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Degree	Subjects	University/Institution	Period
Ph.D	Chemistry (Polymers & Nanomaterials)	Kyungpook National University, Daegu, South Korea	03/2007 – 02/2010
M.Sc	Chemistry	Bharathiar University, Coimbatore, Tamil Nadu, India	06/2003 – 05/2005
B.Sc	Chemistry	University of Madras, Chennai, Tamil Nadu, India	06/2000 – 05/2003

Title of the doctoral thesis: Synthesis and Applications of Novel Fluorene Based Conducting Polymers

Supervisor: Prof. Kwang Pill Lee, Department of Chemistry, Kyungpook National University, Daegu, South Korea

Research Experience

Designation	Address	Period
Post-Doctoral Researcher	Department of Polymer Science and Engineering Pusan National University, Busan, South Korea	March 2011 to February 2012
Post-Doctoral Fellow	Department of Chemical Engineering	March 2010 to February 2011

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Teaching Experience

Designation	Address	Period
Professor (AGP 10000)	School of Physical, Chemical and Applied Sciences Pondicherry University (A Central University).	August 2023 to till date
Associate Professor (AGP 9500)	Department of Chemistry, National Institute of Technology Puducherry, Karaikal	May 2022 to August 2023
Assistant Professor (AGP 8000)	Department of Chemistry, National Institute of Technology Puducherry, Karaikal	June 2018 to April 2022
Assistant Professor (AGP 7000)	Department of Chemistry, National Institute of Technology Puducherry, Karaikal	July 2013 to June 2018
Scientist & Assistant Professor	Department of Research & Development PRIST University, Puducherry, INDIA	September 2012 to June 2013
Assistant Professor	Department of Chemical System Engineering Keimyung University, Daegu, South Korea	March 2012 to August 2012
Teaching Assistant	Department of Industrial Chemistry Alagappa University, Karaikudi, INDIA	December 2005 to February 2007

Research Areas

- Electroanalytical Chemistry
- Polymers
- Nanomaterials – Synthesis, Characterization and applications (Electrocatalysis, Energy & Biosensors)
- Carbon nanotubes, Graphene, Metal Nanoparticles
- Green Energy, Water Splitting, DMFCs & Supercapacitors
- Materials Science & Engineering

HONORS /AWARDS RECEIVED

- ✧ Has been awarded Best Paper Award – 2023 & 2022 from ES Energy & Environment Society, USA.
- ✧ Has been awarded **"Best Performer Awardee – 2022, 2021 & 2020"** by National Institute of Technology Puducherry.
- ✧ Has been awarded **"2017 Albert Nelson Marquis Award"** from Maqruis Who's Who, United States of America.
- ✧ Has been awarded **"Special Achievement Award"** from National Institute of Cleanliness Education and Research (NICER), New Delhi
- ✧ Has been selected for **"YOUNG SCIENTIST AWARD"** in the category of Science/Nanomaterials from VIFRA – 2015 Organized by VENUS INTERNATIONAL FOUNDATION RESEARCH AWARDS.
- ✧ **DST Fast Track Young Scientist Award** of Rs.26,79,600/- (Ref.No.: SB/FT/CS-117/2014, dated on 12.08.2015) funded by Science and Engineering Research Board, New Delhi.
- ✧ **Post-doctoral fellowship award**, Poineer Research Center for Nanogrid Materials, Pusan National University, South Korea (from Mar. 2011 to Feb. 2012)
- ✧ **Post-doctoral fellowship award**, Department of Chemical Engineering, Kyungpook National University, South Korea (from Mar. 2010 to Feb. 2011)
- ✧ Has been awarded "**Best Publication Award BK21**" (Brain Korea 21) for the year 2008 from BK21 – CENTER FOR ADVANCED CHEMICAL MATERIALS, Department of Chemistry, Kyungpook National University, South Korea on 19th September, 2008.
- ✧ **Graduate Education fellowship award**, Brain Korea 2001 (BK21) from February 2007 to Feb. 2010.

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SELECTED PUBLICATIONS (LAST FIVE YEARS)

SI.No.	Title of article	Authors	Year	Journal Name, Issue, Page	Impact factor	Publishers
1.	Facile Synthesis of Nickel and Cobalt Oxide integrated 3-D Porous Nitrogen-Doped Carbon derived from Psidium guajava (PNDC/NiCo2O4) for supercapacitor application	Gaurav Mukherjee, Asha Raveendran, Chuanxiang Chen, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, **Ragupathy Dhanusuraman***	2025	New Journal Chemistry 49, 4226 - 4241	3.3	Royal Chemical Society (RSC)
2.	Binary Ni-Cu nanocomposites modified MXene adorned 3D-Nickel foam for effective overall water splitting and supercapacitor applications	Asha Raveendran, Chandran Mijun, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Subramania Angaiah, **Ragupathy Dhanusuraman**	2024	Sustainable Energy Fuels	5.6	Royal Chemical Society (RSC)
3.	Layer-by-Layer Assembly of CTAB-rGO-Modified MXene Hybrid Films as Multifunctional Electrodes for Hydrogen Evolution and Oxygen Evolution Reactions, Supercapacitors, and DMFC Applications	Asha Raveendran, Mijun Chandran, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Muthusankar Eswaran, **Ragupathy Dhanusuraman**	2023	ACS Omega 8, 34768−34786	4.1	American Chemical Society (ACS)
4.	Facile fabrication of platinum loaded poly(2,5-dimethoxy aniline)/activated carbon ternary nanocomposite as an efficient electrode material for high performance supercapacitors	**Ragupathy Dhanusuraman*,** Priyanka Chahal, Asha Raveendran, Maimur Hossain, Razan A.Alshgari, Saikh Mohammad Wabaidur, Muthusankar Eswaran	2023	Journal of Energy Storage 60, 106554	8.907	Elsevier
5.	Facile electrodeposition fabrication of raspberry-like gold microspheres decorated polydiphenylamine nanohybrid coated electrode for efficient direct methanol fuel cell application	Vishnu Sankar Sivasankarapillai, N. VeniKeertheeswari, Priyanka Chahal, Saikh Mohammad Wabaidur, Vinoth Kumar, Ponnusamy, **Ragupathy Dhanusuraman**	2022	Fuel, 330, 125530	8.035	Elsevier
. 6.	Phosphotungstic Acid-Titania Loaded Polyaniline Nanocomposite as Efficient Methanol Electro-Oxidation Catalyst in Fuel Cells	M Suba Lakshmi, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, Mohd Rafie Johan, Vinoth Kumar Ponnusamy, **Dhanusuraman Ragupathy***	2021	International Journal of Energy Research 45, 8243-8254	4.6	Wiley

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ROYAL SOCIETY OF CHEMISTRY

PAPER

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Cite this: *New J. Chem.*, 2025, **49**, 4226

Facile synthesis of nickel and cobalt oxide-integrated 3-D porous nitrogen-doped carbon derived from *Psidium guajava* ($PNDC/NiCo_2O_4$) for supercapacitor applications†

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In this experimental investigation, porous N-doped carbon (AC) was developed from rotting guavas (*Psidium guajava*), followed by doping with nickel and cobalt oxide spinel, and was studied for its supercapacitive behaviour. The components of the chemical activators have been varied in a methodical synthesis, and their effects on morphological, physiochemical, and electrochemical characteristics have been examined. Two distinct morphologies of the doped biochars and successful $NiCo_2O_4$ deposition on them were examined by SEM analysis. AC-CO_3 showed the highest specific surface area SSA (722.56 $m^2\ g^{-1}$) of all the samples with an average pore diameter of 3.38 nm. X-ray diffraction patterns were in accordance with the band gap energy (E_g) found from Taucs plot, validating the formation of different crystallite-sized spinel $NiCo_2O_4$ on the biochar. The electrochemical tests like cyclic voltammetry, galvanostatic charge–discharge studies, electrochemical impedance tests and stability tests were carried out in 1 (M) KOH electrolyte, and the areal capacitance from GCD for AC-CO_3MO, MO, AC-ClMO, AC-CO_3, and AC-Cl, respectively, was 761.9, 631.5, 380.5, 499.0, and 223.7 mF cm^{-2} at 0.5 mA cm^{-2} current density. The better-performing material among them, AC-CO_3MO, exhibits energy densities of 15.77 and 2.05 mW h cm^{-2}, as well as power densities of 100.14 and 4002.98 mW cm^{-2} at 0.5 and 20 mA cm^{-2} current densities, respectively. As a result, this study showcases the application of biowaste in energy storage devices along with the impact of the usage of various chemical activators in the synthesis of PNDC and their electrochemical behaviour in supercapacitor applications.

1. Introduction

Energy crises accompanied by a variety of environmental issues have been brought on by the overconsumption of non-renewable resources, such as fossil fuels (*e.g.* coal, natural gas, *etc.*) and ever-expanding population growth. With the depletion of fossil fuels, the need and development of alternative energies like geothermal, solar, wind, and electrochemical energy has garnered more attention in an attempt to address the current energy issue.[1] Supercapacitors, among other electrochemical storage technologies, have been widely used in electronic items and electric vehicles in recent years. In comparison to batteries, supercapacitors provide superior energy recovery in high-demand applications and increased power density, showcase superior cycling stability across a high number of cycles, and can handle higher levels of charge and discharge than the conventional dielectric capacitors. Supercapacitors are especially well-suited for recycling energy from repetitive motion because of their quick charge/discharge characteristics and extended cycle life.[2–4] Supercapacitors can be classified into three types: electric double-layer capacitors (EDLCs), pseudo-capacitors and hybrid capacitors, depending on the energy storage processes and materials used for the electrodes. Carbon-based materials such as graphene, carbon nanotubes (CNTs), and activated carbons (ACs) are used in the construction of EDLC electrodes, which store charges non-faradically

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Sustainable Energy & Fuels

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Binary Ni–Cu nanocomposite-modified MXene-adorned 3D-nickel foam for effective overall water splitting and supercapacitor applications†

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Herein, a multifunctional binary nickel–copper-modified MXene on nickel foam was synthesized and employed as an electrode material for hydrogen evolution reaction (HER), oxygen evolution reaction (OER), overall water splitting and supercapacitors. This work focused on the synthesis of a binder-free electrode, where 2-dimensional MXene was electrodeposited onto nickel foam, followed by the electrodeposition of nickel–copper (Ni_xCu_yMX–NF) bimetallic heterostructures using the co-electrodeposition or sequential electrodeposition technique. Compared to the bare nickel foam and electrodeposited MXene-based nickel foam, the co-deposition of Ni–Cu resulted in agglomerated structures and good electrocatalytic activity towards HER, OER and supercapacitor application. Alternatively, it is interesting to note that owing to the uniform coverage of copper particles on the surface of nickel on the electrodeposited MXene/nickel foam (MX–NF), the electrode (NiCuMX–NF) with copper particles as the top layer generated by sequential electrodeposition was superior to the other electrocatalysts. The combined effects of MXene and binary nickel–copper on the nickel foam support enhanced the catalytic activity of the composite in energy conversion for electrochemical water splitting, exhibiting a current density of 10 mA cm^{-2} with a Tafel slope of 104 mV dec^{-1} at an overpotential (η) of 111.14 mV for hydrogen evolution reaction (HER) and Tafel slope of 146.1 mV dec^{-1} at an overpotential (η) of 185.2 mV for oxygen evolution reaction (OER) in alkaline medium. Furthermore, the potential of NiCuMX–NF for energy storage as an electrode material was investigated together with other synthesised electrocatalysts, which was shown to be a good specific capacitance supercapacitor with the cyclic retention of 70.4% after 5000 cycles. Thus, the results of this study highlight that the prepared electrocatalyst can be applied as a multifunctional electrode for energy conversion and storage devices.

