structural integrity even more. Furthermore, the materials show improved resistance to water absorption, which can be attributed to the nano clay reinforcement promoting interfacial bonding. These results highlight how well the suggested approach works to improve the mechanical performance of sandwich panels and face sheets, which bodes well for a variety of industries that need strong but lightweight structural materials. This invention has the potential to greatly improve structural lifespan, performance, and dependability across a range of engineering and building applications.

No. of Pages : 8 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/04/2024

(21) Application No.202441030096 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SMART CAR SHED SYSTEM FOR PREVENTING RODENT INFESTATION IN VEHICLES

(51) International classification :G06Q0010060000, A01M0029180000, G08G0001140000, A61B0090000000, C09D0007650000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

Rodent infestation in vehicles poses a significant challenge for car owners, leading to damage to wiring, insulation, and other essential components, resulting in costly repairs. This mini project proposes a novel solution to this problem through the development of a Rodent Repellent Car Protector. The system aims to deter rodents from accessing and nesting within vehicles by utilizing a combination of ultrasonic sound emissions, natural repellents, and physical barriers. The Rodent Repellent Car Protector presents a promising solution to mitigate the damages caused by rodent infestation in vehicles, offering car owners a cost-effective and environmentally friendly alternative to traditional pest control methods. Implementation of this system has the potential to significantly reduce maintenance costs associated with rodent-related damage and enhance the overall longevity and functionality of vehicles.

No. of Pages : 17 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :14/04/2024

(21) Application No.202441030097 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM AND METHOD OF AN INTEGRATED HYBRID BRAKING SYSTEM FOR VEHICLES

(51) International classification :B60T0013740000, H01L0021285000, B60T0008175500, B60T0008320000, B60T0013580000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)V V Arun Sankar Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 2)R Masilamani 3)V Divakar 4)C Gopikrishnan 5)K Harikarasudhan 6)C Praveen 7)Subramani N Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)V V Arun Sankar Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 2)R Masilamani Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 3)V Divakar Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 4)C Gopikrishnan Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 5)K Harikarasudhan Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 6)C Praveen Address of Applicant :III Year Student, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore ----- 7)Subramani N Address of Applicant :Assistant Professor, Department of Mechanical Engineering, Karpagam College of Engineering, Coimbatore – 641032, Tamil Nadu, India. Coimbatore -----

(57) Abstract :

The present invention discloses a novel hybrid braking system designed to enhance vehicle safety, efficiency, and performance by integrating electromagnetic braking technology with conventional friction-based braking mechanisms. The system incorporates electromagnets or permanent magnets strategically placed within the braking system to generate eddy currents within conductive materials, producing a braking force that complements the traditional friction-based braking. Advanced sensor technologies and control algorithms enable real-time monitoring of vehicle dynamics and braking conditions, allowing for seamless coordination between electromagnetic and conventional braking components. This integrated approach offers dynamic control and optimization of braking performance across various driving scenarios, including low-speed maneuvers, high-speed braking, and emergency stops.

No. of Pages : 21 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030103 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PORTABLE HOUSEHOLD IOT FOOD PROCESSING MACHINE INTEGRATES THE DETACHABLE COOKING STEP MODULES

(51) International classification :A47J0043040000, G06Q0030060000, F24C0007080000, A47J0036320000, G06F0003041000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

The present invention relates to the portable household IoT cooking appliance to prepare different dishes in home with less human interaction and save family time by allowing the integration of optional detachable modules that automate repeated food preparation steps like peeling, cleaning, cutting, grinding, and cooking. This Box type machine with multiple stacked rotating layers with detachable modules can loads raw vegetables, spices, oil, and water in the top layer. User can select recipes (preloaded, custom build, shared by other users- free or paid) and start cooking by button click on inbuilt Touch screen display or Mobile App (Remote) and watch the progress and camera out of cooking unit. It will perform cooking steps in different modules/layers and unload dish to final containers. This invention create platform for new business model by allowing vendors to build custom modules and create/share paid recipes by users.

No. of Pages : 30 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030104 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A WIRELESS SURFACE-INDEPENDENT MULTI-FUNCTION GLOVE MOUSE & KEYBOARD

(51) International classification :G06F0003035400, G06F0003010000, G06F0003038000, G06F0003048830, G06F0016951000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The Gesture-Controlled Mouse Device and Method is a breakthrough advancement in the field of human-computer interaction. With its unique combination of Bluetooth connectivity, flex sensors, and gyro sensors, this sophisticated mouse goes beyond the constraints of a conventional user experience. Its ability to precisely monitor hand movements and raise cursor control is truly remarkable. Beyond mere convenience, this designed product is evidence of a true commitment to user-centric design. At its core, the device harnesses gyro sensors, flex sensors, and a microcontroller, imbuing them with the power to decode the sensor calibration of finger angles, thereby redefining the mapping of keyboard keys. To further elevate the user experience, a classification machine learning model is woven into its fabric providing effortless and seamless interactions. It takes on the function of an internal mouse, skillfully carrying out common tasks such as clicks and exploring the world of gesture-driven trackpad functions that adjust to the individual demands of the user. Fundamentally, the gadget uses a microcontroller, flex sensors, and gyro sensors to give users the ability to interpret the subtleties of finger angles and redefine how keyboard keys are mapped. This innovative approach not only improves user comfort but also opens new possibilities for inclusive and natural human-computer interaction.

No. of Pages : 10 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030105 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : WIRELESS GRASS CUTTER

(51) International classification :G06N0020000000, A01D0101000000, H04L0041120000, A01D0034730000, G16H0040670000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The wireless grass cutter system offers a modern solution to the disadvantages of labor-intensive lawn maintenance by integrating an Arduino microcontroller for centralized control, and coordinating the operation of gear motors for precise movement and cutting actions. Bluetooth connectivity enables remote operation via smart phones, while safety features like emergency stop functionality ensure user safety. Operating within a voltage range of 5V to 12V, the system adapts to various terrains and lighting conditions, delivering efficient and uniform grass-cutting results. Its user-friendly interface and efficient cutting action provide a convenient alternative to labor-intensive methods, reducing reliance on manual labor and enhancing the overall user experience. Additionally, the system's ability to operate wirelessly eliminates the need for physical exertion and time-consuming manual labor, allowing users to maintain their lawns with ease and efficiency.

No. of Pages : 12 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030109 A

(19) INDIA

(22) Date of filing of Application :12/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHODS TO REDUCE THE SCHOTTKY BARRIER HEIGHT AND THE CONTACT RESISTANCE IN MOS TRANSISTORS

(51) International classification :H01L0029660000, H01L0021285000, H01L0021768000, H01L0029872000, H01L0021020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

An embodiment herein provides a method for reducing n-type Schottky barrier height and contact resistance between a semiconductor substrate. The method includes integrating cap Ge layers between a semiconductor substrate and a contact metal. The semiconductor substrate includes SiGe and the contact metal selected from the group consisting of TiSiGe and TiSi₂. The method includes forming a layer of SiGe on top of the integrated cap Ge layers. The SiGe layer has a thickness of at least 20 – 25 Angstrom to prevent consumption of the cap Ge layers during subsequent thermal processes that includes silicidation or germanidation. The method includes depositing the contact metal on the SiGe layer to form a Schottky contact. FIG. 1

No. of Pages : 29 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030119 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT BASED AGRICULTURE ROBOT FOR SMART AGRICULTURE

(51) International classification :G05D0001000000, G05D0001020000, B25J0005000000, B25J0019000000, B25J0011000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Jana Bhaskara rao Address of Applicant :Department of ECE Anil Neerukonda Institute of Technology & Sciences ----- 2)M Pavan kumar 3)M Aashritha 4)L.krishna sri rama sandeep 5)B Sanjay bhargav 6)Anil Neerukonda Institute of Technology & Sciences Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Jana Bhaskara rao Address of Applicant :Department of ECE Anil Neerukonda Institute of Technology & Sciences ----- 2)M Pavan kumar Address of Applicant :32-12a,vishwabrahmin street,bobbili,vzm dist,andhra pradesh-535558 vizianagaram ----- 3)M Aashritha Address of Applicant :MIG 1/47, gullalapalem colony, srihariupuram , malkapuram post, vishakhapatnam visakhapatnam ----- 4)L.krishna sri rama sandeep Address of Applicant :maha lakshmi nagar road no:4 tadeappligudem ph o:6303726549 tadeapalligudem ----- 5)B Sanjay bhargav Address of Applicant :4-143 main road velma vaari veedhi seethanagaram vizianagaram andhra pradesh vizianagaram ----- 6)P Devi pradeep Address of Applicant :Dept. of ECE, Anil Neerukonda Institute of Technology & Sciences, Sangivalasa, Visakhapatnam Visakhapatnam ----- 7)A Lakhmi narayana Address of Applicant :Dept. of ECE, Anil Neerukonda Institute of Technology & Sciences, Sangivalasa, Visakhapatnam Visakhapatnam ----- 8)B Ch Kiran Patrudu Address of Applicant :Dept. of ECE, Anil Neerukonda Institute of Technology & Sciences, Sangivalasa, Visakhapatnam Visakhapatnam ----- 9)A Siva Kumar Address of Applicant :Dept. of ECE, Anil Neerukonda Institute of Technology & Sciences, Sangivalasa, Visakhapatnam Visakhapatnam -----

(57) Abstract :

The Indian economy heavily relies on agriculture, with farmers serving as the backbone of food production. Traditionally, farming practices involve human labour aided by bullock carts, tractors, and tillers. However, in the modern era, the agriculture sector faces challenges such as scarcity of labour, insufficient knowledge on testing and inefficient utilization of seeds and water resources. Due to this, interest has raised for the development of the autonomous vehicles like robots in the agriculture field. Robots are increasingly becoming vital in agriculture, offering autonomous solutions to enhance productivity. A robot called IOT based agriculture robot for smart agriculture has been designed to minimize the labour of farmers in addition to increasing the speed and accuracy of the work. The proposed system is designed with the multipurpose autonomous agriculture robotic vehicle which can be controlled through Bluetooth for ploughing, drilling, seeding for multiple cropping and irrigating the field, sow the seed in the desired depth. The project was tested on the field. The robot is successfully able to move in all the directions and performed all the required functionalities which are given above.

No. of Pages : 15 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :13/04/2024

(21) Application No.202441030122 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD AND SYSTEM FOR EFFICIENT KEY GENERATION IN CRYPTOGRAPHY USING ELLIPTIC CURVE TECHNIQUES

(51) International classification :H04L0009080000, H04L0009300000, H04L0009320000, G06F0007720000, G16B0020000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Exemplary embodiments of the present disclosure are directed towards a method and system for efficient key generation in cryptography using elliptic curve techniques, comprising: a cryptographic key generating module optimizes the generation and utilization of cryptographic keys through tailored key derivation functions, prioritizing reduced computational complexity. The cryptographic key generating module dynamically adapts elliptic curve parameters based on real-time environmental analysis, enhancing cryptographic performance across diverse computing environments. Furthermore, the accompanying cryptographic device is designed with specialized components and functionalities to facilitate secure communication and efficient elliptic curve operations, making it well-suited for resource-constrained devices and varying network conditions. The cryptographic key generating module represents a significant advancement in cryptographic techniques, delivering a secure, adaptable, and computationally efficient solution for key generation and secure communication. Fig. 1

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030125 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DEEP REINFORCEMENT LEARNING FRAMEWORK FOR AUTONOMOUS VEHICLES

(51) International classification :G05D0001020000, G05D0001000000, G06N0003080000, G06N0003040000, G06N0003000000

(86) International Application No :NA
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(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This invention introduces a sophisticated deep reinforcement learning framework specifically designed to enhance the performance and safety of autonomous vehicles. The framework integrates a novel combination of data collection, advanced learning algorithms, real-time decision-making processes, and a dynamic feedback system. It employs a unique architecture that allows the autonomous vehicle to continuously learn and adapt to diverse and changing environments. By leveraging real-time environmental data and historical driving data, the vehicle autonomously refines its driving strategies, improving its decision-making capabilities and adaptability to unforeseen situations. This results in a robust autonomous driving system that excels in various driving conditions, thereby significantly advancing the field of autonomous transportation. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 22 No. of Claims : 10

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(21) Application No.202441030129 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

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(54) Title of the invention : DEEP NEURAL NETWORK ARCHITECTURES FOR MULTI-MODAL IMAGE FUSION IN MEDICAL IMAGING

(51) International classification :G06N0003080000, G06N0003040000, G06T0007000000, A61B0006000000, A61B0005000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

The present invention proposes novel deep neural network architectures for multi-modal image fusion in medical imaging. Traditional methods for integrating information from different imaging modalities often rely on handcrafted features and heuristic rules, limiting their ability to fully exploit the rich information contained in medical images. In contrast, the proposed architectures leverage the representational power of deep learning to automatically learn hierarchical representations directly from data. By extracting features from multiple modalities and fusing them into a unified representation, the proposed architectures provide enhanced information for clinical decision-making, including improved lesion detection, segmentation, and classification. The modular design of the architectures allows for flexibility in incorporating different modalities and adapting to various medical imaging tasks. Experimental results demonstrate the effectiveness of the proposed approach in improving diagnostic accuracy and facilitating treatment planning in clinical settings. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 21 No. of Claims : 10

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(21) Application No.202441030130 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD FOR REMOTE MONITORING AND CONTROL OF AGRICULTURAL IRRIGATION

(51) International classification :A01G0025160000, G06Q0050020000, G06Q0010060000, A01G0025020000, A01G0022000000
(86) International Application No :NA
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(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
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Filing Date :NA

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(57) Abstract :
The present invention introduces a groundbreaking method for remotely monitoring and controlling agricultural irrigation systems, aiming to revolutionize farming practices. By harnessing advanced sensor technologies, robust communication protocols, and sophisticated data analytics, this method enables farmers to optimize water usage, enhance crop yield, and conserve resources with unprecedented efficiency. Through a centralized monitoring system and intuitive user interfaces, farmers can access real-time data, receive actionable insights, and remotely adjust irrigation parameters, thereby transforming traditional irrigation practices into a streamlined, data-driven process. This invention represents a significant advancement in agricultural technology, offering sustainable solutions to address water scarcity challenges and promote agricultural sustainability in the face of evolving environmental conditions. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 22 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030132 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : FIRE DETECTING USING IMAGE PROCESSING AND EXTINGUISHING USING CONTROLLABLE ROBOT

(51) International classification :G08B0017100000, G08B0017120000, G08B0017000000, G08B0017060000, A62C0003160000

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Filing Date :NA

(87) International Publication No : NA

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Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This project brings potential impact on fire detection and extinguishing by leveraging fast image processing with complex algorithms. Through integration with hardware control, it enables early fire detection and precise extinguishing. Utilizing the Jetson Nano processor, capable of processing 140 FPS with the Haar cascade classifier, ensures rapid and accurate fire detection, surpassing traditional sensor-based methods. The mobile robot receives fire detection data via serial communication from the Jetson Nano, enabling precise alignment towards the detected fire angle. Nodemcu controls the motors for extinguishing purposes. This technological framework not only enhances the speed and accuracy of fire detection but also streamlines the extinguishing process, marking a significant departure from traditional methods. The integration of fast computing algorithms with hardware control helps to save lives effectively in real time.

No. of Pages : 11 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030141 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AUTOMATED PROTECTED HEALTH INFORMATION (PHI) DE-IDENTIFICATION SYSTEM AND METHOD THEREOF

(51) International classification :G06F0021620000, G06N0003080000, G16H0010600000, G06N0003040000, G06N0020000000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

Disclosed herein is an automated protected health information (PHI) de-identification system (100) comprising a processing unit (108) configured to: train a deep learning model (110), on a dataset of scanned clinical document images, wherein the protected health information (PHI) has been manually labelled and categorized, utilize the trained deep learning model (110) to identify the structure of the scanned clinical document image, refine the identified structure of the scanned clinical document image, extract text from the refined structure of the scanned clinical document, identify protected health information (PHI) tokens within the extracted text, verify the identified protected health information (PHI) tokens. The system further comprises a memory unit (112) configured to store the trained deep learning model (110). The system further comprises a communication network (106) configured to: receive scanned clinical document images as input from a user device (102) or another network, transmit (108) de-identified scanned clinical document images or anonymized data back to the user device (102) or another network. The system further comprises a storage unit (114), preferably located on a cloud server (116) database, configured to store: the trained deep learning model (110), de-identified scanned clinical document images, the removed regions containing the verified protected health information (PHI) tokens.

No. of Pages : 36 No. of Claims : 10

(54) Title of the invention : INTEGRATION OF PHOTOVOLTAIC MODULES AND PELTIER MODULES FOR ENHANCED SOLAR PANEL EFFICIENCY

(51) International classification :F25B0021020000, H02S0020300000, H01L0031042000, F21S0009030000, H02S0050000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)KARTHIK.M Address of Applicant :ASSISTANT PROFESSOR DEPARTMENT OF MECHANICAL ENGINEERING, SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), SRI SHAKTHI NAGAR, L &- T BY - PASS, CHINNIYAMPALAYAM POST, COIMBATORE-641062. ----- 2)AKHILESH KRSNA.J 3)ADITYA.R 4)BIBIN.S 5)SELVAKUMAR.N Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)KARTHIK.M Address of Applicant :ASSISTANT PROFESSOR DEPARTMENT OF MECHANICAL ENGINEERING, SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), SRI SHAKTHI NAGAR, L 8- T BY - PASS, CHINNIYAMPALAYAM POST, COIMBATORE-641062. ----- 2)AKHILESH KRSNA.J Address of Applicant :UNDER GRADUATE STUDENT DEPARTMENT OF MECHANICAL ENGINEERING, SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), SRI SHAKTHI NAGAR. L &- T BY - PASS. CHINNIYAMPALAYAM POST, COIMBATORE-641062. ----- 3)ADITYA.R Address of Applicant :UNDER GRADUATE STUDENT DEPARTMENT OF MECHANICAL ENGINEERING, SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), SRI SHAKTHI NAGAR. L &- T BY - PASS. CHINNIYAMPALAYAM POST, COIMBATORE-641062. ----- 4)BIBIN.S Address of Applicant :UNDER GRADUATE STUDENT DEPARTMENT OF MECHANICAL ENGINEERING, SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), SRI SHAKTHI NAGAR. L &- T BY - PASS. CHINNIYAMPALAYAM POST, COIMBATORE-641062. ----- 5)SELVAKUMAR.N Address of Applicant :UNDER GRADUATE STUDENT DEPARTMENT OF MECHANICAL ENGINEERING, SRI SHAKTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY (AUTONOMOUS), SRI SHAKTHI NAGAR. L &- T BY - PASS. CHINNIYAMPALAYAM POST, COIMBATORE-641062. -----

(57) Abstract :

The present invention discloses a novel solar panel system that integrates photovoltaic modules and Peltier modules to enhance energy efficiency and power generation capacity. Traditional solar panels often experience reduced performance at elevated temperatures, leading to energy loss and decreased overall efficiency. By combining photovoltaic technology with thermoelectric cooling capabilities, the proposed system actively regulates the temperature of the PV cells, maintaining optimal operating conditions for maximum energy output. The Peltier modules, utilizing the Seebeck effect, efficiently convert heat energy into electrical energy; effectively cooling the solar panels and improving energy conversion rates. This innovative approach addresses the limitations of conventional solar panel systems by mitigating temperature-related power losses and ensuring consistent performance even in challenging environmental conditions. Additionally, the integration of Peltier modules offers a sustainable solution for enhancing solar energy generation, contributing to a more reliable and efficient renewable energy infrastructure. The system's control mechanism further enhances operational efficiency by dynamically adjusting the Peltier modules based on real-time temperature data: enabling continuous and optimized power generation. This invention represents a significant advancement in solar panel technology, offering improved energy efficiency: enhanced performance, and increased sustainability in solar power generation

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(21) Application No.202441030146 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : IMPACT OF DIGITAL EMPLOYEE ENGAGEMENT PRACTICES ON ORGANIZATIONAL PERFORMANCE IN SMES

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(86) International Application No	:NA	
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(62) Divisional to Application Number	:NA	
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(57) Abstract :
ABSTRACT Impact of digital employee engagement practices on organizational performance in SMEs Digital employee engagement refers to the use of various technology-based tools and strategies to increase employee involvement, motivation, and overall satisfaction in the workplace. In SMEs, where resources are often limited, adopting digital employee engagement practices can have a significant impact on organizational performance. This is because engaged employees are more likely to be productive, innovative, and committed to the success of the organization. By using digital platforms such as social media, online surveys, and virtual team-building activities, SMEs can improve communication and collaboration among employees, leading to increased efficiency and better decision-making processes. Furthermore, digital employee engagement practices allow for real-time feedback and data collection, providing SMEs with valuable insights into employee satisfaction and areas for improvement. This can lead to a better understanding of employee needs and the implementation of tailored initiatives to enhance their experience, ultimately impacting retention rates and reducing turnover costs. Moreover, digital employee engagement can foster a positive work culture, strengthening employee relationships and promoting a sense of belonging. This, in turn, can boost morale and motivation, leading to higher job satisfaction and overall performance. Overall, the impact of digital employee engagement practices on organizational performance in SMEs is undeniable. By using technology to engage employees, SMEs can create a more efficient, productive, and positive workplace, resulting in improved business outcomes and a competitive edge in the market.

No. of Pages : 11 No. of Claims : 6

(54) Title of the invention : MULTISTAGE SAND SEPARATOR AND FILTER

(51) International classification :B01D0045120000, E21B0043340000, B01D0036000000, B01D0021260000, C02F0101320000

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(57) Abstract :
The multi-stage sand separator and filter presented in this invention represents a significant advancement in the field of mechanical engineering and filtration technology. Traditional methods of sand separation in industrial settings have long been plagued by inefficiencies, labor intensiveness, and lack of precision. In response to these drawbacks, the innovative design of the multi-stage sand separator and filter offers a comprehensive solution that addresses the shortcomings of existing techniques. By incorporating a unique combination of rotary motion mechanism and multiple filters with varying mesh sizes, this invention enables the efficient and precise separation of sand particles based on their sizes. The rotary motion mechanism, powered by an electric motor, drives the sequential filtration process; ensuring continuous and effective sand separation. Additionally, the inclusion of advanced sieving technology enhances the accuracy of the separation process, resulting in superior quality output. Furthermore= the multi-stage sand separator and filter is equipped with a self-cleaning mechanism to maintain the filters' efficiency during operation, reducing downtime and enhancing overall productivity. This invention is not only a standalone solution but can also be seamlessly integrated into existing industrial sand separation systems, offering improved performance and cost-effectiveness. In conclusion, the multi-stage sand separator and filter sets a new standard for sand separation technology, providing industries with a reliable, efficient, and adaptable solution to meet their diverse sand separation requirements.

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(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030152 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : GENERATIVE AI SYSTEM FOR NATURAL LANGUAGE DIALOGUE GENERATION

(51) International classification :G06N0003040000, G06N0003080000, G06F0040350000, G10L0015220000, G06F0040300000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The proposed invention introduces a Generative AI System for Natural Language Dialogue Generation, leveraging transformer-based neural network architectures to produce contextually relevant and human-like dialogues. By training on extensive text data and incorporating advanced techniques in natural language understanding and dialogue management, the system dynamically adapts to diverse conversation scenarios, maintaining coherence and fluency across multi-turn dialogues. It prioritizes the generation of diverse and emotionally intelligent responses, addressing user concerns and fostering trust through responsible AI practices. With applications spanning virtual assistance, education, entertainment, and healthcare, the system represents a significant advancement in human-computer interaction, offering personalized and engaging interactions tailored to the needs and preferences of users. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030156 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : WIRELESS SENSOR NETWORK FOR DATA COLLECTION AND TRANSMISSION

(51) International classification :H04W0084180000, H04W0052020000, H04W0084200000, H04W0040020000, H04L0045480000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A wireless sensor network (102) for data collection and transmission is disclosed. The wireless sensor network (102) includes one or more base stations (105), one or more branch nodes (110-1, 110-2) communicatively coupled to the one or more base stations (105), and one or more leaf nodes (115-1, 115-2, 115-3, 115-4) communicatively coupled to the one or more branch nodes (110-1, 110-2). The one or more base stations (105), the one or more branch nodes (110-1, 110-2), and the one or more leaf nodes (115-1, 115-2, 115-3, 115-4) are configured for optimising energy consumption associated with at least: transmitting sensor data from a leaf node (115-1) to a branch node (110-1) with a predefined, and transmitting the sensor data from the branch node (110-1) to a base station (105) only when the sensor data is transmitted by the leaf node (115-1) and is received by the branch node (110-1).

No. of Pages : 42 No. of Claims : 24

(54) Title of the invention : EFFICIENT VLSI ARCHITECTURE FOR SOBEL EDGE DETECTION WITH KOGGE-STONE ADDER

(51) International classification :G06T0007130000, G06T0007181000, G06T0007120000, G06T0007000000, H04N0005140000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Mr. Y. Sri Chakrapani Address of Applicant :Research Scholar, Department of ECE, JNTU Kakinada, Kakinada, Andhra Pradesh. Kakinada ----- - ----- 2)Dr. N. Venkateswara Rao 3)Dr. M. Kamaraju Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr. Y. Sri Chakrapani Address of Applicant :Research Scholar, Department of ECE, JNTU Kakinada, Kakinada, Andhra Pradesh. Kakinada ----- - ----- 2)Dr. N. Venkateswara Rao Address of Applicant :Professor and Dean R&D, Department of ECE, Bapatla Engineering College, Bapatla, Andhra Pradesh. Bapatla ----- 3)Dr. M. Kamaraju Address of Applicant :Professor and Director (AS&A), Department of ECE, Seshadri Rao Gudlavalleru Engineering College, Gudlavalleru, Andhra Pradesh. Gudlavalleru ----- --- -----

(57) Abstract :
ABSTRACT Efficient VLSI Architecture for Sobel Edge Detection with Kogge-Stone Adder The present invention relates to a VLSI architecture designed for efficient Sobel edge detection utilizing Kogge-Stone Adder. Sobel edge detection plays a crucial role in image processing for object identification, with this architecture offering enhanced performance in terms of speed and power efficiency. The architecture involves the computation of horizontal and vertical gradients followed by the detection of edge pixels through threshold comparison. Key components include Kogge-Stone Adders, multiplexers, and 2’s Complementers, ensuring optimal processing of image data. The utilization of Kogge-Stone Adder minimizes carry computation delay and power dissipation, resulting in a high-speed and energy-efficient edge detection system.

No. of Pages : 21 No. of Claims : 5

(54) Title of the invention : A FORTIFIED FOOD WITH ANTI-DIABETIC ACTIVITY

(51) International classification :A61K0036590000, A61K0036810000, A61P0003100000, A61P0003020000, A23L0019000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

The invention involves the use of food as medicine. Our product is one-of-a-kind and will replace all commercially available breakfast goods such as corn flakes, choccos, and other nutritional drinks. Our invention relates to the preparation technique using the following edible items: de-oiled cooked ground nut cake, jack fruit pulp, corn, Tinospora cordifolia stem powder and Ashwagandha root powder. This protein and fibre-rich phytochemical powder can be used to treat nutritional deficiencies and diabetes of all age group. This composition can be used to make a wide range of functional meals, including flakes, biscuits, balls, and flavoured nutritional drinks. It is a vegetarian-based diet that can be substituted for breakfast and dinner in any age group. The diet was tested on hyperglycemic rats. Our invention clearly revealed that our food effectively controlled the blood sugar in diabetic rats.

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030168 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : STARCH MARKET DYNAMICS PLAYERS AND UNIQUE VALUE PROPOSITIONS

(51) International classification :G06Q0030020000, G06F0017180000, G16B0020400000, G06Q0010060000, A61B0005091000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention is a starch market dynamics: players and unique value propositions, examine the relationships between differentiation strategies, competitive intensity and company performance. It was also to estimate the effect of interaction terms of differentiation strategies and competitive intensity on company performance. Data were obtained from 100 respondents operators in the- Salem region through a structured questionnaire. The paths of the relationships were estimated and tested using simple percentage analysis. The findings suggest that differentiation strategies have a significant impact on company performance and that competitive intensity partially influence the performance of company. Competitive intensity was, however, found not to moderate the relationship between differentiation strategies and company performance. The study findings will greatly help employees of the sago industry to appreciate the critical contribution of competitive intensity and differentiation strategies in estimating the performance of company. The interactive terms of differentiation strategies and competitive analysis add to the divergent ways of measuring sago industry performance.

No. of Pages : 8 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030169 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : CUSTOMER FEEDBACK ANALYSIS TO IMPROVE PRODUCTS AND SERVICES

(51) International classification :G06Q0030020000, H04W0072120000, G01N0001200000, G01N0033000000, G06Q0030000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Customer feedback is the opinions of customers about products, services, websites, customer support, and businesses in general. A Sample design is definite.plan for obtaining a sample from a given population. It refers to the technical procedufes the research would adopt in selecting items for the sample, Le. the size of the sample' Simple random sampling is used. Under this sampling, every item ofthe universe has an equal chance ofinclusion in the sample. Sample size of the study is 100' Buyers who are happy with their purchases are more likely to recommend them to five or six other people' Conversely, unhappy clients are more likely to tell 10 other people about their negative experience.

No. of Pages : 8 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030178 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : REAL-TIME MONITORING AND ANALYSIS OF RAIN DATA FOR ENVIRONMENTAL MANAGEMENT USING IOT

(51) International classification :H04L0067120000, G01W0001140000, G16H0010600000, G06N0020000000, G06F0016245000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

Abstract The development of efficient methods for managing the environment now requires the continuous monitoring and analysis of rainfall data. Internet of Things (IoT) technology presents a great chance to improve the accuracy and efficiency of weather data gathering and processing. Using IoT technologies, it presents a system for tracking and analyzing rainfall data in real-time. A network of IoT sensors placed in key areas records rainfall data in real time. For analysis and processing, these sensors send data to a main server. By using advanced data analytics methods, we can extract useful information from the rain data, such as trends, patterns, and outliers. Environmental management decisions, such as those concerning agricultural planning, water resource management, and flood prediction, may be better informed with the use of these insights. Remote monitoring and control is also an option with this system, giving stakeholders easy access to analytics findings and real-time rain data. Environmental authorities and stakeholders may promote sustainable environmental management practices by proactively addressing the negative impacts of rainfall events using this approach.

No. of Pages : 16 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030179 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : HERBAL FORMULATION FOR DIABETIC WOUND INFECTIONS CAUSED BY MULTI DRUG RESISTANT BACTERIA

(51) International classification :A61K0009000000, A61K0009060000, A61K0036185000, A61K0036610000, A61K0036896200 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. M. Shailaja Raj Address of Applicant :Department of Microbiology, St. Francis College for Women, Street No. 6, Kundan bagh, Begumpet, Hyderabad, Telangana 500016 Hyderabad ----- ----- 2)Maria Shajan 3)Mithali Raj Marla Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. M. Shailaja Raj Address of Applicant :Department of Microbiology, St. Francis College for Women, Street No. 6, Kundan bagh, Begumpet, Hyderabad, Telangana 500016 Hyderabad ----- ----- 2)Maria Shajan Address of Applicant :Department of Microbiology, St. Francis College for Women, Street No. 6, Kundan bagh, Begumpet, Hyderabad, Telangana 500016 Hyderabad ----- ----- 3)Mithali Raj Marla Address of Applicant :8-2-293/82/A/1138, Road No. 58, Jubilee Hills, Hyderabad, 500033, Telangana Hyderabad ----- ----- ---

(57) Abstract :

ABSTRACT HERBAL FORMULATION FOR DIABETIC WOUND INFECTIONS CAUSED BY MULTI DRUG RESISTANT BACTERIA The present invention relates to a herbal formulation of a topical ointment for diabetic wound infections caused by multi drug resistant bacteria and its method of preparation. The formulation is combination of garlic extract and a plant mixture of pomegranate peel and guava leaves extract. The plant mixture is in a ratio of 3:1. The ointment prepared through this method is cost effective, environmentally friendly and combat multi-antibiotic-resistant bacteria in diabetic foot infections.

No. of Pages : 22 No. of Claims : 4

(54) Title of the invention : MOBILE ROBOT WITH INTERCHANGEABLE MACHINE LEARNING MODULES FOR VARIOUS TASKS

(51) International classification :G06N0020000000, G06N0003040000, B25J0009080000, G06Q0010060000, G06N0003000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
This invention revolutionists mobile robotics by introducing a system with interchangeable machine learning modules. Imagine a universal robot body that can swap brains for diverse tasks. The core lies in a mobile robot platform equipped with standard navigation, sensors, and actuators. The magic unfolds with interchangeable machine learning modules, each housing specialised algorithms pre-trained for specific tasks using machine learning. These tasks could encompass navigating complex environments, object recognition and manipulation, or data collection and analysis. Thg modules likely connect seamlessly to the platform through a standardised interface, enabling effortless attachment and communication wkh the robot's central processing unit. This modular approach offers a plethora of benefits. Firstly, versatility reigns supreme. A single robot platform transforms into a machine for various tasks by simply swapping modules) This eliminates the need for a fleet of dedicated robots, streamlining operations and significantly reducing costs. Businesses can effortlessly scale their robotic workforce; by adding more mobile platforms and corresponding machine learning modules as needed, fostering flexible adaptation to changing demands. Furthermore, This approach proves to be mugh more cost-effective compared to developing and maintaining a multitude of specialised robots. Moreover, as machine learning continues to ' evolve, hew modules can be developed to enhance the robot's capabilities without needing to ~replace the entire platform, future-proofing the technology and ensuring it stays relevant in the face of advancements. The potential applications for this invention are vast and trans formative across various industries. In the realm of .manufacturing, robots' can seamlessly switch between assembly, inspection, and material handling tasks by simply swapping modules. The world of logistics-can be revolutionized with robots that can navigate warehouses, identify and pick items, and manage inventory with different modules tailored for these specific needs. Agriculture can benefit tremendously from robots that can handle 5 planting, weeding, and harvesting with specific modules designed for the agricultural environment. The healthcare industry can le\\erage robots equipped with appropriate modules to assist in patient care, medication delivery, and data collection in hospitals. In essence, this invention has the potential to be a~game-changer, offering a single, adaptable robot'platform capable of tackling diverse tasks through interchangeable machine learning modules. By «LO improving efficiency, flexibility, and cost-effectiveness, this technology could significantly impact the future of robotics and usher in a new-era of automation across various industries.

