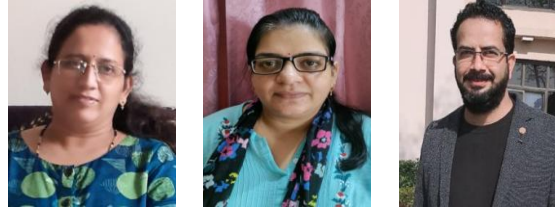


INVENTION :- 1

A method to present antimicrobial activity of tio₂ and 14 zno/go nanomaterial on enterococcus faecails



INVENTORS

Dipti Vaya, AUH

Nidhi Verma, AUH

Tejpal S Chundawat, AUH

Patent Application No. 202111034048 filed in India on 29/07/2021

ABSTRACT OF INVENTION: The present patent is focused on the antimicrobial activity of TiO₂ NPs and ZnO/GO nanocomposite against *Enterococcus faecalis* a gram (+ve) bacteria. *Enterococcus faecalis* cause of urinary tract infections, endocarditis, and wound infection etc. The TiO₂ NPs and ZnO/GO nanocomposite are synthesized by sol-gel and hydrothermal route, respectively. The size of TiO₂NPs and ZnO/GO nanocomposite were found 5.1 nm and 21.9 nm respectively. The nanomaterials were found effective against *Enterococcus faecalis* and compare with antibiotic Gentamycin.

INVENTION :- 2

A Male External Urinary Catheter

INVENTOR

Arun Kumar Sharma, AUH

Ashish Kumar AIP, AUH

Gunjan Sharma, AUH

Aakash Deep, AUH

Md. Sayeed Akhtar, Amity University Haryana,

Patent Application No. 202111043895 filed in India on 29/08/2021

ABSTRACT OF INVENTION: In our product, we developed an external male catheter, which can be easily attached to male glans, replaced, cleaned, or removed by individual with limited knowledge or medical expertise. Our product can attach to male glans externally, which limited the pain and discomfort associated with urine catheter instalment/removal or use. Moreover, due to external instalment of our product it can be easily used for longer period, while minimising the chance of side-effects associated with traditional urinary catheters.

INVENTION :- 3

A SOLAR ENERGY AND MAGNETIC LEVITATION BASED COPTER



INVENTOR

Prof. Pritam Babu Sharma, Vice Chancellor, AUH

Dr. Sanjeev Sharma, Head, Department of Mechanical Engineering, AUH

Patent Application No. 202111044829 filed in India on 01/10/2021

ABSTRACT OF INVENTION: The global air taxi market size is expected to be \$817.50 million by 2021, and is projected to reach \$6.63 billion by 2030, registering a CAGR of 26.2% from 2021 to 2030. In the same reference, we have developed a new concept of aviation that could become a game-changer in the near future. This technology provides the solution for aviation without using fuel, battery bank, or electric motor. The concept is based on solar energy and magnetic levitation. Therefore, I have named this concept "Solar Maglev Copter" which will be used first time in the world.

INVENTION :- 4

A method using alternative splicing of UDP-Glucose Ceramide Glucosyltransferase (UGCG) as a marker for breast cancer diagnosis and prognosis'



INVENTOR

Ujjaini Dasgupta, AUH

Patent Application No. 202111056492 filed in India on 06/12/2021

ABSTRACT OF INVENTION: An exon skipping event in *UGCG* (**UDP glucose ceramide glucosyltransferase**) gene gives rise to an alternatively spliced transcript that codes for a protein lacking a portion of the catalytic domain. The full-length protein coding transcript codes for an enzyme that catalyses the synthesis of glucosylceramides from ceramides. We have shown a significant increase in the full-length transcript in tissue from breast tumors of all subtypes, whereas the expression of alternatively spliced transcript (devoid of exon 7) is higher in adjacent normal patient tissue by Real-time PCR quantitation. Therefore, this alternative splicing event in *UGCG* can be used as a diagnostic biomarker that signifies the high *UGCG* and glucosylceramide levels in breast tumors

INVENTION :- 5

A METHOD FOR PREPARING NOVEL COMPOSITION FOR FLY ASH BRICKS WITH CONCRETE WASTE DEBRIS AND SELF HEALING BACTERIA



INVENTOR

Anil Soharu, AUH

Naveen BP, AUH

Arjun Sil, Amity University Haryana,

Patent Application No.202111059380 filed in India on 20/12/2021

ABSTRACT OF INVENTION: In this study, an effort has been made to use concrete waste debris for the manufacturing of fly ash bricks as a sustainable material. Though in earlier studies, attempts have been made to use concrete waste debris to manufacture fly ash bricks however it becomes inferior as mechanical properties in comparison to regular fly ash brick have always been a concern. To overcome the problem, self-healing bacteria (SHB) has been amalgamated in the manufacturing process. Various tests have been performed to evaluate the mechanical properties, microstructure, and morphology of developed brick samples. The study revealed that brick made with concrete debris and SHB was enhanced having mechanical properties with an initial rate of absorption of about 4.8 kg/m²/min, water absorption as 15.72% and compressive strength of 10.29 MPa observed to be even higher than red clay bricks. Further X-ray Diffraction (XRD) and Scanning Electron Microscopy (SEM) study revealed the presence of lesser micro-cracks over the bricks structure made up of concrete debris and SHB. This investigation revealed that the use of SHB results in a higher strength with the lesser void formation which helps in achieving higher performance quality parameters for brick manufacturing using concrete waste debris as sustainable materials.