1. Introduction

The inevitable energy scarcity and severe environmental issues caused by greenhouse gas emissions from non-renewable energy sources have led to extensive research on alternative energy sources.[1–3] However, due to the rapidly increasing population together with the over consumption of energy, the increasing energy needs of society cannot be met by renewable energy sources such as wind power and geothermal and solar energy sources.[4] Accordingly, electric energy from energy conversion and storage devices such as lithium-ion batteries,[5,6] metal air batteries,[7,8] supercapacitors,[9–13] fuel cells[14,15] and electrochemical water splitting is becoming a more significant part of modern life due to its efficiency, sustainability, and greenness.[16–22] Owing to its ability to produce pure green hydrogen with high energy density as fuel together with zero carbon emission, electrochemical water splitting is considered a promising alternative.[23,24] Electrochemical water splitting is expected to replace fossil fuels given that it only requires mild electrolytic conditions to produce energy due to the production of high-purity environmentally friendly fuel with excellent activity.[25,26] Hydrogen evolution reaction (HER) and oxygen evolution reaction (OER) are the two half-cell reactions of electrochemical water splitting.[27,28] However, despite the excellent

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Article

Layer-by-Layer Assembly of CTAB-rGO-Modified MXene Hybrid Films as Multifunctional Electrodes for Hydrogen Evolution and Oxygen Evolution Reactions, Supercapacitors, and DMFC Applications

Asha Raveendran, Mijun Chandran, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Muthusankar Eswaran, and Ragupathy Dhanusuraman*

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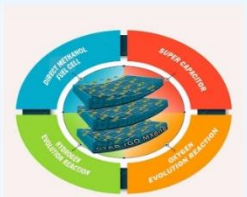
ABSTRACT: Exceptional electrical conductivity and abundance of surface terminations like−F− and OH− leading to hydrophilicity make the family of 2D transition metal carbides/nitrides and carbonitrides (MXene) excellent candidates for energy storage and conversion applications. MXenes, however, undergo restacking of nanosheets via van der Waals interaction, hindering the active sites, leading to slow electronic and ionic kinetics, and ultimately affecting their electrochemical performance. Herein, we report binder-free cetyltrimethylammonium bromide-reduced graphene oxide (CTAB-rGO)-modified MXene hybrid films on nickel foam as a promising noble metal-free multifunctional electrode synthesized via layer-by-layer assembly and dip coating techniques, which effectively reduce restacking while improving the kinetics. The properties of the as-prepared electrocatalysts are investigated using various physiochemical characterizations and electrochemical measurements to accomplish the objective of "creating one kind of electrocatalyst for multiapplication" with a thorough understanding of the relationship between the material structure, morphology, and electrocatalytic performance. In energy conversion, the synergetic effect of MXene and the CTAB-rGO support helped increase the catalytic activity of the composite for electrochemical water splitting, demonstrating a current density of 10 mA/cm^2 at an overpotential (η) of 360 V and a Tafel slope value of 56.6 mV/dec for hydrogen evolution reaction and a current density of 10 mA/cm^2 at an overpotential (η) of 179 mV and a Tafel slope value of 47.03 mV/dec for oxygen evolution reaction in an alkaline medium. The electrode material also exhibited a higher oxidation current density (373.60 mA/cm^2) compared to that of synthesized MXene toward methanol oxidation reaction in direct methanol fuel cell application. Additionally, the energy storage potential of CTAB-rGO modified MXene as electrode materials for supercapacitors with a high specific capacitance (544.50 F g^{-1} at 0.5 A g^{-1}) and a good capacity retention of 87% after 5000 cycles was studied. These findings of this work showcase the potential of the electrocatalyst in both conversion and storage of electrochemical energy.



1. INTRODUCTION

The world's current energy crisis is caused by the never-ceasing depletion of the oil resources and the deterioration of the ecological environment primarily due to carbon dioxide-emitting fossil fuels and has encouraged scientists to research green energy and renewable sources.[1−6] Numerous businesses have shifted focus on the automotive market to lessen the world's reliance on petroleum resources, including big names like Honda, Mercedes-Benz, Hyundai, and Tesla, to emphasize the usage of hybrid materials for fuel cells and electric motors using green energy.[7,8] Issues concerning global warming, pollution, and a suitable energy alternative that could replace non-renewable energy and equip the ever-growing population have resulted in more attention being placed on electrochemical energy applications like supercapacitors,[9−11] fuel cells,[12,13] and electrochemical water splitting,[14,15] thanks to their environmental friendliness, good cyclic stability, and high power density. The high power density of the supercapacitors and the minimal operating temperatures of the fuel cells like the proton exchange membrane fuel cells,[16] alkaline electrolyzers, and direct methanol fuel cells (DMFCs) could effectively produce clean and green energy.[17] They have been prioritized as critical for future energy storage and conversion technologies. However, the bottleneck issues of the electrochemical reactions of these applications include (a) methanol oxidation reaction (MOR):[18] slow kinetics and intermediates like carbon monoxide (CO) easily poison the anodic electrocatalyst and

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Research papers

Facile fabrication of platinum loaded poly(2,5-dimethoxy aniline)/activated carbon ternary nanocomposite as an efficient electrode material for high performance supercapacitors

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ARTICLE INFO

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ABSTRACT

This article details the fabrication of conductive Pt@PDMA/AC nanocomposite via layer by layer electrochemical deposition process on a flexible current collector for highly effective flexible supercapacitor. The unique nanostructure and crystallinity were characterized by using scanning electron microscope (SEM), transmission electron microscopy (TEM) and X-ray diffraction. These suggested electrodes make the most of their incredible electrical conductivity, mechanical strength, electrochemical stability, and adherence to a flexible current collector. They also exhibit great capacitive performance and exceptional cycle life. The Pt@ PDMA/AC electrode has contributed to a good specific capacitance of 348.48 F/g at current density 1 A/g. Further, the nanocomposite shows remarkable stability where 95 % of its capacity retained after 3000 cycles at 10 A/g, due to synergetic effects. The final nanocomposite contributes to a maximum energy density of 108.9 Whkg^{-1} at the power density of 2840.86 Wkg^{-1} at 1 A/g current density. The resulting nanocomposite is a strong contender for energy storage and flexible electronic devices due to its outstanding electrochemical characteristics and great cycle stability.

1. Introduction

Technology advancements and changes over the human preferences, the interest for effective energy storage devices is increasing day by day in many applications such as industrial, aviation, hybrid vehicle development, regenerative breaking, elevators, defence etc. Priority for environmental concerns make to search for sustainable methodologies for the storage device development. The existed technologies such as fuel cells, conventional capacitors and Li-ion batteries are proven effective to meet the current demands but possessing limitations over the sustainability to meet long term goals [1–7]. The need of hour is to opt for a right technology which could work efficiently for long life even after reaching 100,000 cycles. Researchers stated that the Supercapacitors can be a promising technology for the observed demands by its extravagant qualities like higher power densities, long cycle life, safety rating and rapid charge/discharge process while maintaining environmental safety during storage of electrochemical energy [8,9]. Globally, the supercapacitors are manufactured by the prominent industries and marketing them commercially for various applications.

According to Tafete, "supercapacitors are classified into two types with respect to their charge storage process, namely, electrochemical double layer capacitors (EDLC) and pseudo capacitors" [10]. Here, the energy storage in EDLC is depend on the inherent shell area and partition length existed in the charge of an atom whereas the faster redox reactions in the electrically active units in the pseudo capacitors. The cons over the two categories can be eliminated through the hybrid supercapacitors (HSC) at which the increment in energy density, specific capacitance achieved without showing adverse influence on the power density. Compared to other forms of energy storage, such as fuel cells, batteries, and ordinary supercapacitors, the development of HSC was more abrupt. HSCs are developed through the effective utilization of the potential gap existed between the EDLC and Technology advancements

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Facile electrodeposition fabrication of raspberry-like gold microspheres decorated polydiphenylamine nanohybrid coated electrode for efficient direct methanol fuel cell application

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Gold microspheres
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ABSTRACT

In this work, a simple two-step electrodeposition strategy has been successfully developed to fabricate morphology-controlled gold microspheres (AuMS) decorated polydiphenylamine (PDPA) nanohybrid modified FTO electrode. The physicochemical characterization of PDPA/AuMS modified electrode has been explored using XRD and SEM/EDX mapping techniques. Results showed the controlled synthesis of uniform-sized raspberry-like AuMS were decorated in the PDPA matrix to form the electrocatalytically active PDPA/AuMS nanohybrid material on the FTO electrode. As-fabricated PDPA/AuMS modified FTO electrode was used as an efficient electrocatalyst for methanol oxidation reaction under an alkaline environment for fuel cell applications. Cyclic voltammetry, chronoamperometry, and electrochemical impedance spectroscopy techniques were employed to investigate the as-prepared electrode's electrochemical responses and methanol oxidation reaction (MOR). PDPA/AuMS hybrid electrode showed 1.04 mA/cm^2 as the current density at a lower scan rate (50 mV/sec) with a lower potential value of 0.43 V, which indicates the excellent electrocatalytic activity of the fabricated electrode. Moreover, the as-prepared electrode showed more extended stability and durability (60 min) towards MOR due to the combined existence of AuMS and PDPA matrix, which enhances the catalytic property. Based on the above results, an as-prepared PDPA/AuMS nanohybrid composite can be applied as a potential electrocatalyst/alternative electrode for direct methanol fuel cell (DMFC) applications.

1. Introduction

Clean and alternative energy resources are the 'hotspots' of ongoing energy research owing to the rising energy demand existing in the global scenario. Direct methanol fuel cells (DMFC) stand as unique among the fuel cells that have gained significant energy research interest. DMFC is a device that uses methanol as the fuel to generate electricity [1]. However, increasing the electrocatalytic performance is one of the significant issues to be resolved for the real-time application of DMFC as a power source. Owing to this scenario, it is essential to design and develop hybrid electrodes from polymer-nanocomposites with enhanced performance and efficiency for methanol oxidation reaction (MOR). Most of the works reported involving the application of high-cost noble metal nanoparticles like Pt, Rh, and Pd for DMFC application due to their efficient MOR performance [2]. However, these materials possess several disadvantages regarding their real-time applications, such as high cost, lack of durability, and the poisoning effect of carbon monoxide (CO), which affects the catalyst's active sites [3]. This problem can be resolved by designing suitable conductive polymer-metal hybrid material with good MOR behavior, low fabrication cost, and good stability and durability [4].

Conductive polymers (CPs) have emerged as a stable and efficient

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SPECIAL ISSUE RESEARCH ARTICLE

INTERNATIONAL JOURNAL OF ENERGY RESEARCH WILEY

Phosphotungstic acid-Titania loaded polyaniline nanocomposite as efficient methanol electro-oxidation catalyst in fuel cells

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Kaohsiung Medical University; Ministry of Science and Technology, Taiwan; Science and Engineering Research Board; King Saud University

Summary

In this study, we report a new phosphotungstic acid-Titania embedded polyaniline (PANI/PTA/TiO_2) nanocomposite modified hybrid electrode for efficient methanol electro-oxidation reaction. The PANI/PTA/TiO_2 nanocomposite was prepared via a simple in-situ polymerization method. The fabricated modified electrode's surface morphology and elemental analysis were characterized using field-emission scanning electron microscopy with energy-dispersive X-ray spectroscopy and mapping technique. The phase structure and molecular vibrational studies were identified using an X-ray diffraction and Fourier-transform infrared spectroscopic techniques. The electrochemical performance of the modified electrodes was studied using cyclic voltammetry, chronoamperometry, and electrochemical impedance spectroscopic techniques. The PANI/PTA/TiO_2 nanohybrid modified electrode displayed the superior electro-catalytic activity towards methanol oxidation reaction at 0.2 V potential with the charge transfer resistance of 218 Ω, and showed excellent stability up to 1200s in an alkaline medium. The developed nanocomposite material can be used as a potential nanohybrid anode catalyst for the application of direct methanol fuel cells.

