





# Bharathiar University

State University | "A++" Grade by NAAC | 46<sup>th</sup> Rank in MoE-NIRF  
Maruthamalai Road, Coimbatore, Tamil Nadu - 641 046.

Dr C VISWANATHAN , Professor , Department of Nanoscience and Technology

## Ph. D.

Subject : Physics

Institution : BHARATHIAR UNIVERSITY

Affiliated University : BHARATHIAR UNIVERSITY

Year of Award : May 2005

## M. Sc.

Subject : Physics

Institution : KONGUNADU ARTS AND SCIENCE COLLEGE, COIMBATORE

Affiliated University : BHARATHIAR UNIVERSITY

Year of Award : June 2000

## B. Sc.

Subject : Physics

Institution : GOVT ARTS AND SCIENCE COLLEGE, SALEM-7

Affiliated University : MADRAS UNIVERSITY

Year of Award : June 1997

## Projects

### National Level

Ongoing - 2 completed - 10

## Research Guidance

### Completed

Ph.D. - 12 M.Phil. - 22

### On Going

Ph.D. - 7

## Institutional Responsibilities

### Deputy Co-ordinator

Period :Mar 2019 to Till date

Nature of Responsibility :Maintenance and Monitoring of Common Instrumentation Centre

### Cheif warden

Period :Jun 2025 to Till date

Nature of Responsibility :Monitoring all the University Hostels

## Visits

1. Dept of Physics, National University of Singapore (NUS), Singapore. - 2013-08-08 )
2. Institute Charles Sadron , (ICS), Strasbourg, France. - 2005-10-01 )

## Collaborations

1. Dept of Chemistry, University of Manchester, Manchester, United Kingdom (UK). - 2006-08-16 )
2. Dept of Chemistry, University of Birmingham, Birmingham, United Kingdom (UK). - 2007-08-21 )
3. Dept of Physics/Centre for Nanoscience, University of Kassel, Kassel, Germany. - 2007-08-22 )
4. Institute of Physical Chemistry (IPC), NCSR "DEMOKRITOS", Athens, Greece. - 2006-11-01 )

## Publications

### International Journals - 182

**182. Synergistic Surface Modification of NiV LDH/rGO Composite by Plasma Treatment for Improved Near-Neutral Hydrogen Evolution Reaction**

Surfaces and Interfaces, 107852 (October 2025)

G Srividhya, A Lalithkrishnan, C Viswanathan, N Ponpandian



**181. Nanodiamond-embedded tungsten disulfide nanosheets for electrochemical detection of a bacterial metabolite pyocyanin**

Microchimica Acta 192 (9), 1-14 (September 2025)  
S Keerthana, KP Divya, A Rajapriya, C Viswanathan, N Ponpandian

**180. Dimensional Engineering of Ni-Mn MOF Composites: Unveiling the Electrochemical Influence of 1D MWCNT and 2D rGO for High-Performance Supercapacitors**

Electrochimica Acta, 147419 (September 2025)  
M Keerthana, C Viswanathan, N Ponpandian

**179. Revealing the role of the interlayer expansion of Ti3C2Tx and its effect after Bi2WO6 nanoparticles incorporation for energy storage application**

Electrochimica Acta, 14695 (July 2025)  
N Prabhakar, B Gurusami, P Nagamony, V Chinnuswamy,

**178. Exploring Sm2NiMnO6 as a lead-free absorber for perovskite solar cells: Insights from theoretical and experimental approaches**

Solar Energy Materials and Solar Cell (May 2025)  
T Sangavi, S Vasanth, C Viswanathan, N Ponpandian

**177. Oxide derivatives of metal-organic frameworks for water splitting: a concise review**

Sustainable Energy & Fuels (May 2025)  
M Abitha, C Viswanathan, N Ponpandian

**176. Achieving high specific capacitance via cobalt doping over Nb4C3Tx with boron nitride composite for supercapacitor application**

Fuel (April 2025)  
Nikhil Prabhakar, M Lakshmi Narayanan, Haidee Mana-ay, N Ponpandian, C Viswanathan, Pin-Yi Chen

**175. Deciphering oxidation mechanism of partially oxidized Ti3C2Tx MXene Flakes and its electrochemical behaviour towards Estradiol Detection**

Surfaces and Interfaces (April 2025)  
G Bhuvaneshwari, Ponpandian Nagamony, Viswanathan Chinnuswamy

**174. Effect on delamination of Nb4C3Tx MXene supported tungsten oxide for high-performance supercapacitor**

Journal of Energy Storage (September 2024)  
Nikhil Prabhakar, Amir Humayun, Ponpandian Nagamony, Umamaheswari Rajaji, Razan A Alshgari, Ting-Yu Liu, Viswanathan Chinnuswamy