INVENTION :- 6

A METHOD FOR FABRICATION OF ALUMINIUM MMCS WITH DIFFERENT COMPOSITIONS OF GRAPHENE – OXIDE AND GRAPHITE



INVENTOR

Prof. P.B. Sharma, Vice Chancellor, AUH

Dr. Sanjeev Sharma, Head, Department of Mechanical Engineering, AUH

Bhupender Singh, AUH

Sukhveer Yadav, AUH

Patent Application No. 202111059616 filed in India on 21/12/2021

ABSTRACT OF INVENTION: The present invention relates to a method for Fabrication of Aluminium MMCs with different compositions of Graphene – Oxide and Graphite using Powder Blending and strength assessment after FSP. The present invention provides powders of different compositions of Graphene Oxide & Graphite are proposed to be blended to form a final part. Blending is carried out for several purposes as follows, but not limited to: 1. Blending imparts uniformity in the shapes of the powder particles; 2. Blending facilitates mixing of different powder particles to impart wide ranging physical and mechanical properties; 3. Lubricants can be added during the blending process to improve the flow characteristics of the powder particles reducing friction between particles and dies; and 4. Binders can be added to the mixture of the powder particles to enhance the green strength during the powder compaction process

INVENTION :- 7

A 2D-materials based nanocomposites as conductive layer for electronic sensing of biofilms dynamics



INVENTOR

Ranjita Ghosh Moulick, AUH

Jaydeep Bhattacharya, AUH

Rajendra Prasad, AUH

Atanu Banerjee, AUH

Ahana Mukherjee, Amity University Haryana,

Patent Application No. 202211004237 filed in India on 25/01/2022

ABSTRACT OF INVENTION: Microorganisms like bacteria and fungi can cause severe infections in any part of our body and biofilms worsen the situation. They contain hibernating pathogens hidden in a very protective matrix making their treatment cumbersome. 2D materials with their excellent properties can serve as potent killing agents. Due to the temporal and spatial heterogeneity of biofilms, the phenomena occurring in the biofilm matrix during formation and disintegration are still under research. Our invention describes a 2D material nanocomposite that can be functionalized and efficiently coated on solid substrates. Bacterial or fungal cells will be cultured on these coated surfaces and their biofilm dynamics will be monitored at regular intervals electronically to determine the inhibitory concentrations of the nanocomposite and other biological processes that occur during the biofilms' formation and inhibition. Mapping these events play an important role in understanding the role of pathogenic biofilms in the natural environment and various infectious diseases.

INVENTION :- 8

A HYBRID MOLECULE FOR GSK-3B (INHIBITION) AND NRF-2 (ACTIVATION) AND PREPARATION METHOD THEREOF

INVENTOR

Arun Kumar Sharma, AUH

Ashish Kumar AIP, AUH

Kamran Manzoor, AUH

Waidha, AUH

Apoorv Gupta, Amity University Haryana,

Patent Application No. 202211008314 filed in India on 17/02/2022

ABSTRACT OF INVENTION: GSK-3 β receptors play a significant role in signal transduction, as well as pathological conditions ranging from cancer heart failure apoptosis inflammation and cell growth. GSK-3 β has multifactorial role in numerous signalling cascade. Numerous studies revealed an ideal GSK-3 β emitter could significantly potentiate myocardial physiology or resist pathological state of cardiac tissue. In addition to in addition to GSK three beta NRF-2 is a critical factor that would be trigger by GSK 3 β inhibition and plays an interesting role to overcome cardiac pathology. But the vicious cycle of signalling cascade indicates the activation of NRF-2 could down-regulate the phosphorylation of GSK-3 β , which could additionally provide improvement in cardiac pathology. Thus, therapeutically having the ability to inhibit GSK-3 β in addition to activation of NRF-2 could be a novel treatment strategy against pathological event of myocardial tissue.

INVENTION :- 9
A WEARABLE BAND FOR MINERS WITH IOT CONNECTIVITY



INVENTOR

Nishant Kumar Tripathi, AUH

Manish Naagar, AUH

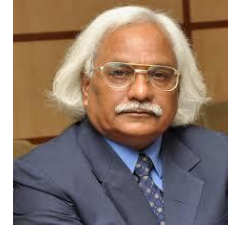
Sonia Chalia, Department of Aerospace Engineering, AUH

Shalini Bhaskar Bajaj, ASET, AUH

Patent Application No. 202211016614 filed in India on 24-03-2022

ABSTRACT OF INVENTION:

INVENTION :- 10
NANOSTRUCTURED Nd³⁺ DOPED NICKEL-ZINC-BISMUTH SPINEL FERRITES



INVENTOR

Dr. Preeti Thakur, HOD Physics, ASAS, AUH

Shilpa Taneja, AUH

Dr. Atul Thakur, Amity Center of Nanotechnology, AUH

Prof. P. B. Sharma, Vice chancellor, AUH

Patent Application No. 202211022067 filed in India on 13/04/2022

ABSTRACT OF INVENTION:

INVENTION :- 11

A Method For Synthesizing Nickel Doped Cobalt Ferrite Synthesized Using Green Synthesis Process



INVENTOR

Neetu Dhandu, AUH

Dr. Preeti Thakur, HOD Physics, ASAS, AUH

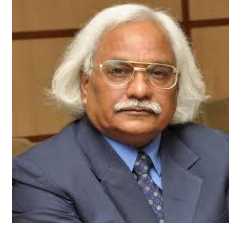
Dr. Atul Thakur, Amity Center of Nanotechnology, AUH

Patent Application No. 202211022880 filed in India on 19/04/2022

ABSTRACT OF INVENTION:

INVENTION :- 12

A METHOD FOR SEPARATING CADMIUM AND CHROMIUM HEAVY METALS BY NI-ZN NANOFERRITES



INVENTOR

Dr. Preeti Thakur, HOD Physics, ASAS, AUH
Dr. Atul Thakur, Amity Center of Nanotechnology, AUH
Prof. P. B. Sharma, Vice chancellor, AUH
Pinki Punia, Physics deptt., GJUS&T, Hisar, Haryana

Patent Application No. 202211025971 filed in India on 04/05/2022

ABSTRACT OF INVENTION:

INVENTION :- 13

A NOVEL METHOD FOR SYNTHESIS AND CHARACTERIZATION OF Ca SUBSTITUTED Ni-Zn NANO-FERRITES



INVENTOR

Dr. Preeti Thakur, HOD Physics, ASAS, AUH

Dr. Atul Thakur, Amity Center of Nanotechnology, AUH

Pinki Punia, Physics deptt., GJUS&T, Hisar, Haryana

Patent Application No. 202211025970 filed in India on 04/05/2022

ABSTRACT OF INVENTION:

INVENTION :- 14
**A NOVEL COMPOSITION OF Mg-Zn NANOFERRITE BY USING A
CITRATE PRECURSOR METHOD**



INVENTOR

Dr. Preeti Thakur, HOD Physics, ASAS, AUH
Dr. Atul Thakur, Amity Center of Nanotechnology, AUH
Sonam Kumari (ASAS), AUH

Patent Application No. 202211027191 filed in India on 11/05/2022

ABSTRACT OF INVENTION:

INVENTION :- 15

**'A TRANSVERSAL V-FOLDED MICROSTRIP PATCH ANTENNA AND
METHOD THEREOF**



INVENTOR

Dr. Preeti Thakur, HOD Physics, ASAS, AUH

Dr. Atul Thakur, Amity Center of Nanotechnology, AUH

Ajay Kumar Ayyala Kishore, AUH

M. S. Prasad (AISST, AUUP, Noida)

Patent Application No. 202211028260 filed in India on 11/05/2022

ABSTRACT OF INVENTION:

INVENTION :- 16

A NOVEL STRUCTURE OF INVERTED LEAD-FREE CS₂TIBR₆ BASED DOUBLE PEROVSKITE SOLAR CELL WITH VARIOUS INORGANIC CHARGE TRANSPORT



INVENTOR

Dr. Preeti Thakur, HOD Physics, ASAS, AUH

Dr. Atul Thakur, Amity Center of Nanotechnology, AUH

Sindhu S Nair, AUH

Patent Application No. 202211030905 filed in India on 26/05/2022

ABSTRACT OF INVENTION:

INVENTION :- 17
**A METHOD FOR SOL-GEL ASSISTED SYNTHESIS OF BISMUTH
DOPED MAGNESIUM FERRITE USING WHITE RICE POWDER**



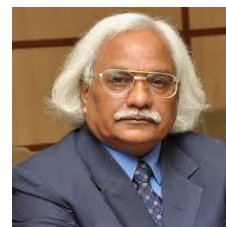
INVENTOR

Dr. Preeti Thakur, HOD Physics, ASAS, AUH
Dr. Atul Thakur, Amity Center of Nanotechnology, AUH
Saarthak Kharbanda, Research Associate, AUH

Patent Application No. 202211031106 filed in India on 31/05/2022

ABSTRACT OF INVENTION:

INVENTION :- 18
'AN ALKALINE WATER CELL PORTABLE DEVICE'



INVENTOR

Dr. Preeti Thakur, HOD Physics, ASAS, AUH
Dr. Atul Thakur, Amity Center of Nanotechnology, AUH
Dinesh Kumar, AUH
Prof. P. B. Sharma, Vice chancellor, AUH

Patent Application No. 202211033072 filed in India on 06/06/2022

ABSTRACT OF INVENTION: This invention generally relates to the field of the alkaline water cell portable device, and more particularly relates to Nano Platinum Coated (100 nm thick) titanium electrode for water ionizer.

INVENTION :- 19

'A METHOD FOR DECIPHERING THE PRESERVATION AND STABILIZATION OF CHLOROPHYLL IN ZnO INCORPORATED GELATIN NANOCOMPOSITE FILMS'



INVENTOR

Dr. Atul Thakur, Amity Center of Nanotechnology, AUH

Chandra Mohan Srivastava, Centre for Polymer Technology, AUH

Meenu

Dr Sudip Majumder, Department of Chemistry, AUH

G. K. Rao

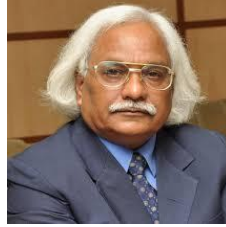
Manish Shandilya, Department of Biochemistry, AUH

Patent Application No. TEMP/E-1/39170/2022-DEL filed in India on 17/06/2022

ABSTRACT OF INVENTION: This invention generally relates to the field of the the Preservation and Stabilization of Chlorophyll in ZnO incorporated gelatin nanocomposite Films, and more particularly relates to a method for Deciphering the Preservation and Stabilization of Chlorophyll in ZnO incorporated gelatin nanocomposite Films.

INVENTION :- 20

'A SYSTEM FOR SACCHARIFICATION, GASIFICATION AND UPGRADATION OF LIGNOCELLULOSE WASTE FOR PRODUCTION OF GREEN ENERGY'



INVENTOR

Hon'ble Founder President Dr. Ashok K. Chauhan
Prof. P. B. Sharma, Vice Chancellor, AUH
Dr. Indu Shekhar, Professor AUH
Dr. Shalini Bhaskar Bajaj, Professor AUH
Dr. Manoj Kumar Pandey, Assistant Professor AUH
Dr. W. Selvamurthy, President ASTIF AUH

Patent Application No. 202211037786 filed in India on 30/06/2022

ABSTRACT OF INVENTION: The present invention describes a self-sustainable system for saccharification, gasification and upgradation of lignocellulose waste for production of green energy. In the present invention, the system is driving its power requirements from the batteries charged using solar panels and fulfils Sustainable Development Goal of climate change mitigation by reducing Green House Gases by using microbial functional diversity. The present invention automates the process of innovative biogas generation process, wherein the Lignocellulosic waste (municipal solid waste (MSW) of landfill sites contains methane, carbon dioxide and nitrous oxide) shall be first shredded in a 14 shredding chamber at controlled temperature environment with the help of temperature sensor and micro-controller

INVENTION :- 1

A method for preparing an advanced graphene and natural silk reinforced epoxy composite materials



INVENTORS

Sanjeev Sharma, AUH

K. N. Sanjeev, AUH

Prof. Pritam Babu Sharma, Vice Chancellor, AUH

Abdel Hamid Ismail Mourad, AUH

Patent Application No. 202011035994 filed in India on 20/08/2020

ABSTRACT OF INVENTION: The invention deals with the development of the novel advanced composite material involving epoxy resin as matrix and reinforcing with Graphene and Natural silk suitable for structural applications in wind turbine blades, aircraft wings and bullet-proof vest. Graphene and natural silk fiber have been used individually in polymer composites but there has never been used in combination for development and application of epoxy based composite at low cost. Hence, Hybridization of Graphene and natural silk fibres to reinforce epoxy-matrix composites is being conceptualised and developed which can result in high performance advanced composite material for structural application with high impact strength and toughness but light in weight. Our invention provides a composite material that will have lower weight but at the same time higher strength and stiffness.