KEYWORDS

direct methanol fuel cells, electrocatalyst, methanol electro-oxidation, PANI/PTA/TiO_2 nanohybrid

Highlights: (as on 07th July 2025)

- **Total: 115 + 5 Book Chapters**
- **Citations: 3631**
- **H-index: 32**
- **Articles in SCI/SCIE Journals: 103**
- **Articles with 1st/Corr. Authorship: 68**

(Sources: Google Scholar)

PAPERS PUBLISHED IN INTERNATIONAL JOURNALS

SI.No.	Title of article	Authors	Year	Journal Name, Issue, Page	Impact factor
115.	Electroactive Flexible Sensor for Selective L-Ascorbic Acid Detection Using Polyaniline-Decorated Phosphotungstic Acid/Copper Composite	Sajina Selvaraj, Archana S, Ragupathy Dhanusuraman, VinothKumar P, Muthusankar Eswaran	2025	IEEE Sensors Letters	2.2
114.	A Comprehensive Exploration of Synthetic Methods for Functionalized Benzo[c]thiophene Derivatives and their Material Science Applications	Pitchamuthu Amaladass, Ragupathy Dhanusuraman, Alphonse Lazer, Devakumar John, Kuppusamy Thangaraju, Vasudevan Dhayalan	2025	Asian Journal of Organic Chemistry	2.4
113.	Facile Synthesis of Nickel and Cobalt Oxide integrated 3-D Porous Nitrogen-Doped Carbon derived from Psidium guajava (PNDC/$NiCo_2O_4$) for supercapacitor application	Gaurav Mukherjee, Asha Raveendran, Chuanxiang Chen, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Ragupathy Dhanusuraman*	2025	New Journal Chemistry 49, 4226 - 4241	3.3
112.	Bipolar Supercapacitive Performance of N-Containing Carbon Materials Derived from Covalent Triazine-Based Framework	Asamanjoy Bhunia, Christoph Janiak, Arijit Maity, Marvin Siebels, Anupam Jana, Muthusankar Eswaran, Ragupathy Dhanusuraman	2024	ChemSusChem 18, e202401716 (1 of 8)	7.5
111.	Prospects of MXene-based nanocomposites: Properties, synthesis techniques, and their applications in electrochemical energy conversion and storage devices	Asha Raveendran, Mijun Chandran, Ragupathy Dhanusuraman*	2024	Synthetic Metals 309, 117756	4.0
110.	Recent synthetic strategies for the functionalization of fused bicyclic heteroaromatics using organo-Li, -	Vasudevan Dhayalan, Vishal Dodke, Marappan Pradeep Kumar, Hatice	2024	Chemical Society Reviews	40.4

	Mg and -Zn reagents	Korkmaz, Anja Hoffmann-Röder, Amaladass Pitchamuthu, Rambabu Dandela, Ragupathy Dhanusuraman, Paul Knochel			
109.	Nickel modified Poly(aniline-co-pyrrole) as electrocatalyst for electrochemical oxidation of methanol in Direct Methanol Fuel Cell Application	Asha Raveendran, M. Jeyapriya, Chennan Ramalingan, Gopinath Ramamoorthy, Mijun Chandran, D. Kamalakannan, B. Prabu, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Ragupathy Dhanusuraman*	2024	Ionics 30, 5577 - 5595	2.4
108.	One-pot synthesis of poly (diphenylamine) decorated platinum nanoparticles via interfacial polymerization and investigation of their application in supercapacitor devices	Vageeswari Nathapettai Thanikaivelan, Asha Raveendran, Fateh Veer Singh, Ragupathy Dhanusuraman*	2024	AIP Conference Proceedings	-
107.	Hierarchical Activated Porous Activated Carbon Derived from Callistemon Leaf Biochar for Supercapacitor and Methylene Blue Removal Applications	Vishnu Sankar Sivasankarapillai, Atchaya Sundararajan, Muthusankar Eswaran, Ragupathy Dhanusuraman*	2024	ES Energy & Environment	-
106.	Porous Network of Nitrogen self-doped Honeycomb like activated Carbon derived from Caladium tricolor leaves: A multifunctional platform for Energy and Environmental Applications	Vishnu Sankar Sivasankarapillai, Shankar Baskaran, Atchaya Sundararajan, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Azhagumuthu Muthukrishnan, Ragupathy Dhanusuraman	2024	Journal of Porous Materials	2.6
105.	Binary Ni-Cu nanocomposites modified MXene adorned 3D-Nickel foam for effective overall water splitting and supercapacitor applications	Asha Raveendran, Chandran Mijun, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Subramania Angaiah, Ragupathy Dhanusuraman	2024	RSC Sustainable Energy Fuels	5.6
104.	Self-supported 3D Coral-like Copper/ Polydiphenylamine on Nickel Foam: Multifunctional Exploration of Overall Electrochemical Water Splitting, Alcohol Oxidation Reaction and Supercapacitor Applications	Asha Raveendran, Chandran Mijun, Soo Chool Lee, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Ragupathy Dhanusuraman	2024	RSC New Journal Chemistry 48, 2236-2250	3.3
103.	Mechanical and Tribology Behavior of Hard-Faced Inconel 718 on Stainless Steel 321	A Karpagaraj, R Sarala, S Manivannan, S Gejendhiran, S Babu, Ragupathy Dhanusuraman	2023	Surface Review and Letters 31, 2450025	1.1

102.	Different Electrodeposition techniques of Manganese and Nickel oxide on Nickel foam and their effect on improved Supercapacitor Behaviour: A Comparative study	Asha Raveendran, Mijun Chandran, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Muthusankar Eswaran, Ragupathy Dhanusuraman	2023	Journal of Materials Science: Materials in Electronics 34, 2018	2.779
101.	Layer-by-Layer Assembly of CTAB-rGO-Modified MXene Hybrid Films as Multifunctional Electrodes for Hydrogen Evolution and Oxygen Evolution Reactions, Supercapacitors, and DMFC Applications	Asha Raveendran, Mijun Chandran, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Muthusankar Eswaran, Ragupathy Dhanusuraman	2023	ACS Omega 8, 34768−34786	4.1
100.	Ultrasonication-assisted synthesis of Nickel tungstate decorated on Polydimethoxyaniline nanocomposite catalyst for potential direct methanol fuel cell application	Veni Keertheeswari Natarajan, Suba Lakshmi Madaswamy, Nishkala Krishnamoorthy, Gopinath Ramamurthy, Ragupathy Dhanusuraman	2023	ES Energy & Environment	-
99.	Facile synthesis of Co3O4@SeNPs grafted MWCNTs Nanocomposite for high energy density supercapacitor and antimicrobial applications	Jothirathinam Thangarathinam, Muthukrishnan Francklin Philips, Violet Dhayabaran, Bavatharani Chokkiah, Jayakumar Princy, Cyril Arockiaraj Crispin Tina, Annadurai Kasthuri, Ragupathy Dhanusuraman	2023	Chemical Physics Impact 13, 949	-
98.	Experimental investigations on Inconel 718 hard-faced layer deposited over SS304 using cold metal transfer	S. Gejendhiran, A. Karpagaraj, D. Vinoth Kumar, Ragupathy Dhanusuraman, N. Annamalai	2023	Surface and Coatings Technology 468, 129739	4.865
97.	Improving the Stability of Ru-Doped Ni-Based Catalysts for Steam Methane Reforming during Daily Startup and Shutdown Operation	Tae-Young Kim, Jong-Heon Lee, Seongbin Jo, Jueon Kim, Jin-Hyeok Woo, Ragupathy Dhanusuraman, Jae-Chang Kim, Soo- Chool Lee	2023	Catalysts 13, 949	4.501
96.	Application of ionic liquids in rubber elastomers: Perspectives and challenges	Vishnu Sankar Sivasankarapillai, Atchaya Sundararajan, Easwaran Chonnur Easwaran, Mehrab Pourmadadi, Ali Aslani, Ragupathy Dhanusuraman, Abbas Rahdar, George Z. Kyzas	2023	Journal of Molecular Liquids 382, 121846	6.633
95.	Electrochemical Fabrication of Nano-Structured	K. Vengadesan, Suba Lakshmi	2023	ES Energy &	-

	Poly(dimethoxyaniline)-Platinum Hybrid Materials: An Efficient Anode Electrocatalyst for Oxidation of Methanol	Madaswamy, Veni Keertheeswari Natarajan, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Muthusankar Eswaran, Ragupathy Dhanusuraman		Environment 19, 858	
94.	Ultrasound assisted synthesis of Cobalt tungstate decorated Poly(2,5-dimethoxyaniline) nanocomposite towards improved methanol electrooxidation	Veni Keertheeswari Natarajan, Suba Lakshmi Madaswamy, Ahmed muteb Aljuwayid, Mohammad Azam, Saikh Mohammad Wabaidur, Ragupathy Dhanusuraman	2023	Journal of Industrial and Engineering Chemistry 121, 480-488	6.76
93.	Biocidal activity of ZnO NPs against pathogens and antioxidant activity - a greener approach by Citrus hystrix leaf extract as bio-reductant	Nishkala Krishnamoorthy, Vishnu Sankar Sivasankarapillai, Veni Keertheeswari Natarajan, Gaber E.Eldesoky, Saikh Mohammad Wabaidur, Muthusankar Eswaran, Ragupathy Dhanusuraman	2023	Biochemical Engineering Journal192, 108818	4.446
92.	A Comprehensive Review on the Electrochemical Parameters and Recent Material Development of Electrochemical Water Splitting Electrocatalysts	Asha Raveendran, Mijun Chandran, Ragupathy Dhanusuraman	2023	RSC Advances 13. 3843-3876	4.036
91.	Facile fabrication of platinum loaded poly(2,5-dimethoxy aniline)/activated carbon ternary nanocomposite as an efficient electrode material for high performance supercapacitors	Ragupathy Dhanusuraman*, Priyanka Chahal, Asha Raveendran, Maimur Hossain, Razan A.Alshgari, Saikh Mohammad Wabaidur, Muthusankar Eswaran	2023	Journal of Energy Storage 60, 106554	8.907
90.	One-Step Preparation of Poly(aniline-co-2,5 dimethoxyaniline) Nanohybrid Coated Graphitic Sheet Electrode for Efficient Energy Application	K. Vengadesan, Suba Lakshmi Madaswamy, Soo Chool Lee, Masoom Raza Siddiqui, Ragupathy Dhanusuraman*, Vinoth Kumar Ponnusamy	2023	International Journal of Hydrogen Energy 48, 21018-21028	7.139
89.	Synthesis and Characterization of Novel Poly(vinylidene fluoride)-Melamine Electrospun Nanofibers: An Extensive Analysis on Mechanical and Thermal Behavior	Priyanka Chahal, Bavatharani Chokkiah, Vishnu Sankar Sivasankarapillai, Asha Raveendran, Masoom Raza Siddiqui, Saikh Mohammad Wabaidur, Soo Chool Lee, Ragupathy Dhanusuraman*	2023	Journal of Materials Engineering and Performance 32, 243–250	1.819
88.	Ultrasonication assisted synthesis of nickel decorated poly(diphenylamine) composites based modified	Veni Keertheeswari Natarajan, Suba Lakshmi Madswamy, Saikh Mohammad	2022	Journal of Materials Science:	

	electrode for high performance methanol electro-oxidation	Wabaidur, Md Ataul Islam, Ragupathy Dhanusuraman*		Materials in Electronics, 33, 25239 - 25249	2.779
87.	Ultrasound-aided synthesis of Nickel loaded on Poly(2,5-dimethoxyaniline) composite towards improved methanol electro- oxidation application	Veni Keertheeswari Natarajan, Suba Lakshmi Madaswamy, Norah Salem Alsaiari, Khadijah Mohammedsaleh Katubi, Ragupathy Dhanusuraman*	2022	Synthetic Metals 291, 117197	4.0
86.	Synthesis of Poly(diphenylamine) nanostructures via microwave and ultra-sonication method for supercapacitor performance	Veni Keertheeswari N, Suba Lakshmi Madaswamy, Bavatharani Chokkiah, Munirah D Albaqami, Saikh M Wabaidur; Soo Chool Lee, Ragupathy Dhanusuraman*	2022	Journal of Materials Science: Materials in Electronics, 33, 23236 – 23249	2.779
85.	Facile Eco-friendly Preparation of Zinc Oxide Nanostructured Material for Efficient Anti-microbial and Anti-oxidant Activity	Vishnu Sankar Sivasankarapillai, Nishkala Krishnamoorthy, Gaber E. Eldesoky, Saikh Mohammad Wabaidur, Md Ataul Islam, Ragupathy Dhanusuraman*, Vinoth Kumar Ponnusamy	2022	Applied Nanoscience	3.869
84.	Optimization of electrocoagulation process for treatment of rice mill effluent using response surface methodology	A. RonaldoAnuf, K.Ramaraj, Vishnu Sankar Sivasankarapillai, Ragupathy Dhanusuraman, J. PrakashMaran, G.Rajeshkumar, Abbas Rahdar, Ana M.Díez-Pascual	2022	Journal of Water Process Engineering, 49, 103074	7.34
83.	Novel Manganese Oxide Decorated Polyaniline/Graphitic Carbon Nitride Nanohybrid Material for Efficient Supercapacitor Application	Priyanka Chahal, Suba Lakshmi Madaswamy, Soo Chool Lee, Saikh Mohammad Wabaidur, Vasudevan Dhayalan, Vinoth Kumar Ponnusamy; Ragupathy Dhanusuraman	2022	Fuel, 330, 125531	8.035
82.	Facile electrodeposition fabrication of raspberry-like gold microspheres decorated polydiphenylamine nanohybrid coated electrode for efficient direct methanol fuel cell application	Vishnu Sankar Sivasankarapillai, N. VeniKeertheeswari, Priyanka Chahal, Saikh Mohammad Wabaidur, Vinoth Kumar, Ponnusamy, Ragupathy Dhanusuraman	2022	Fuel, 330, 125530	8.035
81.	A road map towards field-effect transistor biosensor technology for early-stage cancer detection	Muthusankar Eswaran, Bavatharani Chokkiah, Santosh Pandit, Shadi Rahimi, Ragupathy Dhanusuraman,	2022	Small Methods	15.367

