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CELEBRATING 25 YEARS ANNIVERSARY

SEED MONEY GRANT 2022

Title of the Project : Design and Fabrication of flippy Bifacial Solar PV Module

Sanctioned Amount: 24916/-

PI

CO-PI

PI – Dr.B.Gurukarthick Babu AP/EEE

CO-PI – S.Ramesh Prabhu AP/EIE

CO-PI - Dr.D.Prince Winston Prof. & HoD/EEE

Outcome of the Project :

Design Patent has been filed

Controller General of Patents, Designs & Trade Marks
CP-2, Sector V, Salt Lake City, Kolkata-700091
Tel No. (091)(033) 23671945-46 Fax No. 033 23671988
E-mail: kolkata-patent@nic.in
Web Site: www.ipindia.gov.in

सत्यमेव जयते

INTELLECTUAL PROPERTY INDIA
PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS

G.A.R.6
[See Rule 22(1)]
RECEIPT

Date/Time 18/07/2023

D.PRINCE WINSTON No 23, S/O G P DAVID GNANARAJ, MANGAMMAL RICE MILL STREET, ARUPPUKOTTAI, VIRUDHUNAGAR, TAMILNADU,INDIA - 626101

User Code: dprince123

User Name: D.PRINCE WINSTON

Sr. No.	Ref. No./Application No.	App. Number	Amount Paid	C.B.R. No.	Fee Payment	Remarks
1	390540-001	13-00	4000	208863	Full	FLIPPABLE SOLAR PANEL

TransactionID	Payment Mode	Challan Identification Number	Amount Paid	Head of A/C No
D-0000060976	Online Bank Transfer	1807230020738	4000.00	1475001020000001

Total Amount : ₹ 4000
Amount in Words: Rupees Four Thousand Only

Received from D.PRINCE WINSTON the sum of ₹ 4000 on account of Payment of fee for above mentioned Application/Forms.

* This is a computer generated receipt, hecnce no signature required.

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SEED MONEY GRANT 2022

Title of the Project : Zinc Oxide nanoparticles: An efficient electrode material for supercapacitor

Sanctioned Amount:

Name and Designation of PI

Dr.G.Bharathy

AP / Physics

Outcome of the Project : Presented in International conference and submitted to journal

DST-SERB Sponsored International Conference on
Modern Functional Materials and its Multifunctional Applications
(ICMFM-2023) 21st – 22nd July 2023
Department of Physics, Erode Sengunthar Engineering College
PERUNDURAI -638 057, TAMILNADU, INDIA.

OP 17

ZnO nanoparticles as an efficient electrode material for Supercapacitor

G.Bharathy[1*], V.Chandra[2]

[1]Department of Physics, Kamaraj College of Engineering & Technology, Virudhunagar-626001.Tamilnadu, India
[2]Department of Electrical & Electronics Engineering, AAA College of Engineering and Technology, Amathur, Sivakasi-626005.Tamilnadu, India

*Corresponding author's e-mail bharathyv.rajasri@gmail.com

Sources of renewable energy and technologies for energy storage are needed to solve the problem of energy crisis in future. Supercapacitors are one of the new technologies for energy storage. In this work an effort taken to study the electrochemical characteristics of pure and ZnO nanoparticles along with their structural, optical properties. ZnO nanoparticles shows a good electrochemical performance as super capacitors. Only very few research works were carried out on ZnO nanoparticles as an electrode material for supercapacitors. ZnO nanoparticles were synthesized by Sol-gel method with different calcinations temperatures. XRD spectra reveals the purity of the samples. The crystallite size of pure ZnO nanoparticles are 31 nm and it decreases with the increase in calcinations temperature. SEM analysis reveals the agglomerated clusters of nanoparticles. EDAX spectrum shows the nonstoichiometric nature of the samples. The maximum value of specific capacitance was achieved as 741 F/g for 600°C calcinated sample. For all scan rates, this sample shows maximum specific capacitance value and it can withstand for maximum number of cycles. Hence ZnO nanoparticles are efficient electrode material for supercapacitor.

Acknowledgement:

The Authors would like to thank the Management of Kamaraj College of Engineering & Technology for the financial support of this work under the Kamaraj Seed Money Grant – 2022.

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SEED MONEY GRANT 2022

Title of the Project : "Seasonal and Spatial variations of Particulate Matter (PM2.5 and PM10) concentrations at KCET

Sanctioned Amount: Rs.29,500

Outcome of the Project : Published a paper in "International Conference on Science, Technology and Management – 2023" organized by Conference Hub, Coimbatore.