INVENTION :- 2

Nasal spray with *Boswellia serrata* based compositions and method thereof



INVENTORS

Saurabh Bhatia, AUH

Prof. Pritam Babu Sharma, Vice Chancellor, AUH

Ahmed Al-Harrasi, UoN

Patent Application No. 202011037227 filed in India on 28/08/2020

ABSTRACT OF INVENTION: Chronic rhinosinusitis is characterized by chronic inflammation of the sinonasal mucosa and is clinically associated with sinus pressure, nasal congestion rhinorrhea, and a decreased sense of smell persisting for greater than 12 weeks. This invention relates generally to a novel composition and preparation method thereof for the treatment of Chronic sinusitis, and particularly the nasal spray with Boswellic serrata exudate based compositions and method thereof. Development of Boswellic serrata exudate loaded nasal spray can not only offers anti-inflammatory and analgesic effect but also relive symptoms to improve quality of individual with minimum side effects.

INVENTION :- 3

A method of synthesis of magneto-electric lead nickel niobate ceramics



INVENTORS

Chander Shekhar, AUH

Preeti, AUH

Aditya H Narayan Pandey, AUH

Rachna Selvamani, AUH

Patent Application No. 202011024826 filed in India on 12/06/2020

ABSTRACT OF INVENTION: The present invention relates to a method of synthesis, of magneto-electric lead nickel niobate ceramics. Lead nickel niobate samples were prepared by double step method with and without excess PbO. To prepare single phase PNN, it is necessary to add excess amount of lead during the reaction. After the addition of 2 wt% excess PbO, the cubic perovskite phase without pyrochlore phase has been obtained.

INVENTION :- 4

A grey water remediation system with existing original equipment manufacturer OEM



INVENTORS

Seema R Pathak, AUH

ManishaDevi, AUH

Chinmay Paridha, AUH

Varun Rawat, AUH

Chandra Srivastava, AUH

Pooja Rawat, AUH

Monika Vats, AUH

Manoj Dhariwal, AUH

Patent Application No. 202011030991 filed in India on 20/07/2020

ABSTRACT OF INVENTION: The present invention relates to a grey water remediation system 5 with the existing original equipment manufacturer OEM. The grey water remediation system 5 with the existing original equipment manufacturer OEM comprises an inlet 1 to receive grey water, a plurality of cartridges 3, an Ultraviolet UV lamp chamber 2, a reservoir 4, and an outlet 6 to receive the filtered water. The plurality of cartridges 3 includes a stainless steel mesh cartridge, a sediment filter cartridge, a carbon filter cartridge, a hydrogel Nano-composite cartridge, a resin cartridge, an ultra-filtration (UF) membrane cartridge. The UV lamp chamber 2 to deactivate any bacteria and pathogens in all stages of cleansing, and the reservoir 4 is configured to place each of the cartridges and the Ultraviolet UV lamp chamber 2.

INVENTION :- 5

A method for preparing nano-composite antimicrobial polymers for manufacturing respirator mask



INVENTORS

Dr. Preeti Thakur, HOD Physics, ASAS, AUH

Dr. Atul Thakur, Amity Center of Nanotechnology, AUH

Prof. Pritam Babu Sharma, Vice Chancellor, AUH

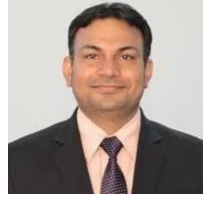
Dinesh Kumar, AUH

Patent Application No. 202011031429 filed in India on 22/07/2020

ABSTRACT OF INVENTION: The present invention generally relates to a method for preparing Nano-composite antimicrobial polymers for manufacturing respirator mask. The composition of the Nano-particles consists of, preferably, but not limited to, about 1% silver nanoparticles, 2% Cu nanoparticles, 2% TiO₂, 1% ferrite nanoparticles, 94% polymer. These are used to make three-dimensional printer cartridge with the antimicrobial properties to produce the respirator masks. The material is hydrophobic in nature, recyclable, reusable and non-toxic.

INVENTION :- 6

A retractable seat assembly for a motor vehicle



INVENTORS

Edmund S Maputi, AUH

Rajesh Arora, AUH

Ranjana Arora, AUH

Patent Application No. 202011032177 filed in India on 27/07/2020

ABSTRACT OF INVENTION: The present invention relates to a retractable seat for an automotive vehicle such as Auto-rickshaws and passenger interaction, which can be classified as relating to passenger comfort, provision of accessories or improvement in Auto rickshaws and automobiles and also relating to access of the motor vehicle by physically challenged persons. In accordance with one of the important aspect of the present invention to provide a hydraulic powered automotive vehicle retractable seat, which is retractable and can be adjusted to the desired position. The improvement of seat frame in order to optimize the seat base with respect to its height, which is adjustable through placed hinged mechanism. The invention is capable of other objects and of being practiced and carried out in various ways, according to the need of that industry.