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80.	Recent Advances in Practical Synthesis of C1 Deuterated Aromatic Aldehydes Enabled by Catalysis and Beyond	Deepika Sharma, Rana Chatterjee, Vasudevan Dhayalan, Ragupathy Dhanusuraman, Rambabu Dandela	2022	Chemistry An Asian Journal	4.839
79.	One-pot electro-co-deposition of nanospherical polydiphenylamine-palladium supported graphitic carbon nitride nanohybrid for efficient methanol oxidation	Suba Lakshmi Madaswamy, K. Vengadesan, Saikh Mohammad Wabaidur, Md Ataul Islam, Muthukrishnan Francklin Philips, Vasudevan Dhayalan, Ragupathy Dhanusuraman	2022	Ionics, 28, pages 4697–4708	2.961
78.	Na-ion conducting filler embedded 3D-electrospun nanofibrous hybrid solid polymer membrane electrolyte for high performance Na-ion capacitor	Dheeraj Kumar Maurya, Ragupathy Dhanusuraman, Zhanhu Guo, Subramania Angaiah	2022	Advanced Composites and Hybrid Materials	5.693
77.	Easy Fabrication of a Novel Electro-spun PVDF-g-C3N4-Pd Nanocomposite Material as Improved Anode Electrocatalyst for Direct Alcohol Fuel Cell	Bavatharani Chokkiah, Saikh Mohammad Wabaidur, Masoom Raza Siddiqui, Md Ataul Islam, Ragupathy Dhanusuraman*, Vinoth Kumar Ponnusamy	2022	Fuel, 324, Part A, 124496	6.609
76.	Facile Electrochemical Fabrication of Nickel-Coated Polydiphenylamine (Ni/PDPA) Nanocomposite Material as Efficient Anode Catalyst for Direct Alcohol Fuel Cell application	Asha Raveendran, Mijun Chandran, Saikh Mohammad Wabaidur, Md Ataul Islam, Ragupathy Dhanusuraman*, Vinoth Kumar Ponnusamy	2022	Fuel, 324, Part B, 124424	6.609
75.	Poly(diphenylamine) and its Nanohybrids for Chemicals and Biomolecules Analysis: A Review	E. Muthusankar, D.Ragupathy, C. Bavatharani, Pei-Chien Tsai, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, Vinoth Kumar Ponnusamy	2022	Current Analytical Chemistry, 18, 546 - 562	1.892
74.	Composite Polymer Electrolytes: Progress, Challenges and Future Outlook for Sodium-ion Batteries	Dheeraj Kumar Maurya, Ragupathy Dhanusuraman, Zhanhu Guo, Subramania Angaiah	2022	Advanced Composites and Hybrid Materials, 5, 2651–2674	5.693
73.	A facile hydrothermal synthesis of MWCNT(SH)/CeO_2@Se nanohybrid materials with enhanced antimicrobial activity	Muthukrishnan Francklin Philips, Jothirathinam Thangarathinam, Jayakumar Princy, Cyril Arockiaraj Crispin Tina, Annadurai Kasthuri, Ragupathy Dhanusuraman*	2022	BioNanoscience, 12, 409 - 422	-

72.	Synthesis and Applications of Asymmetric Catalysis using Chiral Ligands Containing Quinoline Motifs	Vasudevan Dhayalan,Rambabu Dandela, K. Bavya Devi, Ragupathy Dhanusuraman	2022	SynOpen (2022)	-
71.	MXene based sensing materials: Current status and future perspectives	Vishnu Sankar Sivasankarapillai, Tata Sanjay Kanna Sharma, Kuo-Yuan Hwa, Saikh Mohammad Wabaidur, Subramania Angaiah, Ragupathy Dhanusuraman*	2022	ES Energy & Environment 15 (2022) 4-14	--
70.	Fabrication of nanocomposite networks using Pd nanoparticles/Polydiphenylamine anchored on the surface of reduced graphene oxide: An efficient anode electrocatalyst for oxidation of methanol	Suba Lakshmi Madaswamy, N. VeniKeertheeswari, Asma A.Alothman, Murefah mana AL-Anazy, KhadraaN.Alqahtani, Saikh M Wabaidur, RagupathyDhanusuraman*	2022	Advanced Industrial and Engineering Polymer Research, 5, 18-25	-
69.	An efficient amperometric sensor for chloride ion detection through electroactive e-spun PVA-PANi-g-C_3N_4 nanofiber	Bavatharani Chokkiah, Muthusankar Eswaran, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, Soo Chool Lee, Ragupathy Dhanusuraman*	2021	Journal of Materials Science: Materials in Electronics, 33, 9425–9437	2.195
68.	Remarkable electrocatalytic activity of Pd nanoparticles dispersed on polyaniline-polydiphenylamine copolymer nanocomposite for methanol and ethanol oxidation reaction	Suba Lakshmi Madaswamy, M. Alfakeer, Aboud Ahmed Awadh Bahajjaj, Mohamed Ouladsmane, Saikh Mohammad Wabaidur, Chuan-xiang Chen, Ragupathy Dhanusuraman	2021	Synthetic Metals, 281, 116925	3.266
67.	Facile fabrication of hollow polyaniline/carbon nanofibers-coated platinum nanohybrid composite electrode as improved anode electrocatalyst for methanol oxidation	Bavatharani Chokkiah, Muthusankar Eswaran, Asma A. Alothman, Mohammed Alsawat, Ahmad A. Ifseisz, Khadraa N. Alqahtani, Ragupathy Dhanusuraman*****	2021	Journal of Materials Science: Materials in Electronics	2.195
66.	Performance Evaluation of Single Slope Solar Still with Novel Pond Fibres	Subbarama Kousik Suraparaju, Ragupathy Dhanusuraman, Sendhil Kumar Natarajan	2021	Process Safety and Environmental Protection, 154, 142-154	6.158
65.	Platinum Nanoparticles/Phosphotungstic Acid Nanorods Anchored Poly(diphenylamine) Nanohybrid Coated Electrode as a Superior Electro-catalyst for Oxidation of Methanol	N. Veni Keertheeswari, Suba Lakshmi Madaswamy, Saikh Mohammad Wabaidur, Mohamed A. Habila, Murefah mana AsL-Anazy, Ragupathy	2021	Progress in Organic Coatings, 161, 106470	5.161

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64.	A study on the effect of ageing heat treatment on hardness, tensile and corrosion behavior of stir-cast AZ91D-5SiC-1Gr hybrid magnesium composite	Packia Antony Amalan A, Sivaram N M, Bavatharani C, Ragupathy D	2021	International Journal of Metalcasting	1.805
63.	Facile Synthesis of Polyaniline/Titanium Carbide (MXene) Nanosheets/ Palladium Nanocomposite for Efficient Electrocatalytic Oxidation of Methanol for Fuel Cell Application	Mari Elancheziyan, Muthusankar Eswaran, Christopher E.Shuck, Sellappan Senthilkumar, Satheeshkumar Elumalai, Ragupathy Dhanusuraman, Vinoth Kumar Ponnusamy	2021	Fuel 303, 121329	6.609
62.	A green and economical approach to derive nanostructured hydroxyapatite from Garra mullya fish scale waste for biocompatible energy storage applications	Muthusankar Eswaran, Sathiskumar swamiappan, Bavatharani Chokkiah, Ragupathy Dhanusuraman, S.Bharathkumar, VinothKumar Ponnusamy	2021	Materials Letters 302, 130341	3.423
61.	A novel electrodeposited poly(melamine)-palladium nanohybrid catalyst on GCE: prosperous multi-functional electrode towards methanol and ethanol oxidation	Bavatharani Chokkiah, Muthusankar Eswaran, Saikh Mohammad Wabaidur, Mohammad Rizwan Khan, Vinoth Kumar Ponnusamy, Ragupathy Dhanusuraman*	2021	Fuel 300, 121005	6.609
60.	Cobalt selenide decorated polyaniline composite nanofibers as a newer counter electrode for dye-sensitized solar cell	Elindjeane Sheela Sowbakkiyavathi, Vignesh Murugadoss, Ramadasse Sittaramane, Ragupathy Dhanusuraman Subramania Angaiah	2021	Polymers for Advanced Technologies (In Press)	2.578
59.	Role of nanotechnology in facing SARS-CoV-2 pandemic: Solving crux of the matter with a hopeful arrow in the quiver	Vishnu Sankar Sivasankarapilai, Suba Lakshmi Madaswamy, Ragupathy Dhanusuraman*	2021	Sensors International 2, 100096	-
58.	Polyaniline-graphitic carbon nitride based nano-electrocatalyst for fuel cell application: A green approach with synergistic enhanced behaviour	Suba Lakshmi Madaswamy, Saikh Mohammad Wabaidur, Mohammad Rizwan Khan, Soo Chool Lee, Ragupathy Dhanusuraman*	2021	Macromolecular Research 29, 411-417	2.047
57.	Polyaniline-based nanocomposites for direct methanol fuel cells (DMFCs)-A Recent Review	Suba Lakshmi Madaswamy, Asma A Alothman, Murefah mana AL-Anazy, Ahmad A Ifseisi, Khadraa N Alqahtani,	2021	Journal of Industrial and Engineering	6.064

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56.	Electrospinning technique for Production of Polyaniline Nanocomposites/Nanofibres for Multi-functional Applications: A review	C. Bavatharani, E. Muthusankar, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, Khalid M. Alsheetan, Murefah mana AL-Anazy, D.Ragupathy*	2021	Synthetic Metals, 116609	3.266
55.	Investigation of Co–Fe–Al Catalysts for High-Calorific Synthetic Natural Gas Production: Pilot-Scale Synthesis of Catalysts	Tae Young Kim, Seong Bin Jo, Jin Hyeok Woo, Jong Heon Lee, Ragupathy Dhanusuraman, Soo Chool Lee, Jae Chang Kim	2021	Catalysts, 11, 105	4.146
54.	Phosphotungstic Acid-Titania Loaded Polyaniline Nanocomposite as Efficient Methanol Electro-Oxidation Catalyst in Fuel Cells	M Suba Lakshmi, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, Mohd Rafie Johan, Vinoth Kumar Ponnusamy, Dhanusuraman Ragupathy*	2021	International Journal of Energy Research 45, 8243-8254	3.741
53.	Improved cyclic retention and high performance supercapacitive behavior of poly(diphenylamine-co-aniline)/phosphotungstic acid nanohybrid electrode	Muthusankar Eswaran, Soo Chool Lee, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, Mohd Rafie Johan, Vinoth Kumar Ponnusamy, D.Ragupathy*	2021	International Journal of Energy Research 45, 8180-8188	3.741
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51.	Novel 1D Polyaniline Nanorods for Efficient Electrochemical supercapacitors: A facile and Green Approach	M Suba Lakshmi, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, D Ragupathy*	2020	Synthetic Metals 270 (2020) 116591	3.286
50.	Fabrication of amperometric sensor for glucose detection based on Phosphotungstic acid assisted PDPA/ZnO nanohybrid composite	E.Muthusankar, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, Mohd Rafie Johan, Vinoth Kumar Ponnusamy, D.Ragupathy*	2020	Ionics 26 (2020) 6341–6349	2.394
49.	Effects of Thin-Film Thickness on Sensing Properties of SnO_2-Based Gas Sensors for the Detection of H_2S Gas at ppm Levels	Seong Bin Jo, Hyun Ji Kim, Joong Hee Ahn, Byung Wook Hwang, Jeung Soo Huh, Dhanusuraman Ragupathy, Soo Chool Lee, Jae Chang Kim	2020	Journal of Nanoscience and Nanotechnology 20, 7169-7174	1.354
48.	Excellent Cyclic Retention and Supercapacitive	C. Bavatharani, E.Muthusankar, Soo	2020	Sensor Letters 18	-