**173. [HTML] from acs.org Full View Photoelectrochemical Water Splitting: A Visible-Light-Driven CoTiO3@g-C3N4-Based Photoanode Interface Follows the Type II Heterojunction Scheme**

Langmuir (July 2024)  
Sathiya Bama Sundararaj, Humayun Amir, Chinnuswamy Viswanathan, Selvaraju Thangavelu

**172. Pyridine appended pyrimidine bis hydrazone: Zn2+/ATP detection, bioimaging and functional properties of its dinuclear Zn (II) complex**

Talanta (June 2024)  
Ottor Anitha, Sandipan Ghorai, Thangaraj Thiruppathiraja, Humayun Amir, Abinayaselvi Murugan, Ramalingam Natarajan, Senthilkumar Lakshminpathi, Chinnuswamy Viswanathan, Mathivanan Jothi, Balasubramanian Murugesapandian

**171. Corn cob nanocellulose packaging for increasing the shelf life of food products**

International Journal of Biological Macromolecules (May 2024)  
Lakshmi Narayanan E. Cheran , C. Sharmila Rahale , P. Divyabharathi , C. Viswanathan

**170. Cu encrusted RF sputtered ZnO thin film based electrochemical immunosensor for highly sensitive detection of IL-6 in human blood serum**

Microchemical Journal (April 2024)  
M. Lakshmi Narayanan, K. Prabhu, N. Ponpandian, C. Viswanathan



**169. Non-enzymatic electrochemical detection of methylglyoxal in saliva using a polyaniline/nickel oxide nano-hybrid biosensor: A noninvasive approach for diabetes diagnosis**

Biosensors and Bioelectronics: X (April 2024)

Subramanian Vasanth, Humayun Amir, Nagomony Ponpandian, Chinnuswamy Viswanathan

**168. Synergizing experimental and theoretical insights: Unveiling the solar potential of La<sub>2</sub>NiMnO<sub>6</sub> double perovskite for enhanced efficiency and sustainability in photovoltaics**

Chemical Engineering Journal (April 2024)

T Sangavi, S Vasanth, C Viswanathan, N Ponpandian

**167. Nitrogen-enhanced carbon quantum dots mediated immunosensor for electrochemical detection of HER2 breast cancer biomarker**

Bioelectrochemistry (February 2024)

Humayun Amir, Vasanth Subramanian, Sundaram Sornambikai, Nagamony Ponpandian, Chinnusamy Viswanathan

**166. Characterization of vacuum evaporated In-Se thin films**

Ionics (February 2024)

C Viswanathan, S Gopal, D Mangalaraj, Sa K Narayandass, OF Caltun, G Rusu, Junsin Yi

**165. Investigation of optical and electronic characteristics of B<sup>?</sup> site arranged Cs<sub>2</sub>NaB<sup>?</sup>Cl<sub>5</sub> (B<sup>?</sup>= Ni, Mn, Fe) double perovskite: A theoretical and experimental study**

International Journal of Hydrogen Energy (January 2024)

T. Sangavi, S. Vasanth, C. Viswanathan, N. Ponpandian

**164. Cobalt-Iron Co-substituted NiV Layered Double Hydroxide as a High-Performance Electrocatalyst for Oxygen Evolution Reaction in a Neutral Saline Medium**

ACS Applied Energy Materials (December 2023)

G. Srividhya, T. Sangavi, C. Viswanathan, and N. Ponpandian

**163. The intriguing bifunctional effect of strong metal support interaction (SMSI) and hydrogen spillover effect (HSPE) for effective hydrogen evolution reaction**

Applied Catalysis B: Environmental (December 2023)

R Rajalakshmi, G Srividhya, C Viswanathan, N Ponpandian

**162. Modulating the electronic structure of MoS<sub>2</sub>/NiS<sub>2</sub> by functionalizing it over the N-doped reduced GO to improve the catalytic hydrogen evolution**

International Journal of Hydrogen Energy (December 2023)

R Murugan, A Rebekah, D Navadeepthy, C Viswanathan, N Ponpandian

**161. Novel Two-Dimensional MoC/MnSe Composites for Supercapacitors and Hydrogen Evolution Reaction**

Energy & Fuels (November 2023)

Murugesan Duraisamy, Viswanathan Chinnuswamy, Prakash Sengodu, Sannasi Veeman, and Srimala Sreekantan

**160. Synthesis effect on surface functionalized Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> MXene supported nickel oxide nanocomposites with enhanced specific capacity for supercapacitor application**