INVENTION :- 7

An autonomic nano-formulation for long haul disinfection and process thereof



INVENTORS

P. B. Sharma, AUH

Gunjan Sharma, AUH

Ashish Kumar, AUH

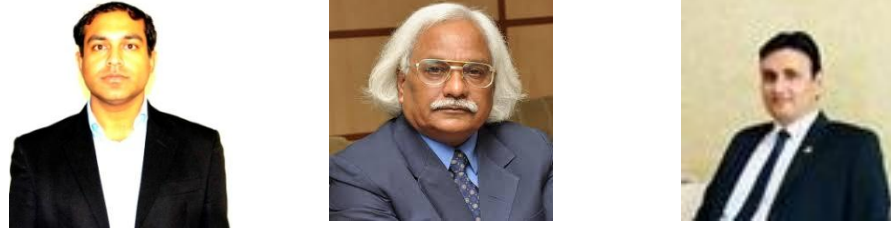
Arun Kumar, AUH

Patent Application No. 202011032587 filed in India on 29/07/2020

ABSTRACT OF INVENTION: The present invention provides a autonomic nano-formulation for long haul disinfection by the combination of copper nanoparticles and silver nanoparticles coated with chlorhexidine gluconate and polyvinylpyrrolidone (PVP), having particle size larger than 500nm combination with existing disinfectant that can effectively prevent microbial contamination and spreadability of virus. The larger sized nanoparticles will prevent their absorption through skin of the contact user. The formulation is dispersed into the solution of PVP, which will act as a binding polymer and help in adhering the nanoparticles on different surfaces.

INVENTION :- 8

A novel medicated plaster for the treatment of underlying skin complications



INVENTORS

Saurabh Bhatia, AUH

Prof. Pritam Babu Sharma, Vice Chancellor, AUH

Viveak Ballyan, AUH

Ahmed Al-Harrasi, AUH

Patent Application No. 202011032835 filed in India on 30/07/2020

ABSTRACT OF INVENTION: Plaster of Paris or POP is a fine powder used in postoperative immobilization. Prolonged immobilization in a POP makes the skin under the cast vulnerable. The dead skin is not removed and leads to scaling. Other complications like ulceration, maceration, itching can result. Even burns can be caused by the exothermic reaction. The most concerning side effects for fracture casted with POP are skin infection, inflammation and scaling, itching etc. In the current invention POP is proposed as drug loaded microcapsules carrier to deliver combination of drugs in a controlled fashion to ultimately treat underlying skin complications caused by POP cast. Thus the objective of the current study is to fabricate medicated POP loaded anti-microbial, antifungal and anti-inflammatory encapsulated capsules as a controlled release delivery to study its effect over skin and bone infections under *in vitro*

INVENTION :- 9

A head gesture-controlled wheelchair system



INVENTORS

Kiran Somisetti, AUH

Rohit Phogat, AUH

Khushboo Tripathi, AUH

Patent Application No. 202011033725 filed in India on 06/08/2020

ABSTRACT OF INVENTION: The present invention relates to a head gesture-controlled wheelchair system. The present invention pertains a sensing system for controlling movement of a wheelchair, which includes a microcontroller to actuate the movement of the wheelchair; an electric motor adapted to move the wheelchair on receiving signal from the microcontroller; a head wearing unit having an accelerometer sensor; a solar panel for providing solar power supply to the whole electronic components. Further, the accelerometer sensor is configured to provide input to the microcontroller.

INVENTION :- 10

A Mop Assembly



INVENTORS

Shivangi Kaushal, AUH

Komal, AUH

Khushboo Tripathi, AUH

Poonam Sharma, AUH

Patent Application No. 202011038376 filed in India on 04/09/2020

ABSTRACT OF INVENTION: The present invention generally relates to a mop assembly. The assembly includes a handle to hold the device, a screen connected to the camera, a camera attached at the bottom of the mop stick to view the area to be cleaned beneath the furniture, wires to connect the electronic component and other devices, a Flash-Light connected near the camera for light purpose, a battery panel, a swivel having 90 degrees swivel at the center of mop rod and -180 degrees swivel at the end where cleaning head is connected and microfiber cleaning pads and a jet spray for the provision of water supply to the fibre cloth for cleaning purpose, a water bottle to hold cleaning compositions in liquid form or water and the like with a button to control the flow of the liquid supply to the fibre cloth, fibre cloth for cleaning purpose.

INVENTION :- 11

A detachable wiping assembly for crockery and utensils



INVENTORS

Vinod Kumar, AUH
Prakhar Jindal, AUH

Patent Application No. 202011036648 filed in India on 25/08/2020

ABSTRACT OF INVENTION: The present invention relates to a novel yet simple mechanically operated crockery wiper for different types of crockery used in hotels / restaurants and even households, which reduce the time as well as manual intervention for wiping. The present invention relates to a novel portable mechanical crockery wiper, which will be useful to wipe the crockery like full plates, half plates, quarter plates, under liners, soup bowl, curry bowl, all types of water goblets and other glasses used in hotel industry as well as in households. The wiper mechanically operates and helps in wiping or drying the crockery/utensils. It has a small frame structure with variety of attachments. The frame has two ends which use two motors that rotate the attachment bay, in opposite directions, at the time of wiping/drying. Different attachments for different variety of utensils are available and can be replaced as and when required. These attachments can be placed or attached to the attachment bay. Once attached, utensils can be placed in these attachments and the wiper will dry the utensils/crockery once electrically connected. The present invention is designed to wipe the different types of plates, bowls and glass ware, etc. This invention is very low cost, has simple design, is light in weight and hence portable and reduces the risk of breakage of crockery by manual intervention.

INVENTION :- 12

A virtual illusion window assembly



INVENTORS

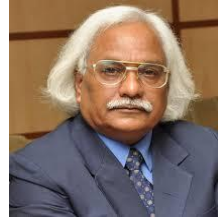
Ila Gupta, AUH
Anurag Pandey, AUH

Patent Application No. 2020110141926 filed in India on 28/09/2020

ABSTRACT OF INVENTION: The idea of the aura window is to create a 3D effect of the cloud onto the frame. It creates an illusion of clouds when viewed from inside the house. This window consists of two types of colour gases (sky blue and white), which gives an illusion of artificial clouds even when clouds aren't really out there. This window also consists of a sliding glass door which when required will let in natural air. With slight pressure on the window frame, this window will vanish the illusion effect by acting as a conventional window to visualise the outside world. This window will diffuse the intensity of light and will provide a rejuvenating view by letting in more light. It is designed in such a way that there is no external power supply needed.