	Performance of Electrochemically Active Nanocomposite Electrode	Chool Lee, Mohd Rafie Johan, D.Ragupathy*		(2020) 395 - 400	
47.	Facile and Low-Cost Production of Lantana Camara stalk-Derived Porous Carbon Nanostructures with Excellent Supercapacitance and Adsorption Performance	G.Sivarasan, E.Muthusankar, C. Bavatharani, D.Ragupathy, L. Arul Pragasan, Vinoth Kumar Ponnusamy, K. Gopalakrishnan, P. Arivalagan	2020	International Journal of Energy Research 2020, 1 - 10	3.741
46.	Novel PDPA-SiO2 Nanospherical Network Decorated Graphene Nanosheets Composite Coated FTO Electrode for Efficient Electro-Oxidation of Methanol	C. Bavatharani, E. Muthusankar, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, Vinoth Kumar Ponnusamy, D. Ragupathy*	2020	Fuel 279, 118439	5.576
45.	Ultra-High Sensitive, Selective, Non-enzymatic Dopamine Sensor based on Electrochemically Active Graphene Decorated PDPA-SiO2 Nanohybrid Composite	C. Bavatharani, E. Muthusankar, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, Vinoth Kumar Ponnusamy, D.Ragupathy*	2020	Ceramics International 46, 23276-23281	3.83
44.	Development and Characterization of Polydiphenylamine/CuO Nanohybrid Electrode and its Improved Electrochemical Properties	M.SubaLakshmi, E.Muthusankar, Saikh Mohammad Wabaidur, Zeid Abdullah Alothman, Vinoth Kumar Ponnusamy, D.Ragupathy*	2020	Sensor Letters 18, 5-11	-
43.	Graphene/Poly(aniline-co-diphenylamine) nanohybrid for ultrasensitive electrochemical glucose sensor	E Muthusankar, D Ragupathy*	2019	Nano-Structures and Nano-Objects 20, 100390	-
42.	Supercapacitive Performance of Surfactants Wrapped KIT-6/MCM-48 Template Based Mesoporous Co3O4	N. Prakash, C. Narendhar, E.Muthusankar, D.Ragupathy	2019	Journal of Nanoelectronics and Optoelectronics 14, 1759 - 1765	1.069
41.	Electrochemically sandwiched poly(diphenylamine)/phosphotungstic acid/graphene nanohybrid as highly sensitive and selective urea biosensor	E Muthusankar, Vinoth Kumar Ponnusamy, D Ragupathy*	2019	Synthetic Metals 254, 134-140	2.526
40.	SnO_2 nanowire gas sensors for detection of ppb level NOx gas	Hyun Ji Kim, Seong Bin JoJoong Hee AhnByung Wook HwangHo Jin Chae Seong Yeol Kim Jeung Soo Huh Dhanusuraman Ragupathy Soo Chool Lee Jae Chang Kim	2019	Adsorption, 5, 1-11	1.829
39.	One-Step Preparation of Graphitic Carbon/Nitride/	Muthusankar Eswaran, Ragupathy	2019	Fuel, 251, 91-97	

	Polyaniline/Palladium Nanoparticles based Nanohybrid Composite Modified Electrode for Efficient Methanol Electro-Oxidation	Dhanusuraman, Pei-Chien Tsai, Vinoth Kumar Ponnusamy			5.128
38.	Supercapacitive retention of electrochemically active phosphotungstic acid supported poly(diphenylamine)/MnO_2 hybrid electrode	E Muthusankar, D Ragupathy*	2019	Materials Letters 241, 144-147	3.019
37.	Enhanced Electron Transfer Characteristics of Surfactant Wrapped SnO_2 Nanorods Impregnated Poly(diphenylamine) Matrix	E Muthusankar, Soo Chool Lee, D Ragupathy*	2018	Sensor Letters 16, 911-917	-
36.	Chitosan Based Nanocomposite Biosensors: A Recent Review	E Muthusankar, D Ragupathy*	2018	Sensor Letters 16, 81-91	-
35.	Synthesis and Characterization of Co-olymer Nanocomposite Film and its Enhanced Antimicrobial Behavior	E. Muthusankar, S. Vignesh Kumar & Narendran Rajagopalan, D. Ragupathy*	2018	BioNanoScience 8, 1008-1013	-
34	Electrochemical synthesis of a novel poly(2,5-dimethoxy aniline) nanorod for ultrasensitive glucose biosensor application	D. Ragupathy*, Soo Chool Lee, Salem S. Al-Deyab, A. Rajendran	2014	Journal of Industrial and Engineering Chemistry 20, 930-936	4.978
33.	Facile Synthesis of Novel Multiwalled Carbon Nanotube Supported Polyaniline/Phosphotungstic Based Electrocatalysts	Se-Hee Lee, D.Ragupathy, Hyun Gyu Lee, A.I. Gopalan, Kwang Pill Lee	2013	Journal of Nanoelectronics and Optoelectronics 8, 493-497	1.069
32.	Simple and rapid synthesis of polyaniline microrods and its electrical properties	D. Ragupathy*, Soo Chool Lee, Salem S. Al-Deyab, A. Rajendran	2013	Journal of Industrial and Engineering Chemistry 19, 1082-1085	4.978
31.	Improvement of H_2S Sensing Properties of SnO_2-Based Thick Film Gas Sensors Promoted with MoO_3 and NiO	Soo Chool Lee, Seong Yeol Kim, Byung Wook Hwang, Suk Yong Jung, Dhanusuraman Ragupathy, In Sung Son, Duk Dong Lee, Jae Chang Kim	2013	Sensors 13, 3889-3901	3.031
30	Self-assembly growth of electrically conductive	Dhanusuraman Ragupathy*, Palanisamy	2012	Macromolecular	

	chitosan nanofibrous scaffold	Gomathi, Loganathan Kumaresan, Soo Chool Lee, Salem S.Al-Deyab, Sang Hak Lee, Han Do Ghim		Research 20, 1070-1074	1.758
29	Development of novel catalyst by gamma irradiation induced distribution of Pt-Sn Nanoparticles onto multi walled carbon nanotubes	Se-Hee Lee, D.Ragupathy, A.Gopalan, Kwang Pill Lee	2012	Journal of Nanoelectronics and Optoelectronics 7, 444-448	1.069
28	CO_2 sorption properties of Nano-Sized zirconia based sorbents promoted with alkali metal carbonates	Soo Chool Lee, Min Su Cho, Yong Mok Kwon, Ho Jin Chae, Suk Yung Jung, Chong Kul Ryu, Dhanusuraman Ragupathy, Jae chang Kim	2012	Journal of Nanoelectronics and Optoelectronics 7, 460-465	1.069
27	An environmentally benign fluoroboric acid catalysed one pot synthesis of substituted quinolines: A Novel Green Chemical Synthesis	A. Rajendran, C. Karthikeyan, D.Ragupathy	2012	Journal of Chemical Science 124, 877–881	1.496
26	One pot three component synthesis of indole with fused chromenes using an efficient tricaprylmethylammoniumthiosalicylate based task specific ionic liquids	A. Rajendran, C. Karthikeyan, K.Rajathi, D.Ragupathy	2012	American Journal of Organic Chemistry 2, 9-13	-
25	One-step synthesis and characterization of novel polyaniline nanostructures by chemical oxidative polymerization method	Dhanusuraman Ragupathy*, Palanisamy Gomathi, Han Do Ghim, Soo Chool Lee, Jae Chang Kim	2012	Journal of Industrial and Engineering Chemistry 18, 1213-1215	4.978
24	Spectrofluorimetric Study of the Interaction between Europium (III) and Moxifloxacin in Micellar Solution and Its Analytical Application	Mohammad Kamruzzaman, Al-Mahmnur Alam, Sang Hak Lee, Dhanusuraman Ragupathy, Young Ho Kim, Sang-Ryoul Park, Sung Hong Kim	2012	Spectrochemica Acta Part A: Molecular and Biomolecular Spectroscopy 86, 375-380	2.931

23	A novel tin oxide-based recoverable thick film SO_2 gas sensor promoted with magnesium and vanadium oxides	Soo Chool Lee, Byung Wook Hwang, Soo Jae Lee, Ho Yun Choi, Seong Yeol Kim, Suk Yong Jung, Dhanusuraman Ragupathy, Duk Dong Lee, Jae Chang Kim	2011	Sensors and Actuators B: Chemical 160, 1328-1334	6.393
22	A study on Zn-based catal-sorbents for the simultaneous removal of hydrogen sulfide and ammonia at high temperature	Jung Je Park, Chang Geun Park, Suk Yong Jung, Soo Chool Lee, Dhanusuraman Ragupathy, Jae Chang Kim	2011	Research on Chemical intermediates 37, 1193-1202	2.064
21	Simultaneous Removal of Sulfur and Nitrogen Comounds in the C_4 Gas from FCC Using Modified Activated Carbons	Jung Je Park, Chang Geun Park, Suk Yong Jung, Soo Chool Lee, Dhanusuraman Ragupathy, Jae Chang Kim	2011	Journal of Nanoelectronics and Optoelectronics 6, 306-309	1.069
20	Electrochemical grafting of poly(2,5-dimethoxy aniline) onto multiwalled carbon nanotubes nanocomposite modified electrode and electrocatalytic oxidation of ascorbic acid	Dhanusuraman Ragupathy*, Jung Je Park, Soo Chool Lee, Jae Chang Kim, Min Kwan Kim, So Min Lee, Han Do Ghim, Annamalai Rajendran, Sang Hak Lee, Kyung Moon Jeon	2011	Macromolecular Research 19, 764-769	1.758
19	Effects of Textural Property on the Response of Tin Oxide-Based Gas Sensor for the Detection of Chemical Warfare Agents	Soo Chool Lee, Seong Yeol Kim, Woo Suk Lee, Suk Yong Jung, Byung Wook Hwang, Dhanusuraman Ragupathy, Sang Yeon Lee, Jae Chang Kim	2011	Sensors 11, 6893-6904	3.031
18	Multiwalled carbon nanotubes grafted chitosan nanobiocomposite: A prosperous functional nanomaterials for glucose biosensor applications	Palanisamy Gomathi, Min Kwan Kim, Jung Je Park, Dhanusuraman Ragupathy*, Annamalai Rajendran, Soo Chool Lee, Jae Chang Kim, Sang Hak Lee, Han Do Ghim	2011	Sensors and Actuators B: Chemical 155, 897-902	6.393
17	Preparation and Characterization of conductive chitosan-poly[N-(3-trimethoxysilylpropyl)aniline]	Palanisamy Gomathi, Han Do Ghim, Dhanusuraman Ragupathy	2011	Macromolecular Research 19, 442-	1.758