No. of Pages : 12 No. of Claims : 10

(54) Title of the invention : IOT ENABLED MULTI STORAGE UNITS FOR OBJECT PRESENCE DETECTION

(51) International classification :G06Q0010080000, B67D0001080000, H04L0041063100, G06F0008300000, G06Q0010060000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

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(57) Abstract :

Followed by the increased demand of inventory management in industries, an IOT-based rack system has been developed. The system is built on the idea of realtime monitoring via an approachable computer-based dashboard. This is accomplished by incorporating Infrared (IR) sensors into each rack and connecting them to microcontrollers, preferably Arduino. The microcontroller processes the corresponding signals when these IR sensors detect changes in the contents of the rack. The output of the IR sensor is transmitted to the microcontroller as a _ microcontroller input. The output from the microcontroller is then translated to signal of the relay receiving the response. LED lights has been positioned to indicate the placement of the objects. If the red light is on, it appears that the storage unit has been occupied; if the green light is on, it appears that the respective storage unit is yet to be occupied. In parallel, an Excel sheet is being operated upon by Python code that has been integrated with the microcontroller. Python code has been employed to integrate along with the dashboard. The dashboard allows to view an accurate update of the location of things over the internet.

No. of Pages : 14 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030199 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : BLOCK-CHAIN ENABLED TRANSPARENCY AND EFFICIENCY IN FRUIT AND VEGETABLE CULTIVATION:LEVERAGING THINGSPEAK FOR REAL-TIME DATA MONITORING AND CONSUMER EMPOWERMENT

(51) International classification :H04L0009320000, G06Q0030020000, H04N0007180000, G06Q0030060000, G06Q0010000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

We focus on enhancing transparency and efficiency in the cultivation and distribution of fruits and vegetables through innovative technological solutions. B ThingSpeak, real-time data reg humidity, y leveraging online platforms like arding crucial environmental conditions such as temperature, and soil health is collected from various sources. This data is securely stored and managed on a blockchain network, ensuring its reliability and accessibility to stakeholders. Registered consumers and retailers can conveniently access this information through QR code seaming, empowering them to make informed decisions about the produce they purchase. Ultimately, this system aims to foster trust and sustainability in the agricultural sector providing by reliable insights directly from the source.

No. of Pages : 7 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030201 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : CLASSIFICATION AND VALUE RECOGNITION OF DECENTRALIZED CCTV MONITORING AND MANAGEMENT SYSTEMS

(51) International classification :H04L0009320000, H04L0009060000, G06Q0050180000, G06F0021620000, G06F0021640000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Abstract The presented invention constitutes a comprehensive and innovative system addressing the vulnerabilities associated with the management and validation of CCTV footage within legal contexts. Leveraging cutting-edge technologies, including blockchain and the InterPlanetary File System (IPFS), the system extracts 30—minute video clips from CCTV cameras and securely stores them in a decentralized IPFS file system. Each video clip is assigned a unique hash code, capturing its distinct content signature, and the associated metadata is immutably recorded on a blockchain, ensuring tamper-resistant storage and providing a verifiable chain of custody for video evidence. To address privacy concerns, the system incorporates a selective encryption feature, allowing for the protection of sensitive information within video clips while maintaining overall system security. The tamper-proof nature of blockchain storage plays a crucial role during legal proceedings, where submitted evidence undergoes verification by comparing its hash code against the original hash code stored on the blockchain. In addition to these fundamental aspects, the invention introduces various innovative features such as decentralized sharing with access control, live previews, timestamp-based retrieval, and a secure communication platform. Tailored for both Government Officials (Law/Police) and Private Firms (Banks, Supply Chain Industries), the system offers a comprehensive and forward-thinking solution to enhance the trustworthiness of digital evidence within the dynamic landscape of surveillance and security. Overall, the invention provides a robust framework for the secure management, validation, and sharing of CCTV footage, contributing significantly to the credibility and reliability of video evidence in legal proceedings.

No. of Pages : 7 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030202 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN AND FABRICATION OF ELECTRICALLY OPERATED ONION BULB PLANTER CUM WEEDER

(51) International classification :G06Q0010060000, A01B0039180000, C05F0011080000, A01G0033000000, A01M0021040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The electrically operated onion bulb planter cum weeder is an innovative agricultural machine. It integrates precision planting and advanced weeding capabilities to streamline farming operations and enhance productivity. The device automates the planing process, ensuring accurate placement of onion bulbs at optimal depths and intervals, thereby promoting uniform growth and maximizing yields. Additionally, its integrated weeding system identifies and removes weeds, minimizing competition for nutrients and reducing the need for herbicides. This not only improves the overall health of the onion crop but also contributes to environmental sustainability. The electrically operated nature of the invention further enhances its efficiency and reduces carbon emissions, making it an environmentally friendly option for farmers. The electrically operated onion bulb planter cum weeder offers a comprehensive solution for optimizing onion cultivation practices, promising to revolutionize the way farmers approach farming tasks. The design and fabrication of the onion planter cum weeder offer a comprehensive solution for optimizing onion cultivation practices. Its innovative features and multifunctional capabilities promise to revolutionize farming tasks, ultimately leading to improved crop yields, reduced labor requirements. This innovation promises to revolutionize farming operations: reduce labor requirements: and promote environmental sustainability in onion cultivation: marking a significant advancement in agricultural technology with wide-ranging benefits for farmers and the environment.

No. of Pages : 9 No. of Claims : 8

(54) Title of the invention : SMARTTRUST CROWDFUND: A SERVICE PLATFORM GROUNDED IN SMART CONTRACTS FOR TRUST WORTHY FUNDRAISING

(51) International classification :G06Q0020100000, G06F0021600000, G06Q0020400000, G06Q0030020000, G06Q0010080000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The lack of transparency and accountability in existing NO 0 donation systems has led to ir utilization. To address challenges in verifying the genuineness of donations and tracking the these challenges, this paper proposes a SmartTrust CrowdFund system with Blockchain Technology. The system leverages blockchain technology to create a transparent, tamper— proof, and accountable platform for donation and Funds Usage tracking. It includes features such as donor and recipient verification through government entity approval. The proposed system utilizes the SHA algorithm and blockchain technology to ensure secure and transparent transactions. This system makes the recipient to submit the details of the fund 6 donors' By implementing this system, we can enhance usage in IPFS, making it visible to th tion processes within the NGO sector, ultimately trust, transparency, and efficiency in dona addressing the shortcomings of existing systems. Finally, our goal is '0 create a web application 'ha' provides a secured and transparent access.

No. of Pages : 7 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030204 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : BLOCKCHAIN-POWERED HEALTHCARE INSURANCE FRAUD DETECTION EXPEDITING INVESTIGATIONS, THWARTING FRAUD,

(51) International classification :G06Q0040080000, G06F0021640000, G06Q0020400000, G06N0020000000, H04L0009320000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
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(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The rapidly growing healthcare market makes robust fraud detection crucial. Traditional methods remain sluggish, leading to financial losses for individuals, institutions, and governments. This paper proposes a novel system leveraging blockchain technology to revolutionize healthcare insurance fraud detection. By analyzing claims data with advanced algorithms, the system can reduce investigation times by up to 50% and proactively detect diverse fraud patterns like billing anomalies and provider misconduct. Securely storing data on a blockchain ensures tamper-proof records and transparent tracking, strengthening trust and financial integrity in the healthcare system. We present a comprehensive taxonomy of health insurance security issues, detail the system architecture, and explore open challenges for widespread adoption. This revolutionary approach paves the way for a future of swift, secure, and efficient healthcare fraud prevention.

No. of Pages : 7 No. of Claims : 4

(54) Title of the invention : DECENTRALIZED ACADEMIC CREDENTIAL VALIDATION : A ROBUST FRAMEWORK INTEGRATING BLOCKCHAIN, IPFS, AND

(51) International classification :H04L0009320000, H04L0009080000, H04L0009060000, G06F0021640000, G06F0021600000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)KKR & KSR Institute of Technology and Sciences Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. 9014156267 principaljr@gmail.com ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mr. P. Aravind Address of Applicant :Assistant Professor Dept. of Computer Science and Engineering KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017 ----- 2)Dr. Chittineni Aruna Address of Applicant :Professor & head Administration Dept. of Computer Science and Engineering KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017 ----- 3)Mr. R. Ramesh Address of Applicant :Professor & head Dept. of Computer Science and Engineering KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017 ----- 4)Mr. Bathula Prasanna Kumar, Address of Applicant :Associate Professor Dept. of Computer Science and Engineering KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017 ----- 5)Emadabathuni Naga Sai Revanth Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017 ----- 6)Chandra Badarinath Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017 ----- 7)Goli Lalith Teja Bhaskar Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017 ----- 8)Benntaktula Revan Veera Chari Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017 -----

(57) Abstract :

Claim: ent in ensuring the confidentiality and 1. Secure key distribution, a critical component k. As we enter the digital age, the integrity (f transmitted information over a network vulnerabilities of traditional encryption methods are increasing, primarily due to our Conventional communication systems have faced many challenges related to security, reliability, availability and data tampering. 2' The decentralizmion emphasizes the distributed and non—reliant-on-single-authority nature of the system, promoting security and transparency. Academic Credential Validation clarifies the specific domain the framework applies to, verifying the and validity of academic credentials.robust highlights the system's strength, reliability, and ability to withstand challenges. lpfs technology is noted for its Decentralized storage and data accessibility features. Multi-Source Authentication underlines the verification of credentials from various sources, enhancing trust and authenticity reliabil'ny. 3. Decentralization offers a promising solution by It can be make sure that credentials like certificates passwords and to solve the problem to Verify academic credentials by using blockchain and IPFS technologies. Blockchain provides a secure and immutable record of students' academic data, such as fees, marks, and attendance. It also stores all the data in the block chain IPFS provides a safe and distributed storage of students certificates and documents. 4. The immutability of the blockchain ledger plays a crucial role in preventing unauthorized alterations to military records blockchain a highly secure communication channels, by providing a strong assurance of the authenticity of the communication partners. By employing a decentralized and immutable ledger. 5. Blockchain technology is employed for its capability to establish a decentralized and tamper-proof ledger. The blockchain ledger is distributed across various military nodes, ensuring redundancy and resilience. Quantum principles are employed to ensure secure key dis'tribution and provides authentication in military communication systems. robustness, IPFS,Decentralization and blockchain, processes. These system provides dentials to make valid among the 6. It leverages the unique properties of to enable highly secure encryption and decryption secure and real-time data exchange, allowing cre organizations or institutions or across the companies which we attend.

No. of Pages : 8 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030212 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ADVANCED TRAFFIC SURVEILLANCE SYSTEM: AUGMENTING SAFETY MEASURES AND ENSURING ACCOUNTABILITY ON THE

(51) International classification :G06Q0010060000, E01F0015040000, A61B0005020500, G08G0001052000, G08B0013196000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :
Abstract We present an advanced Traffic Surveillance System integrating Cutting-edge computer vision technology to enhance road safety. The system features three key components: Helmet Detection, Rash Driving Analysis, and Stolen Vehicle Detection; Helmet Detection employs sophisticated algorithms to ensure compliance with safety regulations among motorcyclists and scooter riders, reducing head injury risks Rash Driving Analysis identifies reckless behavior such as speeding and erratic maneuvers, enabling timely intervention to prevent accidents. Stole'n Vehicle Detection utilizes advanced recognition techniques to swiftly identify stolen vehicles within traffic streams, facilitating rapid recovery efforts. By continuously monitoring, analyzing, and responding to critical traffic behaviors, the system offers a proactive approach to road safety, promoting safer driving practices and enhancing overall road security.

No. of Pages : 7 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030214 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AUGMENTED REALITY-ENABLED INDUSTRIAL MAINTENANCE ASSISTANCE USING MACHINE LEARNING AND INTEGRATED WI

(51) International classification :G06Q0030020000, G06Q0030060000, G06Q0010060000, G07G0001000000, G06Q0010080000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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1)KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES
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(57) Abstract :

Abstract The invention focuses on developing a user-friendly web application for online supermarkets. Users can conveniently shop for groceries by scanning QR codes, accessing detailed product information, and locating items within the store. With supermarkets expanding in size and experiencing high foot traffic, the need for a streamlined shopping experience is paramount. The application aims to fulfill this need by offering a simple, fast, and convenient shopping guide system. Both merchants and customers stand to benefit from improved efficiency and satisfaction. The core features include QR code scanning, product details display, and location identification. A user-friendly interface ensures ease of navigation for shoppers. Performance optimization is prioritized to ensure swift loading times and responsive functionality. Feedback mechanisms allow users to provide suggestions and report issues for continuous improvement. Security and privacy measures are implemented to safeguard user data. Overall, the project aims to enhance the shopping experience by leveraging technology to simplify and streamline the supermarket shopping process.

No. of Pages : 7 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030215 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : PHARMA TRACE:ENHANCING DRUG PACKAGING SYSTEM USING BLOCKCHAIN TECHNOLOGY AND ENHANCED QR CODE SCANNI

		(71)Name of Applicant : 1)KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Bathula Prasanna Kumar Address of Applicant :Associate Professor, Dept of Computer Science and Engineering, KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. ----- ----- 2)Rejeti Venkata Kishore kumar, Address of Applicant :Associate Professor, Dept of Computer Science and Engineering, KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. ----- ----- 3)Chittineni Aruna Address of Applicant :Professor & Head Administration, Dept of Computer Science and Engineering, KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. ----- ----- 4)Allu Eshwara rao Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. ----- ----- 5)Ananthasetty Prasanna Anjaneyulu Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. ----- ----- 6)Hruthik Gonuguntla, Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. ----- ----- 7)Karthik Gudavalli Address of Applicant :KKR & KSR Institute of Technology and Sciences,Vinjanampadu, Guntur,Andhra Pradesh-522017. ----- -----
(51) International classification	:G16H0020100000, G16H0040630000, G06F0021640000, G06Q0010060000, G16H0010600000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

Introducing a comprehensive medication information system, the integration of QR codes on medicine packages functions as a portal to crucial details, including the medicine's name, batch number, expiry date, manufacturing date, and comprehensive tablet usage instructions. This innovative approach not only improves accessibility but also reinforces data security through the hashing concept. The incorporation of blockchain technology further enhances the system's integrity, utilizing hashing to ensure resistance against data tampering. With this heightened security measure, users can confidently trace the journey of a tablet sheet from its initial manufacturing state to the final distribution state, inspired by the tuna fish mechanism. This holistic solution not only offers a user-friendly platform for accessing medication details but also empowers individuals to make informed healthcare decisions, fostering transparency and accountability in the pharmaceutical supply chain.

No. of Pages : 6 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030218 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : OVER SPEEDING AND CRASH DETECTION SURVEILLANCE ON HIGHWAYS

(51) International classification :G08G0001160000, E01F0015040000, G08B0025010000, G08G0001096500, G08B0027000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The proposed system is an ideal solution to the global concern of over speeding. It combines an over speeding indicator and an Automatic Crash Detection and Emergency Alert System (ACDEAS) to promote safe driving. The system forthwith alerts the drivers when they exceed speed limits. On the other hand, the ACDEAS system perceives crashes and alerts the authorities concerned without further ado for quick medical response. This approach remarkably reduces over speeding-related accidents, minimizes fatalities, and alleviates the financial and societal costs of traffic accidents. It plays a significant role in improving public welfare and road safety.

No. of Pages : 8 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030220 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : QR BASED GUIDE SYSTEM FOR PRODUCT SEARCH IN SUPER MARKET

(51) International classification :G06Q0030020000, G06Q0030060000, G06Q0010060000, G06Q0010080000, G06Q0020320000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Abstract The invention focuses on developing a user-friendly web application for online supermarkets. Users can conveniently shop for groceries by scanning QR codes, accessing detailed product information, and locating items within the store. With supermarkets expanding in size and experiencing high foot traffic, the need for a streamlined shopping experience is paramount. The application aims to fulfill this need by offering a simple, fast, and convenient shopping guide system. Both merchants and customers stand to benefit from improved efficiency and satisfaction. The core features include QR code scanning, product details display, and location identification. A user-friendly interface ensures ease of navigation for shoppers. Performance optimization is prioritized to ensure swift loading times and responsive functionality. Feedback mechanisms allow users to provide suggestions and report issues for continuous improvement. Security and privacy measures are implemented to safeguard user data. Overall, the project aims to enhance the shopping experience by leveraging technology to simplify and streamline the supermarket shopping process.

No. of Pages : 7 No. of Claims : 4

(54) Title of the invention : TRANSFORMING POULTRY MANAGEMENT THROUGH THE FUSION OF CUTTING EDGE TECHNOLOGIES:A ROBUST APPROACH TO

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number :G06Q0010060000, H04L0009320000, H04L0009060000, G06Q0050020000, G06F0016182000 :NA :NA : NA :NA :NA	(71)Name of Applicant : 1)KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL, VINJANAMPADU, GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)P. Neela Sundari Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL, VINJANAMPADU, GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017 ----- 2)Dr. Chittineni Aruna Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES, VATTICHERUKU MANDAL, VINJANAMPADU, GUNTUR, ANDHRA PRADESH, INDIA. PIN:522017 ----- 3)R. Ramesh Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES, VATTICHERUKU MANDAL, VINJANAMPADU, GUNTUR, ANDHRA PRADESH, INDIA. PIN:522017 ----- 4)Bathula Prasanna Kumar Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES, VATTICHERUKU MANDAL, VINJANAMPADU, GUNTUR, ANDHRA PRADESH, INDIA. PIN:522017 ----- 5)Daram Bhavana Sai Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES, VATTICHERUKU MANDAL, VINJANAMPADU, GUNTUR, ANDHRA PRADESH, INDIA. PIN:522017 ----- 6)Bursu Revathi Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES, VATTICHERUKU MANDAL, VINJANAMPADU, GUNTUR, ANDHRA PRADESH, INDIA. PIN:522017 ----- 7)Cherukuri Sai Tanuja Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES, VATTICHERUKU MANDAL, VINJANAMPADU, GUNTUR, ANDHRA PRADESH, INDIA. PIN:522017 -----

(57) Abstract :

Recognizing the cost implications of storing the entire supply chain data directly on the blockchain, a distributed off- chain file storage solution known as IPFS (Inter Planetary File System) is utilized. This project aims to provide a comprehensive solution for efficient poultry farm management, leveraging the capabilities of IoT and blockchain technologies to streamline monitoring and data recording processes. This project combines IoT and blockchain for enhanced poultry production. IoT sensors monitor vital environmental parameters (temperature, humidity, air quality, lighting). Large farms encounter difficulties with traditional monitoring; IoT and blockchain automation address these challenges. Stakeholders register on the blockchain for transparency, recording data on a shared ledger. To control costs, off-chain storage (IPFS) manages supply chain data. The project simplifies poultry farm management, enabling consumers to verify blockchain-stored data via a web application by scanning a QR code.

No. of Pages : 7 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030226 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : STRATEGIC ENHANCEMENT OF BIOMASS UTILIZATION FOR THE SYNTHESIS OF NUTRIENT-ENRICHED ORGANIC COMPOST

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(51) International classification	:G06Q0050020000, G06K0009620000, A01M0007000000, A01M0021040000, A01M0021020000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The farming system integrates advanced image analysis technology to classify crops and weeds efficiently. This system classifies between desirable plants and weeds accurately, facilitating targeted weed management strategies. After the classification into weed it again classify whether 'it is pest effected or not if it pest effected they undergoes sterilization and used as organic pesticides, if it is not pest effected that means it is pest free they consider those weeds to convert into manure for the classification of weed with pest and weed without pest they use image processing CNN algorithm It transforms identified weeds into organic manure, promoting environmentally friendly agricultural practices while addressing weed-related challenges. In the manure, the NPK values detected using an NPK sensor. Based on these values, we provide guidance to farmers for better crop yields. Furthermore, the system incorporates sensor-guided nutrient application, ensuring optimal nutrient levels for crop growth and maximizing yields sustainably. This blockchain integration enables stakeholders to verify the organic origin of the produced manure, instilling consumer confidence and fostering trust in the agricultural supply chain.

No. of Pages : 7 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030228 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : GREENHARBOR:NAVIGATING SUSTAINABLE WASTE SEAS TOWARDS ENERGY ABUNDANCE USING BLOCKCHAIN AND IOT

(51) International classification :G06Q0010040000, G06Q0050260000, B65F0001140000, G06F0016360000, D06M0011830000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)KKR & KSR Institute of Technology and Sciences Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017. ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)R. Ramesh Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017. ----- 2)Chinineni Aruna Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017. ----- 3)chidella jyothika Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017. ----- 4)chirathanagandla gayathri Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017. ----- 5)Jidugu Radhika Vara Lakshmi Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017. ----- 6)Bandlamudi Susmitha Address of Applicant :KKR & KSR INSTITUTE OF TECHNOLOGY AND SCIENCES,VATTICHERUKU MANDAL,GUNTUR,ANDHRA PRADESH,INDIA. PIN:522017. -----

(57) Abstract :

Abstract Waste disposal is a crucial problem which impacts the environment like water pollution, air pollution, soil pollution. There are industries, factories and other systems which converts these types of wastes into energy: In this paper we proposed an application that provides an interface between WTE plants and waste generating sources like schools, hospitals, agriculture, industries etc., sources of wastes. These plants provide incentives to the suppliers using this application. Through a user—friendly mobile application, waste generators can actively participate in waste disposal and energy generation processes. The proposed solution aims to streamline waste collection, optimise truck routes, and reward users with energy tokens fostering a sustainable and circular economy.

No. of Pages : 6 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030229 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : INTEGRATED PROCESS FOR ECO-FRIENDLY SYNTHESIS AND COATING OF ZRB2 ONTO CARBON FIBER SUBSTRATES

(51) International classification	:C04B0035580000, C08J0005040000, C30B0029100000, D01F0009160000, H01M0004136000	(71)Name of Applicant : 1)Koneru Lakshmaiah Education Foundation (Deemed To Be University) Address of Applicant :KLEF (Deemed To Be University), Koneru Lakshmaiah Education Foundation, Green Fields, Vaddeswaram, Guntur, Andhra Pradesh 522302 Guntur -----
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	Name of Applicant : NA
(61) Patent of Addition to Application Number	:NA	Address of Applicant : NA
Filing Date	:NA	(72)Name of Inventor :
(62) Divisional to Application Number	:NA	1)Dr. Niranjana Patra
Filing Date	:NA	Address of Applicant :Associate Professor, KLEF (Deemed To Be University), Koneru Lakshmaiah Education, Foundation, Green Fields, Vaddeswaram, Guntur, Andhra Pradesh 522302 Guntur --- -----

(57) Abstract :

ABSTRACT Integrated Process for Eco-Friendly Synthesis and Coating of ZrB₂ onto Carbon Fiber Substrates This Present invention proposes a novel method for synthesizing zirconium diboride (ZrB₂)-coated carbon fiber composites using an eco-friendly solution-based process. The process involves dissolving gum arabic (GA), a naturally available tree exudates polysaccharide in distilled water, followed by mixing zirconyl oxychloride octahydrate (ZOO) and boric acid (BO) with the GA solution. The resulting mixture is refluxed to obtain a ZrB₂ precursor powder, which is then pyrolyzed at temperatures ranging from 1000 to 1400°C under controlled argon atmosphere to avoid oxidation. Two-dimensional needle punched carbon fiber felt undergoes a thorough cleaning process before being coated with the synthesized precursor solution within a vacuum chamber. The coated samples are then dried and subjected to pyrolysis at 1400°C under argon atmosphere to form ZrB₂-coated carbon fiber composites. XRD analysis revealed the temperature-dependent phase transformations during the synthesis process, with well-defined ZrB₂ peaks observed at 1400°C. SEM and TEM imaging provided detailed information regarding the morphology, size distribution, and structural characteristics of the synthesized ZrB₂ particles, confirming their nanostructured nature and high degree of purity. Thermal analysis demonstrated enhanced oxidative stability of the ZrB₂-coated carbon fiber composite compared to pristine carbon fiber, indicating the protective thermal barrier of the ZrB₂ coating against oxidation. Overall, this method offers a promising avenue for the efficient fabrication of ZrB₂-coated carbon fiber composites with reduced energy requirements and enhanced performance characteristics, making them suitable for various high-temperature applications in aerospace and automotive industries.

No. of Pages : 20 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030249 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : A HYBRID ELECTRODE Ti₃C₂Tx.CPDI AND A METHOD FOR PREPARING THE SAME

(51) International classification :B60K0006445000, B60K0006480000, B60W0020400000, B60W0010260000, B60W0010060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A HYBRID ELECTRODE Ti₃C₂Tx.cPDI AND A METHOD FOR PREPARING THE SAME This present disclosure relates to a binder-free composite electrode composed of Ti₃C₂Tx.cPDI, aiming to enhance electrochemical performance. The present disclosure also relates to a method of preparing the same.

No. of Pages : 27 No. of Claims : 8

(54) Title of the invention : SYSTEM AND METHOD FOR PERFORMING RELOCATION OF OBJECTS WITHIN INDUSTRIAL ENVIRONMENTS BY UTILIZING MAGNETIC FORCE

(51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date	:A61B0017000000, E05B0047000000, G06T0019200000, H04L0067120000, G06N0005040000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)VELLORE INSTITUTE OF TECHNOLOGY, CHENNAI Address of Applicant :Vandalur - Kelambakkam Road, Chennai, Tamil Nadu - 600127, India. Chennai ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)S.ABINAYA Address of Applicant :Assistant Professor Senior Grade -1, School of Computer Science and Engineering, Vellore Institute of Technology, Chennai, Vandalur - Kelambakkam Road, Chennai, Tamil Nadu - 600127, India. Chennai ----- 2)A.SHERLY ALPHONSE Address of Applicant :Assistant Professor Senior Grade -2, School of Computer Science and Engineering, Vellore Institute of Technology, Chennai, Vandalur - Kelambakkam Road, Chennai, Tamil Nadu - 600127, India. Chennai ----- 3)D.KAVITHA Address of Applicant :Assistant Professor Senior Grade -2, , School of Computer Science and Engineering, Vellore Institute of Technology, Chennai, Vandalur - Kelambakkam Road, Chennai, Tamil Nadu - 600127, India. Chennai -----

(57) Abstract :

The present disclosure relates to a system for performing relocation of objects within industrial environments by utilizing magnetic force. The system (102) actuates hydraulic actuator (104) to enable movement of hydraulic shaft (106) in forward direction, backward direction, and adjust length of hydraulic shaft (106) at pre-defined position of object. The system (102) directs motor (108) to position electromagnet (114) onto object from pulley (112) using cable (110). The system (102) detects real-time data of hydraulic actuator (104), cable (110), and electromagnet (114). The system (102) activates electromagnet (114) to magnetise object using magnetic force based on real-time data, and enable motor (108) to pull up cable (110). The system (102) enables movement of hydraulic shaft (106), and enable motor (108) to pull down electromagnet (114) from pulley (112) using cable (110). The system (102) deactivates electromagnet (114) to demagnetize object to place object at desired position in industrial environment.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030280 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : RING BLADE GRINDER DEVICE

(51) International classification :G06Q0010060000, B24B0041060000, B24B0041000000, B02C0018060000, A61K0031424500
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present disclosure relates generally to the field of grinding systems. More specifically the present disclosure relates to a ring blade grinder device. The device (100) includes a ring clamp blade assembly (102) comprising a plurality of blades (102-1) with serrated edges mounted on a clamp (102-2), a motor console (104) comprising a wire (104-1) and a regulator switch (104-2) and an adaptor (106) to connect the motor console (104) and a vessel (108). The entire vessel (108) is mounted with the ring clamp blade assembly (102) filled with contents for grinding on the motor console (104) by a freewheel for rotating the vessel (108) along with the plurality of blades (102-1) during operation. The factor of the mass of the vessel (108) is significantly eliminated. Advantageously the present disclosure relates to a ring blade grinder device that significantly reduces the time required to complete the grinding task.

No. of Pages : 14 No. of Claims : 9

(54) Title of the invention : AN APPARATUS FOR DAMPING VIBRATIONS FOR COMFORTABLE RIDING ON A TWO-WHEELER VEHICLE

(51) International classification :F16F0001360000, A61F0013150000, G01R0033563000, G11B0005390000, B60W0050000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Manipal Academy of Higher Education Address of Applicant :Madhav Nagar, Manipal, 576104, Karnataka, India. Manipal ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)KEERTHAN KRISHNA Address of Applicant :Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 2)SATISH SHENOY B Address of Applicant :Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 3)MAHESHA G T Address of Applicant :Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal ----- 4)SRIHARSHA HEGDE Address of Applicant :Manipal Academy of Higher Education, Manipal, 576104, Karnataka, India. Manipal -----

(57) Abstract :

Embodiments of the present disclosure relate to an apparatus for comfortable riding on a two-wheeler vehicle. The apparatus includes a first magnetorheological elastomer (MRE) component (110) applied to a handlebar (100) of the two-wheeler vehicle. The apparatus further includes a second MRE component (208) applied to a footrest (200) of the two-wheeler vehicle. The apparatus further includes a third MRE component (304) applied to a seat of the two-wheeler vehicle. The first MRE component (110), the second MRE component (208), and the third MRE component (304) dampen vibrations of the handlebar (100), the footrest (200), and the seat of the two-wheeler vehicle to enhance comfort of a rider of the two-wheeler vehicle.

No. of Pages : 22 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030295 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : STUDY OF INTEGRATED ROBOTIC NIPPLE-SPARING MACTECTOMY (NSM) TECHNIQUE TO DETECT THE INFECTED TISSUES IN BREAST CANCER IN WOMEN AND ANALYSE THE SUCCESS RATE IN EARLY PREVENTION OF BREAST CANCER WITH THE TRADITIONAL TECHNIQUES USING IOT, AI AND ML ALGORITHMS

(51) International classification :A61P0035000000, A61B0034300000, A61B0005000000, A41C0003140000, G06K0009000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. U. Amaleshwari Address of Applicant :Director, Head Of Research, School Of Management , Kanchipuram, Tamilnadu ----- 2)R.Shanmugapriya 3)R.Masilamani 4)R. Jeevitha 5)Ancy Stephno 6)Poonam Rahul Dubey 7)Dr. G. Suganya 8)Souvik Sen Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. U. Amaleshwari Address of Applicant :Director, Head Of Research, School Of Management , Kanchipuram, Tamilnadu ----- 2)R.Shanmugapriya Address of Applicant :Research Scholar , Kanchipuram, Tamilnadu ----- 3)R.Masilamani Address of Applicant :Research Scholar , Kanchipuram, Tamilnadu ----- 4)R. Jeevitha Address of Applicant :Research Scholar , Kanchipuram, Tamilnadu, ----- 5)Ancy Stephno Address of Applicant :Research Scholar , Kanchipuram, Tamilnadu ----- 6)Poonam Rahul Dubey Address of Applicant :Assistant Professor , 01,Sai Kashinath Residency, Opposite Tanna Panorama Sankara Nagar Sonarpada Dombivli East Thane, Maharashtra ---- 7)Dr. G. Suganya Address of Applicant :Assistant Professor Dr. SNS Rajalakshmi College of arts and science, Coimbatore, Tamilnadu ----- 8)Souvik Sen Address of Applicant :Research Scholar, Computer & Information Science, Raiganj University, Uttar Dinajpur, West Bengal -----

(57) Abstract :

Study of Integrated Robotic Nipple-sparing Mactectomy (NSM) technique to detect the infected tissues in Breast Cancer in women and analyse the success rate in early prevention of breast cancer with the traditional techniques using IoT, AI and ML Algorithms ABSTRACT: As to the World Health Organisation, breast cancer is the leading cause of cancer among women and the second most frequent cause of cancer-related deaths. Performing a nipple-sparing mastectomy (NSM) is a common procedure that can be done for both therapeutic and prophylactic purposes at the same time. Furthermore, apart from the challenges related to prophylactic mastectomies, there are also psychological and cosmetic consequences linked to them. Robotic non-surgical navigation (RNSM) not only reduces invasiveness but also enhances visualisation of the planes. Residual breast tissue (RBT) found by microscopic examination has the potential to be used as an alternative to a medically safe mastectomy. However, it is important to note that the long-term safety of robot-assisted nipple sparing mastectomy (RNSM) has not been established yet. The objective of this experiment is to determine the presence or absence of RBT after RNSM intervention.