INVENTION :- 13

A polyherbal anti-acne composition and preparation method thereof



INVENTORS

Saurabh Bhatia, AUH

Prof. Pritam Babu Sharma, Vice Chancellor, AUH

Ahmed Al-Harrasi, UoN

Patent Application No. 202011046335 filed in India on 23/10/2020

ABSTRACT OF INVENTION:

INVENTION :- 14

A method for preparing composite materials sheet of nonwoven geotextile on the strength of clayey soil



INVENTORS

Naveen BP, AUH

Thakur Ramjiram Singh, AUH

J. P. Tegar, AUH

Patent Application No. 202011046849 filed in India on 27/10/2020

ABSTRACT OF INVENTION: The present invention provides development of the geosynthetics as a tensional material that has been used for reinforcement of clayey soil. Laboratory California Bearing Ratio (CBR) test samples were prepared with clayey soils. Clayey soil containing unreinforced soil and reinforced soil. The sample comprised thermally bonded nonwoven geotextiles (NW) and superior needle-punched nonwoven geotextiles (SNW) with different characteristics (NW 8,10,21,30 and SNW 14, 25, 62, 75) with three-layered, based on the sample materials to perform defined tests. These tests show that, bearing ratio of reinforced soils with thermally bonded nonwoven geotextiles increases.

INVENTION :- 15

An EBOT for medical first aid and emergency

INVENTORS

Sheetal Thakran, AUH

Samragi Madan, AUH

Patent Application No. 202011049781 filed in India on 13/11/2020

ABSTRACT OF INVENTION:

INVENTION :- 16

An antimicrobial composition having ceramide rich-hydrogel dressers blended with vegetable oil emulsion and method thereof



INVENTORS

Deepa Suhag, AUH

Zeeshan Fatima, AUH

Patent Application No. 202011052760 filed in India on 03/12/2020

ABSTRACT OF INVENTION: Burn injury is the global health problem and the fourth most prevalent devastating form of trauma. It is one of the major cause of mortality and morbidity particularly in middle and low income counties. Burn wound are significantly prone to microbial infections that still complicates the problem. Additionally, the scars develop due to burn has extensive cosmetic and psychological burden on the patients mental health. In view of the same it is essential to facilitate the wound healing process that synchronically deal with microbial infections and cosmetic issues. Conventional wound dressings such as gauze or absorbent cotton offers limited therapeutic effects and required timely dressing change which further augments the patient suffering. Recent development of hydrogels designed for biomedical usage proved to be effective alternative to the regular wound dressings. Hydrogel dressing exhibits a structure that mimics natural extracellular matrix. It can be effectively blended with various natural and synthetic compounds of medicinal importance. Here, we propose to fabricate hybrid hydrogels with vegetable oil(s) emulsion and dairy product. This emulsion possesses antimicrobial property and simultaneously induces collagen synthesis, thereby aiding in remodelling of the wounded area. We also hypothesize that these hydrogels would lead to

INVENTION :- 17

Protein rich chunks from horsegram, barnyard millet and whey to strengthen immunity and method thereof



INVENTORS

Luxita Sharma, AUH

Satish Sardana, AUH

Suyasha Gupta, AUH

Patent Application No. 202011052761 filed in India on 03/12/2020

ABSTRACT OF INVENTION: The present invention generally relates to a protein rich chunks from Horsegram, Barnyard millet and whey to strengthen immunity and method thereof. The method of chunks formation involves reducing the anti-nutritional contents of the dal, SOAKING and BLANCHING processes, which are used before grinding it. Blanching leads to reduction in the contents of phytates, tannins and oxalic acid which is present in Horsegram. These High Protein Chunks made from a combination of Cereals, Pulses and Dairy Products to increase immunity, and further, Black pepper extract (Piperine) is extracted and added (recommended dosage) so that protein metabolism is enhanced. Whey Protein is made by dehydration process so that the concentrated form of protein could be added to the product. In addition, there is no use of oil while making the chunks so fat free food product is developed.

INVENTION :- 18

A FACE MASK HAVING VENTILATOR ATTACHMENT INLET



INVENTORS

Arun Kumar, AUH

Ashish Kumar, AUH

Gunjan Sharma, AUH

Patent Application No. 202011049782 filed in India on 13/11/2020

ABSTRACT OF INVENTION: The present invention relates to a facemask having an inlet for a ventilator attachment. The facemask having an inlet for a ventilator attachment and the like includes an inlet to receive respiratory supply or drug delivery to a patient through the mask, a plurality of layers, a silicon band for attaching the mask to the face of a user, an inner silicon ring for providing an airtight seal to prevent transmission of infection, and a plastic backing support for a filtration medium.

INVENTION :- 19

A multilayer liner with enhanced capacity to absorb cervix discharge



INVENTORS

Arun Kumar, AUH

Ashish Kumar, AUH

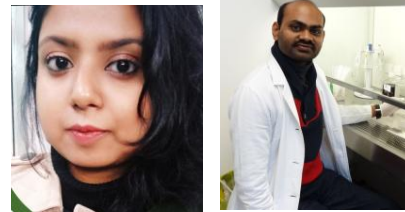
Gunjan Sharma, AUH

Patent Application No. 202011055226 filed in India on 18/12/2020

ABSTRACT OF INVENTION: Leucorrhoea is a thick, whitish, or yellow discharge from vagina. The main cause of Leukorrhea includes hormone disbalance and vaginal infection. The individual suffering from the conditions is more prone to UTI infections which leads to reduced fertility or kidney failure. This problem become more aggravated in developing countries like India, where limited access of healthcare and personal Hygiene. Moreover, Indian population is bottom washers which further increase the chances of contamination and reoccurring infections. These problems also aggravate in case if user leaved her private parts wet after using the restroom. We have developed a sentry pad having triple layer system, the primary layer contains herbal formulation, which provides antibacterial, anti-inflammatory and hormone imbalance. The second layer consist of combination of copper nanoparticles and silver nanoparticles, which provides optimum antibacterial and anti-inflammatory property. The unique combination of herbal formulation layer and nanoparticles layer will help in reducing the pain, itching, discomfort and infectious contamination that can endorse the occurrence of disease.