Journal of Energy Storage (November 2023)

Nikhil Prabhakar, S. Vasanth, N. Ponpandian, C. Viswanathan

**159. Functionalized Ketjenblack Infusion into Expanded Interlayer Spacing of Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub> MXene Nanosheets toward High Specific Capacitance Supercapacitors**

ACS Applied Electronic Materials (October 2023)

Prabhakar Nikhil, Sundaram Sornambikai, Gurusami Bhuvaneshwari, Nagamony Ponpandian, Chinnuswamy Viswanathan

**158. CRISPR based biosensing: An ultrasensitive theranostic tool for the detection of early Breast Cancer biomarkers – A mini review**

Biosensors and Bioelectronics: X (September 2023)

Sundaram Sornambikai, Karutha Pandian Divya, Subramanian Vasanth, Chinnuswamy Viswanathan, Nagamony Ponpandian



**157. Vertically pillared  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> nanorods on carbon yarn as a textile-based stable immunosensor electrode for selective electrochemical sensing of interleukin-6 cancer biomarker**

Sensors and Actuators A: Physical (August 2023)

K Prabhu, M Lakshminarayanan, G Mohankumar, N Ponpandian, C Viswanathan

**156. Interfacial charge separation of nickel tungstate anchored on g-C<sub>3</sub>N<sub>4</sub> heterojunction stimulates visible-light driven direct Z-scheme photoelectrochemical hydrogen evolution**

International Journal of Hydrogen Energy (August 2023)

Selvarj T Sathiya Bama Sundararaj , Humayun Amir , Viswanathan Chinnusamy

**155. Interfacing NiV layered double hydroxide with sulphur-doped g-C<sub>3</sub>N<sub>4</sub> as a novel electrocatalyst for enhanced hydrogen evolution reaction through Volmer–Heyrovský mechanism**

Energy Advances (July 2023)

G Srividhya, C Viswanathan, N Ponpandian

**154. Hydrogen spillover effect – harnessing hydrogen evolution reaction from diverse carbon-based supports with a tungsten oxide catalyst**

Journal of Materials Chemistry A (June 2023)

R Rajalakshmi, G Srividhya, Viswanathan Chinnuswamy, Nagamony Ponpandian

**153. Single-step synthesis of Mn<sub>3</sub>N<sub>2</sub>, Mn<sub>x</sub>ON and Mn<sub>3</sub>O<sub>4</sub> nanoparticles by thermal plasma arc discharge technique and their comparative study as electrode material for supercapacitor application**

Journal of Alloys and Compounds (May 2023)

L Kumaresan, KS Harshini, H Amir, G Shanmugavelayutham, C Viswanathan

**152. MXene supported biomimetic bilayer lipid membrane biosensor for zeptomole detection of BRCA1 gene**

Microchimica Acta (March 2023)

Karutha Pandian Divya, Shanmuganathan Keerthana, Chinnuswamy Viswanathan, Nagamony Ponpandian

**151. CeO<sub>2</sub> Nanoparticles Modified on Graphite Sheet Electrodes for Photoelectrochemical Tobacco**

**Wastewater Detection, Degradation, and Toxicity Measurement**

ACS Applied Nano Materials (March 2023)

Humayun Amir, Nikhil Prabhakar, Govindhan Thiruppathi, Palanisamy Sundararaj, Nagomony Ponpandian, Chinnuswamy Viswanathan

**150. Electrodeposition of SnO<sub>2</sub> nanostructures onto copper substrates and their electrochemical properties**

Materials Science and Technology (February 2023)

D Vasanth Raj, N Ponpandian, C Viswanathan

**149. Enhanced bifunctional aspects of oxygen vacancy rich cation substituted MnCo<sub>2</sub>O<sub>4</sub> intercalated with g-C<sub>3</sub>N<sub>4</sub> as an oxygen evolution and supercapacitor electrode**

International Journal of Hydrogen Energy (February 2023)

A Rebekah, H Amir, C Viswanathan, N Ponpandian

**148. Effect of gamma-ray irradiated reduced graphene oxide (rGO) on environmental health: An in-vitro and in-vivo studies**

Environmental Pollution (February 2023)

S Sivaselvam, A Mohankumar, R Narmadha, R Selvakumar, P Sundararaj, C Viswanathan, N Ponpandian

**147. Bimetallic Coreshell-Hemoglobin Complex Immobilized MXene Based Voltammetric Biosensor for the Electrochemical Detection of Acrylamide**

Journal of The Electrochemical Society (December 2022)