	hybrid submicrostructures			447	
16	Effective Extraction of Heavy Metals from their Effluents using Some Potential Ionic Liquids as Green Chemicals	A.Rajendran, D. Ragupathy, M. Priyadarshini, A. Magesh, P. Jaishankar, N.S. Madhavan, K. Sajitha, S. Balaji	2011	E-Journal of Chemistry 8, 697-702	1.727
15	Development of new alumina-modified sorbents for CO_2 absorption and regeneration at temperatures below 200°C	Soo Chool Lee, Yong Mok Kwon, Chun Yong Ryu, Dhanusuraman Ragupathy, Suk Yong Jung, Joon Beom Lee, Jeom-In Baek, Chong Kul Ryu, Jae Chang Kim	2011	Fuel 90, 1465-1470	5.128
14	Fabrication of novel chitosan nanofiber/gold nanoparticles composite towards improved performance for a cholesterol sensor	Palanisamy Gomathi, Dhanusuraman Ragupathy*, Jin Hyun Choi, Jeong Hyun Yeum, Soo Chool Lee, Jae Chang Kim, Sang Hak Lee, Han Do Ghim	2011	Sensors and Actuators B: Chemical 153, 44-49	6.393
13	A Domino Green Synthesis of Bis(indolyl)methanes Catalyzed by Ionic Liquid $[Et_3NH][HSO_4]$	A.Rajendran, D. Ragupathy, M. Priyadarshini	2011	International Journal of ChemTech Research 3, 298-302	0.598
12	Green Synthesis of Biologically Active Pyrazolopyrimidine Derivatives Using an Ionic liquid 2-Methyl-3-butylimidazolium chloride	A.Rajendran, D. Ragupathy, M. Priyadarshini	2011	International Journal of ChemTech Research 3, 293-297	0.598
11	Improvement of recovery of SnO_2-based thick film gas sensors for dimethyl methylphosphonate (DMMP) detection	Soo Chool Lee, Ho Yun Choi, Woo Suk Lee, Soo Jae Lee, Seong Yeol Kim, Dhanusuraman Ragupathy, Duk Dong Lee, Jae Chang Kim	2011	Sensor Letters 9, 101-105	1.587
10	Synthesis and characterization of polyaniline grafted multiwalled carbon nanotube loaded Nafion-silica nanocomposite membrane	D. Ragupathy, A. Gopalan, Kyeong-Wung Kim, Kwang-Pill Lee	2011	Journal of Nanoscience and Nanotechnology	1.354

				11, 747-750	
9	Electrospun carbon nanotubes-gold nanoparticles embedded nanowebs: prosperous multifunctional nanomaterials	Tae Kyung Kim, Dhanusuraman Ragupathy, Anantha Iyengar Gopalan, Kwang-Pill Lee	2010	Nanotechnology 21, 134021	3.399
8	Electrocatalytic oxidation and determination of ascorbic acid in the presence of dopamine at multiwalled carbon nanotube-silica network-gold nanoparticles based nanohybrid modified electrode	Dhanusuraman Ragupathy, Anantha Iyengar Gopalan, Kwang-Pill Lee	2010	Sensors and Actuators B: Chemical 143, 696-703	6.393
7	Pd (core) - Au (shell) nanoparticles catalyzed conversion of NADH to NAD^+ by UV-visible spectroscopy – A kinetic analysis	A. Gopalan, D.Ragupathy, H-T. Kim, K.M.Manesh, K-P. Lee	2009	Spectrochemica Acta Part A: Molecular and Biomolecular Spectroscopy 74, 678 – 684	2.931
6.	An electrochemical glucose biosensor exploiting a polyaniline grafted multiwalled carbon nanotube/perfluorosulfonate ionomer-silica nanocomposite	Anantha I. Gopalan, Kwang P. Lee, Dhanusuraman Ragupathy, Se H. Lee, Jong W. Lee	2009	Biomaterials 30, 5999-6005	10.273
5	Layer-by-layer electrochemical assembly of poly(diphenylamine)/phosphotungstic acid as ascorbic acid sensor	Dhanusuraman Ragupathy, Anantha Iyengar Gopalan, Kwang-Pill Lee	2009	Microchimica Acta 166, 303-310	5.479
4	Synergistic contributions of multiwall carbon nanotubes and gold nanoparticles in a chitosan –ionic liquid matrix towards improved performance for a glucose sensor	Dhanusuraman Ragupathy, Anantha Iyengar Gopalan, Kwang-Pill Lee	2009	Electrochemistry Communication 11, 397-401	4.197
3.	Development of a stable cholesterol biosensor based on multi-walled carbon nanotubes-gold nanoparticles composite dispersed with a room-temperature ionic liquid	Anantha Iyengar Gopalan, Kwang-Pill Lee, Dhanusuraman Ragupathy	2009	Biosensors and Bioelectronics 24, 2211-2217	9.518
2.	Fabrication and properties of	Kwang-Pill Lee, Anantha Iyengar	2009	Journal of	1.435

	poly(vinylidenefluoride)/PbS/Au heterogeneous nanostructures	Gopalan, Jong Wook Park, Dhanusuraman Ragupathy, Kalayil Manian Manesh		Nanoscience and Nanotechnology 9, 115-122	
1.	Electro-assisted fabrication of layer-by-layer assembled poly(2,5-dimethoxyaniline)/phosphotunstic acid modified electrode and electrocatalytic oxidation of ascorbic acid	Dhanusuraman Ragupathy, Anantha Iyengar Gopalan, Kwang-Pill Lee, Kalayil Manian Manesh	2008	Electrochemistry Communication 10, 527-530	4.425

PAPER PUBLISHED IN NATIONAL JOURNALS

SI.No.	Title of article	Authors	Year	Journal Name, Issue, Page
5.	Biocarbon Derived from Seeds of Palmyra Palm Tree for a Supercapacitor Application	K Vengadesan, Suba Lakshmi Madaswamy, Veni Keertheeswari Natarajan, Ragupathy Dhanusuraman	2023	Advanced Nano Research 6 (2024) 1-10 [ISSN: 2581-5164]
4.	Facile Synthesis and Characterization of Chitosan Nanofibers by Oil/Water Emulsion Method	D. Ragupathy, E Muthusankar, D Kamalakannan	2018	Advanced Nano Research 1 (2018) 31-37 [ISSN: 2581-5164]
3.	One Step Surfactant Free Synthesis and Characterization of Spherical Gold Nanoparticles	D Ragupathy, E Muthusankar, Narendran Rajagopalan	2018	Journal of Nanoscience and Technology 4 (2018) 308-309 [ISSN:2455-0191]
2.	Solvent Free Condensation Reactions between Diketone, Aromatic Aldehydes and A Nitrogen Source- A Green Chemical Approach - One Pot and Three Component Synthesis application	A Rajendran, C Karthikeyan, S Ramu, D Ragupathy	2015	Journal of Advanced Chemical Science 1 (2015) 27-30 [ISSN:2394-5311]
1.	Preparation and characterization of prospective disulfide based electrode materials for Lithium batteries	Dhanusuraman Ragupathy, Anantha Iyengar Gopalan, Kwang-Pill Lee	2008	Analytical Science & Technology 21 (2008) 25-33 [ISSN - 1225-0163]

ONGOING PROJECT

SI.No.	Title	Funding Agencies	Amount	Financial Sanction Order	Status
3.	Development of Advanced Materials based Electrocatalyst for Energy Applications	**UGC, University Start-up Grant**	Rs. 3,00,000/-	-	Ongoing
2.	Nanohybrid Materials as High Performance Anode for Direct Methanol Fuel Cells	Science and Engineering Research Board (SERB), New Delhi	Rs. 27,82,000/-	EEQ/2018/000574 dated on 15.02.2019	Completed
1.	"Development and Characterization of Nanocomposite Modified Electrodes for Electro-analytical Applications"	Department of Science & Technology (DST), New Delhi	Rs.26,79,600/-	No.SB/FT/CS-117/2014 dated on 12.08.2015	Completed

Doctoral Student Guided/ Ongoing

SI.No.	Title	Name of the Research Scholar	Date of Degree Awarded	Status
8.	Biomaterials for Antimicrobial Applications	Ms.Nishkala	-	Ongoing
7.	Synthesis and Characterization of Biomass Derived Porous Activated Carbon for Energy and Environmental Applications	Dr.Vishnu Shankar	24.01.2025	Completed
6.	Development of Transition Metal Based Binder Free Electrocatalysts for Electrochemical Water Splitting and other Energy Applications	Dr.Asha Raveendran	35.05.2024	Completed
5.	Nanocomposite Materials Based Modified Electrodes for Energy Storage and Energy Conversion Application	Dr.Venkatesan	28.08.2023	Completed
4	Ultrasonication Aided Synthesis of Conducting Polymers based Nanocomposite for Methanol Electro-Oxidation	Dr. Veni Keerthiswari	14.04.2023	Completed
3.	Nanohybrid Materials as Anode Electrocatalyst for Direct Methanol Fuel Cell Applications	Dr.C. Bavatharani	17.03.2022	Completed
2.	Green Synthesis Nanostructured Polymer and its Composite for Energy Applications	Dr.M. Suba Lakshmi	23.02.2022	Completed
1.	Development and Characterization of Conducting Polymers based	Dr.E.Muthusankar	19.02.2020	Completed

	Nanocomposites as Modified Electrodes for Multifunctional Devices			

BOOK CHAPTER

SI.No.	Title	Authors	Year	Publishers
5.	**Book Title:** NanoCarbon: A Wonder Material for Energy Applications **Book Chapter:** Graphene-Based Fuel Cells	Suba Lakshmi Madaswamy, N. Veni Keertheeswari, Ragupathy Dhanusuraman	2024	Springer Nature, Singapore.
4.	**Book Title:** Conducting polymers: Fundamentals, Synthesis, Properties and their Applications **Book Chapter:** Conducting polymers: An introduction	Suba Lakshmi Madaswamy, N. Veni Keertheeswari, Ragupathy Dhanusuraman	2022	CRC Press, USA.
3.	**Book Title:** Conducting polymers: Fundamentals, Synthesis, Properties and their Applications **Book Chapter:** Biodegradable Electronic Devices	C. Bavatharani, E. Muthusankar, D.Ragupathy	2022	CRC Press, USA.
2.	**Book Title:** Upconversion Nanophosphors **Book Chapter:** Photoluminescent rare-earth nanocrystal-based characterization methods: Advancements in Photophysical applications	Ajeesh Kumar Somakumar, Kanchan Upadhyay, Soumya Suresh, Vishnu Sankar Sivasankarapillai, Ragupathy Dhanusuraman	2022	Elsevier, Netherlands.
1.	**Book Title:** "Polymer nanocomposites: Physical properties and applications" **Book Chapter:** Polyaniline-based nanocomposites: preparation, properties and applications	K-P. Lee, A. Gopalan, S. Komathi, D. Ragupathy	2010	Woodhead Publishing Limited, Cambridge, UK.

PATENTS

SI.No.	Title	Authors	Year	Publishers	Patent number
1.	Controlled drug carrier for deliverying sildenafil citrate transdermally and patch containing the same	Kwang-Pill Lee, Anantha Iyengar Gopalan, Dhanusuraman Ragupathy	2009	PCT Int. Appl.	WO2009064071
2.	Biosensor Based on Multi-Walled Carbon Nanotubes and Method for Manufacturing the Same	Kwang-Pill Lee, Anantha Iyengar Gopalan, Dhanusuraman Ragupathy	2010	Repub. Korean Kongkae Taeho Kongbo (KOREAN PATENT)	1009928750000
3.	Antioxidant loaded sustained release porous silica matrix and preparing method thereof	Kwang-Pill Lee, Anantha Iyengar Gopalan, Kyoo Jang Park, Dhanusuraman Ragupathy	2010	Repub. Korean Kongkae Taeho Kongbo (KOREAN PATENT)	1009873750000
4.	Aniline fucntionalized polyfluorene nanocomposites and the preparation method thereof	Kwang-Pill Lee, Anantha Iyengar Gopalan, Dhanusuraman Ragupathy	2011	World Intellectual property Organization-Patentscope	1020110101326

CONFERENCE/SEMINAR/WORKSHOP ORGANIZED

1. Has organized five days Faculty Development Program on “Applied Science and Humanities” during 14 – 18th December, 2020, National Institute of Technology Puducherry, Karaikal – 609 609.
2. Has organized four days GYANITH – 2020 technical festival during 04 – 07th March 2020, National Institute of Technology Puducherry, Karaikal – 609 609.
3. Has organized three days GYANITH – 2019 technical festival during 28th February & 01 – 02nd March 2019, National Institute of Technology Puducherry, Karaikal – 609 609.