INVENTION :- 20

Plasmodium falciparum apical membrane antigen 1 (ama1) antigen based non-invasive detection of malaria through urine and method thereof



INVENTORS

Debjanee Das, AUH
Suresh K. Kalangi, AUH

Patent Application No. 202111001742 filed in India on 14/01/2021

ABSTRACT OF INVENTION: The present invention makes use of the immunochromatography strip. This method relies on the principle of immuno-chromatography which utilizes recombinant monoclonal antibody to detect parasite antigen protein and fragments in the urine of malaria infected patients. Immunochromatographic tests have become popular for point-of-care (POC) diagnosis of malaria antigenic proteins produced by the merozoite and gametocyte forms of malaria parasite travel from blood to the kidneys, where they pass onto the bladder as part of the urine detects P. falciparum HRP-2 antigenic protein with improved level of sensitivity.

INVENTION :- 21

A system and method of formulating fumigant activity of syzygium aromaticum oil in combination with anethum graveolens oil



INVENTORS

Narendra Kumar, AUH

S M Paul Khurana, AUH

V N Pandey, AUH

Patent Application No. 202111002632 filed in India on 20/01/2021

ABSTRACT OF INVENTION: Mycological investigations of chickpea revealed occurrence of seventeen fungal species belonging to genus viz., Alternaria, Aspergillus, Chaetomium, Colletotrichum, Curvularia, Fusarium, Penicillium, Rhizopus, Rhizoctonia, and Sclerotium. Formulation of Mixture of oils was more effective showing complete seed protection i.e. no growth of fungi and insects upto 150 days storage than salphos (150 days). While salphos controlled only maximum three fungi (A. terreus, C. dematium, F. moniliforme). The formulated oils mixture did not have any adverse effect on the chickpea seeds and increased their shelf life.

INVENTION :- 22

A quick-absorbable bioadhesive sublingual capsaicin tablets and preparation method thereof



INVENTORS

Saurabh Bhatia, AUH

Prof. Pritam Babu Sharma, Vice Chancellor, AUH

Ahmed Al-Harrasi, AUH

Patent Application No. 202111006298 filed in India on 15/02/2021

ABSTRACT OF INVENTION: Acne vulgaris (or simply acne) is a polymorphic skin disease, which is mainly limited to the facial skin, most seen among the youth during puberty owing to an abnormal secretion of androgens, characterized by physiological changes in skin. It has been anticipated that acne affects 650 million people worldwide. Acne vulgaris may cause scarring, leading to lifelong problems regarding self-esteem. As per reports several herbal extracts are known for their inhibitory effects on the growth of bacteria with high anti-inflammatory potential nevertheless there are only few reports available over the utilization of herbal extract in the treatment of acne. Thus, the current application for the patent claims the use of optimal polyherbal extracts as topical gel for acne treatment. The anti-acne polyherbal topical gel will be prepared from herbal crude extracts obtained from *Boswellia serrata*, *Curcuma longa*, *Aloe vera*, *Azadirachta indica*, *Allium sativum* followed by the evaluation of physico-chemical parameters as well as antibacterial activity of the topical gel formulation. *Boswellia serrata*, *Curcuma longa*, *Aloe vera*, *Azadirachta indica*, *Allium sativum* followed by the evaluation of physico-chemical parameters as well as antibacterial activity of the topical gel formulation.

INVENTION :- 23

Reduction in workpiece setting time and increase productivity using fixture



INVENTORS

Prakhar Jindal, AUH

Abhishek Priyam, AUH

Mark Koli, AUH

Pritesh Gulhane, AUH

Patent Application No. 202111011074 filed in India on 16/03/2021

ABSTRACT OF INVENTION: The present invention relates to the fixture for locating and holding workpiece that simplifies the production of components manufactured in batches or in small quantities to accurate dimensions in less time with increasing productivity. The fixture is manufactured using mild steel (MS) that contains mostly carbon alloying elements. This fixture accommodates four work-pieces at a time and air blowing, loading & unloading with lever clamping mechanism that eliminates rotation and screwing of plate for clamping to reduce the time required for job cycle. This fixture design increase the productivity & reduce time wastage in machining operation that will reduce extra energy expenditure in long terms.

INVENTION :- 24

A footwear cleaning assembly



INVENTORS

Tanuj Joshi, AUH

Ravikant Sharma, AUH

Patent Application No. 202111011072 filed in India on 16/03/2021

ABSTRACT OF INVENTION: :The present invention is focused on the box shape structure used for cleaning the footwear. This mechanism consists a box type shape in which three cylindrical shape hollow cylinders are placed accordingly. These cylinders are filled with detergent water and hollow extruded nozzle shape capillary are added into its circumference. Brushes are also mounted on the circumference of the cylinders. A gear mechanism is attached behind the cylinder which is operated by manually or by power driven motor. When gear rotates all three cylinders are also rotates. Due to the rotation the detergent fluid passes through capillary towards the shoe and attached brushes are also rotated with cylinder and effectively removes the debris. Using this mechanism four shoes are washed at the same time and there is not any necessity of electricity in order to operate this machine. For further advancement solar system, speed regulator of cylinders etc. are to be added as an accessory. An easily removable tray is placed at the bottom of the box for collecting the washed water and debris.

INVENTION :- 25

A method for nano diamond mediated nutraceutical delivery for non alcoholic fatty acid liver disease



INVENTORS

Swati Chauhan, AUH

Ashish Kumar, AUH

Arun Kumar, AUH

Patent Application No. 202111012098 filed in India on 22/03/2021

ABSTRACT OF INVENTION: Our research approach would envisage towards complexing nano diamonds with co enzyme Q10. The formulated complex will be for oral use and shall be targeting non-alcoholic fatty acid liver disease. The formulation will act with the approach of targeting oxidative stress and lipid peroxidation. The nutraceutical composition will also be comprising Vitamin E.