No. of Pages : 8 No. of Claims : 7

(54) Title of the invention : ARTIFICIAL INTELLIGENCE-BASED KNOWLEDGE EVOLUTIONARY PROCESS FOR OPTIMIZATION DECISION SUPPORT AND PERSONALIZED RECOMMENDATION IN E-COMMERCE USING MACHINE LEARNING ALGORITHMS

(51) International classification :G06N002000000, G06N0003080000, G06N0003040000, G16H0050200000, G06N0005040000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr.k.Sita kumari Address of Applicant :Associate Professor, Department of Information Technology, Velagapudi Ramakrishna Siddhartha Engineering College Vijayawada, Krishna district Andhra Pradesh India ----- ----- 2)Dr.Naveen I G 3)Miss. Mayuri Rohidas Londhe 4)Mr Ankit Shrivastava 5)K Bangaru Krishna Veni 6)Dr. L. Sherly Puspha Annabel 7)Ramya N 8)S. Vijayalakshmi 9)Susmitha S 10)Kalaivani. K Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.k.Sita kumari Address of Applicant :Associate Professor, Department of Information Technology, Velagapudi Ramakrishna Siddhartha Engineering College Vijayawada, Krishna district Andhra Pradesh India ----- ----- 2)Dr.Naveen I G Address of Applicant :Associate Professor, Department of Electronics and Communication Engineering, NITTE Meenakshi Institute of Technology P.B.No.6429. Govindapura, Yelahanka, Bangalore 560064, Karnataka, India. ----- ----- 3)Miss. Mayuri Rohidas Londhe Address of Applicant :Assistant Professor, Department of BBA-IB, Sanjivani Art's Commerce and Science College, Sahajanand Nagar, Kopargaon, Ahmednagar, Maharashtra India ----- ----- 4)Mr Ankit Shrivastava Address of Applicant :Assistant Professor, Department of Civil Engineering Institute of Technology and Management, ITM Campus Sithouli Jhansi Road, Gwalior, Madhya Pradesh, India ----- ----- 5)K Bangaru Krishna Veni Address of Applicant :Assistant Professor, Department of CSE, GMR Institute of Technology, GMR Nagar, Rajam Vizianagaram Andhra Pradesh India ----- ----- 6)Dr. L. Sherly Puspha Annabel Address of Applicant :Professor, Department of Artificial intelligence and Machine Learning, St. Joseph's College of Engineering, Old Mahabalipuram Road, Chennai Tamilnadu India ----- ----- 7)Ramya N Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Sri Sai Ram Engineering College, Sai Leo Nagar, West Tambaram,Chennai - 600044 Kanchipuram Tamilnadu India ----- ----- 8)S. Vijayalakshmi Address of Applicant :Assistant professor Department of computer science and Technology, SNS College of Engineering SNS Kalvi Nagar, Sathy Main Road, NH-209, Vazhiyampalayam, Saravanampatti, Coimbatore, 641107 Tamilnadu India ----- ----- 9)Susmitha S Address of Applicant :Assistant professor, Department of computer science and Technology, SNS College of Engineering SNS Kalvi Nagar, Sathy Main Road, NH-209, Vazhiyampalayam, Saravanampatti, Coimbatore, 641107 Tamilnadu India ----- ----- 10)Kalaivani. K Address of Applicant :Assistant professor Department of Computer Science and Design SNS College of Engineering SNS Kalvi Nagar, Sathy Main Road, NH-209, Vazhiyampalayam, Saravanampatti, Coimbatore, 641107 Tamilnadu India ----- -----

(57) Abstract :
Artificial intelligence-based Knowledge evolutionary process for Optimization decision support and personalized recommendation in E-commerce using Machine learning algorithms ABSTRACT: Recommender systems offer tailored service support to users by analysing their previous behaviours and predicting their current preferences for certain products. Artificial intelligence (AI), particularly computational intelligence and machine learning techniques, has been utilised to develop recommender systems with the aim of improving prediction accuracy and addressing challenges related to data sparsity and cold start problems. This position paper offers a thorough analysis of the basic methodology and common approaches used in recommender systems. It also explores how artificial intelligence can significantly improve the technological advancement and implementation of recommender systems. The study not only offers a thorough assessment of the latest theoretical and practical advancements, but also identifies the most urgent research issues and proposes potential areas for further investigation. This article offers an in-depth examination of the various issues linked to recommender systems that utilise artificial intelligence (AI). In addition, it analyses the improvements that have been achieved in these systems by including different artificial intelligence techniques, such as fuzzy techniques, transfer learning, genetic algorithms, evolutionary algorithms, neural networks, deep learning, and active learning. The insights presented in this study will assist scholars and professionals in understanding the latest breakthroughs and developing trends in recommender systems that utilise artificial intelligence.

No. of Pages : 11 No. of Claims : 5

(54) Title of the invention : METHOD AND SYSTEM FOR DEVELOPMENT OF FORCED DEGRADATION AND STABILITY INDICATING STUDIES OF DRUGS WITH DEFINED PARAMETERS

(51) International classification :G06Q0010060000, G01N0033574000, G16H0040200000, G16H0070400000, G01N0035080000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Dr.R.RAJAPANDI Address of Applicant :DEPARTMENT OF PHARMACEUTICAL CHEMISTRY & ANALYSIS, ARULMIGU KALASALINGAM COLLEGE OF PHARMACY, SRIVILLIPUTTUR -626126, TAMILNADU. ----- 2)Dr.N.VENKATEASHAN 3)Dr.S.A.MOHAMED SHIEK ARABATH 4)Dr.MEJO JOSEPH 5)Mr.M.SANTHANAKUMAR 6)Mrs.M.PRINCY PRASANNA 7)Mr.N.JEGAN Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.R.RAJAPANDI Address of Applicant :DEPARTMENT OF PHARMACEUTICAL CHEMISTRY & ANALYSIS, ARULMIGU KALASALINGAM COLLEGE OF PHARMACY, SRIVILLIPUTTUR -626126, TAMILNADU. ----- 2)Dr.N.VENKATEASHAN Address of Applicant :PRINCIPAL & PROFESSOR, DEPARTMENT OF PHARMACEUTICAL CHEMISTRY & ANALYSIS, ARULMIGU KALASALINGAM COLLEGE OF PHARMACY, SRIVILLIPUTTUR -626126, TAMILNADU ----- 3)Dr.S.A.MOHAMED SHIEK ARABATH Address of Applicant :DEPARTMENT OF PHARMACOGNOSY, ARULMIGU KALASALINGAM COLLEGE OF PHARMACY, SRIVILLIPUTTUR -626126, TAMILNADU ----- 4)Dr.MEJO JOSEPH Address of Applicant :PROFESSOR, DEPARTMENT OF PHARMACEUTICAL CHEMISTRY, KARUNA COLLEGE OF PHARMACY, PALAKKAD, KERALA - 679533 ----- 5)Mr.M.SANTHANAKUMAR Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF PHARMACOLOGY, ARULMIGU KALASALINGAM COLLEGE OF PHARMACY, SRIVILLIPUTTUR -626126, TAMILNADU ----- 6)Mrs.M.PRINCY PRASANNA Address of Applicant :ASSISTANT PROFESSOR, DEPARTMENT OF PHARMACEUTICAL CHEMISTRY & ANALYSIS, ARULMIGU KALASALINGAM COLLEGE OF PHARMACY, SRIVILLIPUTTUR -626126, TAMILNADU ----- 7)Mr.N.JEGAN Address of Applicant :ASSOCIATE PROFESSOR, DEPARTMENT OF PHARMACOLOGY K.M.COLLEGE OF PHARMACY, MADURAI - 625107 --- -----

(57) Abstract :
Abstract The present invention discloses a method and system for conducting forced degradation and stability indicating studies of drugs with precise control over critical parameters. Forced degradation studies are essential in evaluating drug stability and identifying degradation pathways and products. The method involves defining and optimizing parameters such as temperature range, time intervals, and solution content percentages to ensure controlled experimental conditions. A rigorous experimental setup with precise temperature control systems, monitoring mechanisms, and validated analytical techniques is implemented to accurately detect and quantify degradation products. Advanced algorithms are utilized for data analysis, providing insights into degradation pathways and stability indicating characteristics. The invention facilitates informed decision-making in drug development processes, regulatory compliance, and product quality assurance by generating comprehensive reports documenting experimental protocols and conclusions. Overall, the method and system represent a significant advancement in the pharmaceutical industry, enhancing reproducibility and reliability in forced degradation and stability indicating studies.

No. of Pages : 12 No. of Claims : 7

(54) Title of the invention : SMART NAVIGATION SYSTEM FOR EMERGENCY VEHICLES

(51) International classification :A61G0003080000, A61G0003000000, G08G0001010000, G08G0001096800, A61G0001060000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Prasanna Gandhiraj Address of Applicant :no:8-9/35 Magila malar street Mahathma Gandhi nagar - ----- 2)Anil Neerukonda Institute of Technology and Sciences 3)Ms. DIVEDARI NAGAMANI 4)KOSANAM RAHUL 5)NOLLU SIVA RAMA KRISHNA 6)MATTI VENAKATA SAI MURALI KRISHNA 7)BONDILI PUJIT RAM 8)Ms. CHUKKA ANOOSHA 9)Ms. M. Nirmala Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Ms. DIVEDARI NAGAMANI Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 2)KOSANAM RAHUL Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 3)NOLLU SIVA RAMA KRISHNA Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 4)MATTI VENAKATA SAI MURALI KRISHNA Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 5)BONDILI PUJIT RAM Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 6)Ms. CHUKKA ANOOSHA Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 7)Ms. M. Nirmala Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam -----

(57) Abstract :
SMART NAVIGATION SYSTEM FOR EMERGENCY VEHICLES ABSTRACT: . Traffic congestion is a major challenge in metropolitan cities which arises when numerous vehicles share the road simultaneously. This results in transport delay. This phenomenon commonly occurs during peak hours. In heavy traffic situations, ambulances need to move without any problems. Figuring out how to make sure ambulances can move well in traffic is a big challenge. This system emphasizes a process that simplifies ambulance routes, aiming to minimize response time by providing the shortest and quickest paths, especially in congested city areas. It features real-time alerts to notify traffic police in relevant regions about incoming ambulances, allowing for proactive traffic management. This system facilitates tracking of ambulance positions, enabling traffic police to optimize traffic flow and ensure unobstructed paths for ambulances, ultimately improving emergency response and potentially saving lives by ensuring timely medical assistance in critical situations

No. of Pages : 21 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030316 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN OF LEAN OPERATION TECHNIQUES IN THE PRODUCTION CYCLE TO BE ECONOMICAL SUSTAINABILITY

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(51) International classification	:G06Q0010060000, G06Q0050040000, G05B0017020000, F21V0008000000, B09B0003000000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
Design of Lean operation techniques in the Production Cycle to be economical sustainability ABSTRACT This invention relates to the field of manufacturing process optimization and introduces a novel system of lean operation techniques specifically designed to enhance economic sustainability within production cycles. The system integrates several innovative components and methodologies, including resource optimization algorithms, waste reduction mechanisms, energy efficiency models, and sustainable supply chain integration, all tailored to improve environmental and economic performance in manufacturing settings. The resource optimization algorithms are engineered to dynamically manage material and energy use, significantly reducing waste and costs. Waste reduction mechanisms focus on minimizing waste at the source, promoting a more sustainable production process. Energy efficiency models enhance the utilization of energy, incorporating renewable energy sources to reduce environmental impact. Sustainable supply chain integration extends these principles beyond the factory floor, ensuring that all stages of production reflect sustainability goals. Additionally, the system includes continuous improvement processes that foster ongoing enhancements in sustainability and efficiency. This invention offers a comprehensive solution to modern manufacturing challenges, aligning operational efficiency with environmental stewardship and providing a scalable, adaptable framework for industries seeking to implement sustainable practices.

No. of Pages : 20 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030317 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN AUTOMATED PERITONEAL DIALYSIS MACHINE AND TUBING SYSTEM

(51) International classification :A61M0001280000, A61M0001160000, G16H0020400000, A61M0001360000, G16H0040630000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to :NA

Application Number :NA

Filing Date

(62) Divisional to :NA

Application Number :NA

Filing Date

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(57) Abstract :

ABSTRACT The low-cost Automated Peritoneal Dialysis (APD) machine (100) presented herein offers a compact, portable, and user-friendly solution for patients with end-stage renal disease (ESRD). Featuring a compact housing and sophisticated control system (104), including a microcontroller (140) and touch screen display (106), the machine enables precise control of dialysis therapy parameters. A fluid filling and draining system (108), comprising a peristaltic pump (110) and brushless stepper motor (112), ensures efficient delivery and removal of dialysis fluid. Electric linear actuators (114, 142) regulate fluid flow through the tubing system (116), which includes medical-grade PVC (118) and silicone tubes (120). The method for performing APD therapy with this machine involves priming, filling, dwelling, and draining stages, ensuring comprehensive treatment for ESRD patients. Figure associated with Abstract is Fig. 1

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030330 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : INDOOR HYDROPONIC FARMING USING IOT AND K-MEANS CLUSTERING MACHINE LEARNING ALGORITHM.

(51) International classification :G06N0020000000, G06K0009620000, A01G0031020000, G01D0021020000, A01G0031060000		(71)Name of Applicant : 1)Prasanna Gandhiraj Address of Applicant :no:8-9/35 Magila malar street Mahathma Gandhi nagar ----- 2)Anil Neerukonda Institute of Technology and Sciences 3)Dr. G. Manmadharao 4)Sambangi Bhagyasree 5)Kishan Kumar Tamminana 6)Arasavilli Mohith 7)Voodi jayanth kamalesh Name of Applicant : NA Address of Applicant : NA
(86) International Application No	:NA	(72)Name of Inventor : 1)Dr. G. Manmadharao Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam -----
Filing Date	:NA	2)Sambangi Bhagyasree Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam -----
(87) International Publication No	: NA	3)Kishan Kumar Tamminana Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam -----
(61) Patent of Addition to Application Number	:NA	4)Arasavilli Mohith Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam -----
Filing Date	:NA	5)Voodi jayanth kamalesh Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam -----
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

INDOOR HYDROPONIC FARMING USING IOT AND K-MEANS CLUSTERING MACHINE LEARNING ALGORITHM Agriculture sector is facing a lot of challenges. This is due to lack of nutrients in the soil, irregular rains, external weather conditions and many more. Indoor hydroponic farming is an alternative to conventional farming. It is a technique where plants are grown in water without the use of soil in a closed container. Growing plants indoor protects the plants from external and irregular weather conditions. The main objective of the project Indoor hydroponic farming using IoT and machine learning algorithms is to address the challenges being faced in regular farming. This project is divided into two main parts: remote monitoring and disease detection. Internet of Things is used for remote monitoring by using various sensors to monitor different parameters. Machine learning is employed for disease detection. This technique promises year-round production and greater yield compared to traditional farming.

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/04/2024

(21) Application No.202441030331 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : EARTHQUAKE DETECTION USING VIBRATION SENSOR AND NODE MCU

(51) International classification :G01V0001000000, E04H0009020000, G08B0021100000, G01V0001180000, G01V0001160000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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5)N.M.S.BHAVYA

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(57) Abstract :

Earthquakes pose a significant threat to life and property, making early detection crucial for minimizing their impact. Traditional earthquake detection systems rely on seismometers, which can be costly and limited in their distribution. This paper proposes a seismic sensor-based earthquake detection system utilizing NodeMCU, an open-source IoT platform, to provide a cost-effective and scalable solution for earthquake monitoring. The system consists of NodeMCU microcontrollers equipped with seismic sensors strategically deployed in seismic-prone areas. These sensors detect ground motion caused by seismic waves generated during an earthquake. The system is designed to detect seismic events of varying magnitudes, ranging from minor tremors to significant earthquakes. Upon detecting seismic activity above a predefined threshold, the NodeMCU triggers an alert mechanism, which can include sending notifications via email, SMS, or mobile app notifications enabling timely evacuation and emergency response

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030336 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : MECHANICALLY ENHANCED HIGH PRECISION LINEAR ACTUATION DEVICE FOR SPACE BORNE PAYLOADS

(51) International classification :H02N0002040000, H04L0009080000, H02N0002020000, H04B0010700000, B64G0001640000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)INDIAN SPACE RESEARCH ORGANISATION Address of Applicant :Department of Space, ISRO Headquarters, Antariksh Bhavan, New BEL Road Bangalore-560094, Karnataka, India Bangalore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)AGRAWAL, Gagan Address of Applicant :4326, Space Applications Centre, ISRO, Satellite Road, Ahmedabad, Gujarat – 380015, India Ahmedabad - ----- 2)PATEL, Naimesh Address of Applicant :4325, Space Applications Centre, ISRO, Satellite Road, Ahmedabad, Gujarat – 380015, India Ahmedabad - ----- 3)JOSHI, Shaunak Address of Applicant :4319, Space Applications Centre, ISRO, Satellite Road, Ahmedabad, Gujarat – 380015, India Ahmedabad - -----

(57) Abstract :

The present disclosure relates to a mechanically enhanced high precision linear actuation device. The linear actuation device comprises a housing (102), a piezoelectric stack (104), a dumbbell flexure (116) fastened between top centre of the housing (102) and piezoelectric actuators (104), multiplier flexures (108) arranged at both sides along the length of the piezoelectric stack (104), flexure arms (112) attached to the top end of the multiplier flexures (108), sheet flexures (114) arranged with the flexure arms, an output motion adaptor (118) and back springs (110) both sides of an output motion adaptor (118). The developed linear actuation device has a compact size and provides for higher range linear output motion which is tuneable and find its application in aerospace, medical, quantum communication, medical, microfluidics and the like.

No. of Pages : 36 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030343 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : COCONUT RACHIS BASED SUPERCAPACITOR AND METHOD OF FABRICATION

(51) International classification :H01G0011860000, H01G0011240000, H01G0011300000, H01G0011380000, H01M0004620000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The disclosure provides a supercapacitor electrode (100) based on activated carbon from coconut rachis. The electrode (100) includes a dried activated carbon from coconut rachis (101) with narrow pore size distribution, conducting (103), a binder (105) on a current collecting substrate (109), wherein the dried activated carbon (101) is present in an amount of at least 70 wt% of the electrode. The electrode has a specific capacitance of 320 F/g or more at a scan rate of 5 mV/s. The disclosure further provides a method for preparing a supercapacitor electrode 200 based on activated carbon from coconut rachis. The electrode (101) is easy to fabricate, chemical free, cost effective, eco-friendly in nature and provides efficient specific capacitance.

No. of Pages : 31 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030346 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : IMPROVED CONTACT TRACING SYSTEMS AND PROXIMITY DATA ENCODING THEREIN

(51) International classification :G06Q0030000000, G06Q0020060000, G06Q0020400000, G06Q0020320000, G06F0016250000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

IMPROVED CONTACT TRACING SYSTEMS AND PROXIMITY DATA ENCODING THEREIN The present invention discloses encoding and processing of proximity data in contact tracing systems so that they can be scaled for global use, and further provides an improved method of exchanging and processing proximity data in a contact tracing system. Also disclosed are a centralized, distributed, and federated contact tracing system, each of the said systems employing the aforesaid proximity data encoding and improved methods of proximity data exchange and processing.

No. of Pages : 43 No. of Claims : 12

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030362 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD FOR PREPARATION OF ACTIVATED CARBON FROM COCONUT RACHIS WASTE

(51) International classification :H01G0011340000, B01J0020200000, C01B0032324000, B82Y0030000000, A61B0017700000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

The disclosure provides a method (100) of preparing activated carbon (200) with high surface area and narrow pore size distribution from coconut rachis. The method 100 includes providing sun dried coconut rachis (100) followed by powdering and oven drying (101). This is followed by pre-carbonizing (104), pulverizing (105) and carbonizing (106) to form carbon (200). Further, mixing (107) the obtained carbonized carbon with a strong base is performed to form a colloid. In next step (108), drying and annealing of the colloid is carried out to form a powder. In step (109), washing the powder with distilled water is carried out to obtain activated carbon. The obtained activated carbon is oven dried in step (110). The method is cost effective and provides a pore size distribution in the range of 2.09 nm, suitable for energy storage applications.

No. of Pages : 17 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030369 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : FACIAL PALSY IMAGE EVALUATION SYSTEM

(51) International classification	:A61B0005000000, A61B0005110000, A61B0005103000, G01N0033000000, A61N0005100000	(71)Name of Applicant : 1)Andhra University Address of Applicant :Andhra University, Visakhapatnam-530003, Andhra Pradesh, India -----
(86) International Application No	:NA	Name of Applicant : NA
Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor : 1)Samuel Susan Veeravalli Address of Applicant :Research Scholar, Department of Computer Science and Systems Engineering, Andhra University College of Engineering, Andhra University, Visakhapatnam-530003, Andhra Pradesh, India -----
(61) Patent of Addition to Application Number	:NA	2)Dr. Prajna Bodapati Address of Applicant :Professor, Department of Computer Science and Systems Engineering, Andhra University College of Engineering, Andhra University, Visakhapatnam-530003, Andhra Pradesh, India -----
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The Facial Palsy Image Evaluation System presented in this invention utilizes cutting-edge computer vision techniques to analyze facial images for asymmetry assessment. Traditional methods for evaluating facial palsy often lack objectivity, leading to inconsistent results. This system addresses this challenge by automatically detecting facial landmarks and contours, allowing for precise quantification of asymmetry. By generating quantitative measurements and diagnostic reports, healthcare professionals can accurately diagnose and monitor facial paralysis conditions. This innovative approach offers a reliable and objective method for assessing facial palsy, facilitating more effective treatment planning and monitoring. Accompanied Drawings [FIGS. 1-2]

No. of Pages : 14 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030370 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : METHOD AND SYSTEM FOR IDENTIFYING INFLUENTIAL NODES IN DIRECTED WEIGHTED NETWORKS USING PYTHAGOREAN FUZZY SETS

(51) International classification :G16B0005000000, G06Q0050000000, G06N0007020000, G16B0005300000, G06Q0030020000		(71)Name of Applicant : 1)Andhra University Address of Applicant :Andhra University, Waltair, Visakhapatnam-530003, Andhra Pradesh, India -----
(86) International Application No	:NA	-
Filing Date	:NA	Name of Applicant : NA Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor : 1)Songa Venkata Rao Address of Applicant :Research Scholar, Department of Computer Science and Systems Engineering, Andhra University, Visakhapatnam, Andhra Pradesh - 530003, India -----
(61) Patent of Addition to Application Number	:NA	--
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Filing Date	:NA	

(57) Abstract :

The present invention discloses a method and system to identify influential nodes in directed weighted networks using Pythagorean fuzzy sets. Traditional centrality measures often overlook the complex relationships between nodes in such networks. This invention introduces a novel approach that quantifies the significance of nodes by considering the internal structure of their packs. By employing Pythagorean fuzzy sets to address uncertainty, the method accurately determines the influence of neighboring nodes on the centrality of the center node. Experimental validation demonstrates the effectiveness of the proposed approach in enhancing network connectivity and identifying crucial nodes. This innovation holds promise for various applications in fields such as social network analysis, transportation planning, and biological systems. Accompanied Drawings [FIGS. 1-7]

No. of Pages : 20 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030371 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A NOVEL CONFIGURATIONS OF MULTILEVEL INVERTER WITH LOW COMPONENTS COUNT FOR GREEN ENERGY INTEGRATION

(51) International classification :H02M0007483000, H02M0007487000, H02M0007490000, H02M0001000000, H02M0003335000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)LOGANATHAN VIJAYARAJA Address of Applicant :7/8, Panner Illam, Ground Floor, Kurunji Nagar, 1st Mainroad, Old Perungalathur ----- -- 2)DHANASEKAR R 3)S KESAV SANADHAN 4)KANNAN V 5)VISHAL T Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)LOGANATHAN VIJAYARAJA Address of Applicant :7/8, Panner Illam, Ground Floor, Kurunji Nagar, 1st Mainroad, Old Perungalathur Chennai ----- --- 2)DHANASEKAR R Address of Applicant :SRI SAI RAM INSTITUTE OF TECHNOLOGY, SAI LEO NAGAR, WEST TAMBARAM, TAMILNADU, CHENNAI - 600044 CHENNAI ----- --- 3)S KESAV SANADHAN Address of Applicant :SRI SAI RAM INSTITUTE OF TECHNOLOGY, SAI LEO NAGAR, WEST TAMBARAM, TAMILNADU, CHENNAI - 600044 CHENNAI ----- --- 4)KANNAN V Address of Applicant :SRI SAI RAM INSTITUTE OF TECHNOLOGY, SAI LEO NAGAR, WEST TAMBARAM, TAMILNADU, CHENNAI - 600044 CHENNAI ----- --- 5)VISHAL T Address of Applicant :SRI SAI RAM INSTITUTE OF TECHNOLOGY, SAI LEO NAGAR, WEST TAMBARAM, TAMILNADU, CHENNAI - 600044 Chennai -----

(57) Abstract :

This invention introduces a novel multi-level inverter circuit designed specifically for green energy applications. The key aspect of this design is its focus on achieving efficient power conversion while utilizing the fewest possible components. The proposed MLI boosts the capability of generating eleven distinct output voltage levels. To control the switching operation, the design employs the nearest level control PWM technique. This ensures the inverter generates the closest possible voltage level to the desired output, maximizing efficiency. The model is built in real time and tested with both resistive and resistive-inductive loads. The overall voltage stress across all switches in terms of overall standing voltage is computed for both circuits. The performance of multilevel inverters is evaluated in terms of THD. The real-time circuit monitors the output voltages, currents, and powers of both resistive and reactive loads.

No. of Pages : 25 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030376 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ROOM FOR SALE OR RENT IN THE SKY USING A HOT AIR BALLOON BASKET

(51) International classification :G06Q0030060000, B64B0001400000, B32B0027320000, B64B0001640000, F24S0020800000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Converting hot air balloon basket into a modern dwelling unit for rental or sale purposes

No. of Pages : 4 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030377 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : CONTACTLESS SMART DOORBELL SYSTEM

(51) International classification :G08B0003100000, H04L0012280000, H04W0004020000, H04W0004140000, G08B0013196000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(72)Name of Inventor :

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(57) Abstract :

The present invention is in the field of home automation. The present invention provides a smart contactless doorbell system comprising a controller module (1) electronically connected to a sensor module (2), a photography device (3), a wireless communication module (4), an alarm module (5), a cloud server (6), a rechargeable battery module (7) and a memory module (8), characterizing in that the central module is in communication with the cloud server (6) via the wireless communication module (4), wherein the sensor module senses a movement and provide a decision parameter, that passes on to the controller module (1), wherein receiving the decision parameter, the controller module (1) activates the alarm module (5) and the photography device (3).

No. of Pages : 14 No. of Claims : 8

(54) Title of the invention : PREDICTIVE ANALYSIS FOR PATENT APPLICATION

(51) International classification :G10L0019060000, G06F0016140000, H04L0065612000, G06K0009620000, H04W0028080000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Pruthvi Sakleshpur Nagaraj Address of Applicant :Flat 401, Suresh Comforts, Uttara Halli, Bangalore – 560061, Karnataka, India Bangalore ----- --- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Pruthvi Sakleshpur Nagaraj Address of Applicant :Flat 401, Suresh Comforts, Uttara Halli, Bangalore – 560061, Karnataka, India Bangalore ----- ---

(57) Abstract :
A system 100 for prediction of the scope of a patent claim. The system 100 generates a parsed text of an initial claim of a patent application. The system 100 retrieves a first set of prior art references using the parsed text. The system 100 generates a first summary for each of the first set of prior art references. The system 100 determines a first modification of the initial claim based on a comparison between the first summary and the parsed text to generate a modified claim. The system 100 retrieves a second set of prior art references using the modified claim. The system 100 generates a second summary for each of the second set of prior art references. The system determines a second modification of the modified claim or a final scope of the patent claim based on a comparison between the second summary and the modified claim. FIG. 1

No. of Pages : 39 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030384 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : MENTAL HEALTH ASSESSMENT TOOL WITH RUBRICS AND BAND DESCRIPTORS

(51) International classification :G16H0050300000, G16H0010200000, A61B0005000000, A23L0033135000, A61B0005160000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT The present invention is a mental health assessment tool with rubrics and band descriptors a method claim assesses based on a rubrics and a band descriptors are being a tool to assessing the mental health, therein, the rubrics shows the affinity to perform the routines and the band descriptors ranges from zero to nine, thereby, the nine shows the optimal state of well-being.

No. of Pages : 6 No. of Claims : 1

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :16/04/2024

(21) Application No.202441030389 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : ASSESSING RADIOMICS STABILITY OF CONTRAST - ENHANCED 2D MAMMOGRAMS

(51) International classification :G06T0007000000, G06T0005400000, G06T0007110000, G06K0009620000, G06T0005000000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No :NA

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7)Ms. Mudda Priyanka,

8)Mr. Thirumalasetty Sai Charan

9)Mr. Kompala Mahesh Chandra,

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(57) Abstract :

The objective of this study was to assess the stability of radiomic features obtained from contrast-enhanced 2D mammograms of confirmed benign tumor. As subjects, fifteen mammogram images were chosen from the Cancer Imaging Archive datasets. Images were processed and analyzed using MATLAB as software. Mammogram images were made more visible by employing Adaptive Histogram Equalization (AHE), Contrast Limited Adaptive Histogram Equalization (CLAHE), and Bi-Histogram Equalization techniques. Subsequently, radiomic features were extracted via semiautomatic segmentation using the snakes model. The extracted features were evaluated by computing intra-class correlation coefficients (ICC). According to the findings, radiomic features extracted from Bi-Histogram equalization are more reproducible and robust than those extracted from the CLAHE and AHE groups. This approach may be used to forecast patients outcomes with breast cancer.

No. of Pages : 27 No. of Claims : 3

(54) Title of the invention : CYLINDRICAL WATER TANK CLEANING DEVICE FOR REMOVAL OF SLUDGE THEREOF

(51) International classification :B08B0001000000, B08B0009093000, A61B0001000000, B08B0009087000, A61L0002180000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Water tank cleaning device for removal of sludge thereof, comprises Hand wheel (100), Inner pipe (101), threaded pipe (102), supporting plate (103), supporting base (104), Supporting rods (105), Cleaning pads (106), Bottom plate (107), Cleaning brush (108), Suction pump (109), and drain port (110), sponge rollers (111), disinfectant inlet valve (112). The inner pipe (101) is pushed down into the threaded pipe (102) to obtain V-shaped position of the cleaning pads for easy insertion, once the device inserted into the tank the inner pipe (101) in pulled back into the original height for obtaining flat position of the cleaning pads (106). The sponge rollers (111) are fixed to the V-shaped position of the cleaning pads for complete cleaning of the inner walls of the water tank. The removal of sludges is followed by spraying of sterilizing liquid through the disinfectant inlet valve (112). Supporting plates (103) are used to support the entire cleaning device. Threaded pipe (102) is used to make height adjustment of the cleaning pads (106) as well. Hand wheel (100) is used to rotate the inner pipe (101) with cleaning pads (106) manually for removal of scale formation in the inner walls of the tank. Finally, suction pump (109) is used to suck out the scale sediments and sludges in the bottom of the tank.

No. of Pages : 13 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030392 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : Twin wheel snap-on double blower heat dissipation system for commercial vehicle

(51) International classification :B60J0007220000, B60B0007000000, B60B0011060000, H05K0007200000, B01D0053040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Twin wheel snap-on double blower heat dissipation system for commercial vehicle [0036] The invention relates to a double blower heat dissipation system designed for twin wheels of commercial vehicles, aiming to improve heat dissipation efficiency. The system comprises a wheel cap (101a), wheel cap fan (102a) and a wind deflector (103c) with fin contour deflector blades (201a) positioned between twin wheels at a rear axle. The wind deflector (103c), strategically placed between the twin wheels, directs airflow from outer wheel rim vent holes (201d) to inner wheel rim vent holes (202d) and through the gap between the wheel rim and brake drum, facilitating effective heat dissipation. (Figure 1c)

No. of Pages : 18 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030406 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DEVELOPMENT OF GRANOLA BAR FROM JACKFRUIT SEED

(51) International classification :A23L0007126000, A23L0025000000, A23L0033120000, A23L0007100000, A23L0025100000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The jackfruit seed, often underrated despite its rich nutrient profile, originates from tropical regions like South and Southeast Asia. It's packed with protein, fiber, B-complex vitamins, and essential nutrients, offering notable health advantages. Our project emphasizes convenience and innovation, utilizing jackfruit seed powder to craft a nourishing granola bar—an easy breakfast choice. Adding jackfruit seeds boosts the bar's nutritional quality, complemented by dates, almonds, pumpkin seeds, peanut butter, and honey for taste and texture. Additionally, substituting oats with jackfruit seeds not only enhances nutrition but also reduces expenses and minimizes waste.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :16/04/2024

(21) Application No.202441030407 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DEVELOPMENT OF PASTA FROM JACKFRUIT FLOUR AND JACKFRUIT SEED FLOUR

(51) International classification :A23L0007109000, A61K0036600000, A61P0029000000, A23L0019000000, C09K0008720000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)TKM INSTITUTE OF TECHNOLOGY Address of Applicant :Karuvilil P.O, Kollam - 691505, Kerala, India Kollam ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Vignesh B S Address of Applicant :B. Tech Student, Department of Food Technology, TKM Institute of Technology, Karuvilil P.O, Kollam - 691505, Kerala, India Kollam ----- 2)Namitha Maria Rajeev Address of Applicant :B. Tech Student, Department of Food Technology, TKM Institute of Technology, Karuvilil P.O, Kollam - 691505, Kerala, India Kollam ----- 3)Rithik Restan Address of Applicant :B. Tech Student, Department of Food Technology, TKM Institute of Technology, Karuvilil P.O, Kollam - 691505, Kerala, India Kollam ----- 4)Likhita Roy Pillai Address of Applicant :B. Tech Student, Department of Food Technology, TKM Institute of Technology, Karuvilil P.O, Kollam - 691505, Kerala, India Kollam ----- 5)Parvathy M S Address of Applicant :B. Tech Student, Department of Food Technology, TKM Institute of Technology, Karuvilil P.O, Kollam - 691505, Kerala, India Kollam ----- 6)Laya Liz Kuriakoze Address of Applicant :Assistant Professor, Department of Food Technology, TKM Institute of Technology, Kollam - 691505, Kerala, India Kollam ----- 7)Dr. R. Sindhu Address of Applicant :Professor And Dean Research Department of Food Technology, TKM Institute of Technology, Karuvilil P.O, Kollam - 691505, Kerala, India Kollam -----

(57) Abstract :

This work delves into crafting pasta using jackfruit (*Artocarpus heterophyllus*) and jackfruit seed flour as eco-conscious alternatives to conventional wheat-based pasta. The increasing global appetite for sustainable, plant-based foods necessitates innovative ingredients that enrich nutrition while lessening environmental impact. Jackfruit, an underused tropical fruit, boasts diverse culinary prospects due to its distinctive texture and taste. Furthermore, jackfruit seeds, often discarded, hold promise as a nutritious, functional flour. The primary objectives include crafting pasta dough by combining jackfruit pulp and seed flour, and assessing how Jacalin and Artocarpin influence the pasta's physicochemical properties, sensory aspects, and nutritional profile. Jacalin, a jackfruit-derived lectin, may offer immunomodulatory potential, while Artocarpin, a flavonoid, exhibits antioxidant and anti-inflammatory properties. This work underscores the potential of utilizing underutilized fruits and by-products in the food sector, championing sustainability and waste reduction. Developing jackfruit-based pasta underscores the importance of integrating nutritious, eco-friendly ingredients into mainstream food offerings.