4. Has organized two days National Conference on Recent Advancement in Nanotehcnology (RAN-2018) 19th & 20th September 2018, Department of Chemistry, National Institute of Technology Puducherry, Karaikal – 609 609.
5. Has organized one day National Workshop on Recent Advancement in Nanotehcnology (RAN-2017) 14th April 2017, Department of Chemistry, National Institute of Technology Puducherry, Karaikal – 609 609.

EDITORIAL TEAM MEMBER IN JOURNAL

- ✧ Journal of Chemical Engineering and Materials Science (ISSN-2141-6605)
- ✧ International Journal of Engineering Research & Technology (ISSN: 2278-0181)
- ✧ Current Indian Science – Polymer Chemistry (ISSN: 2210-299X)

REVIEWER IN INTERNATIONAL JOURNALS

- ✧ Langmuir (ISSN: 0743-7463)
- ✧ Electrochemica Acta (0013-4686)
- ✧ Journal of Industrial and Engineering Chemistry (ISSN: 1226-086X)
- ✧ Macromolecular Research (1598-5032)
- ✧ Journal of Chemical Engineering and Materials Science (ISSN-2141-6605)
- ✧ Arabian Journal of Chemistry (ISSN: 1878-5352)

MEMBERSHIP IN PROFESSIONAL SOCIETIES

- ✧ Royal Chemical Society
- ✧ American Nano Society
- ✧ Korean Chemical Society
- ✧ Chemical Research Society of India
- ✧ Society for Advancement of Electrochemical Science and Technology
- ✧ Bioelectrochemical Society
- ✧ The Korean Society of Analytical Science and Technology
- ✧ Korean Institute of Chemical Engineers

Academic / Administrative Experience

- ✧ Registrar (i/c) - NIT Puducherry
- ✧ Member - Board of Governors, NIT Puducherry
- ✧ Dean – Faculty Welfare at NIT Puducherry
- ✧ Head, Department of Chemistry
- ✧ Senate Member at NIT Puducherry
- ✧ Associate Dean – Research & Consultancy at NIT Puducherry
- ✧ Nodal Officer SC/ST and OBC Cell at NIT Puducherry
- ✧ Chairman Sanitation Committee
- ✧ Public Grievance Cell Member at NIT Puducherry
- ✧ Faculty Warden Boys Hostel at NIT Puducherry

INVITED LECTURE(S) DELIVERED IN INTERNATIONAL/NATIONAL CONFERENCES

Name of the Symposium / Conference	Title of the lecture	Place	Date
International Conference on New and Renewable Energy 2010	"Nanostructuring of conducting polymer and its composite for biosensor applications"	Daegu, South Korea	May 14, 2010
38th Symposium on Analytical Science and Technology	"Fabrication and electrocatalysis of modified electrodes based on gold nanoparticles anchored carbon nanotubes"	Musan, South Korea	May 18, 2007
The Biozenith Association Conference,	Interesting Aspects of Nanoscience & Nanotechnology	Coimbatore, Tamil Nadu	December 15, 2014
Recent Advances In Orthopaedic Implants Using Nanotechnology	Interesting Aspects of Nanotechnology & Its Biomedical Applications	Villupuram, Tamil Nadu	May 09, 2016

"International Workshop on Smart Materials Sensors and Energy Devices, SMSED-2018"	Nanocomposite Materials for Electrochemical Sensor Applications	Chennai, Tamil Nadu	December 07, 2018
National Conference on "Recent Advances in Chemistry"	Nanomaterials: A bird's eye view of technological aspects	Chennai, Tamil Nadu	January 04, 2019
"Solar Fuel Source for carbon dioxide free Environment"	Nanomaterials for Energy Applications	Nagapattinam, Tamil Nadu	January 21, 2019
National Seminar on Recent Advances in Chemistry	Nanocomposite Materials for Electro-analytical Applications	Madurai, Tamil Nadu	January 22, 2020
Chemistry Day - 2020	Nanoscience and Nanotechnology: A Bird's Eve View	Karaikal, Puducherry	February 26, 2020
2nd International Conference Webinar on Smart Materials Sensors and Energy Devices, SMSED-2020"	Nanocomposite Materials for Catalytic and Energy Applications	Chennai, Tamil Nadu	May 27, 2020
AICTE sponsored STTP on Augmentation of SMART materials and technologies for commercial energy harvesting	Nanocomposite materials for Electro-Catalytic and Energy Applications	Erode, Tamil Nadu	November 30, 2020
National Level Technical Symposium on Emerging Trends in Chemistry and Forensic Science	Nanoscience and Nanotechnology	Coimbatore, Tamilnadu	February 19, 2021
National Colloquium on Biovision - 2022	Introduction to Nanoscience	Nagapattinam	February 27, 2022

PAPERS PRESENTED IN INTERNATIONAL CONFERENCES

SI.No.	Title of article	Authors	Year	Name, Issue, Page
1.	Preparation and Characterization af Novel Organic-Inorganic Hybrid Composite Based on Silica, Nafion and Conducting Polymer	J-W. Lee, N-H. Kim, D.Ragupathy, A. Gopalan , K-P. Lee	2007	41st IUPAC World Chemistry Congress, Torin, Italy, August 5 – 11, (S04BP21)
2	Self Assembly Directed Synthesis of Novel MWNT Grafted Poly (2,2'-dithiodianiline) – A Novel Material Suitable For Energy Device Applications	K.M. Manesh , J-W. Park, D. Ragupathy, A. Gopalan, K-P. Lee	2007	41st IUPAC World Chemistry Congress, Torin, Italy, August 5 – 11, (S04AP02)
3	Development of a stable cholesterol biosensor based on multi-walled carbon nanotubes-gold nanoparticles composite dispersed with a room-temperature ionic liquid	A. Gopalan, Kwang Pill Lee, K. M. Manesh, D. Ragupathy	2008	The tenth world congress on biosensors – 2008, Shanghai, China, May 14 – 16, (P2 – 35)
4	Direct electrochemistry of cytochrome c and detection of hydrogen peroxide on a polyaniline grafted multi-walled carbon nanotube biosensor electrode	Kwang Pill Lee, A. Gopalan, D. Ragupathy, K. M. Manesh	2008	The tenth world congress on biosensors – 2008, Shanghai, China, May 14 – 16, (P2 – 36)
5	Electrospun carbon nanotubes-gold nanoparticles embedded nannoweb; Prosperous multifunctional nanomaterials	Tae-Gyung Kim, D. Ragupathy A. Gopalan, Kwang-Pill Lee	2009	Nano and Giga Challenges in Electronics, Photonics and Renewable Energy & 14th Canadian Semiconductor Technology Conference, Ontario, Canada. August 10-14, (p 244)
6	Synthesis and characterization of polyaniline grafted multiwalled carbon nanotube loaded Nafion-silica nanocomposite membrane	D. Ragupathy, A. Gopalan, Kwang-Pill Lee	2009	The 7th International Nanotech Symposium & Exhibition in Korea, KINTEX, Koyang, Korea Auguest 26-28 (PNM 128)
7	Radiation induced preparation of Pt/Sn bimetallic dispersed multi walled carbon	Se-Hee Lee, A. Gopalan, Kwang-Pill Lee, D. Ragupathy, Nam-Hee Kim	2009	The 7th International Nanotech Symposium & Exhibition in Korea,

	nanotubes prospective for application in fuel cells			KINTEX, Koyang, Korea Auguest 26-28 (PNM 129)
8	Effects of Textural Property on the Response of Tin Oxide-Based Gas Sensor for the Detection of Chemical Warfare Agents	Soo Chool Lee, Seong Yeol Kim, Woo Suk Lee, Suk Yong Jung, Byung Wook Hwang, Dhanusuraman Ragupathy, Sang Yeon Lee, Jae Chang Kim	2011	International conference on New and Renewable Energy, Daegu, South Korea, April 8, (P-07)
9	Simple and Efficient Microfluidic Synthesis of Crosslinked Polymer Microbeads for Li^+ ion adsorption	Ragupathy Dhanusuraman, Yong Seok Kim, Jung Hyun Kim, In Woo Cheong, Chang Sik Ha	2011	The 8th International symposium on Advanced Materials in Asia-Pacific Rim (ISAMAP) and the 2nd International Workshop on Nanogrid Materials (IWNM), Busan, South Korea, November 2-5, (P-20)
10	Modification of multi walled carbon nanotubes with layer by layer polyaniline/phosphotungstic acid film for electrocatalytic oxidation of methanol	D.Ragupathy, Se-Hee Lee, A.Gopalan, Kwang Pill Lee	2012	International conference on New and Renewable Energy 2012, Daegu, South Korea, March 16-17
11	Development of novel catalyst by gamma irradiation induced distribution of Pt-Sn Nanoparticles onto multi walled carbon nanotubes	Se-Hee Lee, D.Ragupathy, A.Gopalan, Kwang Pill Lee	2012	International conference on New and Renewable Energy 2012, Daegu, South Korea, March 16-17
12	Spectrofluorimetric determination of bovine serum albumin using enoxacin-aluminium (III) as a fluorescence probe	Sang Hak Lee, Mohammad Kamruzzaman, A-Mahmnur Alam, Kyung Min Kim, Dhanusuraman Ragupathy, Young Ho Kim	2012	XV International Symposium on Luminescence Spectroscopy (ISLS 2012) Barcelona, Spain June 19-22, (PP-49, P113)
13	Enhanced chemiluminescence of 32uminal-[$AuCl_4$] by silver nanoparticles in microfluidic chip for the determination of melamine	A-Mahmnur Alam, Mohammad Kamruzzaman, Sang Hak Lee, Dhanusuraman Ragupathy, Young Ho Kim, Sang Hyub Oh	2012	XV International Symposium on Luminescence Spectroscopy (ISLS 2012) Barcelona, Spain June 19-22, (PP-51, P115)
14	Electrochemical grafting of poly(2,5-dimethoxy aniline) onto multiwalled	D. Ragupathy	2012	Seventh INDO-US Workshop on Mathematical Chemistry, Tanjavur,

	carbon nanotubes nanocomposite modified electrode and electrocatalytic oxidation of ascorbic acid			India December 4-6, 2012 (PP-57)
15	Preparation and Characterization of Novel Chitosan Nanofiber Modified Electrodes and Its Electrical Properties	D.Ragupathy, SooChool Lee , Sendhil Kumar Natarajan, Salem S. Al-Deyab, NarendranRajagopalan, Madappa V.R. Sivasubramanian and Jae Chang Kim	2016	International conference on New and Renewable Energy 2016, Daegu, South Korea, March 17-19 (PP-21)
16	Design and Electrical Performance Analysis of Concentrating Solar Cell	VijeshJayan,M.Vijayakumar,R. VinaiKrishnan,D.Ragupathy, SooChoolLee, JaeChangKim, SalemS.Al-Deyab, NarendranRajagopalan, Sendhil Kumar Natarajan	2016	International conference on New and Renewable Energy 2016, Daegu, South Korea, March 17-19(PP-07)
17.	Electrochemical Synthesis of PDPD/PTA/ZnO Hybrid Nanocomposite Modified Electrode for Ultra-sensitive Glucose Biosensor Applications	D.Ragupathy, E.Muthusankar	2018	International Conference on Nanomaterials: Synthesis, Characterization and Applications, May 11-13
18.	Nanocomposite Modified Electrode based on PANI/PTA/TIO_2 for Energy Applications	D.Ragupathy	2020	International Conference on 11th Bengaluru India Nano-2020, May 2 - 4

PAPERS PRESENTED IN NATIONAL CONFERENCES

SI.No.	Title of article	Authors	Year	Name, Issue, Page
1	Preparation of poly(ethylene glycol)/poly(vinylidene fluoride) composite porous membrane for lithium battery applications	A.Gopalan, R.M.Rama Lakshmanan, T.Vasudevan, D.Ragupathy, K.M.Manesh, P.Santhosh, Kwang-Pill Lee	2006	97th National meeting of the Korean Chemical Society, Seoul , S.Korea, April 20-21, (I30P255, p313)
	Poly(diphenylamine)/poly(dimethoxy	D.Ragupathy, A.Gopalan,		37th Symposium on Analytical Science