Mr.P.Ponkarthikeyan
AP/Civil

Dr.N.Jegan Durai
AP/Civil

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SEED MONEY GRANT 2022

Title of the Project : Fabrication of polymer nanocomposites for insulation windings in electrical Machines used for high power applications

Sanctioned Amount: Rs 25000/-

PI -
Dr.S.Kalyani

CO-PI
Dr.R.Baskaran,
ASP/BT

CO-PI
Dr.M.G. Sri Bala
AP/PT

Outcome of the Project : received first place in the international conference on challenges and new trends in Hybrid solar cell Technology

From: ICSCT '23 <icsct23@gmail.com>
Sent: Friday, June 23, 2023 2:57:57 PM
To: Baskaran.R <baskaranpt@kamarajengg.edu.in>
Subject: Certificates for ICSCT23'

Dear participant,
A warm greeting from ICSCT23' Team. Congratulations that you're selected for the first place in the ICSCT23' Paper presentation of Panel 3.

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SEED MONEY GRANT 2022

Title of the Project : Performance Investigation of Bifacial Solar Photovoltaic Module Installed with single Axis Tracking System

Sanctioned Amount: 25000

PI

K.Ganesan,

AP/EEE

Co-PI

Dr. D. Prince

Winston, Prof/EEE

Outcome of the Project : International Conference on Power and Energy System, 17th and 18th March 2023.

VELAMMAL COLLEGE OF ENGINEERING AND TECHNOLOGY, MADURAI
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(Approved by AICTE, New Delhi)
(Accredited with "A" Grade by NAAC & 5 UG Programmes accredited by NBA, New Delhi)
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
INTERNATIONAL CONFERENCE ON POWER AND ENERGY SYSTEMS
(ICPES' 23)

Certificate of Participation

This is to certify that Dr. / Mr. / Ms. GANESAN. K has presented a paper entitled PERFORMANCE INVESTIGATION OF BIFACIAL SOLAR PHOTOVOLTAIC MODULE INSTALLED WITH SINGLE AXIS TRACKING SYSTEM

in International Conference on Power and Energy Systems (ICPES' 23) held on 17th and 18th March 2023.

Dr. B. Kiruthiga, Co-ordinators | Dr. S. Chellam | Dr. R. Narmatha Banu, HoD / EEE | Dr. P. Alli, Principal

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SEED MONEY GRANT 2022

Title of the Project : Automatic Security Kit for Detecting and Repelling Wild Boar in Farm Land

Sanctioned Amount: Rs.24,917/-

PI
Dr.R.Sureshbabu

Co-PI
Dr.T.Prathiba,
AP/ECE

Co-PI
Mrs.P.Muthumari,
AP/ECE

Outcome of the Project : 3 International Conference + 2 International Project Contest/ Publication (In Process to upload in journal).

1. Dr.R.Sureshbabu, Dr.T.Prathiba, P.Muthumari, "Smart Crop Protection from Wild boar Using Deep Learning", **International Conference on Emerging Engineering Technology (ICEET-2023),** Organized by Raji Publications, 11.03.2023 and 12.03.2023.
2. Dr.R.Sureshbabu, Dr.T.Prathiba, P.Muthumari, "Design of an animal detection system based on Deep Learning", **5th International Conference on Emerging Trends in Engineering and Technology (ICETET-2023)**, Through Online mode Organized by St.Joseph College of Engineering Chennai, 19.04.2023 and 20.04.2023.
3. Dr.R.Sureshbabu, Dr.T.Prathiba, P.Muthumari, "Survey of Animal Detecton System based on Deep Learning", **International Conference on Newer Engineering Concepts and Technology (ICONNECT – 2023)**, Organized by K.Ramakrishnan College of Technology (Autonomou), Tirchy, 27.04.2023 and 28.04.2023.
4. M.Ragul(UG), M.Madhavan(UG), N.Dinesh(UG), S.Premia(PG) participated in IEEE YESIST12, 2023 Prelims of **International Project Innovation Challenge** for students and young professionals, "Kaushalya Open House Project Expo-2023" held on 4.5.23 entitled "AGRO SHIELD: AI Powered Animal Detection System for Crop Protection", at NITTE Meenakshi Institute of Technology, Department of ECE, Bangalore. Mentors: Dr. T. Prathiba & Dr. R. Sureshbabu
5. Selected to participate **in IEEE YESIST12, 2023** to be held at **Arab Academy for Science, Technology & Maritime Transport (AASTMT), Egypt (Virtual Mode) on 02.09.2023 and 03.09.2023** under "Maker Fair Track" entitled "AGRO SHIELD: AI-Powered Animal Deterrent System for Crop Protection", Student members: Premia.S, M.E Communication Networking, Ragul.M, B.E(ECE), M.Madhavan, B.E (ECE), N.Dinesh, B.E(ECE). Mentor: Dr.T.Prathiba & Dr.R.Sureshbabu (Applied on 30.04.2023, Selected on 20.06.2023)