No. of Pages : 21 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :16/04/2024

(21) Application No.202441030409 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : EMPOWERING NETWORK SECURITY WITH BLOCKCHAIN: ENHANCING AUDITABILITY AND TRACEABILITY OF OPERATIONS

(51) International classification :H04L0009320000, H04Q0003000000, G06F0021640000, G06N0005020000, H04L0043081700
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :
[06] Signaling System 7 (SS7) defines a stack of protocols used mainly in the signaling exchange of mobile service provider networks. Originally, such protocols were based on relationships of mutual trust between parties, without concern for network security. With the success of the Internet and the growth in the number of operators, mobile networks have become exposed to SS7 attacks that can lead to privacy problems and even unavailability of services. This work proposes the use of blockchain technology as a way of introducing auditability and traceability of network operations, serving as a complement to existing countermeasures (e.g., firewalls). It therefore becomes possible to identify threats and determine their impact on the network. The feasibility of the proposal is assessed through measurements of the consumption of computational resources, leakage and latency of blockchain transactions. The experiments carried out on Hyperledger Fabric show that it is possible to implement the proposed technology without causing major impacts to the existing infrastructure in the operator's network. Accompanied Drawing [FIG. 1] [FIG. 2] [FIG. 3] [FIG. 4] [FIG. 5] [FIG. 6]

No. of Pages : 28 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030412 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN AUTONOMOUS AND INTELLIGENT TOWER PARKING SYSTEM

(51) International classification :B60W0030060000, G08G0001140000, E04H0006420000, G06Q0010060000, G08G0001000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The demand for efficient and space-saving parking solutions in urban areas has spurred the development of innovative automated parking systems. In response to this need, we present a cutting-edge solution: the Fully Automated Tower Parking System. This system integrates a network of sensors, actuators, and a sophisticated control algorithm to autonomously manage the parking and retrieval of vehicles within a vertical parking structure. Utilizing ultrasonic or infrared sensors strategically positioned throughout the tower, real-time data on parking space availability is continuously monitored and processed by a central control unit equipped with an Arduino microcontroller. Motorized platforms within the structure are then orchestrated to efficiently park and retrieve vehicles based on analyzed parking conditions. A user-friendly interface, such as an LCD display or LED indicators, guides drivers to vacant spots upon entry. Safety mechanisms, including emergency stop buttons, limit switches, and obstacle detection sensors, ensure safe operation. Scalable and adaptable, this system promotes sustainability by maximizing space efficiency, reducing traffic congestion, and minimizing environmental impact compared to traditional parking methods.

No. of Pages : 29 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030414 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN ADAPTIVE PORTABLE VENTILATOR SYSTEM FOR RESPIRATORY SUPPORT IN DIVERSE ENVIRONMENTS

(51) International classification	:A61M0016000000, A61M0016120000, A61M0016100000, A61B0005080000, A61M0016040000	(71)Name of Applicant : 1)R. M. K. College of Engineering and Technology Address of Applicant :Puduvoyal, Gummidipoondi, Taluk – 601206, Thiruvallur, Tamil Nadu, India. Tiruvallur -----
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(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention relates to a novel ventilator system designed to provide adaptive respiratory support in various environments, including resource-constrained settings and emergency situations. Traditional ventilation units often lack adaptability and may not adequately respond to the dynamic respiratory needs of patients. In contrast, the proposed ventilator system integrates Arduino technology to offer cost-effective and adaptable solutions for respiratory care. By incorporating a sensor array and a microcontroller unit, the ventilator system can monitor and analyze patient respiratory parameters in real-time, enabling precise control of air delivery to the lungs. This innovation addresses the critical need for portable ventilator systems capable of providing life-saving support to patients with respiratory diseases and disorders, particularly in the context of recent global health crises such as the COVID-19 pandemic.

No. of Pages : 29 No. of Claims : 7

(51) International classification :G01N0033000000, F24F0110700000, F24F0011300000, F24F0110500000, F24F0110200000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
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(57) Abstract :
IOT ENABLED INDOOR AIR CONSTITUENTS MONITORING SYSTEM ABSTRACT This study presents a novel air constituents monitoring system integrating advanced sensors and cloud-based analytics to provide real-time insights into indoor environmental conditions. Key components include a DHT11 temperature and humidity sensor, an ACD-10 CO2 sensor, and Arduino Uno microcontroller for data aggregation and transmission. Bluetooth connectivity enables seamless interaction with mobile devices, while ThingSpeak serves as the cloud repository for data storage and analysis. The system's modular design allows for scalability and adaptability, ensuring applicability across diverse indoor environments. Through accurate sensing, data visualization, and proactive management, the proposed system empowers stakeholders to mitigate health risks associated with indoor air pollution and enhance occupant comfort and productivity. This research contributes to the advancement of IoT-enabled solutions for sustainable indoor environments and underscores the importance of technology-driven approaches in safeguarding public health.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030418 A

(19) INDIA

(22) Date of filing of Application :15/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ISOBARIC CHAMBER MADE BY INTERCONNECTING 'ELEVATED GAS VESSEL, LIQUID IMMERSED GAS VESSEL' HOUSING FLUID BALLOONS

(51) International classification :B30B0011000000, F17C0013040000, F17C0005060000, F17C0001000000, F17C0013000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
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(57) Abstract :

This device named as Isobaric chamber made by interconnecting 'elevated gas vessel, liquid immersed gas vessel' housing fluid balloons relates to Physical Sciences. Few liquid filled flexible balloons (50) are submerged in a gas filled pressure vessel (10) provided at ground level. Few other fluid filled balloons (50) are housed in a container (40) submerged in a deep liquid holding body (30) where liquid's pressure is equal to pressure to be maintained in the pressure vessel (10). Balloons (50) in pressure vessel (10) are filled with fluid to be supplied to the high pressure fluid utilizing means. Gas filled pressure vessel (10) is connected through a pipe (150) to gas filled container (40) submerged in the deep liquid holding body (30). Balloons (50) in the container (40) are filled with liquid same as liquid in deep liquid holding body (30). This device is useful to supply fluid at constant pressure.

No. of Pages : 38 No. of Claims : 19

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030434 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : HIGH-RESOLUTION MASS SPECTROMETRY SYSTEM FOR RAPID AND ACCURATE PROTEIN IDENTIFICATION IN COMPLEX BIOLOGICAL SAMPLES

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(51) International classification	:G01N0033680000, G01N0033574000, G16B0050000000, G16C0020200000, G16B0040000000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The proposed invention is a high-resolution mass spectrometry system designed for rapid and accurate identification of proteins in complex biological samples. It features advanced ionization techniques for efficient protein stabilization, novel fragmentation methods to enhance specificity, and high-sensitivity detectors capable of identifying proteins at very low concentrations. Integrated AI-powered data analysis software processes complex data, distinguishing subtle protein modifications and improving identification accuracy. This system supports high-throughput screening, adaptable to both large-scale research and clinical diagnostics. It enhances proteomic research capabilities, aiding in disease diagnosis, therapeutic developments, and personalized medicine.

No. of Pages : 20 No. of Claims : 10

(54) Title of the invention : IOT INTEGRATED SYSTEM FOR GAS LEAK DETECTION AND THREAT ZONE IDENTIFICATION AND METHOD EMPLOYED THEREOF

(51) International classification :G01N0033000000, G08B0021120000, G08B0021140000, G08B0021180000, H04Q0009000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING Address of Applicant :L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DR. B. SIVARAMAKRISHNA Address of Applicant :L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. ----- 2)IMANDI VASAVI Address of Applicant :L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. ----- 3)MULLANGI RAJU Address of Applicant :L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. ----- 4)DR. D. VEERAIAH Address of Applicant :L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. ----- 5)DR.K.DEVIPRIYA Address of Applicant :L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. ----- 6)DR.D.VENKATA SUBBAIAH Address of Applicant :L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. ----- 7)PAJJURI SARANYA DURGA Address of Applicant :L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. -----

(57) Abstract :
Exemplary embodiments of the present disclosure are directed towards an iot integrated system for gas leak detection and threat zone identification and method employed thereof, comprising: a plurality of gas sensors configured to transfer air quality and harmful gases real-time data to first computing device over a network. First computing device comprises gas exposure monitoring module configured to analyze the real-time data of air quality and harmful gases to detect the presence of harmful gases and identify potential gas leak incidents using environmental factors wind speed and direction with temperature to identify and delineate threat zones within the industrial environment, the gas exposure monitoring module configured to categorize threat zones into different levels of severity based on the concentration of harmful gases. The gas exposure monitoring module configured to send alerts to individuals and emergency services through auditory, and visual alarms and broadcast messages based on the different levels of the threat zones. Fig. 1

No. of Pages : 29 No. of Claims : 10

(54) Title of the invention : LONG-TERM BENEFITS OF FLY ASH, GGBS AND SILICA FUME IN SUSTAINABLE CONCRETE DEVELOPMENT

(51) International classification :C04B0028080000, C04B0028040000, C04B0111100000, C04B0018080000, G01N0033380000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

This patent application presents a comprehensive study on the long-term benefits of using fly ash, ground granulated blast furnace slag (GGBS) and Silica fume (SF) in sustainable concrete development. The research focuses on investigating the performance of concrete mixtures containing fly ash, GGBS and Silica fume over extended periods, with a specific emphasis on their impact on concrete strength, durability, and environmental sustainability. Fly ash, GGBS and Silica fume are supplementary cementitious materials (SCMs) that can partially replace cement in concrete mixtures, offering environmental benefits such as reduced carbon footprint and resource conservation. However, the long-term performance of concrete containing these materials is not well understood, which has limited their widespread adoption in construction projects. This study employs a rigorous experimental approach to evaluate the long-term performance of fly ash, GGBS and Silica fume in concrete mixtures. The research includes comprehensive testing of concrete specimens over extended periods, with a focus on assessing their compressive strength, durability, and resistance to environmental factors such as sulphate and chloride attacks. The results of this study provide valuable insights into the long-term benefits of using fly ash, GGBS and Silica fume in sustainable concrete development. The research demonstrates that concrete mixtures containing fly ash, GGBS and Silica fume exhibit comparable or superior performance to traditional concrete mixtures, particularly in terms of strength development, durability, and environmental sustainability.

No. of Pages : 18 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030497 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD AND SYSTEM FOR TAILORED PRODUCT SELECTION

(51) International classification :G06Q0030060000, C12Q0001682700, H04L0051000000, H04L0067520000, G06N0003040000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr Ch Ramesh Babu Address of Applicant :Associate Professor Department of IT Matrusri Engineering College ,Hyderabad hyderabad ----- ----- 2)Dr Sowmya Kethi Reddy 3)Dr. Meruva Sreenivasulu Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr Ch Ramesh Babu Address of Applicant :Associate Professor Department of IT Matrusri Engineering College ,Hyderabad hyderabad ----- ----- 2)Dr Sowmya Kethi Reddy Address of Applicant :Assistant professor, School of Management Studies, Chaitanya Bharathi Institute of Technology, Hyderabad hyderabad ----- ----- 3)Dr. Meruva Sreenivasulu Address of Applicant :Professor, Department of IT Matrusri Engineering College, Hyderabad hyderabad -----

(57) Abstract :

A METHOD AND SYSTEM FOR TAILORED PRODUCT SELECTIONA method and system for selling products is disclosed, where the customer is guided through an interactive process that receives selection criteria from the customer relating to the type of product the customer would like to purchase. The method comprises a 10 step of storing in a product data file a plurality of products or product designs to be sold. The method comprising another step of providing a product suitability data file, said product suitability data file including a plurality of product suitability matrices, each said product suitability matrix corresponding to one of said products or product designs stored in said product data file. Rather than seeking to identify products whose 15 characteristics exactly match customer specifications, the system and method embodies one or more kinds of suitability data for the purpose of selectively retrieving some subset of best fitting or most appropriate products or product data files in response to customer data entry

No. of Pages : 13 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :16/04/2024

(21) Application No.202441030557 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : RISK ASSESSMENT USING MANHOLE DETECTION AND MONITORING SYSTEM

(51) International classification :B65F0001140000, H04L0067120000, H04W0084180000, E02D0029140000, H02G0009100000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Prasanna Gandhiraj Address of Applicant :no:8-9/35 Magila malar street Mahathma Gandhi nagar ----- 2)Anil Neerukonda Institute of Technology and Sciences 3)Dr. N. Swathi 4)Dr. B. Jagadeesh 5)M. Aswanth Kumar 6)P. Rama Supriya 7)P. Janaki 8)P. Vamsi Krishna Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. N. Swathi Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 2)Dr. B. Jagadeesh Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 3)M. Aswanth Kumar Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 4)P. Rama Supriya Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 5)P. Janaki Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam ----- 6)P. Vamsi Krishna Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences, Visakhapatnam, Andhra Pradesh. Visakhapatnam -----

(57) Abstract :

RISK ASSESSMENT USING MANHOLE DETECTION AND MONITORING SYSTEM A crucial aspect of building a smart city is enhancing underground infrastructure, especially in monitoring manholes. Traditional methods are slow and risky for workers. To address this, a low-cost, low-maintenance, real-time IoT system with wireless sensor networks has been proposed. It alerts management when manholes exceed set thresholds, improving drainage issue response times and reducing risks for sanitation workers. This proactive approach contributes to a cleaner, safer, and healthier urban environment, aligning with the smart city vision

No. of Pages : 19 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030570 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM AND METHOD FOR TABULATION AND CALCULATION OF CULINARY COST DATA

(51) International classification	:G06Q0040000000, G06Q0030020000, G06Q0010060000, G06Q0030040000, G06Q0010080000	(71)Name of Applicant : 1)Manipal Academy of Higher Education Address of Applicant :Madhav Nagar, Manipal, 576104, Karnataka, India. Manipal -----
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Filing Date	:NA	Address of Applicant : NA
(87) International Publication No	: NA	(72)Name of Inventor :
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(57) Abstract :

Embodiments of the present disclosure relates to a system (102) and method (300) for tabulation and calculation of culinary cost data to provide a total cost of procuring ingredients for food to a user. In an aspect, the system (102) comprises a processor (202) and a memory (204). The processor (202) is configured to accept a gross cost from a user and accept a direct overhead percentage value and an indirect overhead percentage value from the user. Further, the processor (202) is configured to create a database for the gross cost, the direct overhead percentage value and the indirect overhead percentage value to calculate a profit and transmit a cost analysis statement to the user. The cost analysis statement provided to the user comprises a recipe cost and a total cost of procuring ingredients for food.

No. of Pages : 23 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030571 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : STRUCTURE OF SOLID ROCKET MOTORS FOR HIGH-POWER ROCKETRY APPLICATIONS

(51) International classification :F02K0009340000, F04C0029040000, B64G0001400000, F02K0009970000, A61L0027560000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present disclosure relates to a structure (100) of solid rocket motor, the structure includes a casing (102) defining an outer shell of the solid rocket motor (100), configured as a pressure vessel to contain propellant and withstand high internal pressure during motor operation. A closure (104) positioned at a front end of the casing (102). A nozzle (106) adapted to accelerate flow of exhaust gases produced during propellant combustion. A pair of retainers (108-1, 108-2) is configured to counteract over pressurization within the motor. One or more bolts (110) adapted for connecting the closure (104) and the pair of retainers (108-1, 108-2), offering a robust attachment to withstand high mechanical loads and vibrations and a liner (112) configured as thermal insulation of the casing (102) to protect internal surfaces from extreme heat and pressure generated during combustion.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030578 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SMART WATER HEATER SYSTEM AND A METHOD THEREOF

(51) International classification :F24H0009200000, F24D0017000000, F24D0019100000, H05B0001020000, E03C0001040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT A SMART WATER HEATER SYSTEM AND A METHOD THEREOF The present disclosure discloses a smart water heater system(100) and a method(200) thereof. The system(100) comprises a first chamber(104) having a first inlet(104a) for receiving running water, an electric heater(106) for heating the normal water, a first outlet(104b) for discharge of heated water; a second chamber(108) having a second inlet(108a) for receiving heated water discharged, a third inlet(108c) coupled with a supply tap for receiving running water for mixing with heated water to maintain a requisite temperature for obtaining mixed water, a second outlet(108b) to discharge the mixed water at the requisite temperature; a controller(110) to control said geyser(102); a mode selection module(110a) to operate said geyser(102) in operating mode, activate a mode to discharge the mixed water; an operating module(110b) to turn ON/ OFF said geyser(102); a data transfer module(110c) to collect usage data of the geyser(102) and store said data in a memory of a remote server(112). Figure 1

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030581 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD FOR DEVELOPING MAGNESIUM-BASED MULTI-FUNCTIONAL COMPOSITE COATING FOR METALLIC BONE IMPLANTS

(51) International classification :A61L0027540000, A61L0027320000, A61L0027060000, A61P0013120000, A61L0027040000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

ABSTRACT: Title: A Method for Developing Magnesium-Based Multi-Functional Composite Coating for Metallic Bone Implants

The present disclosure proposes a method for enhancing magnesium-based multi-functional composite coating for metallic bone implants using a colloidal processing technique. The method ensures the effective delivery of at least one antibiotic into a wound, thereby enhancing the healing rate of the wound. The method increases tissue integration and enhances surface integrity with the presence of hydroxyapatite, magnesium, and the at least one antibiotic, which supplies the required calcium into the wound to accelerate the healing. The method could be applied to all the existing biomedical implants to enhance osseointegration and enhance anti-bacterial resistance. The method employs electrophoretic deposition techniques to enhance biocompatibility, precise control, and the ability to create tailored coatings for metallic bone implants with specific functionalities. The method increases patient satisfaction due to the possibility of reducing revision surgeries.

No. of Pages : 14 No. of Claims : 10

(54) Title of the invention : COMPACT MULTI-FREQUENCY RECONFIGURABLE PATCH ANTENNA

(51) International classification :H01Q0009040000, G06F0030230000, H01Q0001480000, H02J0013000000, H01Q0001380000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING Address of Applicant :L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Rakesh Kumar Prathipati Address of Applicant :Department of ECE, L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. ----- 2)Dr. Satyanarayana Talam Address of Applicant :Department of ECE, L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. ----- 3)Dr. Alur Narendra Babu Address of Applicant :Department of ECE, L.B.Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh-521230, India. -----

(57) Abstract :

Exemplary embodiments of the present disclosure are directed towards a compact multi-frequency reconfigurable patch antenna, comprising: a radiating element on an FR-4 substrate with a defective ground structure, three switches, and a microstrip feed line, the antenna operates across eight distinct frequency bands from 2 GHz to 5.5 GHz, supporting diverse communication standards. Optimization using Ansys HFSS software ensures efficient performance, while parametric analysis considers variations in DGS dimensions and materials. PIN diodes enable frequency switching, and electric field distribution analysis provides insights into wave interaction. With impedance bandwidths ranging from 2.51% to 6.86% and gains from 4.8 dB to 6.8 dB, the antenna demonstrates robust performance. Additionally, its VSWR of less than 1.5 ensures optimal matching and lumped element components facilitate frequency reconfiguration. Offering remote monitoring and control capabilities, this antenna system represents a comprehensive solution for adaptable and efficient wireless communication. Fig. 1A,1B

No. of Pages : 39 No. of Claims : 10

(54) Title of the invention : LC-MS/MS METHOD FOR ESTIMATION OF RITLECITINIB IN PHARMACEUTICAL DOSAGE FORM AND USES THEREOF

(51) International classification :G01N0030020000, G01N0030860000, G01N0030060000, G01N0030880000, G01N0030720000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Rajitha Galla Address of Applicant :Professor, Institute of Pharmaceutical Technology, Sri Padmavati Mahila Visvavidyalayam, Tirupati-517502, Andhra Pradesh, India Tirupati ----- 2)Charumathi Salva Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Rajitha Galla Address of Applicant :Professor, Institute of Pharmaceutical Technology, Sri Padmavati Mahila Visvavidyalayam, Tirupati-517502, Andhra Pradesh, India Tirupati ----- 2)Charumathi Salva Address of Applicant :Assistant Professor, Seven Hills College of Pharmacy, Venkatramapuram, Tirupati-517561, Andhra Pradesh, India Tirupati -----

(57) Abstract :

LC-MS/MS METHOD FOR ESTIMATION OF RITLECITINIB IN PHARMACEUTICAL DOSAGE FORM AND USES THEREOF The present invention provides a method for estimation of Ritlecitinib in pharmaceutical dosage form using LC-MS/MS, comprising of dissolving Ritlecitinib using Acetonitrile: 0.1% Formic acid as mobile phase in the ratio of 30:70% v/v using water as diluent; running chromatogram through column 100mm x 4.6mm, 3µm using mobile phase; optimizing conditions of column at flow rate 1.0 ml/min, injecting volume 10µL; running the sample and recording chromatogram from the chromatograph for estimation of Ritlecitinib, separating the samples and eluting with retention time of 2.729mins for Ritlecitinib and 2.727mins for Ritlecitinib D6; the products m/z values of 286.159105.7458 and 292.1595-111.7468; LLOQ of 5 ng/ml and concentration range of Ritlecitinib in plasma ranging from 5 to 100ng/ml; the dichloromethane is used as organic solvent, %recovery is within the range of 98.97% to 99.79%; accuracy ranged from 97.24% to 104.20% and %CV is less than 2%; AUC0-t is 87 ng-hr/ml, Cmax is 43.829 ng/ml, AUC0-8 is 87 ng-hr/ml, tmax is 0.75hrs and T1/2 is 2.5hrs. The method for estimation of Ritlecitinib as claimed in claim 1, wherein the LLOQ for Ritlecitinib is 5 ng/ml, ULOQ of 100 ng/ml, regression equation $y = 0.0201x + 0.02541$ and the correlation coefficient of 0.9999, and the relative standard deviation was less than 3%. The method is suitable for the regular analysis of Ritlecitinib in plasma samples.

No. of Pages : 26 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :16/04/2024

(21) Application No.202441030612 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN APPARATUS AND METHOD TO PERFORM MULTI-WHEEL FASTENING AND REMOVAL OF BOLTS / NUTS IN VEHICLES

(51) International classification :B60B0029000000, B25B0013440000, B60S0005000000,
B60T0017220000, B25G0001040000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
Number :NA
Filing Date :NA

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(57) Abstract :

The present invention relates to a vehicle multi wheel fastener tightening and removal system designed to simplify the process of replacing wheel nuts on vehicles. As the standard of living has increased, so has the prevalence of car ownership, resulting in a higher frequency of tire failures. Traditional methods for replacing wheel nuts involve manual labor and can be cumbersome and time-consuming. In response to this need, the proposed system incorporates an adjustable socket and crank mechanism driven by an electric motor to facilitate the simultaneous removal of all wheel nuts. The system is characterized by its ease of maintenance, storage, and handling, offering an efficient solution to the challenges associated with tire maintenance on vehicles.

No. of Pages : 23 No. of Claims : 7

(54) Title of the invention : AN AUTOMATED TREATMENT RECOMMENDATION SYSTEM BASED ON PATIENT-SPECIFIC HEALTH DATA AND AI ALGORITHMS

(51) International classification :G16H0050200000, A61B0005000000, G16H0010600000, G16H0050300000, G16H0020100000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Sivasubramanian Balasubramanian Address of Applicant :246, 61st, Apartment 1 Brooklyn, New York University, New York, 11220 ----- 2)Dr. G. Thamarai Selvi 3)Md Aminul Islam 4)Dr. Gowri A. 5)G. Anitha 6)Dr. Alpesh Vaghela Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Sivasubramanian Balasubramanian Address of Applicant :246, 61st, Apartment 1 Brooklyn, New York University, New York, 11220 ----- 2)Dr. G. Thamarai Selvi Address of Applicant :Professor & HoD, Sri Sai Ram Institute of Technology, Chennai, Tamil Nadu ----- 3)Md Aminul Islam Address of Applicant :Chairman, RNB Lab, School of Computing and Technology, University of Gloucestershire, Park Campus, UK, GL50 2RH ----- 4)Dr. Gowri A. Address of Applicant :Assistant Professor, Department of Information Technology, Hindusthan College of Arts & Science, Coimbatore, Tamil Nadu ----- 5)G. Anitha Address of Applicant :Assistant Professor, Department of ECE, St. Joseph's College of Engineering, Chennai, Tamil Nadu ----- 6)Dr. Alpesh Vaghela Address of Applicant :Lecturer, CE Department, GMB Polytechnic, Rajula, Gujarat -----

(57) Abstract :
The present invention relates to provide an automated treatment recommendation system based on patient-specific health data and AI algorithms. It aggregates diverse patient data, including EHRs, genetic profiles, and wearable sensor data, harmonizing them for a holistic understanding of each patient's health. Advanced AI algorithms continuously analyze this data, identifying patterns and informing personalized treatment recommendations. These recommendations span medication regimens, lifestyle modifications, and more, accounting for individual factors like genetics and socioeconomic status. Real-time decision support tools provide clinicians with actionable insights, integrating seamlessly into existing workflows. The feedback loop mechanism enables continuous monitoring and adjustment of treatment plans based on patient progress, ensuring responsiveness to evolving health needs.

No. of Pages : 10 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030633 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : IOT BASED FARM SYSTEM UTILIZING SILICON LED LAMPS AND WORKING METHOD THEREOF

(51) International classification :G06Q0050020000, A01G0007040000, A01G0009240000, C12M0001000000, A01G0009160000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention relates to an innovative IoT-Controlled Smart Farm System utilizing Silicon LED Lamps designed to optimize agricultural operations. This system integrates advanced silicon-based LED lighting with Internet of Things (IoT) technology to provide an efficient, automated solution for maximizing plant growth and monitoring environmental conditions within a smart farm environment. The system comprises a network of high-efficiency silicon LED lamps that deliver optimal light spectra for plant photosynthesis, combined with an IoT control module that facilitates real-time data acquisition and remote management. Environmental sensors are strategically placed to collect data on factors such as soil moisture, temperature, and ambient light levels, which are processed by the IoT module to adjust lighting conditions dynamically and maintain optimal growing environments. This integration results in enhanced crop yields, reduced energy consumption, and improved operational efficiency, making it an essential advancement in agricultural technology. Accompanied Drawing [FIGS. 1-2]

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030634 A

(19) INDIA

(22) Date of filing of Application :16/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A RADAR SYSTEM FOR DETECTING TARGETS USING A VARIABLE PHASE DELAY AND A METHOD THEREOF

(51) International classification :G01S0013931000, G01S0013340000, G01S0007030000, A61B0005020500, G01S0013580000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT A RADAR SYSTEM FOR DETECTING TARGETS USING A VARIABLE PHASE DELAY AND A METHOD THEREOF A radar system and method for detecting targets using a variable phase delay is disclosed. The radar system includes a radar configured to detect a target based on a reflected signal and a transponder system. The transponder system includes a receive subsystem configured for receiving an incident energy from the radar system using a receive antenna. The transponder system further includes a bridge circuit configured for generating a rectified signal. Furthermore, the transponder system includes a configurable phase delay block communicatively coupled to the receive subsystem. The configurable phase delay block is configured for converting the received incident energy to a delayed digital signal using one or more delay line circuits. The transponder system further includes a filtering subsystem communicatively coupled to the configurable phase delay block. The filtering subsystem is configured for filtering the delayed digital signal and generating the reflected signal. FIG. 2A-2B

No. of Pages : 63 No. of Claims : 19

(54) Title of the invention : HIGH-EFFICIENCY VOLTAGE REGULATOR ENSURING STABLE, OPTIMAL SUPPLY FOR INDUSTRIAL AND CONSUMER ELECTRONICS PERFORMANCE AND RELIABILITY

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(51) International classification	:G06Q0010060000, G06Q0010040000, G06Q0050060000, C23C0028000000, H02J0003140000	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
The proposed invention introduces a novel voltage regulation system designed to enhance efficiency and reliability in industrial and consumer electronics. Combining advanced semiconductor technologies with sophisticated control algorithms, the system delivers stable and optimal power supply while minimizing energy losses. The invention's modularity and adaptability enable seamless integration into diverse applications, from heavy-duty industrial machinery to portable consumer devices. Through rigorous testing and validation, it has been proven to offer unparalleled performance across a wide range of operating conditions, ensuring uninterrupted operation and extending the lifespan of electronic components. Furthermore, the system prioritizes sustainability by maximizing energy efficiency and minimizing environmental impact. With its intuitive interface and comprehensive support mechanisms, it empowers users to harness its benefits with ease, driving innovation and progress in the field of power electronics.

No. of Pages : 20 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030651 A

(19) INDIA

(22) Date of filing of Application :17/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ENHANCED EFFICIENCY OF COMPRESSION IGNITION ENGINE USING BLENDS OF HONGE OIL AND ETHANOL

(51) International classification :F02B0003060000, F02D0041400000, F02D0015000000, F02B0075040000, F02D0041380000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Nandkishore Address of Applicant :Professor in Mechanical Engineeirng Guru Nanak Dev Engineering College, Bidar ----- 2)Dr. Sanjay Patil 3)Dr. Nagraj Gandhe 4)Dr. Abhijit L Dandavate Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Nandkishore Address of Applicant :Professor in Mechanical Engineeirng Guru Nanak Dev Engineering College, Bidar ----- 2)Dr. Sanjay Patil Address of Applicant :Professor in Mechanical Engineering, Guru Nanak Dev Engineering College, Bidar, Karnataka, India, 585403 Bidar ----- 3)Dr. Nagraj Gandhe Address of Applicant :Associate Professor in Mechanical Engineering, Guru Nanak Dev Engineering College, Bidar, Karnataka, India, 585403 Bidar ----- 4)Dr. Abhijit L Dandavate Address of Applicant :Associate Professor in Automobile Engineering Dhole Patil College of Engineering, Kharadi, Pune Maharashtra, India, 585403 Pune -----

(57) Abstract :

This work Discloses blends based on ethanol and Honge oil has improved thermal efficiency of compression ignition engine with a BHO-70, Engine thermal efficiency is improved with increase in injector opening pressure up to 220 bar, advancing injection timing up to 27° bTDC, and increasing compression ratio to 18 which also reduced smoke opacity to pre-set engine operating settings. It is found that compression ignition engine thermal efficiency was highest with vegetable oil-ethanol blend with 70% Honge oil and 30% ethanol as compared to other blends used in this work. In comparison to preset engine operating settings, the maximum thermal efficiency and lowest smoke opacity are obtained for a combination of 220 bar injector opening pressure, 27° bTDC fuel injection timing, and 18 compression ratio.

No. of Pages : 24 No. of Claims : 4

(54) Title of the invention : SYNTHESIS OF N-SUBSTITUTED 1-(3-METHYL-1-PHENYL-PYRAZOL-5-YL) PIPERAZINE DERIVATIVES AS DPP4 INHIBITORS THROUGH SAR ANALYSIS

(51) International classification :A61P0003100000, A61P0025020000, A61P0027020000, G01N0033500000, A61P0025000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Abstract This study innovatively aims to enhance the therapeutic profile of DPP4 inhibitors for type 2 diabetes. Several N-substituted 1-(3-methyl-1-phenyl-pyrazol-5-yl) piperazine derivatives were synthesized and evaluated. In a structured SAR analysis, we systematically modified the N-position of piperazine ring to examine its effect on enzymatic inhibition. Given the the piperazine binding favourable data prediction from computational interactions and including molecular docking and dynamics, enzymatic avalidatedng, in a biochemical assay in vitro. The synthesised compounds had IC50 values ranging from 1.2 to 50, and more active compounds had bulkier alkyl substitutions. The most potent compound exhibited an IC50 of 1.2, which was significantly more potent than the benchmark compound, sitagliptin, which had an IC50 of 2.5. The present findings not only supplement the existing information on DPP4 inhibitors but also delineate the possibilities of piperazine derivatives for diabetes treatment. Our next research will focus on further optimizing these promising candidates to improve their pharmacokinetics and evaluating their effectiveness in clinical settings. This study opens new doors for the development of DPP4 inhibitors with better therapeutic efficacy, which could pave the way for more effective therapies for type 2 diabetes patients.