INVENTION :- 26

Biogenic gold-silver bimetallic nanoparticles as potential anti leishmanial agents drug carriers against wild and drug resistant leishmania doanavani



INVENTORS

Suresh Kumar Kalangi, AUH

Patent Application No. 202111014750 filed in India on 31/03/2021

ABSTRACT OF INVENTION: As per above mentioned conditions, alternative ways of drug internalization are the only option. Above mentioned shortcomings, leading to the leishmanial drug resistance, and the opportunity to deliver drugs inside the cell could be collectively addressed by developing better drug delivery systems that could not only improve the intracellular availability of the drugs, but also, stabilize the parasite-to-drug stoichiometry necessary for killing the parasite. With recent advancements in nanoscience to achieve cost effective, biocompatible nanoparticles in one step synthesis, by using medicinal plant extracts as reducing agents, Nanomedicine offers a vast range of solutions to ongoing antimicrobial resistance. Owing to the usage of antimicrobial, immune modulatory properties of medicinal plant like *Azadirachta indica*¹⁵⁻¹⁸ and *Ocimum sanctum*^{19, 20} and know efficacy of silver (Ag) and gold (Au) nano particle's efficacy on leishmanial parasite, the present idea is proposed use Au-Ag bimetallic nanoparticles (BNPs) reduced with *Azadirachta indica* and *Ocimum sanctum* leaf extract as potential anti-leishmanial agents, drug carriers in combating the drug resistance *L. donovani Dd8* strain.

INVENTION :- 27

An inorganic solid waste segregator and resource recovery system



INVENTORS

Naveen B P, AUH

Mohammad Yaseen, AUH

Patent Application No. 202111017330 filed in India on 14/04/2021

ABSTRACT OF INVENTION: The present invention provides the Specific Objective of This Prototype Is to Identify the Inorganic Solid Waste Particularly Inorganic Dry Waste Like Pet Bottles, Metal Tin Cans, And Carton Packing Materials To Recycle Them Effectively Using Automation To Recover The Material From Commingled Inorganic Waste.

INVENTION :- 28

A drainage grating assembly



INVENTORS

Tanu Joshi, AUH

Ravikant Sharma, AUH

Shashi Kant, AUH

Patent Application No. 202111018998 filed in India on 24/04/2021

ABSTRACT OF INVENTION: The present invention is focused on the designing of a cylindrical shape structure used for filtering the waste particles of certain size and other media from waste water. Three removable slidable plates with different shape and hole sizes has been used at a certain gap and are free to slide. The top most drainage plate has slot shape holes, middle plate consists of hexagonal holes comparatively smaller than top plate whereas and bottom plate consists of small size circular holes. A detachable porous cylindrical structure has been used as casing. The waste of larger diameter is filtered by topmost plate and next plates have been designed to remove the smaller waste particles and debris. The longitudinal supporting structure with holes, plates and casing leaks the water to the outlet pipe which is connected to bottom part of casing. This device can be used in houses and also in industries. The size and shape of plates with holes can be varied with the application.

INVENTION :- 29

A paper-based biosensor for uric acid detection and method thereof



INVENTORS

Amitender Yadav, AUH

Debashree Ghosh, AUH

Sudip Majumdar, AUH

Kavita Yadav, AUH

Ranjeet Kumar Brajpuriya, AUH

Patent Application No. 202111024317 filed in India on 01/06/2021

ABSTRACT OF INVENTION: The present invention generally relates to a paper based biosensor for uric acid detection and method thereof. In the present invention, we have studied the enzyme kinetics of the uricase-peroxidase based enzymatic method for uric acid estimation. The favorable use of dye and enzyme concentration have also been studied. The present study may pave the way to develop the consumable, single use strip based uric acid biosensor which may fulfill the urgent need of preliminary home test of uric acid for quick assessment of the user's conditions in case of many clinical/pathological conditions for example in case of renal failure patients, Gout/arthritis patients and patients receiving chemotherapy for various cancerous diseases.

INVENTION :- 30

A method of generating biosynthetic biomaterial (hydrogel) and pluripotent stem cells for ocular surface/lacrimal gland/corneal tissue regeneration



INVENTORS

Vimal Kishore Singh, AUH

Yogesh Kumar Verma, AUH

Patent Application No. 202111026519 filed in India on 15/06/2021

ABSTRACT OF INVENTION: The present invention generally relates to a method of generating biosynthetic biomaterial (hydrogel) and pluripotent stem cells for ocular surface/lacrimal gland/corneal tissue regeneration. The present invention, the therapeutic potential of pluripotent stem cell-based regenerative therapies further provides reconstruction protocols for severe ocular surface diseases/disorders. Specifically, the present invention pertains to pharmaceutical components/formulation, and methods for the regeneration/ reconstruction or repair of ocular surface tissue/cells, such as Lacrimal gland and corneal limbal stem cell and also help in rejuvenating extra cellular matrix (ECM) niche microenvironment in these tissues and tissues using human pluripotent stem cells and biomaterials hydrogel).

RNA extraction free assay for kit development to visually detect sars-cov-2 and methods thereof



INVENTORS

Saif Hameed, AUH

Zeeshan Fatima, AUH

Munindra Ruwali, AUH

Akansha Bhatt, AUH

Patent Application No. 202111028198 filed in India on 23/06/2021

ABSTRACT OF INVENTION: SARS-CoV-2, the causative agent for COVID-19 pandemic, continues to wreak havoc across the globe leading to unimaginable loss of human lives and plunging millions into extreme poverty. This evocative scenario of COVID-19 pandemic has presented a formidable defiance even for most sophisticated hospital settings. There is an urgency to develop simple, fast and highly accurate methods for the rapid identification and isolation of SARS-CoV-2 infected patients. In an effort to address the ongoing challenge, the present study offers a CLEVER assay (CCRISPR-Cas integrated RT-LLAMP Easy, Visual and Extraction-free RNA) which will allow RNA extraction-free method to visually diagnose COVID-19. RNA extraction is a major hurdle in preventing rapid and large-scale screening of samples particularly in low resource regions because of the logistics and costs involved. Herein, the visual SARS-CoV-2 detection method consists of RNA extraction-free method directly utilizing the patient nasopharyngeal and oropharyngeal samples for reverse transcription loop mediated isothermal