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SEED MONEY GRANT 2022

Title of the Project : Fabrication of low cost membrane from structurally modified polystyrene with excellent filtration activity

Sanctioned Amount: 18.000/-

Dr.S.Luna Eunice

Assistant Professor/Chemistry

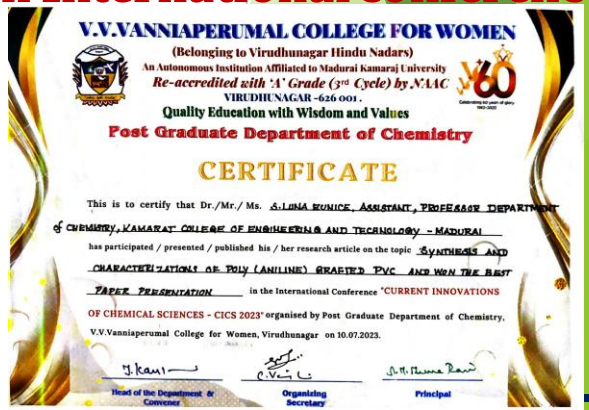
Outcome of the Project : Presented in International conference

SYNTHESIS AND CHARACTERIZATION OF STRUCTURALLY MODIFIED POLY VINYL CHLORIDE

S. Luna Eunice[1] and R. Anbarasan[2]*
[1] Department of Chemistry, Kamaraj College of Engineering and Technology Virudhunagar -626 001
[2] Department of Chemical Engineering, Saveetha School of Engineering, Chennai

ABSTRACT

Polyvinyl chloride based co-polymer was synthesized and structurally modified using Polyaniline and characterized by Fourier Transform Infrared spectroscopy (FTIR), Thermo gravimetric analysis and Field emission scanning electron microscopy (FESEM) like analytical tools. The structurally modified membrane was found to have good porous structure which can be used in the filtration process. Synthesis and characterization of structurally modified PVC based membrane is the target of our present investigation.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Post Graduate Department of Chemistry
CERTIFICATE
This is to certify that Dr./Mr./Ms. S.LUNA EUNICE, ASSISTANT PROFESSOR DEPARTMENT of CHEMISTRY, KAMARAJ COLLEGE OF ENGINEERING AND TECHNOLOGY - MADURAI has participated / presented / published his / her research article on the topic SYNTHESIS AND CHARACTERIZATIONS OF POLY (ANILINE) GRAFTED PVC AND WON THE BEST PAPER PRESENTATION in the International Conference "CURRENT INNOVATIONS OF CHEMICAL SCIENCES - CICS 2023" organised by Post Graduate Department of Chemistry, V.V.Vanniaperumal College for Women, Virudhunagar on 10.07.2023.
Head of the Department & Convener
Organizing Secretary
Principal

BEST PAPER PRESENTATION AWARD

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SEED MONEY GRANT 2022

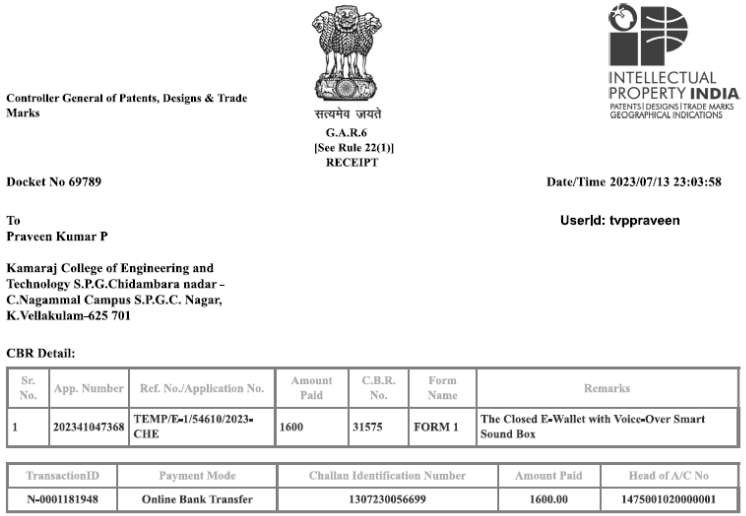
Title of the Project : Closed E-Wallet: A payment system for Educational Institutions in India