No. of Pages : 13 No. of Claims : 5

(54) Title of the invention : DEEP LEARNING-BASED IMAGE SEGMENTATION AND CLASSIFICATION FOR MEDICAL DIAGNOSTICS IN RADIOLOGY IMAGING

(51) International classification	:G06N0003080000, G06T0007000000, G16H0050200000, G06N0003040000, G16H0015000000
(86) International Application No	:NA
Filing Date	:NA
(87) International Publication No	: NA
(61) Patent of Addition to Application Number	:NA
Filing Date	:NA
(62) Divisional to Application Number	:NA
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(57) Abstract :
Abstract The deep learning-based system for image segmentation and classification in medical diagnostics revolutionizes radiology imaging by automating complex analysis tasks. Leveraging a sophisticated deep neural network architecture trained on diverse annotated datasets, the system offers precise segmentation of regions of interest (ROIs) in radiology images, such as X-rays, CT scans, and MRI scans. Advanced convolutional layers and post-processing techniques ensure accurate delineation of anatomical structures or abnormalities, while classification modules categorize segmented ROIs into diagnostic categories using softmax or sigmoid activations. The system's user-friendly interfaces empower healthcare professionals to interact with analysis results and generate comprehensive diagnostic reports. Seamlessly integrated into existing radiology software, this innovation enhances diagnostic accuracy, efficiency, and workflow, paving the way for improved patient care and outcomes in medical diagnostics.

No. of Pages : 14 No. of Claims : 8

(54) Title of the invention : AI BASED TRANSPARENT AND TRACEABLE SUPPLY CHAIN MANAGEMENT USING BLOCKCHAIN

(51) International classification :G06Q0010060000, G06Q0030020000, G06Q0010080000, G06Q0010100000, G06Q0020120000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr.Alex David S Address of Applicant :Professor Department of Computer Science and Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, 400 feet Outer Ring Road, Avadi, Chennai – 600 062 Thiruvallur Tamil Nadu India ----- 2)Dr.Almas Begum 3)Dr.Carmel Mary Belinda M J 4)Dr. Ravikumar S 5)Dr. Antony Kumar K 6)Dr. Kishore Kumar K 7)Mrs. Hemalatha D 8)Jason. K 9)Saranya S 10)Kanchana M Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr.Alex David S Address of Applicant :Professor Department of Computer Science and Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, 400 feet Outer Ring Road, Avadi, Chennai – 600 062 Thiruvallur Tamil Nadu India ----- 2)Dr.Almas Begum Address of Applicant :Professor, Department of Computer Science and Engineering, Saveetha School of Engineering, Saveetha institute of Medical and Technical Sciences Saveetha Nagar,Thandalam, Chennai - 602105 Kanchipuram Tamil Nadu India ----- 3)Dr.Carmel Mary Belinda M J Address of Applicant :Professor, Department of Computer Science and Engineering, Saveetha School of Engineering, Saveetha institute of Medical and Technical Sciences Saveetha Nagar,Thandalam, Chennai - 602105 Kanchipuram Tamil Nadu India ----- 4)Dr. Ravikumar S Address of Applicant :Associate Professor [SG] Department of Computer Science and Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, 400 feet Outer Ring Road, Avadi, Chennai – 600 062 Thiruvallur Tamil Nadu India ----- 5)Dr. Antony Kumar K Address of Applicant :Assistant Professor [SG] Department of Computer Science and Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, 400 feet Outer Ring Road, Avadi, Chennai – 600 062 Thiruvallur Tamil Nadu India ----- 6)Dr. Kishore Kumar K Address of Applicant :Assistant Professor [SG] Department of Computer Science and Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, 400 feet Outer Ring Road, Avadi, Chennai – 600 062 Thiruvallur Tamil Nadu India ----- 7)Mrs. Hemalatha D Address of Applicant :Assistant Professor, Computer Science and Engineering, Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology, 400 feet Outer Ring Road, Avadi, Chennai – 600 062 Thiruvallur Tamil Nadu India ----- 8)Jason. K Address of Applicant :Assistant professor Department of Computer Science and Technology, SNS College of Engineering SNS Kalvi Nagar, Sathy Main Road, NH-209, Vazhiyampalayam, Saravanampatti, Coimbatore, 641107 Tamilnadu India ----- 9)Saranya S Address of Applicant :Assistant professor Department of Computer Science and Technology, SNS College of Engineering SNS Kalvi Nagar, Sathy Main Road, NH-209, Vazhiyampalayam, Saravanampatti, Coimbatore, 641107 Tamilnadu India ----- 10)Kanchana M Address of Applicant :Assistant professor Department of Computer Science and Technology, SNS College of Engineering SNS Kalvi Nagar, Sathy Main Road, NH-209, Vazhiyampalayam, Saravanampatti, Coimbatore, 641107 Tamilnadu India -----

(57) Abstract :
AI based Transparent and Traceable Supply Chain Management using Blockchain Abstract: As a result of digitalization, it is anticipated that the employment of contemporary technology applications would transform the operations involved in the supply chain from beginning to end. The overall impact of integrating digital technologies in operations has been neglected due to a lack of tangible proof from the real world. This is despite the fact that implementation of digital technologies in operations offers individual benefits. The purpose of this project is to examine the utilization of Artificial Intelligence (AI) and Blockchain Technology (BCT) in supply chains in order to improve operational performance, as well as to encourage sustainable growth and the collection of data for monetization purposes. The purpose of this study was to conduct an empirical investigation of the tuna fish supply chain in Thailand with the intention of identifying the numerous operations that are involved, observing the processes that are related to the processing of materials and data, and taking into consideration the possibility of implementing artificial intelligence (AI) and blockchain technology (BCT). In light of this, we initially charted the business activities and the interactions at the system level in order to gain an understanding of the controlling material, data, and information flows that may be enabled by the combined use of AI and BCT in the supply chain that corresponds to the situation. Artificial intelligence (AI) and blockchain technology (BCT) are shown to be of major relevance in the management of digital supply chains, as demonstrated by the findings of the mapping. According to the particular factors and goals that have been specified by the stakeholders of the system, the influence on the sustainability and monetization of data is dependant upon those parameters and goals. Following that, we proposed a unified structure that incorporates the important data components that need to be digitally handled in AI and BCT assisted food supply chains in order to improve the provision of value. In conclusion, it is anticipated that the utilization of empirically-driven modeling will be of assistance to both academics and practitioners in the process of making informed decisions regarding the evaluation and implementation of digital interventions for the purpose of monetizing data and ensuring sustainability.

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :17/04/2024

(21) Application No.202441030655 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : COMPOSITION AND METHODS FOR TREATING MULTI DRUG-RESISTANT TUBERCULOSIS USING CAPSULES CONTAINING ECAM MESOPOROUS NANOPARTICLE

(51) International classification :A61P0031040000, A61K0031496000, A61K0009510000, A47J0031400000, A47J0031360000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Composition and Methods for Treating Multi drug-Resistant Tuberculosis using Capsules containing ECAM Mesoporous Nanoparticle 1. Abstract Tuberculosis (TB) may no longer be an automatic death sentence, but its reign of terror isn't over. Multidrug-resistant TB (MDR-TB) throws a particularly nasty wrench into treatment plans, leaving us with limited options. This research proposes a novel weapon in this ongoing battle: equimolar couple active moiety (ECAM) derivatives loaded within mesoporous nanoparticles. This invention aims to address these unmet needs in the field of MDR-TB treatment. Think of ECAM derivatives as a powerful one-two punch against TB. By combining two active ingredients in just the right ratio (equimolar), we aim to create a synergistic effect, supercharging their effectiveness against even the most stubborn MDR-TB strains. Here's where the mesoporous nanoparticles come in. Imagine them as tiny Trojan horses, carrying this ECAM derivative capsule directly to their target: the TB bacteria. This targeted delivery not only improves treatment outcomes but also offers the potential for sustained release, ensuring a prolonged assault. This research delves into previously unexplored territory - the use of ECAM mesoporous nanoparticles derivatives within capsule for MDR-TB treatment. It's a game-changer, paving the way for a more potent strategy against this formidable foe. A significant advancement in the global fight against TB. By developing effective and readily available therapies, we can finally corner MDR-TB and bring an end to its reign.

No. of Pages : 9 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :17/04/2024

(21) Application No.202441030663 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : INTELLIGENT PEST INFESTATION ASSESSMENT AND SPRAYING INTERVENTION SYSTEM EMPLOYED WITHIN A TEA PLANTATION

(51) International classification :H04W0084120000, A01M0007000000, G06N0003080000, B64C0039020000, H04W0084180000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Intelligent Pest Infestation Assessment and Spraying Intervention system employed within a tea plantation Abstract: The illustration showcases a sophisticated Pest Infestation Assessment and Spraying Intervention system commissioned in a tea canopy. This system accomplishes effective assessment and pesticide by integrating multiple equipment/sensors A DJI Pro Phantom drone with low energy consumption, mounted with a multispectral camera, comprehensively captures images of tea leaves. These images are then pre- processed by the on board computer vision technology, utilizing contemporary deep-learning methods. The Raspberry Pi Pico connected with an integrated sensor module to receive data on the nutrients and quality of the soil of a plantation. Solenoid valves ensure the accurate release of pesticides, while sensors for pressure and flow enhance the spraying process's efficiency. Spray nozzles, fixed to a mobile boom setup, guarantee even distribution of pesticides. The whole mechanism can be remotely operated and manoeuvred through mobile apps, powered by either a battery or solar panel, with sturdy supports, frames, and tracks securing the system in place. The communication among components is facilitated through Wi-Fi, LoRa, or mobile networks.

No. of Pages : 13 No. of Claims : 4

(54) Title of the invention : ADVANCED 3D WIRELESS SENSOR NETWORK LOCALIZATION METHOD

(51) International classification (86) International Application No Filing Date (87) International Publication No (61) Patent of Addition to Application Number Filing Date (62) Divisional to Application Number Filing Date	:H04W0084180000, G06N0020000000, H04W0052020000, G01S0005020000, H04W0004380000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)Srinivasa Ramanujan Institute of Technology Address of Applicant :Anantapur-515701, Andhra Pradesh, India ----- 2)Mandli Rami Reddy 3)Dr M L Ravi Chandra Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mandli Rami Reddy Address of Applicant :Assistant Professor , Department of Electronics and Communication Engineering, Srinivasa Ramanujan Institute of Technology, Rotarypuramu, Anantapur Dist 515701, Andhra Pradesh, India ----- 2)Dr M L Ravi Chandra Address of Applicant :Professor and HOD, Department of Electronics and Communication Engineering, Srinivasa Ramanujan Institute of Technology, Rotarypuramu, Anantapur Dist 515701, Andhra Pradesh, India -----

(57) Abstract :

The advanced 3D wireless sensor network (WSN) localization method offers a comprehensive solution for accurately determining the spatial coordinates of sensor nodes within complex three-dimensional environments. By integrating cutting-edge signal processing techniques, machine learning algorithms, and energy-aware strategies, the method addresses the challenges inherent in 3D WSN localization, including signal propagation anomalies, dynamic environmental conditions, and energy constraints. Leveraging advanced signal processing algorithms to mitigate the effects of signal reflections, diffraction, and non-line-of-sight conditions, the method improves the accuracy and reliability of distance measurements. Additionally, machine learning algorithms continuously adapt localization models and parameters based on real-time feedback, optimizing node placement and refining localization estimates. Energy-aware strategies minimize energy consumption and prolong the operational lifespan of battery-powered sensor nodes, ensuring sustainability and reliability in 3D WSN deployments. This method facilitates precise localization of sensor nodes in diverse 3D environments, enabling applications such as environmental monitoring, disaster management, and industrial automation. In summary, the advanced 3D WSN localization method represents a significant advancement in the field of wireless sensor networks, offering a holistic approach that meets modern application requirements while ensuring sustainability and reliability in dynamic environments.

No. of Pages : 13 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :17/04/2024

(21) Application No.202441030826 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AQUA SILENCER

(51) International classification :A61P0043000000, A61P0029000000, A61P0009100000, A61P0003020000, G01N0033000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT The present invention is an aqua silencer water works as a chemical agent, removing and reducing many of the pollutants present in exhaust emissions, and this dissolving technique works particularly well for water-soluble gases like carbon dioxide and some nitrogen oxides. The presence of water within the aqua silencer promotes chemical processes, which help in pollution removal.

No. of Pages : 6 No. of Claims : 1

(54) Title of the invention : ‘EXSO-BOT’-ENHANCED EXOSKELETON WITH ADVANCED CONVERTER AND MICROPORCESSOR CONTROL FOR MOBILITY

(51) International classification :A61H0003000000, A61H0001020000, B25J0009000000, A61B0005000000, A61H0003040000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)LOGANATHAN VIJAYARAJA Address of Applicant :7/8, Panner Illam, Ground Floor, Kurunji Nagar, 1st Mainroad, Old Perungalathur ----- 2)Dr. R. DHANASEKAR 3)KANAKASRI V 4)KEERTHANA M 5)SHARAVANAN S M Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. R. DHANASEKAR Address of Applicant :Sri Sairam Institute of Technology, West Tambaram- Chennai-600044, Tamil Nadu, India Chennai ----- ----- 2)LOGANATHAN VIJAYARAJA Address of Applicant :7/8, Panner Illam, Ground Floor, Kurunji Nagar, 1st Mainroad, Old Perungalathur Chennai ----- 3)KANAKASRI V Address of Applicant :Sri Sairam Institute of Technology, West Tambaram- Chennai-600044, Tamil Nadu, India Chennai ----- ----- 4)KEERTHANA M Address of Applicant :Sri Sairam Institute of Technology, West Tambaram- Chennai-600044, Tamil Nadu, India Chennai ----- ----- 5)SHARAVANAN S M Address of Applicant :Sri Sairam Institute of Technology, West Tambaram- Chennai-600044, Tamil Nadu, India Chennai ----- -----

(57) Abstract :
The device ‘EXSO-BOT’ focuses on advancing the functionality and efficiency of exoskeletons, wearable robotic devices designed to aid mobility and provide support in walking. This employs cutting-edge technologies, including high-standard converters and microprocessors, to optimize the performance of the exoskeleton. One significant aspect of the device is the integration of a high-quality Landsman converter, which plays a pivotal role in converting alternating current (AC) voltage to direct current (DC) voltage. This converter not only ensures smooth voltage conversion but also addresses issues related to harmonic distortions, oscillations, and unwanted noises. By effectively reducing these distortions, the exoskeleton's overall performance is enhanced, resulting in more fluid and stable movements. The core control system of the exoskeleton is powered by a microprocessor, specifically the Arduino platform. The microprocessor serves as the brain of the exoskeleton, orchestrating various functions and operations. The utilization of simple yet effective coding enables the configuration of movement directions—be it forward, reverse, or rest—providing intuitive control for the wearer. In summary, this device represents a significant advancement in exoskeleton technology by combining sophisticated converter technology and microprocessor-based control. The integration of a high-standard converter ensures efficient voltage conversion with reduced distortions, enhancing the device's overall performance. The microprocessor control system adds intelligence to the exoskeleton, allowing for seamless and user-friendly control of movement directions. This endeavour contributes to the evolution of exoskeletons, making them more capable and user-centric in their mission to enhance mobility and provide walking support.

No. of Pages : 25 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :17/04/2024

(21) Application No.202441030843 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : NIRAMAYA CREDIT SCORE - A SYSTEM AND METHOD OF COMPUTING CREDITWORTHINESS OF AN UNDERPRIVILEGED

(51) International classification	:G06Q0040020000, H04W0004140000, A63K0003040000, G06Q0020100000, G06Q0050260000	(71)Name of Applicant : 1)IIT Bhilai Innovation and Technology Foundation Address of Applicant :GEC Campus, Sejbahar, Raipur, India Sejbahar ----- 2)Dayananda Sagar Entrepreneurship Research and Business Incubation (DERBI) Foundation 3)Dayananda Sagar College of Engineering Name of Applicant : NA Address of Applicant : NA
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(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention introduces a novel Niramaya Credit score system and method tailored for evaluating the creditworthiness of underprivileged individuals. Despite the Indian government's efforts to enhance financial inclusion through initiatives like rural cooperative banks and micro-financial institutions, the absence of a credit score remains a substantial hurdle for emergency lending. To overcome this challenge, a novel credit-scoring model has been developed, leveraging non-traditional data sources such as SMS messages, utility bill payments, and questionnaires. An algorithm has been devised to compute credit scores based on these parameters, with the goal of offering a more inclusive approach to assessing creditworthiness. This innovative model holds promise for broadening access to credit and mitigating poverty within marginalized communities across India.

No. of Pages : 26 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030854 A

(19) INDIA

(22) Date of filing of Application :17/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A SYSTEM AND A METHOD FOR EVALUATING MUSIC-BASED SKILLS, APTITUDE AND KNOWLEDGE OF A USER

(51) International classification :A63F0013814000, G06F0021620000, G06Q0010060000, G06Q0010100000, G09B0007020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A system (100) for evaluating music-based skills, aptitude and knowledge of a user is disclosed. A receiving module (120) receives a request from the user for evaluating music-based skills, aptitude, and knowledge. A login module (125) queries the proficiency level of the user. An evaluation module (130) generates a test based on a response to the query. An aptitude assessment module (135) includes a recognition module (175) and a demonstration module (180). A knowledge assessment module (140) assesses the user based on music theory, timbre genre and associated musical topics. A skill assessment module (145) assesses the user based on vocals or an instrument. A customization module (150) customizes the test. A result generation module (155) generates the result. A feedback generation module (160) analyzes the performance of the user and generates feedback. A security measure module (165) verifies the identity of the user and secures integrity of the test. FIG. 1

No. of Pages : 42 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030865 A

(19) INDIA

(22) Date of filing of Application :17/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : DESIGN AND ANALYSIS OF LIGHTWEIGHT ALKALI-ACTIVATED SLAG AND FLY ASH GEOPOLYMER MORTARS USING ANFIS-SSO

(51) International classification :C04B0028000000, G06N0005040000, C04B0018140000, C04B0018080000, B09B0003000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)KL University Address of Applicant :Vaddeswaram, Guntur District, Andhra Pradesh, India, Pincode: 522302 ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Mrs. T. Bhavani Chowdary Address of Applicant :Research Scholar, Department of Civil Engineering, KL University, Green Fields, Vaddeswaram, Guntur District, Andhra Pradesh, India, Pincode: 522302. ----- ---- 2)Dr. A. Venkateswara Rao Address of Applicant :Professor, Department of Civil Engineering, KL University, Green Fields, Vaddeswaram, Guntur District, Andhra Pradesh, India, Pincode: 522302. ----- ----

(57) Abstract :

The proposed invention introduces a novel approach to the design and analysis of lightweight alkali-activated slag and fly ash geopolymer mortars using Adaptive Neuro-Fuzzy Inference System (ANFIS) and Swarm Optimization (SSO). Geopolymers offer a sustainable alternative to traditional cement-based materials, leveraging industrial by-products to reduce environmental impact. By integrating ANFIS and SSO, the system automates and streamlines the design process, enabling researchers and engineers to optimize material formulations efficiently. This data-driven approach facilitates the development of predictive models that capture complex relationships between input parameters and material properties, while SSO algorithms guide the search for optimal solutions within the design space. The proposed invention has significant implications for sustainable construction practices, resource efficiency, and economic competitiveness in the construction industry.

No. of Pages : 20 No. of Claims : 10

(54) Title of the invention : A MATCHED FILTERING BASED SYSTEM AND METHOD FOR DETERMINING MULTI-PARAMETERS OF AN OPTICAL SENSOR

(51) International classification :G01L0001240000, G01D0005353000, A61B0005000000, G01B0011160000, A61B0005020500 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Sunil Kumar Address of Applicant :Department of Computer Science Engineering, M S Ramaiah University of Applied Sciences, Bangalore Karnataka India Bangalore ----- 2)Yogesh K. M. 3)Dr. Abhinav Adarsh Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Sunil Kumar Address of Applicant :Department of Computer Science Engineering, M S Ramaiah University of Applied Sciences, Bangalore Karnataka India Bangalore ----- 2)Yogesh K. M. Address of Applicant :Department of Computer Science Engineering, M S Ramaiah University of Applied Sciences, Bangalore Karnataka India Bangalore ----- 3)Dr. Abhinav Adarsh Address of Applicant :Assistant professor, Advanced Computer Science and Engineering Department, Vignan Foundation for Science Technology and Research, Vadlamudi, Guntur Andhra Pradesh India Guntur -----

(57) Abstract :
The a matched filtering-based system and method for determining multi-parameters of an optical sensor discloses a system comprises a light source 100 emitting light towards a Y-coupler 102, primary 104 and secondary 108 fiber Bragg gratings (FBGs) connected in series, an optical spectrum analyser 112, a memory unit, and a matched filtering-based AI module 110. The AI module 110 analyzes reflected light data to evaluate zero-crossing points, followed by multi-parameter detection protocols such as transfer learning-based machine learning and linear regression analysis. A computing unit 114 visualizes the evaluated data. The method involves emitting light towards FBGs, applying strain and temperature, receiving reflected light, storing spectrum data, and utilizing multi-parameter detection protocols. These innovations address drawbacks of prior art by enabling accurate, efficient, and simultaneous detection of strain and temperature parameters in optical sensor systems. Refer to Figure 1

No. of Pages : 29 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202441030872 A

(19) INDIA

(22) Date of filing of Application :17/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A METHOD FOR POST-PROCESSING BLACK SOLDIER FLY (BSF) LARVAE TO IMPROVE AND MAINTAIN THE PROTEIN QUALITY

(51) International classification	:A01K0067033000, A23K0020147000, C04B0035010000, C01B0003360000, H04W0072040000	(71)Name of Applicant : 1)Bhimanadam Venkataramaiah Address of Applicant :8-155, Sivalyam Street, West Godavari District, Viravasaram-534245 (AP) East Godavari ----- ----- 2)Bhimanadam Vani Name of Applicant : NA Address of Applicant : NA
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Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention generally relates to amethod for post-processing Black Soldier Fly (BSF) larvae to improve and maintain protein quality. The method comprises collecting and sanitizing the BSF larvae;adding microbes into the sanitized BSF larvae to prepare a mixture;grinding the mixture to produce a ground mixture; fermenting the prepared mixture either in a liquid or solid state;optimizing dehydration by introducing indirect heating for curtailing protein degradation and bolstering protein retention;monitoring parameters of processed larvae;comparing the protein quality of the processed larvae with Whey Protein Concentrate (WPC) and protein powder samples, stored at 20 and 30°C for an extended duration, approximating 9 months, to establish a standard of protein preservation; and maintaining a required dehydration temperature by an indirect heating method to avoid protein degradation thereby improving and maintaining the protein quality.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :17/04/2024

(21) Application No.202441030874 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DYNAMIC WIRELESS POWER TRANSFER SYSTEM FOR ELECTRIC VEHICLE CHARGING

(51) International classification :H02J0050120000, B60L0053300000, H02J0007000000, B60L0053120000, B60L0053800000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
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(57) Abstract :

The proposed invention introduces a Dynamic Wireless Power Transfer (DWPT) System for Electric Vehicle (EV) charging, revolutionizing the way EVs are powered and refueled. By merging principles from power electronics, wireless communication, and electromagnetic induction, the DWPT system enables seamless, efficient, and convenient charging experiences without physical connectors. This system addresses key challenges in traditional charging methods, such as range anxiety and infrastructure limitations, by offering continuous charging opportunities while vehicles are in motion. Through dynamic charging capabilities, EVs can recharge their batteries on highways, urban streets, and other roadways, reducing dependence on fossil fuels and lowering emissions. The DWPT system represents a transformative innovation with significant implications for transportation, energy, and urban development, offering a pathway to a cleaner, greener future.

No. of Pages : 24 No. of Claims : 10

(54) Title of the invention : JOB PERFORMANCE OF COLLEGE TEACHERS IN HIGHER EDUCATION WITH REFERENCE TO ICT

(51) International classification :G06Q0050200000, G09B0007020000, G09B0019000000, G16H0010600000, G09B0007000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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(57) Abstract :

The invention presents a comprehensive method and system for evaluating and enhancing the job performance of college teachers in higher education through the integration of Information and Communication Technology (ICT) tools. By collecting and analyzing diverse datasets on teaching activities and student interactions, the system provides personalized feedback and recommendations to teachers, enabling them to optimize their teaching practices and improve student learning outcomes. Through advanced data analytics, interactive teaching modules, and virtual teaching assistants, the invention facilitates a continuous cycle of monitoring, feedback, and improvement, empowering college teachers to achieve excellence in their profession and create enriching educational experiences for their students.

No. of Pages : 17 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :17/04/2024

(21) Application No.202441030888 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : SOLAR BASED HYDROPONIC FODDER CHAMBER

(51) International classification :A01G0031000000, A01G0031020000, G06Q0010060000, A01G0031060000, A01G0025160000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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8)A. K. P. Madhuri
Address of Applicant :Department of Electronics and Communication Engineering, Anil Neerukonda Institute of Technology and Sciences,Visakhapatnam, Andhra Pradesh. Visakhapatnam -----

(57) Abstract :
ABSTRACT In India, there is a scarcity of agricultural land and water resources. The farmland is shrinking because of the increasing population, and approximately 80% of the water resources are used for agriculture. The implementation of a hydroponic farming system is a solution that can potentially reduce land utilization by 50% and decrease water consumption by 90%. Hydroponics is a soilless method of cultivation, employing nutrient-rich water solutions. This proposes solar energy integration and water storage sensors to automate water management, reducing stagnant water accumulation and associated risks. The chamber uses image processing for real-time plant growth tracking and pest detection, providing users with crucial insights for optimizing fodder yield and quality. This project involves creating a hydroponic monitoring and automation system with Arduino Uno, Wi-Fi, and Raspberry Pi. The Hydroponic Chamber enables efficient cultivation with notably faster fodder growth than traditional methods, especially beneficial in water-scarce regions.

No. of Pages : 14 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202442016065 A

(19) INDIA

(22) Date of filing of Application :07/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND METHOD FOR EMPOWERING USERS ON UNCLAIMED FUNDS
AUTHORIZATION AND MATCHING

(51) International classification :G06Q0030000000, G06Q0020080000, G06Q0020400000, G06Q0040020000, G06F0021620000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :202341075311 Filed on :03/11/2023	(71)Name of Applicant : 1)Gurushantappa Hanchinal Address of Applicant :349, 12TH Cross 2nd block Viswapriya nagar off Begur road Bangalore ----- 2)R.Anand 3)Shreeshail Ganiger 4)Mallanagouda Patil 5)Parashuram Hallur Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Gurushantappa Hanchinal Address of Applicant :349, 12TH Cross 2nd block Viswapriya nagar off Begur road Bangalore ----- 2)R.Anand Address of Applicant :MIG 31 RAINBOW GARDEN SAI STREET TNHB PHASE 6 HOSUR ----- 3)Shreeshail Ganiger Address of Applicant :897-B 1ST Main road Bahubali nagar Jalahalli Bangalore ----- 4)Mallanagouda Patil Address of Applicant :#495 12th main road 23rd cross 7th sector HSR Layout Bangalore ----- 5)Parashuram Hallur Address of Applicant :C106 Arvind Sporca ST.Anne's Church road Rachenahalli Road Bangalore -----

(57) Abstract :

Method and system for providing authorization and other services on financial related claim transaction is enclosed. In a preferred embodiment, an authorization service includes both a messaging specification and a set of rules that govern its use. A first customer wishing to use the authorization service prepares a request that complies with the service's messaging specification and transmits it to a first participant. The first participant transmits the request to a second participant, which processes the request according to authorization information provided by a second customer and rules that have been specified for the service. The second participant then prepares a response that complies with the service's messaging specification. [Fig. 3]

No. of Pages : 26 No. of Claims : 11

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202443030839 A

(19) INDIA

(22) Date of filing of Application :17/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN IMPROVED STRUCTURE OF A SINTERED HYBRID SWITCHED RELUCTANCE MOTOR

(51) International classification :H02K0019100000, H02P0025080000, H02P0025092000, H02P0025089000, H02K0001240000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :
Filed on :01/01/1900
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :
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Name of Applicant : NA
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(72)Name of Inventor :
1)Srinivas Kudligi
Address of Applicant :T6, Madhura Elegance, 24th Main, JP Nagar, Bangalore - 560078, Karnataka, India JP Nagar ----- --

(57) Abstract :

An improved structure of a sintered Hybrid Switched Reluctance Motor (HSRM) 400, 500,1102 is provided. Sintered HSRM comprises stator entity 502,1116 comprising a stator 606a, 606b and E shaped stator poles 614a,614b forming a single stator entity 502. Stator entity 502 comprises first set of windings 1104, 608a, 608b and second set of windings 1108, 610b and rotor entity 504, 1112 comprising rotor 716 and I shaped rotor poles 710, 1112 forming a single rotor entity 720. First and second set of windings are energized for driving the HSRM to support redundancy and to improve torque density of the HSRM based on the type of system in which the HSRM is deployed. Flux generated by the stator windings around the E shaped stator poles 614a,614b traverses a three-dimensional path through the single stator entity 502 of the HSRM .

No. of Pages : 41 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202444017155 A

(19) INDIA

(22) Date of filing of Application :10/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : IMPROVED DENTAL FLASK DESIGN FOR EFFICIENT PROSTHESIS FABRICATION

(51) International classification :A61C0013000000, A61C0009000000, B33Y0080000000, A61C0008000000, A61C0013200000 (31) Priority Document No :nil (32) Priority Date :10/03/2024 (33) Name of priority country :----- (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number:NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Gopi Chander Address of Applicant :496,3rd Main Road, TNHB Colony, Velachery, Chennai ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Gopi Chander Address of Applicant :496,3rd Main Road, TNHB Colony, Velachery, Chennai ----- 2)Aashmika Mahajan Address of Applicant :496,3rd Main Road, TNHB Colony, Velachery, Chennai -42 Chennai -----

(57) Abstract :

Background: Traditional methods involving PMMA resin and brass molds are time-consuming, relying on external pressure during the polymerization. This restricts scalability and efficiency in dental laboratories. The Improved Dental Flask Design aims to revolutionize prosthesis fabrication by introducing a modular structure. This invention seeks to enable simultaneous production, reduce cycle times, and enhance workflow efficiency. Summary of the Invention: The dental flask comprises six detachable aluminum plates secured with laser-cut screw channels. This design allows simultaneous fabrication of multiple prostheses, eliminating the need for external pressure. Aluminum's superior thermal conductivity and user-friendly features, including customized Allen keys, further contribute to efficiency. Constructed with precision-engineered aluminum plates, the dental flask maximizes utility by facilitating simultaneous fabrication. The material's thermal properties ensure even heat distribution during resin curing. Detachable plates and Allen keys simplify the fabrication process, offering enhanced workflow efficiency. The Improved dental flask offers utility in simultaneous fabrication of many prosthesis samples, time-saving detachable design and eliminates the requirement of external pressure. These utilities enhance workflow efficiency and produce consistent, high-quality prostheses. Conclusion: The Improved dental flask design presents a transformative change in fabrication of dental prosthesis, emphasizing efficiency, scalability, and user-friendly features. This device establishes the novelty, utility, and advantages of this innovative approach in the field of dental prosthetics.

No. of Pages : 19 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202444029965 A

(19) INDIA

(22) Date of filing of Application :13/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : CONVERSION OF AGRICULTURE WASTE INTO BIO CHAR

(51) International classification	:C10B0053020000, C05F0011000000, C01B0032050000, C05F0003000000, C09K0017020000	(71)Name of Applicant : 1)Karapgam College of Engineering Address of Applicant :Dept. of Mechanical engineering, Karpagam College of Engineering Coimbatore ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. GANESH MURALI J Address of Applicant :Dept. of Mechanical engineering, Karpagam College of Engineering Coimbatore ----- 2)KASTHURI RANGAN A Address of Applicant :Dept. of Mechanical engineering, Karpagam College of Engineering Coimbatore ----- 3)PRABAKARAN S Address of Applicant :Dept. of Mechanical engineering, Karpagam College of Engineering Coimbatore ----- 4)MADHESHWAR R Address of Applicant :Dept. of Mechanical engineering, Karpagam College of Engineering Coimbatore ----- 5)SATHIYADEVAN V Address of Applicant :Dept. of Mechanical engineering, Karpagam College of Engineering Coimbatore -----
(31) Priority Document No	:CN108893128B	
(32) Priority Date	:02/04/2024	
(33) Name of priority country	:-----	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

Agricultural activities generate substantial amounts of waste, including crop residues, manure, and other organic byproducts. Traditionally, much of this waste is either left to decompose or disposed of through burning, leading to environmental degradation and greenhouse gas emissions. However, the emergence of biochar offers a promising solution by converting agricultural waste into a valuable resource. Biochar, a carbon-rich material produced through the pyrolysis of biomass, has shown potential to enhance soil fertility, improve water retention, and sequester carbon. This work explores the feasibility and implications of converting agricultural waste into biochar as a sustainable approach for soil enrichment. In this proposed work a design of an experimental setup was erected to convert agriculture waste into biochar. This setup can be easily operated by any family members and a farmer

No. of Pages : 12 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202444029979 A

(19) INDIA

(22) Date of filing of Application :13/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : PELTIER BASED COOLING SYSTEM

		(71)Name of Applicant : 1)Karpagam College fo Engineering Address of Applicant :Dept. of Mechanical Engineering, Karpagam College fo Engineering, Coimbatore Coimbatore ----- ----- Name of Applicant : NA Address of Applicant : NA
(51) International classification	:F25B0021020000, A61P0043000000, H01L0035000000, H01L0035280000, H01L0035300000	(72)Name of Inventor : 1)KONDUSAMY V Address of Applicant :Dept. of Mechanical Engineering, Karpagam College fo Engineering, Coimbatore Coimbatore ----- ----- 2)BAGAVATHI RAJ B S Address of Applicant :Dept. of Mechanical Engineering, Karpagam College fo Engineering, Coimbatore Coimbatore ----- ----- 3)ELAVARASAN T Address of Applicant :Dept. of Mechanical Engineering, Karpagam College fo Engineering, Coimbatore Coimbatore ----- ----- 4)HERSON K Address of Applicant :Dept. of Mechanical Engineering, Karpagam College fo Engineering, Coimbatore Coimbatore ----- ----- 5)NITHISH S Address of Applicant :Dept. of Mechanical Engineering, Karpagam College fo Engineering, Coimbatore Coimbatore ----- -----
(31) Priority Document No	:US10212857B2	
(32) Priority Date	:01/04/2024	
(33) Name of priority country	:-----	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

In recent years the world has moving towards the non-conventional energy technology to cater the needs of environmental sustainability. Increasing power costs, environmental pollution and global warming are issues that we are dealing in present time. To reduce their effect, focusing on improving the energy harvesting based on the solid state cooling method. This comes under the concept based on the reversible process of Peltier effect and Seebeck effect. The Peltier effect is used as the electric generated as well as thermoelectric cells. Peltier found that the application of a current at an interface between two dissimilar materials results in the absorption/release of heat. Thermoelectric cooling provides a alternative R&AC technology use the distinct advantages .Use of thermoelectric cooling has increasing the COP of cooling.