2	aniline) doped with phosphotungstic acid films modified electrodes for electrocatalytic oxidation of ascorbic acid	K.M.Manesh, P.Santhosh, Kwang-Pill Lee	2006	and Technology, Yongpyong, S.Korea, November 23-24, (PF-70, p226)
3	One pot-synthesis of a noval organic-inorganic hybrid nanocomposite	A. Gopalan, K.M. Manesh, Dhanusuraman Ragupathy, Kwang-Pill Lee	2007	The 99th National Meeting of the Korean Chemical Society, Seoul, S.Korea, April 19-20, (27P143, p295)
4	Hollow structures of polyaniline grafted to multiwalled carbon nanotubes- Use of a new strategy for nanostucturing	Kwang Pill Lee, A. Gopalan, D.Ragupathy	2007	38th Symposium on Analytical Science and Technology, Musan, S.Korea, May 17-18, (PF-02, p146)
5	Preparation and characterization of a prospective disulfide based electrode material for Lithium battery application	A.Gopalan, D.Ragupathy, Kwang Pill Lee	2007	38th Symposium on Analytical Science and Technology, Musan, S.Korea, May 17-18, (PF-02, p147)
6	Preparation of MCM-41 based novel functional acid catalyst	Jong Won Lee, D.Ragupathy, A. Gopalan, Kwang Pill Lee	2007	38th Symposium on Analytical Science and Technology, Musan, S.Korea, May 17-18,(PF-11, p155)
7	Flexible and transparent films containing of carbon nanotubes	Kalayil Manian Manesh, Dhanusuraman Ragupathy, Min Seok Kim, Anantha Iyengar Gopalan, Kwang Pill Lee	2007	KCS work shop, S. Korea, June 28 – 29, (PP – 1)
8	Preparation of polyvinylidene fluoride-conduction polymer composite membrane by irradiation for improving ion-exchange capabilities in fuel cell application	K.M. Manesh, D. Ragupathy, Jong Wook Park, A. Gopalan, Kwang Pill Lee	2007	Korean Society of Radiation Industry, Muju Resort, South Korea, August 24 – 25, (PA_30)
9	Poly (Dithiodianiline) Grafted Carbon Nanotubes - A Novel Electrode Material For Lithium Battery Applications	D. Ragupathy, A. Gopalan, Kwang Pill Lee, K.M. Manesh	2007	The 100th National Meeting of the Korean Chemical Society, Daegu, S.Korea, October 18-19, (III32P183, p385)
10	Controlled release of a potent drug from electrospun nanofibers of poly(vinyl pyrrolidone)	Kwang Pill Lee , A. Gopalan, D. Ragupathy	2007	The 100th National Meeting of the Korean Chemical Society, Daegu, S.Korea, October 18-19, (III32P177, p383)

11	Functional nanomaterial based on carbon nanotube and its sensor characteristic	K. M. Manesh, A Gopalan, Kwang Pill Lee, D. Ragupathy	2007	The 100th National Meeting of the Korean Chemical Society, Daegu, S.Korea, October 18-19, (III32P181, p384)
12	Preparation of carbon nanotubes – conducting polymer nanocomposites by interfacial polymerization route	Jong Wook Park, D. Ragupathy, A. Gopalan, Kwang Pill Lee	2007	The 100th National Meeting of the Korean Chemical Society, Daegu, S.Korea, October 18-19, (III32P180, p384)
13	Anchoring of gold nanoparticles into carbon nanotubes by microwave irradiation	Kim Nam Hee, D. Ragupathy, A. Gopalan, Kwang Pill Lee	2007	The 100th National Meeting of the Korean Chemical Society, Daegu, S.Korea, October 18-19, (III32P186, p386)
14	Optical detection of NADH and of NAD^+ dependent processes by core shell Pd-Au nanoparticles – A kinetic analysis	Kwang Pill Lee, Hyun Tae Kim, K.M. Manesh, D.Ragupathy, A. Gopalan	2007	The 9th Asian Conference on Analytical Sciences, Jeju Island, S.Korea, November 4- –6, (P-MN-MON-02, p272)
15	Development of novel organic-inorganic hybrid composites for fuel cell application	Kwang Pill Lee, A. Gopalan, D. Ragupathy	2007	The 39th Convention of The Korean Society of Analytical Sciences, Jeju Island, S.Korea, November 7 – 8, (PW-72, p460)
16	Encapsulation of ascorbic acid into the matrix of mesoporous silica	A. Gopalan, Kwang Pill Lee, D. Ragupathy, Jong Won Lee	2007	The 39th Convention of The Korean Society of Analytical Sciences, Jeju Island, S.Korea, November 7 – 8, (PW-73, p461)
17	Layer-by-layer self assembly approach for the fabrication of poly(2,5-dimethoxyaniline)/phosphotungstic acid multilayer film modified electrode	D. Ragupathy, Kwang Pill Lee, A. Gopalan	2007	The 39th Convention of The Korean Society of Analytical Sciences, Jeju Island, S.Korea, November 7 – 8, (PW-76, p462)
18	Preparation and photo degradation studies of a TiO_2 based nanocomposite - A prospective study towards solar cell	Se Hee Lee, Kim Nam Hee, Park Jong Wook, D. Ragupathy, A. Gopalan, Kwang Pill Lee	2008	The 101st National Meeting of the Korean Chemical Society, Ilsan, S.Korea, April 17-18, (I30P222, P368)

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19	Preparation and characterization of a new CNT based electrode material for lithium battery application	D. Ragupathy, Kwang Pill Lee, A. Gopalan, Park Jong Wook	2008	The 101st National Meeting of the Korean Chemical Society, Ilsan, S.Korea, April 17-18, (I30P223, P369)
20	Multiwalled carbon nanotube-chitosan inter-connected network composites based biosensor	D. Ragupathy, Jong-Wook Park, A. Gopalan, Kwang Pill Lee	2008	The 40th Convention of The Korean Society of Analytical Sciences, Pohang, S.Korea, May15 –16, (PF-30, p179)
21	Biosensor studies using iron oxide nanoparticles coated conducting polymer composites	Min-Seok Kim, D. Ragupathy, S. Komathi, A. Gopalan, Kwang Pill Lee	2008	The 40th Convention of The Korean Society of Analytical Sciences, Pohang, S.Korea, May15 –16, (PF-33, p182)
22	Preparation and characterization of a novel organic-inorganic hybrid nanocomposite based on multiwalled carbon nanotubes and silica	D. Ragupathy, A. Gopalan, Kwang-Pill Lee	2008	The 101st National Meeting of the Korean Chemical Society, Jeju, S.Korea, October 16-17, (IV32P44)
23	Graft copolymerization of a conducting polymer onto multi-walled carbon nanotubes (MWNTs) in a biphasic media	Jong Wook Park, D. Ragupathy, A. Gopalan, Kwang-Pill Lee	2008	The 101st National Meeting of the Korean Chemical Society, Jeju, S.Korea, October 16-17, (IV32P46)
24	Fabrication of an electrochemical DNA sensor based on conducting polymer-Au nanoparticles composite	D. Ragupathy, Kwang-Pill Lee, A. Gopalan	2008	KAS winter, The 41th Convention of The Korean Society of Analytical Sciences, Yongpyong, S.Korea, November 20–21, (PT-76, p146)
25	Influence of additives on the dispersion of multi wall carbon nanotubes in the presence of surfactants	Jong Wook Park, D. Ragupathy, A. Gopalan, Kwang Pill Lee	2008	The 41th Convention of The Korean Society of Analytical Sciences, Yongpyong, S.Korea, November 20–21, (PT-74, p144)
26	Preparation of mesoporous Poly(vinylidene fluoride(PVDF)-Silica composite nanofiberous membranes and application to Lithium batteries	Tae-Gyung Kim, D. Ragupathy, Se-Hee Lee, A.Gopalan, Kwang-Pill Lee	2008	The 41th Convention of The Korean Society of Analytical Sciences, Yongpyong, S.Korea, November 20–21,(PT-71, p141)
27	Fabrication of a novel organic-inorganic nanohybrid based modified electrode	D. Ragupathy, A. Gopalan, Kwang-Pill Lee	2009	The 103rd National Meeting of the Korean Chemical Society, Seoul,

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28	Preparation of nano-SiO_2/$LiClO_4$/PVDF-HFP composite gel polymer electrolytes and their electrochemical performances	Tae-Gyung Kim, D. Ragupathy, Se-Hee Lee, A.Gopalan, Kwang-Pill Lee	2009	The 103rd National Meeting of the Korean Chemical Society, Seoul, S.Korea, April 16-17, (Ⅳ33P224)
29	A sensitive electrochemical glucose biosensor based on loading of polyaniline grafted multiwalled carbon nanotubes into Nafion-silica matrix	D.Ragupathy, A.Gopalan, Kwang-Pill Lee	2009	The 42nd Convention of The Korean Society of Analytical Sciences, , S.Korea, May 21–22, (PF-77, p220)
30	Poly(aminophenylboronic acid) grafted onto silica nanoparticles – A novel nanomaterial for electrochemical glucose detection	Byun Hun Chang, S. Komathi, D.Ragupathy, A.Gopalan, Kwang-Pill Lee	2009	The 42nd Convention of The Korean Society of Analytical Sciences, , S.Korea, May 21–22, (PF-61, p204)
31	Conducting polymer 3D network grafted onto MWNT: A novel material for electrochemical detection of biomolecules	Yoen-Jeong Nam, S. Komathi, D. Ragupathy, A.Gopalan, Kwang-Pill Lee	2009	The 42nd Convention of The Korean Society of Analytical Sciences, , S.Korea, May 21–22, (PF-62, p205)
32	Electrochemical sensing of nitrite ions at a novel carbon nanotube based multilayer electrode	Dhanusuraman Ragupathy, Tae-Gyung Kim, Anatha Iyengar Gopalan, Kwang-Pill Lee	2009	The 3rd Korea-China-Japan Joint Ion Analysis Symposium, Jeju, South Korea, June 10-12,(PT-08, p50)
33	Layer-by-layer assembly of poly(diphenylamine)/phosphotungstic acid modified electrode for electrocatalytic oxidation of ascorbic acid	D. Ragupathy, A. Gopalan, Kwang-Pill Lee	2009	The 104th National Meeting of the Korean Chemical Society, Daejeon, S.Korea, October 29-30, (IV35P146, p820)
34	Preparation of a novel multiwalled carbon nanotube/substituted polyaniline nanocomposites and electrocatalytic oxidation of ascorbic acid	D. Ragupathy, A. Gopalan, Kwang-Pill Lee	2009	The 43rd Convention of The Korean Society of Analytical Sciences, Jeju, S.Korea, November 12–13, (PT-59, p218)
35	Novel nanostructured potassium-based dry sorbents for high CO_2 capture capacity	Dhanusuraman Ragupathy, Jae Chang Kim, Ho Jin Chae, Soo Chool Lee, Jung Je Park	2010	"2010 Fall and National Conference on Korean Institute of Chemical Engineers" held at Daejon Convention Center, Daejon, South Korea, October 20-22,

				(PT-68, p399)
36	The removal of sulfur compounds using various AC adsorbents	Jung Je Park, Jae chang Kim, Chang In Park, Chong Nam Kim, Ragupathy Dhanusuraman	2010	"2010 Fall and National Conference on Korean Institute of Chemical Engineers" held at Daejon Convention Center, Daejon, South Korea, October 20-22, (P-14, p385)
37	Synthesis and Characterization of Magnetic Fe_2O_3 Nanoparticles for Drug Delivery Applications	M.Muthusankar, D.Ragupathy, V.Kumar, PR.Rao, P.Vinodh Kumar	2019	International Conference on Nanomaterials: Synthesis, Characterization and Applications (ICN 2019)) Conference Proceedings, Page: 194

DECLARATION

I hereby declare that the information provided above is true to the best of my knowledge.

Place: Puducherry

Date: 07.07.2025 **(**Dr.RAGUPATHY DHANUSURAMAN)