Sanctioned Amount: 15,000

Dr.P.Praveen Kumar, ASP-CSE

Dr.R.Ramya, ASP-CSE

Outcome of the Project : Patent filled on 13/07/2023



Controller General of Patents, Designs & Trade Marks

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G.A.R.6
[See Rule 22(1)]
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Docket No 69789

Date/Time 2023/07/13 23:03:58

To
Praveen Kumar P

UserId: tvppraveen

Kamaraj College of Engineering and Technology S.P.G.Chidambara nadar - C.Nagammal Campus S.P.G.C. Nagar, K.Vellakulam-625 701

CBR Detail:

Sr. No.	App. Number	Ref. No./Application No.	Amount Paid	C.B.R. No.	Form Name	Remarks
1	202341047368	TEMP/E-1/54610/2023-CHE	1600	31575	FORM 1	The Closed E-Wallet with Voice-Over Smart Sound Box

TransactionID	Payment Mode	Challan Identification Number	Amount Paid	Head of A/C No
N-0001181948	Online Bank Transfer	1307230056699	1600.00	1475001020000001

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SEED MONEY GRANT 2022

Title of the Project : Automatic temperature control in a water dispenser

Sanctioned Amount: Rs.10,000

Dr.R.Muthuselvi

Dr.G.Nirmala Professor-

CSE AP-CSE

Outcome of the Project : Patent filed No. 202341033997"

Office of the Controller General of Patents, Designs & Trade Marks
Department of Industrial Policy & Promotion,
Ministry of Commerce & Industry,
Government of India
(http://ipindia.nic.in/index.htm)

INTELLECTUAL PROPERTY INDIA

Application Details

APPLICATION NUMBER	202341033997
APPLICATION TYPE	ORDINARY APPLICATION
DATE OF FILING	15/05/2023
APPLICANT NAME	1 . KARTHIKUMAR SANKAR 2 . Dr.R.MUTHUSELVI
TITLE OF INVENTION	AUTOMATIC TEMPERATURE CONTROL IN A WATER DISPENSER
FIELD OF INVENTION	MECHANICAL ENGINEERING
E-MAIL (As Per Record)	muthuselvisa@kamarajengg.edu.in
ADDITIONAL E-MAIL (As Per Record)	
E-MAIL (UPDATED Online)	
PRIORITY DATE	
REQUEST FOR EXAMINATION DATE	27/06/2023
PUBLICATION DATE (U/S 11A)	23/06/2023

Application Status

APPLICATION STATUS	Application Awaiting Examination

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SEED MONEY GRANT 2022

Title of the Project : Fabrication of Dye sensitized solar cell module for wireless IoT sensors

Sanctioned Amount: Rs. 30,569

Dr. K. M. Manikandan

Assistant Professor/ Physics

Outcome of the Project :
International Hybrid Conference On Nano Structured Materials and Polymers (ICNP 2023), 12-14 May 2023 at Mahatma Gandhi University, Kottayam, Kerala, India

International Hybrid Conference on Nano Structured Materials and Polymers
May 12-14, 2023
ICNP 2023

Jointly Organized by
Mahatma Gandhi University, Kottayam, Kerala, India
Gdansk University of Technology, Poland,
Wroclaw University of Technology, Wroclaw, Poland
University of Johannesburg, Johannesburg, South Africa
&
University of Lorraine, Nancy, France

CERTIFICATE

This is to certify that Dr. K. M. Manikandan Department of Physics, Kamaraj College of Engineering and Technology, Tamil Nadu, India has done an "Invited Talk" in the International Hybrid Conference on Nano Structured Materials and Polymers (ICNP 2023) held at Mahatma Gandhi University, Kottayam, Kerala, India. from 12th -14th May 2023

Prof. Dr. Sabu Thomas
Chairman ICNP-2023

Springer

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SEED MONEY GRANT 2022

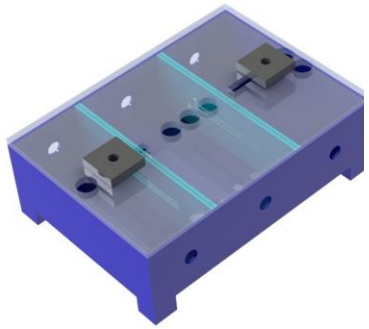
Title of the Project : Simultaneous wastewater treatment, bioelectricity generation and biodiesel production through algae based microbial fuel cell