No. of Pages : 9 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :16/04/2024

(21) Application No.202444030593 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : FABRICATION OF MINI BALL MILL

		(71) Name of Applicant : 1)Karpagam College fo Engineering Address of Applicant :Dept. of Mechanical Engineering, Karpagam College of Engineering, Coimbatore Coimbatore ----- ----- Name of Applicant : NA Address of Applicant : NA
(51) International classification	:B02C0017180000, B02C0017100000, B02C0017240000, B02C0017160000, B29B0013100000	(72) Name of Inventor : 1)ARUN SANKAR V V Address of Applicant :Dept. of Mechanical Engineering, Karpagam College of Engineering, Coimbatore Coimbatore ----- ----- 2)NAVEEN G Address of Applicant :Dept. of Mechanical Engineering, Karpagam College fo Engineering, Coimbatore Coimbatore ----- ----- 3)ANAND M Address of Applicant :Dept. of Mechanical Engineering, Karpagam College fo Engineering, Coimbatore Coimbatore ----- ----- 4)SANJAY K Address of Applicant :Dept. of Mechanical Engineering, Karpagam College fo Engineering, Coimbatore Coimbatore ----- ----- 5)Rahul K Address of Applicant :Dept. of Mechanical Engineering, Karpagam College fo Engineering, Coimbatore Coimbatore ----- -----
(31) Priority Document No	:CN109622152B	
(32) Priority Date	:12/03/2024	
(33) Name of priority country	:-----	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

This patent is about fabrication of a mini ball mill that can grind the solid state of raw materials into fine powder. Ball mill is a cylindrical device that used to grind and blend raw materials and it rotates around a horizontal axis, partially filled with the material to be ground plus the grinding medium. When it is controlled by speed, the load nearest the wall of the cylinders will break and it quickly followed by other particle in the top curves and form a sliding stream containing several layers of balls separated by material of varying thickness. Ball milling must be operated in a closed system, with oversize material continuously being recirculated back into the mill to be reduced due to internal cascading effect. In our project, we need to fabricate a low cost mini ball mill. To fabricate this ball mill, we first design a model using Solidwork and checked for interferences. Then, we start looking for suitable material to fabricate the jar and carry out machining in lab to make some supporting parts such as shaft and metal block. After all parts are done fabricated in desired dimension, testing is carried out to determine whether the raw material selected can be grinded into powder form. Lastly, a metal bar is added inside the jar to lift up the stainless steel balls to fall from higher position so that the specimen can be crushed which is known as cascading effect.

No. of Pages : 7 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202447018943 A

(19) INDIA

(22) Date of filing of Application :15/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : CYCLOPROPANECARBOXYLIC ACID ESTER COMPOUND AND USE THEREFOR

(51) International classification :C07C 69/74, A01N 53/06, A01P 3/00
(31) Priority Document No :2022-152272
(32) Priority Date :26/09/2022
(33) Name of priority country :-----
(86) International Application No :PCT/JP2023/034321
Filing Date :21/09/2023
(87) International Publication No :WO 2024/070892
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant : NA
(72)Name of Inventor :
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Address of Applicant :c/o SUMITOMO CHEMICAL COMPANY, LIMITED, 2-1, Takatsukasa 4-chome, Takarazuka-shi, Hyogo 6658555 -----

(57) Abstract :

The present invention provides a compound having excellent control efficacy against plant diseases. A compound represented by formula (I) has excellent control efficacy against plant diseases.

No. of Pages : 32 No. of Claims : 13

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202447018986 A

(19) INDIA

(22) Date of filing of Application :15/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : CYCLOPROPANECARBOXYLIC ACID ESTER COMPOUND AND USE THEREOF

(51) International classification	:C07D 303/40, A01N 53/06, A01P 1/00, A01P 3/00	(71)Name of Applicant : 1)SUMITOMO CHEMICAL COMPANY, LIMITED Address of Applicant :2-7-1, Nihonbashi, Chuo-ku, Tokyo 1036020 -----
(31) Priority Document No	:2023-024187	Name of Applicant : NA
(32) Priority Date	:20/02/2023	Address of Applicant : NA
(33) Name of priority country	:-----	(72)Name of Inventor :
(86) International Application No	:PCT/JP2023/044007	1)MORI, Tatsuya
Filing Date	:08/12/2023	Address of Applicant :c/o SUMITOMO CHEMICAL
(87) International Publication No	:WO 2024/071441	COMPANY, LIMITED, 2-1, Takatsukasa 4-chome, Takarazuka-
(61) Patent of Addition to Application	:NA	shi, Hyogo 6658555 -----
Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention provides a compound having excellent control efficacy against plant diseases. The compound, represented by formula (I), has excellent control efficacy against plant diseases.

No. of Pages : 36 No. of Claims : 16

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202447018987 A

(19) INDIA

(22) Date of filing of Application :15/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : CYCLOPROPANECARBOXYLIC ACID ESTER COMPOUND AND USE THEREOF

(51) International classification	:C07C 69/757, A01N 53/06, A01P 1/00, A01P 3/00	(71)Name of Applicant : 1)SUMITOMO CHEMICAL COMPANY, LIMITED Address of Applicant :2-7-1, Nihonbashi, Chuo-ku, Tokyo 1036020 -----
(31) Priority Document No	:2023-024186	Name of Applicant : NA
(32) Priority Date	:20/02/2023	Address of Applicant : NA
(33) Name of priority country	:-----	(72)Name of Inventor :
(86) International Application No	:PCT/JP2023/044005	1)KATAGIRI, Yasushi
Filing Date	:08/12/2023	Address of Applicant :c/o SUMITOMO CHEMICAL
(87) International Publication No	:WO 2024/071440	COMPANY, LIMITED, 2-1, Takatsukasa 4-chome, Takarazuka-
(61) Patent of Addition to Application Number	:NA	shi, Hyogo 6658555 -----
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention provides a compound having excellent control efficacy against plant diseases. The compound, represented by formula (I), has excellent control efficacy against plant diseases.

No. of Pages : 35 No. of Claims : 13

(54) Title of the invention : ESTER COMPOUND AND USE THEREOF

(51) International classification	:C07C 69/734, A01N 37/36, A01P 3/00	(71)Name of Applicant : 1)SUMITOMO CHEMICAL COMPANY, LIMITED
(31) Priority Document No	:2023-216470	Address of Applicant :2-7-1, Nihonbashi, Chuo-ku, Tokyo
(32) Priority Date	:22/12/2023	1036020 -----
(33) Name of priority country	:-----	Name of Applicant : NA
(86) International Application No	:PCT/JP2024/002402	Address of Applicant : NA
Filing Date	:26/01/2024	(72)Name of Inventor :
(87) International Publication No	:WO 2024/071442	1)MORI, Tatsuya
(61) Patent of Addition to Application Number	:NA	Address of Applicant :c/o SUMITOMO CHEMICAL
Filing Date	:NA	COMPANY, LIMITED, 2-1, Takatsukasa 4-chome, Takarazuka-
(62) Divisional to Application Number	:NA	shi, Hyogo 6658555 -----
Filing Date	:NA	

(57) Abstract :
The present invention provides a compound having excellent control efficacy against plant diseases. The compound, represented by formula (I), has excellent control efficacy against plant diseases (in the formula, R represents a 2-hydroxypropan-2-yl group or a 1-propen-2-yl group).

No. of Pages : 43 No. of Claims : 27

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202447028077 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : APPARATUS WITH SQUEEZING MEANS FOR PASSIVE MIXING OF MULTI-PHASE FLOW

(51) International classification :B01F 25/433 (31) Priority Document No :202241051515 (32) Priority Date :09/09/2022 (33) Name of priority country :----- (86) International Application No :PCT/IB2023/058354 Filing Date :22/08/2023 (87) International Publication No :WO 2024/052755 (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)SRAVATHI ADVANCE PROCESS TECHNOLOGIES PRIVATE LIMITED Address of Applicant :H.No.113/40, 2nd Main Road, Rajaji Nagar Industrial Town Rajaji Nagar Bangalore 560010, Karnataka ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)SOURI, Sreeramagiri Venkata Shanmukha Address of Applicant :#384, Embassy Heritage, 8th Main Malleswaram Bangalore 560055, Karanataka ----- 2)SOHEL, Chungikar Abbas Address of Applicant :G9, Deccan Field ITPL Main Road, Kundalahalli, Doddanekkundi Bangalore 560037, Karanataka ----- ----- 3)SIVAKUMAR, Sreeramagiri Address of Applicant :#384 Embassy Heritage, 8th Main Malleswaram Bangalore 560055, Karanataka ----- 4)SAMIR, Anapat Address of Applicant :No.23, 3rd Main, Nagappareddy Layout, Kaggadasapura Bangalore 560093, Karanataka -----

(57) Abstract :

The invention discloses an apparatus with squeezing means for passive mixing of multi- phase flow or hydrodynamic performance that is housing a conduit/tube, which is a channel extending internally from the fluid inlet to the outlet ports, comprising stacked plurality of static-mixers with modified geometry to possess undulations or step-like geometry, which are responsible for alternate Squeezing and relaxation of flow through the conduit, which results in enhanced mixing of the multi-phasic flow. The conduit comprises of a plurality of stacked static-mixers which are axially or asymmetrically arranged across the length of the conduit, that can allow the fluid to pass through them continuously experiencing squeezing effect resulting in improved mixing, mass-transfer, and heat transfer.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202331022942 A

(19) INDIA

(22) Date of filing of Application :28/03/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A DEVICE FOR PREPARATION OF CLAY MIXTURE COMPOSITION FOR MANUFACTURINGCLAY BRICK AND PROCESS THEREOF

(51) International classification :G05B0015020000, F02D0041140000, H01L0051500000, C04B0033040000, H01L0051560000

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

ABSTRACT TITLE OF INVENTION: A DEVICE FOR PREPARATION OF CLAY MIXTURE COMPOSITION FORMANUFACTURINGCLAY BRICK AND PROCESS THEREOF A crusher system for mechanically working and crushing crushable soft subjects including sticky soil comprising a vertically disposed cylindrical crusher body (1) having a centrally disposed bearing supported rotor shaft (3) carrying stage wise spaced rotor blades (5); an internally disposed movable surrounding cylindrical scrapper (2) adjacent to the internal wall of the cylindrical crushed body; an exit point (8) at the lower end of said crusher body for release of crushed material. The crusher system manufactures clay mixture composition for manufacturing clay brick which is free of top soil and sand by using the waste material that comes out with the finished brick as a substitute of sand. Fig .12

No. of Pages : 33 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202331023141 A

(19) INDIA

(22) Date of filing of Application :29/03/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : RECOMBINANT FABI ENZYME FOR DETECTION OF KLEBSIELLA PNEUMONIAE INHIBITORS AND METHOD THEREOF

(51) International classification :A61P0043000000, C07D0471040000, A61P0001040000, A61K0031550000, C07K0014260000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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(57) Abstract :

RECOMBINANT FABI ENZYME FOR DETECTION OF KLEBSIELLA PNEUMONIAE INHIBITORS AND METHOD

THEREOF ABSTRACT The present invention discloses a method of obtaining recombinant FabI enzyme having SEQ ID 2 for the detection of Klebsiella pneumoniae inhibitors. The method includes the steps of designing a primer having SEQ ID 3 and SEQ ID 4 corresponding to fabI gene having SEQ ID 1, synthesizing a recombinant fabI gene having SEQ ID 1 and obtaining a recombinant FabI enzyme having SEQ ID 2 from fabI gene having SEQ ID 1 for detection of Klebsiella pneumoniae inhibitors. The present invention further provides a method of detection of Klebsiella pneumoniae inhibitors. The method for wherein method includes the steps of obtaining a solution comprising Klebsiella pneumoniae FabI enzyme having SEQ ID 2, crotonyl CoA, NADH and inhibitor to be detected, incubation of the solution at 20 ° to 40 ° temperature for 10 minutes to 40 minutes and examining the solution by measuring the absorbance at 340 nm for the detection of Klebsiella pneumoniae inhibitors

No. of Pages : 2 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :31/05/2023

(21) Application No.202331037635 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AN AUTOMATIZED BETEL LEAF COUNTING MACHINE

(51) International classification :A61K0036889000, G07D0011500000, C12M0001340000, G01D0004000000, G06T0011200000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

An automatized betel leaf counting machine which is user friendly and includes the counting process free of manual intervention and hence is on one hand hygienic and on the other hand a fast and accurate counting unit. The automatized machine favours a unique method of counting involving the betel leaf petioles instead of the leaves itself and free of any human touch during counting and includes an advanced clamping means to hold betel leaf petioles in a vertically aligned straight line and a cooperatively disposed semiconductor LASER -LDR combination(102) with respect to said clamping unit(101) adapted to move up and down alongside the clamping unit and a computing unit(103) interfaced to receive said electrical pulsed signals generated by said semiconductor LASER-LDR combination and count the number of said electrical pulses(108) generated as representative of the count of the betel leaf. Fig. 1

No. of Pages : 30 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202331064032 A

(19) INDIA

(22) Date of filing of Application :24/09/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : INTEGRATION OF IMAGE PROCESSING WITH MACHINE LEARNING BASED APPROACHES FOR PLANT HEALTH AND DISEASE DETECTION

(51) International classification :G06K0009620000, G06N0020000000, G06T0007000000, G06N0003080000, G01N0015020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)JITENDRA KUMAR Address of Applicant :PHD SCHOLAR/CSE, NIT ROURKELA, ROURKELA, 769008 ROURKELA ----- ----- 2)RAVI KUMAR 3)V RAMANJANEYULU YANNAM Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)JITENDRA KUMAR Address of Applicant :PHD SCHOLAR/CSE, NIT ROURKELA, ROURKELA, 769008 ROURKELA ----- 2)RAVI KUMAR Address of Applicant :ASSISTANT PROFESSOR/CSE-DS,MALLA REDDY COLLEGE OF ENGINEERING, MAISAMMAGUDA DHULAPALLY, SECUNDERABAD,500100 MAISAMMAGUDA ----- ----- 3)V RAMANJANEYULU YANNAM Address of Applicant :ASSISTANT PROFESSOR, SCHOOL OF TECHNOLOGY, WOXSSEN UNIVERSITY, SANGAREDDY, 502345 HYDERABAD -----

(57) Abstract :

Integration of image processing with machine learning based approaches for plant health and disease detection is the proposed invention. The proposed invention focuses on studying the plant health and disease detection. The invention focuses on analyzing the parameters of plant health and disease detection using algorithms of Machine Learning and Image processing.

No. of Pages : 13 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202331085871 A

(19) INDIA

(22) Date of filing of Application :15/12/2023

(43) Publication Date : 19/04/2024

(54) Title of the invention : A multipurpose integrated apparatus for treatment of powder, flaked and granular material

(51) International classification :F01K0023100000, F26B0017100000, F28C0003060000, B29B0013060000, E21B0043240000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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3)SARKHEL, Shubhajit

Address of Applicant :Department of Chemical Engineering, Birla Institute of Technology Mesra, Ranchi- 835215, Jharkhand Ranchi -----

(57) Abstract :

The multipurpose integrated apparatus (100) comprises a jacketed fluidization chamber (101); a hopper placed on the top of the vessel with automatic feed control valve; a controllable exhaust outlet (103); and a pneumatic outlet (104); spray supply nozzle (105) installed around the bottom periphery of the fluidization chamber (101) at equidistance; magnetron assemblies with wave guard (106) installed around the periphery of the fluidization chamber; steam purging nozzles (107); air inlet nozzles (109) connected to a hot and cold air generator (120) placed at the end of the taper region periphery of the fluidization chamber (101); a secondary vacuum chamber (110) with outlet nozzle (111); a controllable exhaust outlet (103) with bag filter(117) and cyclone separator(118); fluidization chamber jacket circulating heated fluid through hot fluid generator (115); a control unit (116) is disclosed. The integrated housing is adapted to receive food material for microbial deactivation, antinutrient and allergen reduction, fortification, functional alterations, precooking and blanching, pre-treatment, enzymatic deactivation, drying, puffing, and popping in food matrices.

No. of Pages : 24 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :15/12/2023

(21) Application No.202331085872 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : An integrated apparatus for blanching, sterilization, drying, and recovery of volatile components

(51) International classification :F26B0021000000, A23B0007020000, H01J0037340000, F26B0005040000, H05B0006800000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)BIRLA INSTITUTE OF TECHNOLOGY MESRA Address of Applicant :P.O. Mesra, Ranchi, Jharkhand- 835215 Ranchi ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)ROY, Dr. Anupam Address of Applicant :Department of Chemical Engineering, Birla Institute of Technology Mesra, Ranchi- 835215, Jharkhand Ranchi ----- 2)SAHOO, Bijendra Address of Applicant :Department of Chemical Engineering, Birla Institute of Technology Mesra, Ranchi- 835215, Jharkhand Ranchi ----- 3)SARKHEL, Shubhajit Address of Applicant :Department of Chemical Engineering, Birla Institute of Technology Mesra, Ranchi- 835215, Jharkhand Ranchi ----- 4)KUMARI, Ankanksha Address of Applicant :Department of Chemical Engineering, Birla Institute of Technology Mesra, Ranchi- 835215, Jharkhand Ranchi -----

(57) Abstract :

Disclosed herein an integrated apparatus which is a multifunctional drying system designed for blanching, sterilizing, and drying agricultural and food materials along with retention and recovery of the volatile component. The apparatus is having a jacketed drying chamber and offers the choice of microwave-permeable rotating trays or a hollow tray assembly to hold the materials. Further, the apparatus employs a magnetron assembly for microwave irradiation, a temperature-controlled air inlet for convective heat transfer, and a superheated steam inlet with purging nozzles for combined conductive and convective heating at variable modified condition. Further, the apparatus is having an exhaust airline for facilitating moisture removal, that intricately connected to a heat pump-assisted dehumidification system comprising a condense collector and a secondary vacuum chamber linked to a vacuum pump.

No. of Pages : 27 No. of Claims : 9

(54) Title of the invention : A VERSATILE, USER FRIENDLY, COST-EFFECTIVE, SNAP-FIT SEALING DEVICE, PARTICULARLY SUITED FOR SMART METERS.

(51) International classification :G01D0004000000, H04N0019436000, H02H0003093000, F16C0033780000, G09F0003030000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(72)Name of Inventor :

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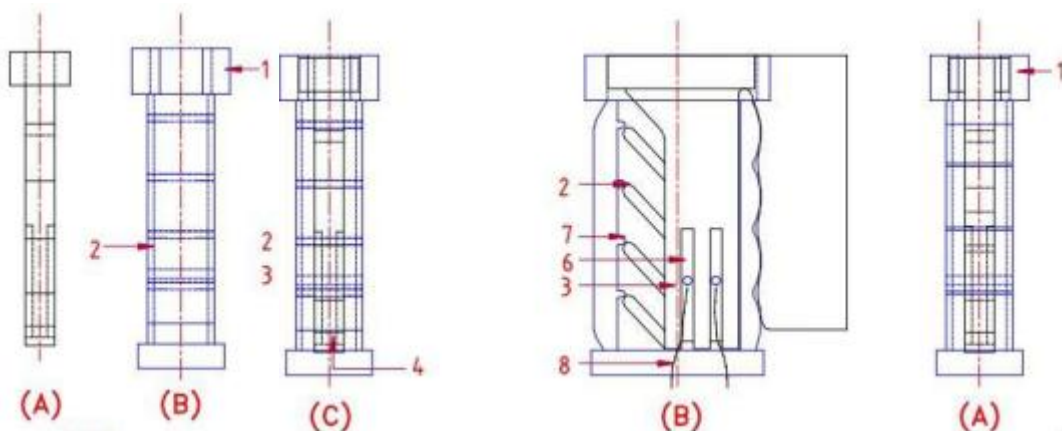
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(57) Abstract :

This invention relates to A Versatile, User Friendly, Cost-Effective, Snap-Fit Sealing Device, particularly Suited for Smart Meters (a) the said device comprise a hollow casing (b) a locking insert and (c) a sealing wire of variable length.Claim: Both the insert and receiving piece are equipped with holes/openings which become aligned in the same plane on application of pressure at the top surface of the insert, thereby allowing the said wire to go through the aligned holes which in turn is wrapped around the groove provided in the insert, creating a loop on one side of the insert and the free ends of the wire protruding from the other side thereof are utilized for winding around or passing through the substrate or object to be sealed.



No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431019475 A

(19) INDIA

(22) Date of filing of Application :16/03/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : MULTIPOINT POWER ADAPTERS FOR CHARGING WITH INTELLIGENT POWER SHARING AND CHARGING STATUS INDICATION

(51) International classification :H02J0007000000, G06F0001260000, H01M0010440000, A24F0040950000, H02M0003335000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

ABSTRACT MULTIPOINT POWER ADAPTERS FOR CHARGING WITH INTELLIGENT POWER SHARING AND CHARGING STATUS INDICATION The invention pertains to a multiport USB power adapter (200) designed for efficient charging with real-time status indication and intelligent power sharing (IPS). The adapter integrates key components, including a switch mode power supply (SMPS) (100), a microcontroller (201A, 201B, an LED (202A, 202B, 202C), a current sense resistor, a USB connector, all innovatively connected on a printed circuit board (PCB) interconnected via PCB traces. Notably, the device employs a color-changing LED to dynamically indicate charging status, transitioning from RED (0-25%) to YELLOW (26-75%), and finally GREEN (76-100%). The design ensures an intuitive user experience, addressing the limitations of existing adapters by providing comprehensive visual feedback on the charging process, thereby enhancing user convenience and optimizing charging efficiency.

No. of Pages : 30 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :01/04/2024

(21) Application No.202431026938 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Multi-Purpose Biosensor for Signal Conditioning and analysis of Bio-Signals

(51) International classification :A61B0005000000, A61B0005398000, A61B0005389000, A61B0005316000, A61B0005369000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The idea described in the abstract is the development of a single sensor capable of measuring multiple bio-signals simultaneously, specifically Electroencephalography (EEG), Electrocardiography (ECG), Electrooculography (EOG), Electromyography (EMG), and Electroretinography (ERG) signals. Traditionally, each of these bio-signals would require a separate sensor, leading to a cumbersome and uncomfortable setup for patients. The proposed sensor aims to simplify this process by combining advanced signal processing techniques and innovative electrode designs. Key components of the idea include:

No. of Pages : 8 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :01/04/2024

(21) Application No.202431026939 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : DRIVER DROWSINESS AVOIDANCE SYSTEM

(51) International classification :G06Q0010080000, G06Q0010060000, B60K0028060000, B60Q0009000000, G08B0021060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Purpose of our project is to help solving real life problem in very cost effect way. It alerts the truck driver as well as the owner of the company. Whenever the driver feels drowsy and closes his eyes for more than a second, the buzzer is blown. As a result, it alerts the driver. It also warns the owner of the truck driver by sending him text messages. As a result, the accident ratio decreases. Hence, our project if commercially developed will help in saving the precious life of truck driver & money of the owner.

No. of Pages : 10 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027046 A

(19) INDIA

(22) Date of filing of Application :01/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A method for synthesizing silica nanoparticles from waste plant matter

(51) International classification :B01J21/08, B82Y30/00,
B82Y40/00, C01B33/12

(86) International Application :NA
No

Filing Date :NA

(87) International Publication : NA
No

(61) Patent of Addition to :NA
Application Number

Filing Date :NA

(62) Divisional to Application :NA
Number

Filing Date :NA

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(57) Abstract :

The disclosed invention herein is a green method for synthesizing crystalline silica from waste plant husk. An optimized set of selected processing parameters (temperature, speed, etc.) is used to produce nanosilica. The method is innovative and cost-effective for synthesizing silica for industrial usage, particularly as a potent intranuclear drug delivery carrier in plants.

No. of Pages : 23 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :01/04/2024

(21) Application No.202431027140 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Smart Irrigation System with Automated Regulation of Valves

(51) International classification :A01G0025160000, A01G0025020000, B60S0001080000,
G01N0033240000, A01G0025000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No :NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Agriculture remains the sector which contributes the highest to India's GDP. But, when considering technology that is deployed in this field, we find that the development is not tremendous. Now a day's there is huge enhancement in technologies which have a significant impact on various fields like agriculture, healthcare etc. Agriculture is the primary occupation in our country. India's major income source is depending on agriculture therefore the development of agriculture is important. In today also most of the irrigation systems are operated manually. The available traditional techniques are like drip irrigation, sprinkler irrigation etc. These techniques are need to be combined with IoT so that we can make use of water vary efficiently. IoT helps to access information and make major decision making process by getting different values from sensors like soil moisture, water level sensors, water quality etc. This paper focuses primarily on reducing the wastage of water and minimizing the manual labour on field for irrigation so that you can save time, cash and power of the farmer. After wiring and attaching all the devices and setting up to the Smart Irrigation system, now observe all the important setup whether they are well connected or something missed. After connection set up now next step is to submit/upload code in ESP32 and supply power to the circuit. When system is powered ON, Arduino keeps monitoring for any things that come near the sensor at give range. When soil moisture sensor detects the moisture of the soil, it switches on/off the water pump accordingly, the DHT11 sensor checks the temperature and humidity and informs about it. When rain sensor detects rain, it sends information, same as fire sensor. This process continues when the system is ON.

No. of Pages : 15 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027324 A

(19) INDIA

(22) Date of filing of Application :02/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : IMIDAZOLE DERIVATIVE AS A NOVEL CORROSION INHIBITOR FOR Q235 STEEL AND PROCESS THEREOF

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(51) International classification	:A61K31/417, C07D233/00, C09B31/143, C09D5/08, C09D7/41	(72)Name of Inventor : 1)Dr. Ambrish Singh Address of Applicant :Department of Chemistry, Nagaland University, Lumami Headquarters, Zunheboto district Zunheboto - ----- 2)Dr. Yuanhua Lin Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500. ----- 3)Mrs. Shivani Singh Address of Applicant :Lovely Professional University Jalandhar Delhi GT road Phagwara Phagwara ----- 4)Kashif Rahmani Ansari Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500. ----- 5)Dr. Ashutosh Tripathi Address of Applicant :Professor, Department of Environment science, Nagaland University, Lumami Headquarters, Zunheboto district Zunheboto ----- 6)Dr. Ashutosh Tripathi Address of Applicant :Asst. Professor, Department of Environment science, Nagaland University, Lumami Headquarters, Zunheboto district Zunheboto -----
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The current work discusses the environmentally friendly process for producing N-(2-(2-pentadecyl-2,5-dihydro-1H-imidazol-1-yl)ethyl)palmitamide palmitate (IPP), an imidazole derivative that is used to protect Q235 steel from corrosion by using it as a corrosion inhibitor in strong acid (15%) HCl. An IPP inhibitor is characterized using IR and NMR techniques. The effect of the corrosion inhibitor is inversely proportional to temperature and proportional to the concentration of the corrosion inhibitor. The results of the electrochemical analysis indicate that IPP can halt the corrosion process simply by coating the Q235 steel's surface. Combining cathode and anode types, the IPP is a corrosion inhibitor. According to the isothermal adsorption fitting results, IPP is in line with both spontaneous mixed adsorption and Langmuir isothermal adsorption. The paint is easy to use and increases the shelf life of steel.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027325 A

(19) INDIA

(22) Date of filing of Application :02/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : NOVEL PYRIMIDINE DERIVATIVE AS CORROSION INHIBITOR AND PROCESS THEREOF

(51) International classification :A61K31/505, C07D235/02, C07D239/70, C07D7/43, C09D4/00, C09D5/08 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Nagaland University Address of Applicant :Nagaland University, Lumami Headquarters, Zunheboto district Zunheboto ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Ambrish Singh Address of Applicant :Department of Chemistry, Nagaland University, Lumami Headquarters, Zunheboto district Nagaland Zunheboto ----- 2)Dr. Yuanhua Lin Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500 ----- 3)Mrs. Shivani Singh Address of Applicant :Lovely Professional University, Jalandhar Delhi GT road Phagwara ----- 4)Kashif Rahmani Ansari Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500. -----

(57) Abstract :

This invention successfully synthesized APC as an environmentally friendly corrosion inhibitor. and employed for the first time as an acidizing corrosion inhibitor. According to the results, APC demonstrated a good inhibitory nature for Q235 steel in a 15% HCl medium under hydrodynamic conditions, and the correlation between the inhibition efficiency and APC concentration is observed. A protective film is formed on the surface of Q235 steel by the corrosion inhibitor adhering to it, as evidenced by the alteration in impedance parameters. At 400 mg/L, the protective performance results equal 99.83%. The excellent fitting is represented by the Langmuir isotherm. On the surface of Q235 steel, SEM, AFM, XPS, and contact angle observations revealed that the metal matrix in the corrosion inhibitor solution has a strong anti-corrosion effect. Additionally, DFT and MD indicate that APC is neutral. The paint is cost effective and easy to use.

No. of Pages : 27 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :02/04/2024

(21) Application No.202431027326 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : CORROSION PROTECTION OF NEGATIVE ELECTRODE OF LEAD-ACID BATTERY BY NATURAL POLYSACCHARIDE COMPOSITE

(51) International classification :C09D105/00, C09D17/00, C09D5/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The electrochemical and hydrogen evolution data validated GG-VA's potential to prevent Pb from dissolving in a lead-acid battery. With an increase in feeding dose, GG-VA's capacity to prevent Pb corrosion and reduce H₂ gas evolved, reaching values of 99.6% inhibition at 200 mg/L and 4 mL/h H₂ gas reduction at 4 mL/h. The Langmuir isotherm model guided the GG-VA adsorption process. The EIS result is consistent with rising R_{ct} values and rising GG-VA amount, which are indicative of GG-VA adsorption. PDP data shows that adding GG-VA reduces i_{corr} values and has a mixed inhibitory effect. GG-VA performance decreases with rising temperatures. The evolution of H₂ gas and the rise in the energy barrier for corrosion reactions are both demonstrated by the EA data. The paint is used for coating the electrodes.

No. of Pages : 29 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027327 A

(19) INDIA

(22) Date of filing of Application :02/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : NOVEL QUINOLINE DERIVATIVE AS CORROSION INHIBITOR AND PROCESS THEREOF

(51) International classification :A61K31/47, C07D215/00,
C09D5/08
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to :NA
Application Number :NA
Filing Date :NA
(62) Divisional to Application :NA
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(57) Abstract :

The present invention, ethyl 4-(4-methoxyphenyl)-2,7,7-trimethyl-5-oxo-1,4,5,6,7,8-hexahydroquinoline-3-carboxylate (MQC), a quinoline derivative, is manufactured sustainably and used as a corrosion inhibitor in strong acid (15%) HCl to protect Q235 steel. IR and NMR methods were used to characterize an MQC inhibitor. The action of the corrosion inhibitor is inversely correlated with temperature and proportional to concentration. The electrochemical results indicate that MQC can lessen corrosion on Q235 steel even when it is only applied topically. As a corrosion inhibitor, the MQC functions as both an anode and a cathode. MQC was consistent with the Temkin isotherm and spontaneous mixed adsorption, based on the results of the isothermal adsorption fitting. The SEM, EDX, AFM, and XPS data demonstrate that MQC molecules have adsorbed on the Q235 steel surface. The paint is cost effective and easy to use.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027328 A

(19) INDIA

(22) Date of filing of Application :02/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : NOVEL MODIFIED GUAR GUM AS CORROSION INHIBITOR AND PROCESS THEREOF

(51) International classification :C09D105/00, C09D17/00, C09D5/08 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Nagaland University Address of Applicant :Nagaland University, Lumami Headquarters, Zunheboto district Zunheboto ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Ambrish Singh Address of Applicant :Department of Chemistry, Nagaland University, Lumami Headquarters, Zunheboto district Zunheboto - ----- 2)Dr. Yuanhua Lin Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500. ----- 3)Mrs. Shivani Singh Address of Applicant :Lovely Professional University Jalandhar Delhi GT road Phagwara Phagwara ----- 4)Kashif Rahmani Ansari Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500 -----

(57) Abstract :

In an acidizing environment, the performance of the GG-EEA composite is superior, even at low concentrations, to the previously reported corrosion inhibitors. Adsorbing on the P110 steel surface, the GG-EEA molecule follows the Langmuir adsorption isotherm in its actions. As the inhibitor concentration increased, the efficiency of inhibition increased as well, reaching a maximum of 99.3% at 500 mg/L. As demonstrated by the thermodynamic parameters, GG-EEA exhibits a mixed mode of chemical and physical adsorption. The adsorption of the inhibitor on the steel surface is confirmed by EIS studies, which also demonstrated an increase in the charge transfer resistance and a charge transfer control of the process. The PDP studies demonstrated that when the inhibitor molecule is added to the corrosive electrolyte and mixed, the corrosion current densities exhibited a decreasing trend. The aerosol spray gives better results being cost effective and easy to apply.

No. of Pages : 27 No. of Claims : 9

(54) Title of the invention : FRAMEWORK FOR DEFINING THE CRITICAL ZONE IN FOUNDATION-CAVITY INTERACTION AND THE METHOD THEREOF

(51) International classification :G06F0030230000, G16H0050300000, G06Q0010040000, H04W0004060000, G01C0021340000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)National Institute of Technology Jamshedpur Address of Applicant :Adityapur, Jamshedpur, Jharkhand – 831014, India . ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Kumar Shubham Address of Applicant :Research Scholar, Department of Civil Engineering, NIT Jamshedpur, Jharkhand – 831014, India . ----- ----- 2)Subhadeep Metya Address of Applicant :Assistant Professor, Department of Civil Engineering, NIT Jamshedpur, Jharkhand – 831014, India . ----- -----

(57) Abstract :
The present invention introduces a novel and comprehensive approach to defining the critical zone in foundation-cavity interaction and the method thereof. Unlike conventional methods that often rely on simplified assumptions and limited parameter considerations, the proposed solution integrates a wide range of parameters, including footing size, soil properties, cavity characteristics, and lining properties. By incorporating both the experimental data from literature surveys and the finite element analysis (FEA) simulations, the solution generates a reliable dataset for critical zone analysis. Unique optimization techniques are employed to maximize bearing capacity and minimize settlement under various scenarios, enhancing the stability and performance of foundations over cavities. Additionally, the development of prediction models for bearing capacity and settlement equations enables the determination of optimal coordinates to prevent cavity construction within the critical zone. These technical advancements distinguish the proposed solution from conventional methods, offering more accurate, reliable, and efficient solutions for foundation design and risk mitigation.

Figure 1

No. of Pages : 13 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027443 A

(19) INDIA

(22) Date of filing of Application :02/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : Vivek Mushroom Substrate Pasteurization Drum

(51) International classification :A61K0038000000, A24B0001060000, G02F0001136800, B23K0026140000, B21B0037280000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Mushroom growers face several challenges in the production of mushroom. The process of substrate pasteurization holds great importance in the production cycle. But in Indian context, where most of the farmers are small growers, it is not possible for them to go for highly mechanized substrate pasteurization techniques which require great deal of investment as well as skill. To address this issue, Vivek Mushroom Substrate Pasteurization Drum has been designed, which comes in-hand, it is portable, flexible to assemble and disassemble. Various parts such as a drum with a drainage tap fixed at the bottom, pressing tool having holes at fixed intervals which act as a lock-and-key mechanism with the holes made at the drum. This assembles makes sure that the substrate remains submerged into the solution and complete pasteurization is ensured.

No. of Pages : 18 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :02/04/2024

(21) Application No.202431027449 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AI Based LPG Gas Leakage Detection and Fire Alert System Notification

(51) International classification :G06Q0050180000, G08B0025010000, G08B0007060000, G08B0017000000, G08B0017060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The proposed invention is an LPG gas detector integrated with a fire detection system, coupled with a WhatsApp notification mechanism. This innovation aims to enhance home safety by promptly identifying gas leaks and potential fire hazards. The gas detector utilizes advanced sensing technology to detect LPG leaks, triggering an immediate response from the fire detection system. In the event of a detected threat, the system generates an automated notification via WhatsApp, providing real-time alerts to users. The integration of these functionalities creates a comprehensive safety solution, fostering timely responses to prevent accidents and protect lives and property. The patent application seeks to secure the intellectual property rights for this innovative and potentially life-saving technology.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :02/04/2024

(21) Application No.202431027457 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : AI-Based Automatic Alarm Generation and Payload Dropping from Drone

(51) International classification :B64C0039020000, A61N0001372000, H04W0084180000, G06T0007730000, H04L0061451100
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

In the realm of disaster management, rapid and efficient identification of individuals in affected areas is critical for timely and effective response efforts. This paper introduces a novel WiFi-based drone system designed to detect people during disasters. The system integrates the YOLOv7 (You Only Look Once) object detection model for accurate and real-time identification of individuals within disaster-stricken zones. The drone is equipped with an advanced Long-Range Telemetry System (LTS) module, ensuring unlimited communication range even in areas with compromised or non-existent traditional communication infrastructure. This LTS module employs cutting-edge communication technologies, such as satellite and mesh networking, to establish a robust and reliable link between the drone and the base station, facilitating seamless data transmission over extended distances.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/04/2024

(21) Application No.202431027500 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Gesture Recognition Using Sign Language With The Help of AI And Digital Image Processing

(51) International classification :G09B0021000000, G06N0020000000, H04N0021236000, G09B0021040000, G06F0040400000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The goal of this invention is to create a novel system that employs digital image processing (DIP) and artificial intelligence (AI) to recognize gestures in sign language. The suggested method seeks to bridge communication gaps between those who primarily communicate using sign language and those who have hearing difficulties. The device can effectively understand and translate sign language motions acquired using digital image processing techniques thanks to the inclusion of AI algorithms. The invention advances assistive technology for the deaf and hard of hearing population by investigating the ability of machine learning models to precisely detect and understand a broad variety of sign language motions.

No. of Pages : 13 No. of Claims : 7

(54) Title of the invention : NOVEL BIOPOLYMER BASED COMPOSITE FOR THE INHIBITION OF P110 STEEL CORROSION AND PROCESS THEREOF

(51) International classification :A61P0043000000, G01N0027327000, B82Y0030000000, G01N0027020000, G01N0017020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Nagaland University Address of Applicant :Nagaland University, Lumami Headquarters, Zunheboto district, Nagaland India Zunheboto ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Ambrish Singh Address of Applicant :Department of Chemistry, Nagaland University, Lumami Headquarters, Zunheboto district, Nagaland, India Zunheboto ----- 2)Dr. Yuanhua Lin Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500 ----- 3)Mrs. Shivani Singh Address of Applicant :Lovely Professional University, Jalandhar Delhi GT road Phagwara Phagwara ----- 4)Khashif Rahmani Ansari Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500 -----

(57) Abstract :

The present paper, three monomers—acrylic acid (AA), vinyl acetate (VAC), and 2-acrylamido-2-methyl-1-propanesulfonic acid (AMPS)—are used to synthesize a novel nano polymer of zinc oxide (n-ZnO-AVA). Transmission electron microscopy (TEM), X-ray diffractometer (XRD), and Fourier transform infrared spectroscopy (FTIR) are used to characterize the polymer. By using the weight loss method and an electrochemical test (potentiodynamic polarization and electrochemical impedance spectroscopy), the inhibitive effectiveness of n-ZnO-AVA on J55 steel in 3.5% NaCl saturated with CO₂ solution is assessed. The EIS results indicate that R_{ct} values rise as n-ZnO-AVA concentration increases, reaching a maximum value of 1409 Ωcm². The n-ZnO-AVA inhibiting action's mixed nature is revealed by the PDP. At its highest concentration, n-ZnO-AVA performs at 99.8%.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/04/2024

(21) Application No.202431027593 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : PYRIMIDINE DERIVATIVE AS A NEW CORROSION INHIBITOR AND PROCESS THEREOF

(51) International classification :C09K0008740000, G16H0020300000, C23G0001060000, H01J0011120000, B01J0035000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
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Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500. -----

(57) Abstract :

In an acidizing environment, PD performs better—even at low concentrations—than the corrosion inhibitor. The weight loss result shows that the inhibition efficiency increases from 41% to 93% (100 mg/L to 900 mg/L) with increasing PD concentration. The inhibition efficiency rises to 99% with the addition of KI. The increase in temperature lowers PD performance. The addition of PD appears to increase R_{ct} and decrease C_{dl} values, according to the EIS result. The PDP results show the mixed nature of the PD inhibition action and correlate with the decline in i_{corr} . The physical nature of PD adsorption at 308 K temperature is supported by the Gads results. The ideal fit to the experimental data is provided by the Freundlich isotherm. XPS and SEM.

No. of Pages : 26 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027594 A

(19) INDIA

(22) Date of filing of Application :03/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ANTI-CORROSION NANO POLYMERIC MATERIAL OF SIO2 FOR PROTECTION OF J55 STEEL

(51) International classification	:G01N0023225200, C25D0005180000, C25D0017000000, G01N0015080000, C23F0011100000	(71)Name of Applicant : 1)Nagaland University Address of Applicant :Nagaland University, Lumami Headquarters, Zunheboto district, Nagaland, India Zunheboto -----
(86) International Application No	:NA	Name of Applicant : NA
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(87) International Publication No	: NA	(72)Name of Inventor :
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(57) Abstract :

The oil and gas industry faces a great challenge and loss due to corrosion in the sweet aggressive medium. To overcome this effect addition of corrosion inhibitors, especially eco-friendly ones, are the prime additive. The description in this paper includes the synthesis of nano-sized novel polymeric composite material of SiO₂, i.e., n-SiO₂/P(ANA), and its application as a sweet corrosion inhibitor (3.5wt.% NaCl saturated with CO₂) for J55 steel. The characterization of synthesized n-SiO₂/P(ANA) is done via spectroscopic techniques. The chemical and electrochemical methods are used to evaluate the inhibitive performance. The surface texture of both protected and corroded samples is analyzed via scanning electron microscopy (SEM), Energy-dispersive X-ray spectroscopy (EDX), and atomic force microscopy (AFM).

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027595 A

(19) INDIA

(22) Date of filing of Application :03/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : CORROSION INHIBITOR COMPOSITION AND PROCESS THEREOF

(51) International classification :C09K0008740000, C09K0008540000, C23F0011140000, C23F0011040000, C09K0008720000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500 -----

(57) Abstract :

The advantage of the corrosion inhibitor composition is that they provide it provides the corrosion inhibition in strong acidic media which is responsible for the corrosion of the metal preferably steel in oil and gas industry during acidizing process which uses normally 15% HCl solution to dissolve carbonate in water soluble chlorides. Another advantage of the disclosed composition is that it is resistant to halogen attack. A metal corrosion inhibition paint composition comprising of: (a) water; (b) acid; (c) corrosion inhibitor (d) pH from 0.5 to 2 and (e) a preservative. The process is cost effective, easy to use and scale up for the industry.

No. of Pages : 22 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027596 A

(19) INDIA

(22) Date of filing of Application :03/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : CHONDROITIN SULFATE AS A GREEN CORROSION INHIBITOR FOR ZINC AND PROCESS THEREOF

(51) International classification :H01M0004880000, G01N0023225200, C02F0101100000, C02F0001280000, G01N0029036000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)Nagaland University Address of Applicant :Nagaland University, Lumami Headquarters, Zunheboto district, Nagaland India Zunheboto ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Ambrish Singh Address of Applicant :Department of Chemistry, Nagaland University, Lumami Headquarters, Zunheboto district, Nagaland, India Zunheboto ----- 2)Dr. Yuanhua Lin Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500. ----- 3)Mrs. Shivani Singh Address of Applicant :Lovely Professional University, Jalandhar Delhi GT road, Phagwara, India Phagwara ----- 4)Khashif Rahmani Ansari Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500. -----

(57) Abstract :

At just 200 mg/L, the inhibition efficiency of CS paint is 99.09%. The EIS results show that as the concentration of CS paint increased, so did the double layer thickness. The mixed but primarily cathodic nature of CS paint adsorption is supported by the PDP analysis. The chemical process of adsorption is involved in the spontaneous adsorption of CS paint. The El-Awady adsorption isotherm model is followed by the adsorption of CS paint. The Zn surface adsorption of CS paint molecules is verified by SEM, EDX, and XPS analysis.

No. of Pages : 24 No. of Claims : 9

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027597 A

(19) INDIA

(22) Date of filing of Application :03/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : NOVEL BIOPOLYMER SALICYDEHYDE COMPOSITE FOR THE INHIBITION OF P110 STEEL CORROSION AND PROCESS THEREOF

(51) International classification	:C02F0001280000, B01J0020280000, A61K0031137000, B01J0020300000, B01J0020100000	(71)Name of Applicant : 1)Nagaland University Address of Applicant :Nagaland University, Lumami Headquarters, Zunheboto district, Nagaland India Zunheboto ----- ----- Name of Applicant : NA Address of Applicant : NA
(86) International Application No	:NA	(72)Name of Inventor :
Filing Date	:NA	1)Dr. Ambrish Singh Address of Applicant :Department of Chemistry, Nagaland University, Lumami Headquarters, Zunheboto district, Nagaland, India Zunheboto -----
(87) International Publication No	: NA	2)Dr. Yuanhua Lin Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500. -----
(61) Patent of Addition to Application Number	:NA	3)Mrs. Shivani Singh Address of Applicant :Lovely Professional University, Jalandhar Delhi GT road, Phagwara Punjab Phagwara -----
Filing Date	:NA	4)Khashif Rahmani Ansari Address of Applicant :Southwest Petroleum University, Xindu district, Chengdu city, Sichuan, China-610500. -----
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

With an increase in concentration, the Sali-Cht paint performance reaches 99.23% at 400 mg/L. At 348 K, the Sali-Cht paint performance decreases with increasing temperature to 67.07%. The Sali-Cht paint adsorption is supported by the EIS, which causes Rct and Yo values to fluctuate. The PDP results show that the mixed (suppressing both anodic and cathodic) nature of the adsorption blocks the anodic and cathodic reaction mechanisms. The formation of the Sali-Cht paint film onto P110 steel was verified by the SEM and XPS results. Sali-Cht paint adsorption's physical and chemical characteristics are indicated by the ΔG_{ads} value. According to DFT results, Sali-Cht paint in its protonated form is more adsorbent than in its neutral form. According to MD results, the neutral state has a twisted adsorptive nature, whereas the protonated form is flatly adsorbed.

No. of Pages : 25 No. of Claims : 9

(54) Title of the invention : DESIGN AND IMPLEMENTATION OF AN ADAPTIVE WIRELESS ENERGY HARVESTING SYSTEM FOR SUSTAINABLE POWER MANAGEMENT

		(71)Name of Applicant : 1)Dr. Deepak Kumar Nayak Address of Applicant :Professor, Department of Electronics and Communication Engineering, Budge Budge Institute of Technology, Kolkata, Pin: 700137, West Bengal, India. ----- 2)Dr. Akhila John. Davuluri 3)Ms. Anandhi Kathiresan 4)Dr. Neenu Joseph 5)Mr. Mulakapati Krishna 6)Mr. Brahmaiah Battula 7)Mrs. D. Divya 8)Ms. M. Supriya 9)Mr. Shanmugaraja T 10)K. Pavithra Devi 11)Dr. Harikumar Pallathadka Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Deepak Kumar Nayak Address of Applicant :Professor, Department of Electronics and Communication Engineering, Budge Budge Institute of Technology, Kolkata, Pin: 700137, West Bengal, India. ----- 2)Dr. Akhila John. Davuluri Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, Dr.YSR ANU College of Engineering and Technology, Acharya Nagarjuna University, Nagarjuna Nagar, Guntur, Pin: 522510, Andhra Pradesh, India. ----- 3)Ms. Anandhi Kathiresan Address of Applicant :Assistant Professor, Department of Electronics and Telecommunication Engineering, Karpagam College of Engineering, Coimbatore, Pin: 641668, Tamil Nadu, India. ----- 4)Dr. Neenu Joseph Address of Applicant :Associate Professor, Albertian Institute of Science and Technology, Ernakulam, Pin: 682022, Kerala, India. ----- 5)Mr. Mulakapati Krishna Address of Applicant :Assistant Professor, St. Peter's Engineering College, Maisammaguda, Hyderabad, Medchal Malkajgiri, Pin: 500100, Telangana, India. ----- 6)Mr. Brahmaiah Battula Address of Applicant :Assistant Professor, Department of Electronics and Communication Engineering, Institute of Aeronautical Engineering, Dundigal, Hyderabad, Pin: 500043, Telangana, India. ----- 7)Mrs. D. Divya Address of Applicant :Assistant Professor, St. Peter's Engineering College, Maisammaguda, Hyderabad, Medchal Malkajgiri, Pin: 500100, Telangana, India. ----- 8)Ms. M. Supriya Address of Applicant :Assistant Professor, KPR Institute of Engineering and Technology, Arasur, Coimbatore, Pin:641407, Tamil Nadu, India. ----- 9)Mr. Shanmugaraja T Address of Applicant :Assistant Professor (Sr.G), KPR Institute of Engineering and Technology, Arasur, Coimbatore, Pin:641062, Tamil Nadu, India. ----- 10)K. Pavithra Devi Address of Applicant :Assistant Professor, Department of Computer Science (Artificial Intelligence and Data Science), Dr. SNS Rajalakshmi College of Arts and Science, Coimbatore, Pin: 641049, India. ----- 11)Dr. Harikumar Pallathadka Address of Applicant :Director and Professor, Manipur International University, Ghari, Imphal, Imphal West, Pin: 795140, Manipur, India. -----
(51) International classification	:G05B13/04, G05F1/67, H02J50/00, H02J50/20, H02J7/00	
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
The adaptive wireless energy harvesting system presented herein revolutionizes sustainable power management by efficiently capturing ambient energy from various sources and dynamically optimizing energy extraction through adaptive control algorithms. Integrating solar, kinetic, thermal, and RF harvesting techniques, the system ensures reliability in powering electronic devices and sensors, even in remote or off-grid locations. With advanced MPPT algorithms for solar panels and innovative sun-tracking mechanisms, as well as efficient piezoelectric transducers and vibration sensors for kinetic energy capture, the system maximizes energy harvesting efficiency. Furthermore, energy storage elements and wireless communication capabilities enable seamless power distribution and remote monitoring, making this system a versatile solution for diverse applications ranging from environmental sensing to industrial IoT deployments.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027740 A

(19) INDIA

(22) Date of filing of Application :03/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS FOR DEVELOPING POLYDIMETHYLSILOXANE (PDMS) BASED CONDUCTING FLEXIBLE ELASTOMER BLEND REDUCED GRAPHENE OXIDE / CALCIUM CARBONATE NANOCOMPOSITE

(51) International classification	:C08K0003040000, C08K0003260000, C08L0083040000, C01F0011180000, C08K0005098000	(71)Name of Applicant : 1)National Institute of Technology Jamshedpur Address of Applicant :Adityapur-2, Jamshedpur-831014, Jharkhand, India Seraikela Kharsawan ----- Name of Applicant : NA Address of Applicant : NA
(86) International Application No	:NA	(72)Name of Inventor : 1)Deepak Kumar Address of Applicant :B-5, Professor's Colony, NIT Jamshedpur, Adityapur-2, Jamshedpur-831014 Seraikela Kharsawan -----
(87) International Publication No	: NA	2)Swaroop Kumar Mandal Address of Applicant :Shakuntala Kunj, Friends Colony, Maira Tola Damodarpur, Dhanbad Jharkhand -826004 Dhanbad -----
(61) Patent of Addition to Application Number	:NA	3)Rahul Kumar Address of Applicant :Flat no - 227 D Aditya Syndicate Apartment, Adityapur - 2 Near NIT JSR Main Gate Jamshedpur - 831014 Seraikela Kharsawan -----
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention generally relates to a process for developing reduced graphene oxide(rGO)-filled Polydimethylsiloxane (PDMS)-Calcium Carbonate Flexible Elastomer. The process comprises mixing 20 wt.% of synthesized reduced graphene oxide/calcium carbonate (rGO/CaCO₃) nanocomposite in 80 wt.% of Polydimethylsiloxane (PDMS), preferably at a weight ratio of 1:4 to form a mixture; adding 10 wt.% of curing agent to the mixture, preferably in a ratio of 10:1 and stirring the mixture for an hour; ultrasonication the mixture for 120 minutes; degassing the PDMS/nanocomposite mixture inside a vacuum desiccator for 60 minutes; and solidifying the mixture at room temperature to form the conductive elastomer.

No. of Pages : 24 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027741 A

(19) INDIA

(22) Date of filing of Application :03/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS FOR PREPARATION OF FUNCTIONALIZED REDUCED GRAPHENE OXIDE (rGO)/CALCIUM CARBONATE (CaCO₃) NANOCOMPOSITES

(51) International classification	:C01F0011180000, C08K0003260000, B05D0001180000, C12M0001220000, C05D0003020000	(71)Name of Applicant : 1)National Institute of Technology Jamshedpur Address of Applicant :Adityapur-2, Jamshedpur-831014, Jharkhand, India Seraikela-kharsawan ----- Name of Applicant : NA Address of Applicant : NA
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Filing Date	:NA	
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(61) Patent of Addition to Application Number	:NA	3)Swaroop Kumar Mandal Address of Applicant :Shakuntala Kunj, Friends Colony, Maira Tola Damodarpur, Dhanbad Jharkhand -826004 Dhanbad -----
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(62) Divisional to Application Number	:NA	4)Rahul Kumar Address of Applicant :Flat no – 227 D Aditya Syndicate Apartment, Adityapur – 2 Near NIT JSR Main Gate Jamshedpur - 831014 Dhanbad -----
Filing Date	:NA	

(57) Abstract :

The present invention generally relates to aprocess for the preparation of functionalized reduced graphene oxide (rGO)/calcium carbonate (CaCO₃) nanocomposites. The process comprises submerging reduced graphene oxide in a bath of nitric acid (HNO₃) at60°C and stirring submerged rGO magnetically; rinsing the treated rGO with 10-50 wt.% of deionized water to remove acidic residues and drying the sample in ambient air for one day; eliminating absorbed moisture content upon heating the dried rGO sample in a Petri dish to obtain functionalized rGO; mixing 95-97 wt.% of nanoscale calcium carbonate, preferably 40% with the functionalized rGO in a weight percentage range of 3% to 5%; and blending the mixture using a portable ball mill, with steel balls to induce impact during milling to obtain functionalized reduced graphene oxide (rGO)/calcium carbonate (CaCO₃) nanocomposites.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/04/2024

(21) Application No.202431027742 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : FORMULATION OF PHYTOSOMAL GEL OF B - BLOCKER FOR MANAGEMENT OF DIABETIC FOOT ULCER

(51) International classification :A61P0003100000, A61K0009000000, A61K0047240000, A61K0047200000, A61P0017020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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5)Dr. Manjunatha Panduranga Mudagal
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7)Satish Kumar Pradhan
8)Dr. Gourisankar Roymahapatra
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(57) Abstract :

The present invention relates to a phytosomal gel formulation of a β -blocker for the management of diabetic foot ulcers (DFUs). DFUs are a common complication of diabetes mellitus, often leading to severe infections and amputations if not managed properly. The formulation comprises a phytosomal complex encapsulating the β -blocker within phospholipid vesicles, enhancing its bioavailability and efficacy when applied topically to DFUs. The phytosomal gel formulation offers improved skin penetration and sustained release of the active compound at the wound site, providing a convenient and effective treatment option for DFUs with minimized systemic side effects.

No. of Pages : 12 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :03/04/2024

(21) Application No.202431027747 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : The Fire Fighting Robot

(51) International classification :B25J0009160000, A62C0099000000, G06Q0040080000, G08B0017120000, A62C0031020000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Fires are among the most important form of problems. Fire incident is a disaster that can potentially cause the loss of life, property damage and permanent disability to the affected victim. Robot industry has a lot of work in this area. The main and only work is to deploy the robot in a fire prone area and the robot will automatically work once it detects a fire breakout. There is a need of Fire extinguisher Robot that can detect and extinguish a fire on its own. Robotics is one of the fastest growing engineering fields of today. Robots are designed to remove the human factor from labor intensive or dangerous work and also to act in inaccessible environment. With the invention of such a device, lives and property can be saved with minimal damage caused by the fire. As an engineer's we have to design a prototype that could autonomously detect the fire and extinguish it. The Fire Fighter Robot is designed to search for a fire in the house or industry to extinguish the fire.

No. of Pages : 13 No. of Claims : 7

(54) Title of the invention : Third Eye: Advanced Driver Safety System with Facial Monitoring and Automatic Braking

(51) International classification	:G08B0021060000, B60K0028060000, A61B0005180000, B60Q0009000000, B60T0007120000	(71)Name of Applicant : 1)JIS COLLEGE OF ENGINEERING Address of Applicant :Block A, Phase III, Dist. Nadia, Kalyani, West Bengal-741235 India Kalyani ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)RUPASHRI BARIK Address of Applicant :FACULTY, JIS COLLEGE OF ENGINEERING Block A, Phase III Kalyani West Bengal India 741235 Kalyani ----- 2)ANIRUDDHA BISWAS Address of Applicant :FACULTY, JIS COLLEGE OF ENGINEERING Block A, Phase III Kalyani West Bengal India 741235 Kalyani ----- 3)ANNWESHA BANERJEE Address of Applicant :FACULTY, JIS COLLEGE OF ENGINEERING Block A, Phase III Kalyani West Bengal India 741235 Kalyani ----- 4)ANUNAY GHOSH Address of Applicant :FACULTY, JIS COLLEGE OF ENGINEERING Block A, Phase III Kalyani West Bengal India 741235 Kalyani ----- 5)PARNAB BAGCHI Address of Applicant :STUDENT, JIS COLLEGE OF ENGINEERING Block A, Phase III Kalyani West Bengal India 741235 Kalyani ----- 6)RUPAM SAMANTA Address of Applicant :STUDENT, JIS COLLEGE OF ENGINEERING Block A, Phase III Kalyani West Bengal India 741235 Kalyani ----- 7)DEBASHIS PAUL Address of Applicant :STUDENT, JIS COLLEGE OF ENGINEERING Block A, Phase III Kalyani West Bengal India 741235 Kalyani ----- 8)SAYAN BASAK Address of Applicant :STUDENT, JIS COLLEGE OF ENGINEERING Block A, Phase III Kalyani West Bengal India 741235 Kalyani ----- 9)SHANKHADEEP PARIA Address of Applicant :STUDENT, JIS COLLEGE OF ENGINEERING Block A, Phase III Kalyani West Bengal India 741235 Kalyani ----- 10)SOUMIK GHOSH Address of Applicant :STUDENT, JIS COLLEGE OF ENGINEERING Block A, Phase III Kalyani West Bengal India 741235 Kalyani -----
(86) International Application No	:NA	
Filing Date	:NA	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :
The ThirdEye: Advanced Driver Safety System with Facial Monitoring and Automatic Braking invention introduces a pioneering driver safety system designed to mitigate accidents resulting from driver drowsiness or fatigue. Leveraging an advanced camera module discreetly integrated into the vehicle's dashboard and powered by an Arduino Uno microcontroller, this system employs sophisticated Python libraries—cv2, numpy, dlib, imutils, and face_utils—for real-time facial monitoring and recognition. The system vigilantly observes the driver's facial expressions, promptly detecting nuanced signs of drowsiness. Upon recognition, it triggers a two-tiered response: an immediate alarm activates within 2 seconds of detecting closed eyes or signs of fatigue, aiming to jolt the driver awake. Should the driver remain unresponsive for 5 seconds, an autonomous braking mechanism intervenes, seamlessly integrated into the vehicle's controls to prevent potential accidents. The ThirdEye: Advanced Driver Safety System with Facial Monitoring and Automatic Braking stands as a novel amalgamation of hardware and software technologies, setting a new standard in proactive driver safety measures aimed at enhancing road safety and minimizing accidents caused by driver fatigue.

No. of Pages : 17 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431027755 A

(19) INDIA

(22) Date of filing of Application :04/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : Nutri Waste Home Liquid Fertilizer Maker

(51) International classification :C05G0005200000, C05F0003000000, C05F0017200000, C05F0011080000, C05F0007000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SWAMI VIVEKANANDA UNIVERSITY Address of Applicant :Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 India. Barasat ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DR. TANMOY SARKAR Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 India. Barasat ----- 2)MR.VIBHOR RAJ Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 India. Barasat ----- 3)MR. ABHISHEK DHAR Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 India. Barasat ----- 4)MR. SAURABH ADHIKARI Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 India. Barasat ----- 5)Prof. (Dr.) Subhranil Som, Principal, Address of Applicant :Bhairab Ganguly College 2, Feeder Rd, Beehive Garden, Belghoria, Kolkata, West Bengal India 700056 Belghoria -----

(57) Abstract :

This revolutionary device, an automatic organic liquid fertilizer maker, swiftly transforms kitchen waste into nutrient-rich liquid fertilizer within 48 hours. Utilizing heat to expedite decomposition, it ensures rapid breakdown of organic scraps. Featuring automated filtration and adaptive water adjustment, it produces high-quality liquid fertilizer suitable for various farming techniques. Portable, solar-charged, and electric-powered, this invention promotes sustainable agriculture while efficiently repurposing waste, contributing to eco-friendly practices and enhanced soil fertility.

No. of Pages : 15 No. of Claims : 10

(54) Title of the invention : Development of Conductive Lightweight Composite Laminates for Improved Electromagnetic Interference (EMI) Shielding in Aerospace Electronics

(51) International classification :H05K0009000000, H01B0001240000, H01B0001040000, G06Q0010060000, C08K0003040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This invention relates to the development of conductive lightweight composite laminates designed for improved electromagnetic interference (EMI) shielding in aerospace electronics and beyond. By integrating advanced conductive materials such as carbon nanotubes, graphene, and metallic nanoparticles into lightweight composite matrices, this innovative solution achieves superior EMI shielding effectiveness without the weight penalty associated with traditional metal-based methods. The invention encompasses a multifaceted approach, including material selection based on conductivity and mechanical strength, sophisticated fabrication techniques for homogeneous filler distribution, and comprehensive theoretical modeling and empirical testing to optimize EMI shielding performance. These advancements not only enhance the operational efficiency and reliability of aerospace vehicles by mitigating EMI but also offer broad applications in industries seeking to balance electromagnetic compatibility with weight reduction.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/04/2024

(21) Application No.202431027881 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Method for Bioconversion of Municipal Waste

(51) International classification :A01K0067033000, B09B0003000000, C02F0003120000, B03B0009060000, C02F0003340000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

A method (100) for the bioconversion of municipal waste utilizing Black Soldier Flies (BSF) is described herein. The present invention is the municipal waste is meticulously processed, and organic waste is repurposed for BSF farming. The larvae, in a climate-controlled bio-reactor, efficiently convert the waste. Mechanical sieving separates larvae and frass, optimizing the bioconversion. Pupae, a dormant stage, are employed for storage. Adult flies mate in controlled conditions, laying eggs with potential hatching yields of 500-900 larvae. This bioconversion process, with its systematic stages, offers an efficient, sustainable, and nutrient-rich solution for municipal waste management and resource recovery.