Sanctioned Amount: 25000/-

Dr.R.Shyam Kumar
Prof. & Head/BT

Dr.S.Karthikumar
Assoc. Prof/BT

National level Symposium
" INTERSECT 2023 "
CSIR – CECRI (Won Secon
Paper Presentation
" Simultaneous Waste Water
Treatment and Bioelectricity
Generation Through Algal-A
Microbial Fuel Cell "
Date : 03.03.2023 - 04.03.2023



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SEED MONEY GRANT 2022

Title of the Project : Development of Biopolymer based blend electrolytes using Ultrasound assisted Solution casting Technique and its application in Electric Double Layer Capacitor (EDLC)

Sanctioned Amount: 25,000

Name and Designation of PI
Dr. M.Hema
Associate Professor
Department of Physics
Kamaraj College of Engineering and Technology

Outcome of the Project

DST-SERB Sponsored International Conference on
Modern Functional Materials and its Multifunctional Applications
(ICMFM-2023) 21st – 22nd July 2023
Department of Physics, Erode Sengunthar Engineering College
PERUNDURAI -638 057, TAMILNADU, INDIA.

OP 12

EFFECT OF BIOPOLYMER ON POLY (VINYL ALCOHOL) [PVA] BASED PROTON CONDUCTING POLYMER ELECTROLYTE

M.Hema[a*], C.Bhavyasree[b], D.Shalini[b]

[a*]Department of Physics, Kamaraj College of Engineering and Technology, K. Vellakulam, Near Virudhunagar - 625 701, Tamilnadu, India.

[b]Department of Electrical and Electronics Engineering, Kamaraj College of Engineering and Technology, K.Vellakulam, Near Virudhunagar - 625 701, Tamilnadu, India

* Corresponding author E-mail: hemaphy@kamarajengg.edu.in

Proton conducting Polymer electrolytes are very promising candidate for the constructing flexible and slim solid Supercapacitor. Recent research is hotly pursued to replace liquid electrolytes by solid polymer electrolytes to overcome the leakage problem associate with it. The ionic conductivity for Poly (Vinyl alcohol) [PVA] as prepared by solution casting technique to be 1.9 x 10^{-6} Scm^{-1}. Biopolymers are renewable and good alternate to synthetic polymers owing to their cost effectiveness, eco friendly and user friendly nature. In this aspect, a good attempt has been made to incorporate the biopolymer, Gum Arabic in PVA. Different composition of the blend polymer electrolytes was prepared using Solution casting method. AC impedance spectroscopic technique is implemented on the prepared samples for analyzing the proton conduction. The calculated highest ionic conductivity from conductance plot is of the order of $10^{-5}Scm^{-1}$at 303K which is high compared to pure PVA. The DC polarization method implemented on the prepared samples shows the transference number to be 0.93-0.95 which reveals that the conduction is mainly due to proton.

Keywords: Polymer electrolyte, Ion conductivity, AC impedance, polarization method

Acknowledgement: The corresponding author, Dr.M.Hema acknowledge Kamaraj college of Engineering and Technology for providing financial assistance under KAMARAJ SEED MONEY SCHEME (KSMG'2022) to carry out the above Research work.

8/25/23, 2:49 PM Mail - Hema.M - Outlook

Acknowledgement of receipt of Proposal under CSIR - ASPIRE

CSIR - ASPIRE <hrdgemr2@csirccmb.org>
Sun 4/30/2023 12:17 AM
To:Hema.M <hemaphy@kamarajengg.edu.in>
Dear M Hema,

Your research proposal titled: ' High performance Electric Double Layer Capacitor EDLC using hybrid biopolymer based electrolyte ' has been registered on CSIR - ASPIRE Portal.

The registration/reference no. of your submitted research proposal is as follows:

Proposal ID:'.56863.'

CSIR - ASPIRE

Note: This is an auto generated Email, please do not reply to this mail.
For further assistance, you may please contact
Email: nsemr2@csirhrdg.res.in
Phone.No: 011-25842850

Received Best ORAL PRESENTATION AWARD in International Conference

Project proposal submitted (Extension of the Seed Money work) : "High performance EDLC using hybrid biopolymer based electrolyte" **CSIR-ASPIRE**