No. of Pages : 13 No. of Claims : 4

(54) Title of the invention : SYSTEM AND METHOD FOR EVALUATING SOCIAL NETWORK MARKETING STRATEGIES USING DEEP LEARNING TECHNIQUE

(51) International classification :G06Q0030020000, G06Q0050000000, G06N0003080000, G06N0003040000, G06N0020000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr. Gagan Pareek Address of Applicant :Techno India University, West Bengal, EM4, Sector V, Salt Lake, Kolkata 700091, India . ----- ---- 2)Dr. Anup Kumar Ghosh 3)Prof. Abhinandan Bose 4)Daniya Hashmi 5)Shariq Ahmed 6)Aftab Mullick Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Gagan Pareek Address of Applicant :Techno India University, West Bengal, EM4, Sector V, Salt Lake, Kolkata 700091, India . ----- ---- 2)Dr. Anup Kumar Ghosh Address of Applicant :Techno India University, West Bengal, EM4, Sector V, Salt Lake, Kolkata 700091, India . ----- ---- 3)Prof. Abhinandan Bose Address of Applicant :Techno India University, West Bengal, EM4, Sector V, Salt Lake, Kolkata 700091, India . ----- ---- 4)Daniya Hashmi Address of Applicant :Techno India University, West Bengal, EM4, Sector V, Salt Lake, Kolkata 700091, India . ----- ---- 5)Shariq Ahmed Address of Applicant :Techno India University, West Bengal, EM4, Sector V, Salt Lake, Kolkata 700091, India . ----- ---- 6)Aftab Mullick Address of Applicant :Techno India University, West Bengal, EM4, Sector V, Salt Lake, Kolkata 700091, India . ----- ----

(57) Abstract :
Disclosed herein a system and method for evaluating social network marketing strategies using deep learning techniques. The system employs a combination of data collection, preprocessing, deep learning models, and evaluation metrics to provide insights into the effectiveness of social network marketing strategies. By leveraging deep learning techniques, the system can analyze vast amounts of social media data efficiently, extract relevant features, and predict the performance of marketing strategies with high accuracy. This invention enables marketers to optimize their marketing campaigns, improve targeting, and enhance overall performance in the dynamic landscape of social media marketing. Fig. 1

No. of Pages : 15 No. of Claims : 10

(54) Title of the invention : Arc Heating Based Metal Additive Manufacturing Process using Waste Machining Chips as Feedstock Material

(51) International classification :B33Y0010000000, B22F0010200000, B33Y0070000000, B33Y0030000000, B33Y0080000000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)National Institute of Technology Jamshedpur Address of Applicant :Adityapur, Jamshedpur, Jharkhand – 831014, India . ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Kuntal Maji Address of Applicant :Production and Industrial Engineering Department, National Institute of Technology Jamshedpur, Jharkhand-831014, India . ----- 2)Avishek Samanta Address of Applicant :Production and Industrial Engineering Department, National Institute of Technology Jamshedpur, Jharkhand-831014, India . ----- 3)Prakash Kumar Address of Applicant :Department of Mechanical Engineering, National Institute of Technology Patna, Patna-800005, India . ---- ----- 4)Dr Sharifuddin Mondal Address of Applicant :Department of Mechanical Engineering, National Institute of Technology Patna, Patna-800005, India . ---- -----

(57) Abstract :

The present invention deals with the method of fabricating metallic engineering components from waste metal machining chips used as feed stock materials and recycle of the same using arc welding heat-based additive manufacturing. Waste metallic machining chips can of high value if these can be converted into metallic products through sustainable fabrication method like additive manufacturing. In this research, a novel approach has been used to directly convert waste machining chips into useful metallic parts or components through the developed experimental technique arc heating based additive manufacturing using waste machining chips as feed stock material. Welding arc can generate sufficient heat to melt the machine chips under suitable processing conditions and environment to deposit materials in a layer upon layer manner to fabricate engineering components. Machining chips have to be converted into finer size using a ball mill to be used as feedstock material. The mechanical properties of the fabricated metallic components from waste machining chips by arc heating based metal additive manufacturing (AAM) are seen to be comparable to that of the cast and other AM fabricated materials. Figure 1

No. of Pages : 10 No. of Claims : 3

(54) Title of the invention : SECURE ROAD DATA TRANSMISSION AND MANAGEMENT SYSTEM UTILIZING GENETIC ENCRYPTION ON BLOCKCHAIN

(51) International classification :H04L0009320000, H04L0009060000, G06Q0020380000, G06F0021640000, G06F0021620000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)AMITY UNIVERSITY, KOLKATA Address of Applicant :Major Arterial Road, AA II, New Town, Kolkata, West Bengal, India, 700135 Kolkata ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DR. BANNISHIKHA BANERJEE Address of Applicant :Amity University, Kolkata, Major Arterial Road, AA II, New Town, Kolkata, West Bengal, 700135 Kolkata - ----- 2)DR. INDRANEEL MUKHOPADHYAY Address of Applicant :Amity University, Kolkata, Major Arterial Road, AA II, New Town, Kolkata, West Bengal, 700135 Kolkata - -----

(57) Abstract :
The SECURE ROAD DATA TRANSMISSION AND MANAGEMENT SYSTEM UTILIZING GENETIC ENCRYPTION ON BLOCKCHAIN integrates genetic encryption techniques within a blockchain framework. The system encompasses an image capturing unit (101) comprising camera, LiDAR, and radar modules, dedicated to capturing comprehensive road image data (201). Subsequent data processing is facilitated by a filtering module (102), followed by encryption using genetic algorithms via an encryption module (103). Hashing algorithms (104) are then employed to generate hash values for the encrypted data. These encrypted data, alongside personal data (202) and location information data (203), are securely managed within a chain of blocks (106) within the blockchain network. An alignment module (107) ensures the orderly arrangement of blocks within the blockchain. User access and network control are orchestrated through a management hub (105) equipped with a user interface (108). Rigorous testing methods validate the security and sensitivity of the encrypted road data, while efficiency assessments demonstrate the system's suitability for real-time deployment within smart vehicle networks.

No. of Pages : 30 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028008 A

(19) INDIA

(22) Date of filing of Application :04/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : ELECTROMECHANICALLY TENSIONED LINE SPOOLING SYSTEM WITH DUAL AXIS TENSIONING ARM ASSEMBLY

(51) International classification	:A01K0087060000, F16H0007080000, G11B0015430000, A01K0089000000, A61B0017000000	(71)Name of Applicant : 1)AMITY UNIVERSITY, KOLKATA Address of Applicant :Major Arterial Road, AA II, Newtown, Kolkata, West Bengal, 700135 Kolkata -----
(86) International Application No	:NA	Name of Applicant : NA
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Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

An Electromechanically Tensioned Line Spooling System With Dual Axis Tensioning Arm Assembly comprising various integrated components. These components include X axis Arms (101) and Y axis Arms (102) forming the dual-axis tensioning arm assembly, driven by a servo motor unit (103) powered by a rechargeable battery unit (104). A stainless-steel hollow shaft (105) provides structural support to the tensioning arms, controlled by an arm actuation unit (106). A tension control spring-loaded device (107) applies adjustable tension to the fishing line, regulated by a control circuit unit (108). An adjustable auxiliary take-up spool (109) collects excess line, with a spindle (110) serving as the central axis for the fishing line spool. The system features a base (111) for stability and support, along with a hook keeper (112) integrated into the reel seat to hold fishing hooks when not in use. Additional components include an ergonomic grip handle, reel seat, extended shaft, connecting shaft, and tip guide, facilitating smooth operation and line management. The tensioning arms (101, 102) are made of aluminum and are independently adjustable along both the X and Y axes for precise line tension control. The servo motor (103) articulates the tensioning arms for further tension control, with tension adjustment knobs provided for manual adjustments. The control circuit unit (108) receives feedback from a string tension sensor (112) to dynamically adjust line tension and incorporates an algorithm for iterative adjustment to optimize line lay and prevent twisting.

No. of Pages : 15 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/04/2024

(21) Application No.202431028037 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Automatic Plant Watering System Using Arduino and Water Filling System Using Ultrasonic Sensor

(51) International classification :A01G0027000000, A01G0025160000, G01N0033240000, A01G0022000000, A01G0025060000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The aim of this invention is to ease the mechanism of watering plants at home with the help of this Automatic Plant Watering System which automatically switches the water pump ON or OFF depending on the moisture content of the soil, which is continuously sensed by the soil moisture sensor. The system works on the principle of measuring the soil moisture level by means of the sensor technology which in turn controls the water pump via microcontroller in order to provide the plant enough amounts of water when necessary. From this work, we can control the moisture content of the soil of cultivated land. According to soil moisture, water pumping motor turned on or off via the relay automatically. This saves water, while the water level can be obtained in a preferred aspect of the plant, thereby increasing productivity of crops.

No. of Pages : 11 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028169 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A hybrid metal matrix composite material and method of fabricating the same

(51) International classification :C22C0032000000, G01S0005020000, C04B0035580000, B23K0103100000, C09K0011060000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Disclosed herein a hybrid metal matrix composite material comprising a matrix of aluminium alloy, in-situ zirconium diboride (ZrB₂) nanoparticles ranging from 1wt% to 5wt% dispersed within the matrix and fly ash particles ranging from 1wt% to 2wt% dispersed within the matrix, wherein said hybrid metal matrix composite material is fabricated using an ultrasonic-assisted stir casting method.

No. of Pages : 27 No. of Claims : 7

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028200 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : FISH FEED OF ACACIA PENNATA (L.) FOR FISHES IN-AQUARIA

(51) International classification :A23K0050800000, A01K0063040000, A23K0010300000, A61K0036480000, A01K0061100000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Nagland University Address of Applicant :Nagaland University, Lumami Headquarters, Zunheboto district, Nagaland India Zunheboto ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Prabhakar Maddela Address of Applicant :Nagaland University, Lumami Headquarters, Zunheboto district, Nagaland, India Zunheboto ----- ----- 2)Veto Khesoh Address of Applicant :Nagaland University, Lumami Headquarters, Zunheboto district, Nagaland India Zunheboto ----- ----- 3)Melevolu Thisa Address of Applicant :Nagaland University, Lumami Headquarters, Zunheboto district, Nalagland India Zunheboto ----- -----

(57) Abstract :

This present invention is a Phytochemical Screening of aqueous bark extracts of Acacia pennata for examining dose-dependent piscicidal potential and a fish feed based on the screening, comprising: saponins; steroids; terpenoids; alkaloids; tannins; phenols; flavonoids; and glycosides; wherein, the dose-dependent piscicidal potential of the fresh bark aqueous extracts of Acacia pennata is examined on two ornamental fish species, Carassius auratus (gold fish) and Danio rerio (zebra fish) and one indigenous fish Cyprinus carpio (common carp) in aquaria; and wherein, the dose-dependent piscicidal potential of the fresh bark aqueous extracts of Acacia pennata is used to identify the mortality rate of fishes at minimum lethal dose.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028201 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A NOVEL PROCESS OF MAKING LANTHANUM NANOPARTICLES

(51) International classification :A61K0033244000, C02F0001280000, C01F0017247000, A61P0043000000, H01M0010052500

(86) International Application No :NA

Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA

Filing Date :NA

(62) Divisional to Application Number :NA

Filing Date :NA

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(57) Abstract :

The smallest possible dimensions of two synthesized nanoparticles (NPs) may be used to present the size and morphology of the particles in this study. By using a probe sonicator to interact with sodium carbonate and lanthanum acetate hydrate in an aqueous medium, lanthanum carbonate nanoparticles are created using a sonochemical technique. Lanthanum oxide nanoparticles (S2) are obtained by calcining the $\text{La}_2(\text{CO}_3)_3 \cdot 8\text{H}_2\text{O}$ (S1) NPs at 600-700 °C following a thorough washing and drying process. The two NPs are described using a range of instrumental methods. PXRD analysis revealed hexagonal phases with space group P-3m1(164) for S2 and orthorhombic phases with space group Pccn(56) for S1, respectively. FESEM and EDX are used to analyze the morphology and elemental analysis of these phases. $\text{La}_2(\text{CO}_3)_3 \cdot 8\text{H}_2\text{O}$ and La_2O_3 high resolution TEM images revealed spherical nanoparticle shapes.

No. of Pages : 27 No. of Claims : 3

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :05/04/2024

(21) Application No.202431028202 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : NOVEL CATALYST FOR ORGANIC REACTIONS AND PROCESS THEREOF

(51) International classification :A61B0005000000, C09K0011770000, B82Y0030000000, C30B0029600000, C08G0083000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The field of lanthanide-doped nanomaterials is a major driver of the current state of materials science. They represent a revolutionary era in material engineering, with applications ranging from the production of advanced optical devices to solar cells, phosphors, lasers, and biomedical technologies. The current work is a noteworthy contribution to this field since it successfully synthesized uniform and well-crystallized GdF₃:Eu³⁺ nanoparticles using a simple solvothermal method. While luminescence spectroscopy clarified the dynamics of excitation and emission energy transfer, infrared spectroscopy explored the complex mechanisms underlying the formation of diverse morphologies in LnF₃ nanocrystals. It also identified the formation of chemical bonds between lanthanide and fluoride moieties. A wide range of analytical methods, such as X-ray, were also used to confirm the orthorhombic crystal structure and nanoparticle size.

No. of Pages : 19 No. of Claims : 2

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028203 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A NOVEL BIOFERTILIZER FOR PSEUDOSTEM AND PROCESS THERE OFF

(51) International classification :A01H0004000000, G09B0019000000, A01K0001010000, A22C0025140000, C10L0005420000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

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(57) Abstract :

Grand Nain is a well-liked Cavendish banana cultivar that is valued for its nutritional and commercial qualities. Nevertheless, there is a lack of clean planting materials because of diseases and steady natural regeneration. Micropropagation offers a solution, but it is inconvenient for small-scale, impoverished farmers who live in remote areas. As a result, macropropagation provides farmers with an alternate method of producing their own planting materials. Therefore, the goal of this study is to create a basic, low-cost macropropagation protocol that even inexperienced farmers can follow. The Conventional Method (TC), Incomplete Decapitation (T0), Complete Decapitation (T1), Split Corm Method (T2), PIF method (T3), Excised Bud (T4), and Split Corm + PIF Method (T5), as well as potting substrates like Garden Soil + Straw + Dried Cow Dung Manure, Sawdust (P2), and Forest Soil, were compared with each other.

No. of Pages : 20 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028204 A

(19) INDIA

(22) Date of filing of Application :05/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A NOVEL BACTERIAL COMPOSITION FOR PLANT GROWTH

(51) International classification :C12N0001200000, C12R0001010000, A01N0063220000, C01C0001040000, C01B0003020000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention is to identify and isolate the rhizobacteria that promote plant growth from the rhizospheric soil of Musa itinerans that are collected from the village of Zaphumi in Nagaland, Northeast India. Plant growth-promoting characteristics, such as phosphate solubilization, IAA production, siderophore production, and ammonia production, are screened for in the purified bacterial isolates. Three of the 25 isolates that exhibited the greatest growth-promoting characteristics are chosen and will be investigated further for their ability to withstand heavy metals and salinity. While only isolate EZ30 is able to produce IAA, all three isolates are able to produce siderophores. The highest phosphate solubilization ability is found in EZ27 (272.89 ± 2.46), with EZ30 (109.70 ± 5.47) and EZ11 (89.12 ± 1.87) following closely behind. Additionally, the isolates showed varying degrees of salinity resistance (2-14%) and cadmium ($30-280 \mu\text{g/ml}$). utilizing the 16S rRNA gene.

No. of Pages : 24 No. of Claims : 4

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028425 A

(19) INDIA

(22) Date of filing of Application :06/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A Closed-Loop Hybrid-Sorbent Carbon Dioxide Capture & Mineralization Process

(51) International classification :B01D0053620000, B01D0053140000, B01J0020320000, B01D0053020000, C08G0018440000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(72)Name of Inventor :

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(57) Abstract :

The present invention introduces a novel approach to carbon dioxide capture, utilizing a contactor-less design and a hybrid sorbent system comprising primary and secondary sorbents. This innovative method efficiently extracts carbon dioxide from both atmospheric and industrial emissions, with the secondary sorbent undergoing a transformation into a usable carbonate compound during the capture process, facilitating the regeneration of the primary sorbent which is recirculated back into the system for further carbon dioxide uptake creating a closed-loop. The contactor-less design enhances efficiency and reduces energy consumption, while the hybrid sorbent system maximizes performance and versatility. By combining these elements, the invention offers a sustainable, cost-effective, and scalable solution for mitigating greenhouse gas emissions, with potential applications across various industrial sectors.

No. of Pages : 26 No. of Claims : 6

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028475 A

(19) INDIA

(22) Date of filing of Application :07/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : Revolutionizing Agriculture: Vermicompost Innovations

(51) International classification :C05F0017050000, B05B0015740000, A01G0025020000, C05F0005000000, C05F0007000000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :Bhairab Ganguly College 2, Feeder Rd, Beehive Garden, Belghoria, Kolkata, West Bengal-700056, India
Barasat -----

(57) Abstract :

This innovative vermicomposting system redefines waste management and agriculture. It harnesses Vermicompost gases as clean fuels and nutrient-rich liquid waste to enrich soil. Through drip irrigation and sprinkler systems, it efficiently delivers these nutrients, fostering eco-conscious agriculture while minimizing environmental impact for sustainable, precision-based crop cultivation.

No. of Pages : 11 No. of Claims : 10

(54) Title of the invention : Transformation of Dairy By-Product into Sustainable Biodegradable Material

(51) International classification :C08L0089000000, A01G0022000000, C08L0101000000, A47G0021180000, A01N0037020000 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)SWAMI VIVEKANANDA UNIVERSITY Address of Applicant :Telinipara, Barasat - Barrackpore Rd,Bara Kanthalia, West Bengal – 700121 India. Barasat ----- ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DR. MD ERSHAD Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121, India. Barasat ----- 2)DR. RANJAN KUMAR Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121, India. Barasat ----- 3)MR. ABHISHEK DHAR Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121, India. Barasat ----- 4)MR. SAURABH ADHIKARI Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121, India. Barasat ----- 5)Prof. (Dr.) Subhramil Som, Principal, Address of Applicant :Bhairab Ganguly College 2, Feeder Rd, Beehive Garden, Belghoria, Kolkata, West Bengal India 700056 Belghoria, -----

(57) Abstract :

The invention pertains to a method for transforming dairy by-products into a sustainable biodegradable material, specifically focusing on the utilization of casein found in milk. Referred to as casein plastic, the resulting material is environmentally friendly and can be molded into diverse shapes. Plastics, pervasive in daily life, often contribute to environmental concerns due to their synthetic nature. This invention addresses the need for sustainable alternatives by leveraging the inherent properties of casein proteins in milk. The method involves heating milk and introducing an acid, such as white vinegar, to induce polymerization, leading to the formation of curds. These curds are then processed into a malleable casein polymer, herein termed casein plastic. The material retains the natural biodegradability of casein, presenting an eco-friendly alternative to traditional plastics. The invention extends to the creation of a polymerization kit, enabling individuals to replicate the process, emphasizing its educational potential. Additionally, shaped and dried products, molded from the resulting casein plastic, exhibit durability and biodegradability. In summary, the disclosed method offers a practical and sustainable solution for repurposing dairy by-products, contributing to the reduction of environmental impact associated with conventional plastic materials.

No. of Pages : 8 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/04/2024

(21) Application No.202431028477 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Intelligent Autonomous Wheel-Driven Sprayer System for Precision Agriculture

(51) International classification :A01M0007000000, G01B0003100300, G05D0001020000, A01B0079000000, A01C0021000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The Intelligent Autonomous Wheel-Driven Sprayer System for Precision Agriculture is a groundbreaking advancement in farming technology, addressing drawbacks of traditional pesticide and fertilizer application. Operating autonomously with advanced GPS and sensor technology, it precisely navigates fields following predefined routes. Its standout feature is a precision spraying mechanism, offering adjustable parameters for spray volume, droplet size, and pattern, allowing tailored applications based on crop specifics. Real-time monitoring adjusts spraying parameters based on crop health and environmental factors. The wheel-driven propulsion system ensures energy efficiency and adapts traction control for diverse terrains. Data logging captures details for analysis, enhancing usage patterns and refining future strategies. Equipped with safety features like obstacle detection and emergency shutdown, it minimizes environmental impact through targeted spraying. This innovation promises increased cost-effectiveness, resource utilization, and reduced reliance on manual labor, aligning with agricultural automation trends. The patent secures this unique combination of features, technologies, and methodologies, potentially revolutionizing precision agriculture for sustainability and productivity.

No. of Pages : 11 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/04/2024

(21) Application No.202431028478 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Pest Guard Pro-Air

(51) International classification :A01M0007000000, A01M0001020000, A01M0001040000, A01M0001200000, A01M0001240000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The automatic air blower pesticide sprayer is a breakthrough in agricultural pest control, boasting adjustable cool and hot air systems that dynamically adapt to specific pest conditions. Upon pest detection, its automated heat and cool air control swiftly tailor the environment for optimal pesticide efficacy. Advanced memory storage analyzes pest data, guiding the automated system to regulate temperature and administer pesticides as needed. This innovative approach ensures precise and effective pest management while operating sustainably on solar power and electricity.

No. of Pages : 11 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/04/2024

(21) Application No.202431028486 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Smart Flora Hub

(51) International classification :H02J0007350000, A01C0023040000, A01G0027000000, H02J0003480000, A01M0029180000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The smart flower pot redefines plant care by amalgamating automated irrigation, fertilization, and pest control within a singular, multifunctional system. Utilizing ultrasonic waves for insect deterrence, it minimizes water wastage through low water level protection and over drain prevention. With adaptable power sources, including solar panels and rechargeable batteries, this invention caters to indoor and outdoor environments, offering sustainable, user-friendly plant care solutions.

No. of Pages : 23 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :07/04/2024

(21) Application No.202431028487 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Solar Air Heater

(51) International classification :F24F0005000000, F24S0010800000, F24S0025100000, F24S0025632000, F24S0020000000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The solar air heater project aims to design and develop a system that can efficiently use solar energy to heat air for space heating and ventilation purposes. The project involves designing a collector that can absorb solar radiation and transfer the heat to the air, and an air circulation system that can distribute the heated air to the desired space. The objective of this project is to develop a cost-effective and environmentally friendly solution for space heating and ventilation that can help reduce the dependence on fossil fuels and minimize greenhouse gas emissions. The project is expected to contribute to the advancement of renewable energy technologies and promote sustainable living practices.

No. of Pages : 11 No. of Claims : 10

(54) Title of the invention : INNOVATIVE METHOD FOR COST-EFFECTIVE PRODUCTION OF COMPLETE MICROBIAL MEDIA FROM FRESHWATER FISH SCALES

(51) International classification :C02F0003340000, C12N0001200000, B09B0003000000, C12N0001160000, C12Q0001040000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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Address of Applicant :Principal Scientist, Fish Genetics and Biotechnology Division, ICAR-Central Institute of Freshwater Aquaculture. Kausalyaganga, Bhubaneswar - 751002. India -----

(57) Abstract :

The fish processing industry generates a significant amount of waste, including viscera, scales, fins, frames, and gills. These by-products, if not properly managed, can pose serious environmental problems. Landfills struggle to accommodate this waste, and improper disposal can lead to water contamination. However, conventional microbial media often face limitations like High Cost,Limited Source Sustainability, Synthetic Dependence. This invention aims to address these challenges by proposing a novel approach to microbial media production. We utilize readily available freshwater fish scales, a waste product from the processing industry, as the primary source material. This approach offers several advantages: Cost-Effectiveness: Fish scales are a readily available and inexpensive resource, significantly reducing production costs compared to traditional media. Sustainable Waste Management: Utilizing fish waste for media production diverts it from landfills and promotes environmentally friendly waste management practices. Nutrient Richness: Our research demonstrates that the media derived from fish scales possesses excellent characteristics for bacterial growth. It effectively supports the cultivation of various bacterial strains, including genetically modified E. coli, without requiring additional peptone or yeast sources. By successfully growing bacteria on this innovative media formulation, we have validated its potential as a cost-effective and sustainable alternative to conventional media. This invention has the potential to revolutionize the way microbial media is produced, benefiting research, education, and the biotechnology industry at large.

No. of Pages : 8 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028681 A

(19) INDIA

(22) Date of filing of Application :08/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SWITCHED-CAPACITOR BASED MULTI-LEVEL DC-AC CONVERTER WITH FEWER SEMICONDUCTOR SWITCHES

(51) International classification :H02M1/00, H02M1/32, H02M7/483, H02M7/529, H02M7/5387 (86) International Application No :NA Filing Date :NA (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA		(71)Name of Applicant : 1)National Institute of Technology Patna Address of Applicant :Ashok Rajpath, Patna - 800005, Bihar, India. Patna ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)TIWARI, Anurag Address of Applicant :Department of Electrical Engineering, National Institute of Technology Patna, Ashok Rajpath, Patna – 800005, Bihar, India. Patna ----- 2)KUMAR, Vinayak Address of Applicant :Department of Electrical Engineering, National Institute of Technology Patna, Ashok Rajpath, Patna – 800005, Bihar, India. Patna ----- 3)AGARWAL, Ruchi Address of Applicant :Department of Electrical Engineering, National Institute of Technology Patna, Ashok Rajpath, Patna – 800005, Bihar, India. Patna -----

(57) Abstract :

The system (100) of the present disclosure provides a 5-level inverter that generates a 5-level AC output voltage waveform. It is highly efficient and utilizes lesser number of semiconductor switches. The switches can be Insulated Gate Bipolar Transistors (IGBTs). Switched capacitors are charged and discharged in parallel and series configurations with a DC input supply voltage. The present disclosure provides lower switching losses, reduced electromagnetic interference, and improved output waveform quality. The system includes a Digital Signal Processor (DSP) to generate a control algorithm to regulate the switching operation of the switches and produce an efficient output voltage form. The system (100) also facilitates prevention of a reverse current flow using the diodes to provide a path for the current during the off-state of the IGBTs and to prevent reverse current flow.

No. of Pages : 36 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028861 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A PROCESS FOR PREPARING A HYDROXYAPATITE/REDUCED GRAPHENE OXIDE REINFORCED ALGINATE/ACRYLAMIDE DOUBLE NETWORK BIO HYDROGEL

(51) International classification	:C02F0101200000, B82Y0010000000, H01M0008120000, A61K0008730000, C08F0220060000	(71)Name of Applicant : 1)National Institute of Technology Jamshedpur Address of Applicant :Adityapur-2, Jamshedpur-831014, Jharkhand, India Seraikela Kharsawan ----- Name of Applicant : NA Address of Applicant : NA
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(87) International Publication No	: NA	
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Filing Date	:NA	
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Filing Date	:NA	

(57) Abstract :

The process comprises mixing hydroxyapatite (HAP) and reduced graphene oxide (rGO) in a ball milling process for obtaining a powdered mixture; mixing the powdered solution of HAP/rGO nanocomposite into 20 ml distilled water using a probe sonicator for preparing a slurry solution; dissolving 0-4 wt.% of sodium alginate (SA) in 100 ml of distilled water and stirring for 4 hours at room temperature to form a first monomer solution of alginate; adding 10-20 wt.% of acrylamide powder to the sodium alginate (SA) and continuing stirring for 1 hour at room temperature; adding 10 ml of 0.1 wt.% solution of N,N'-methylenebisacrylamide (MBAAm) crosslinker, and 10 ml of 1 wt.% ammonium persulfate initiator to the monomer solution while continuously stirring at 200 rpm; and allowing the obtained solution to crosslink and form a double network alginate/polyacrylamide-based hydrogel in a required mold at room temperature for 24 hours in a desiccator.

No. of Pages : 18 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028906 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A system and a method for protection of DC Microgrid

(51) International classification :G01R19/25, G01R31/50, G05B23/02, G06F113/04, H02J1/10, H02J3/34, H02J3/36, H02J3/38

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention relates to a system and a method for protection of DC Microgrid, comprising; i) A DC microgrid with a Photovoltaics (PV) and wherein a Diesel generator integrated (distributed energy resources) DERs and DC loads are interfaced with the AC grid; ii) PV system is constituted by shunt connected network of multiple PV generators interfaced with DC grid by means of DC-DC converters; iii) DC to AC interface has been achieved by Voltage source converters with high pulse width modulation (PWM) switching frequency and Phase locked loop (PLL) control for synchronization with the AC grid, and iv) point of common coupling (PCC) records the current-voltage signals for the protection analysis. Figure 1.

No. of Pages : 14 No. of Claims : 5

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028924 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : A solar still apparatus and method of use thereof

(51) International classification :F28D0020020000, F28D0020000000, C09K0005060000, F24F0005000000, F24S0060300000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

Disclosed herein a solar still apparatus comprising an absorber basin configured to receive solar radiation, and a hybrid heat storage device attached to the absorber basin, wherein the hybrid heat storage device comprising a galvanized steel sheet cassette with extended fins, a phase change material (PCM) filled within the extended fins, wherein the hybrid heat storage device is positioned at the bottom of the absorber basin. The solar still apparatus has a modified design for the absorber basin which help to operate during sunshine and off sunshine hours effectively using hybrid thermal energy storage system.

No. of Pages : 11 No. of Claims : 6

(54) Title of the invention : A pour point depressant for flow assurance of Indian waxy crude oil, a process for the preparation thereof and the use thereof

(51) International classification :C09K0008524000, C09K0008584000, C09K0008540000, C10L0001197000, G01N0021350000

(86) International Application No :NA
Filing Date :NA

(87) International Publication No : NA

(61) Patent of Addition to Application Number :NA
Filing Date :NA

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Filing Date :NA

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(57) Abstract :

The present invention relates to a pour point depressant for flow assurance of Indian waxy crude oil, a process for the preparation thereof and the use thereof for to overcome wax deposition issue in the petroleum industry. The novel green pour point depressant (PPD) Polyethylene glycol stearate (PGS) will overcome wax depositional issue which is a major flow assurance problem faced by the petroleum industry. PGS is synthesised from stearic acid and has been characterized by FTIR, ¹H NMR, ¹³C NMR and CHNS analysis. Particle size of the PPD was determined by Dynamic light scattering (DLS) measurement. The effectivity of the prepared additive PGS has been evaluated by checking pour point, viscosity and wax deposition thickness of both virgin crude oil as well as crude oil dosage with PGS in several concentration. This naturally derived pour point depressant PGS has shown better performance in reduction of pour point of Indian waxy crude oil than that of the commercial PPD.

No. of Pages : 37 No. of Claims : 8

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431028980 A

(19) INDIA

(22) Date of filing of Application :09/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : IoT based smart ECG system and method of DNA encoding

(51) International classification :G06K0009620000, G16B0020000000, A61P0031120000, G01N0033487000, C12Q0001680900
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

The present invention relates to a system which mimics the flow of genetic information, transforming raw ECG signals into DNA, which is then transcribed and translated into RNA and amino-acid sequences using genetic coding principles. As a result, similar signals yield comparable amino acid sequences, preserving the distinctive structure necessary for ECG classification. Subsequently, a Principal Component Analysis (PCA) is used to extract essential low-dimensional structural properties from the generated amino acid sequence. Figure 1.

No. of Pages : 21 No. of Claims : 5

(54) Title of the invention : SYSTEM AND METHOD FOR EDGE DEVICE AUTHENTICATION IN AN IOT NETWORK

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number :H04L0009320000, G06F0021320000, H04L0009080000, G10L0015120000, G06F0021310000 :NA :NA : NA :NA :NA :NA	(71)Name of Applicant : 1)National Institute of Technology Patna Address of Applicant :Ashok Rajpath, Patna - 800005, Bihar, India. Patna ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)ANAND, Abhishek Address of Applicant :National Institute of Technology Patna, Ashok Rajpath, Patna – 800005, Bihar, India. Patna ----- ----- 2)SINGH, Jyoti Prakash Address of Applicant :National Institute of Technology Patna, Ashok Rajpath, Patna – 800005, Bihar, India. Patna ----- -----

(57) Abstract :

The proposed system (100) presents a robust authentication framework for Internet of Things (IoT) devices leveraging Static Random-Access Memory - Physical Unclonable Function (SRAM-PUF) extraction and Dynamic Time Warping (DTW) comparison techniques. Through the SRAM-PUF extractor module (102) and edge devices (114), unique identifiers are extracted from memory cells within IoT devices (114), which are subsequently embedded into digital signals for transmission to an authentication server. Utilizing a Dynamic Time Warping (DTW) module (106), the extracted identifiers are compared with reference identifiers stored in the server, facilitating device authentication based on similarity thresholds. Additionally, the system (100) incorporates multi-factor authentication methods (500), including device location verification, user credentials authentication, and biometric authentication, to enhance security. The multi-layered approach ensures the reliable and secure authentication of IoT devices (114), mitigating risks associated with unauthorized access and data breaches in IoT networks.

No. of Pages : 28 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :09/04/2024

(21) Application No.202431029001 A

(43) Publication Date : 19/04/2024

(54) Title of the invention : Sustainable Spin Blade Weeder

(51) International classification :A01B0039180000, A01M0021020000, A61M0016100000, A01B0039190000, A01B0001180000
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

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(57) Abstract :

This invention presents a human-powered weeding machine inspired by bicycle mechanics, revolutionizing agricultural weed control. Utilizing interconnected free wheels and cutting blades driven by human force, it offers a cost-effective, user-friendly, and eco-friendly solution. This innovation streamlines weeding processes, reducing labour while enhancing productivity in diverse agricultural settings.

No. of Pages : 10 No. of Claims : 10

(54) Title of the invention : Thermo Guard Agri Sprayer

(51) International classification (86) International Application No (87) International Publication No (61) Patent of Addition to Application Number (62) Divisional to Application Number	:G10L0015220000, H04M0001600000, H01L0031054000, B32B0027320000, B32B0027080000 :NA :NA : NA :NA :NA :NA :NA	(71)Name of Applicant : 1)SWAMI VIVEKANANDA UNIVERSITY Address of Applicant :Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat ----- Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)DR. TANMOY SARKAR Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat ----- 2)MR.VIBHOR RAJ Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat ----- 3)DR. SUDIP SENGUPTA Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat ----- 4)MR. ABHISHEK DHAR Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat ----- 5)MR. SAURABH ADHIKARI Address of Applicant :SWAMI VIVEKANANDA UNIVERSITY Telinipara, Barasat - Barrackpore Rd, Bara Kanthalia, West Bengal – 700121 Barasat ----- 6)Prof. (Dr.) Subhranil Som, Principal Address of Applicant :Bhairab Ganguly College 2, Feeder Rd, Beehive Garden, Belghoria, Kolkata, West Bengal-700056 India Belghoria -----

(57) Abstract :

The body-shaped pesticides sprayer, integrated with voice control for on/off commands, is designed for farmers in high-temperature settings. This innovative device shields the upper body with pesticides liquid, protecting against direct sunlight and extreme heat. The voice control feature enables hands-free operation, enhancing convenience. Combined with an adjustable sprinkler system and dual power sources (solar/electricity), this invention revolutionizes farming safety, prioritizing comfort, efficiency, and productivity.

No. of Pages : 14 No. of Claims : 10

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202431029216 A

(19) INDIA

(22) Date of filing of Application :10/04/2024

(43) Publication Date : 19/04/2024

(54) Title of the invention : SYSTEM AND METHOD FOR MEASURING A FLOOD WATER DEPTH AND ISSUING EARLY WARNING FOR FLOODS

(51) International classification	:G01B0011060000, G01N0021880000, G01N0033000000, H04N0005235000, G16H0050300000	(71)Name of Applicant : 1)National Institute of Technology Patna Address of Applicant :Ashok Rajpath, Patna - 800005, Bihar, India. Patna -----
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Filing Date	:NA	Address of Applicant : NA
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Filing Date	:NA	Address of Applicant :Department of Civil Engineering, National Institute of Technology Patna, Ashok Rajpath, Patna – 800005, Bihar, India. Patna -----

(57) Abstract :

The system (100) presents a system for precise water level measurement utilizing a distomat module (104). The system (100) integrates a laser-based distomat module (104) with a low-density float cube positioned within the flow channel. The distomat module (104) emits a laser beam towards the reflective upper surface of the float cube, capturing the reflected beam with a receiver. A processor module (102) analyzes the received beam, determining a delay in reception to provide accurate information about water depth, height, and elevation. The system (100) also generates early warning for floods. The system's (100) robust design improves stability, durability, and real-time monitoring capabilities for various water management applications.

No. of Pages : 32 No. of Claims : 10

CONTINUED TO PART- 2