Karutha Pandian Divya, Shanmuganathan Keerthana, Chinnuswamy Viswanathan, Nagamony Ponpandian

**146. Hybrid nanostructures of WS<sub>2</sub> nanoflowers on N, B co-doped rGO for sensitive amperometric detection of Nilutamide**

Materials Today Chemistry (December 2022)

S Keerthana, A Rajapriya, C Viswanathan, N Ponpandian



**145. Electrochemical impedimetric immunosensor based on stabilized lipid bilayer–tethered WS<sub>2</sub>@MWCNT for the sensitive detection of carcinoembryonic antigen**

Microchimica Acta (November 2022)  
S Keerthana, KP Divya, A Rajapriya, C Viswanathan, N Ponpandian

**144. Fluorescence quenching mechanism of P-doped carbon quantum dots as fluorescent sensor for Cu<sup>2+</sup> ions**

Colloids and Surfaces A: Physicochemical and Engineering Aspects (November 2022)  
M Preethi, C Viswanathan, N Ponpandian

**143. Influence on effective and ineffective delamination of MXene (Ti<sub>3</sub>C<sub>2</sub>T<sub>x</sub>) by tightly anchoring tin oxide nanocomposite for boosting the specific capacitance of supercapacitor**

Journal of Alloys and Compounds (November 2022)  
Nikhil Prabhakar, A Rajapriya, N Ponpandian, C Viswanathan

**142. Novel palladium-decorated molybdenum carbide/polyaniline nanohybrid material as superior electrocatalyst for fuel cell application**

International Journal of Hydrogen Energy (October 2022)  
Murugesan Duraisamy, Elanchezian Mari, Viswanathan Chinnuswamy, Sellappan Senthilkumar, Yuan-Chung Lin, Vinoth kumar Ponnusamy

**141. Plasma assists titanium nitride and surface modified titanium nitride nanoparticles from titanium scraps for magnetic properties and supercapacitor applications**

Ceramics International (October 2022)  
L Kumaresan, H Amir, G Shanmugavelayutham, C Viswanathan

**140. Potato starch derived N-doped carbon quantum dots as a fluorescent sensing tool for ascorbic acid**

Journal of Photochemistry and Photobiology A: Chemistry (October 2022)  
M Preethi, R Murugan, C Viswanathan, N Ponpandian

**139. Three dimensional integrated architecture of SrFe LDH on hierarchical NiS framework as a flexible electrode for efficient energy storage and conversion applications**

Journal of Energy Storage (September 2022)  
A Rajapriya, S Keerthana, C Viswanathan, N Ponpandian

**138. Revealing the Role of Brønsted Basicity by the Electrocatalytic Reaction via Li Insertion in the MgFe<sub>2</sub>O<sub>4</sub> Lattice**

Journal of Physical Chemistry C (July 2022)  
Saravanakumar Tamilarasan, S. J. Sardhar Basha\*, Sathiya Bama Sundararaj, Humayun Amir, Viswanathan Chinnusamy, and Selvaraju Thangavelu

**137. systematic review on electrochemical biosensing of breast cancer miRNAs to develop alternative DCIS diagnostic tool**

ECS Sensors Plus (June 2022)  
S Sornambikai, H Amir, G Bhuvaneshwari, N Ponpandian, C Viswanathan

**136. Diatom Frustules: A Transducer Platform for Optical Detection of Molecules**

Diatom Microscopy (May 2022)  
S Viji, N Ponpandian, C Viswanathan

**135. Engineering the semiconducting CdS nanostructures by N-doped rGO for enhancing the adsorption sites: Promising electrocatalyst for hydrogen evolution reaction**

International Journal of Hydrogen Energy (April 2022)  
R Murugan, A Rebekah, JA Allen, M Preethi, C Viswanathan, N Ponpandian

**134. One-step preparation of N-doped grapheme quantum dots with high quantum yield for bioimaging and highly sensitive electrochemical detection of isoniazid**

Biomaterials Advances (April 2022)  
S Sivaselvam, C Viswanathan, N Ponpandian



**133. Waste cigarette butt derived Carbon/Magnesium oxide nanocomposite as potential adsorbent for the removal of ciprofloxacin from waste water**

Materials Letters (April 2022)  
S Sivaselvam, C Viswanathan, N Ponpandian

**132. A metal-free, dual catalyst for the removal of Rhodamine B using novel carbon quantum dots from muskmelon peel under sunlight and ultrasonication: A green way to clean the environment**

Journal of Photochemistry and Photobiology A: Chemistry (April 2022)  
M Preethi, C Viswanathan, N Ponpandian

**131. SnO<sub>2</sub> nanoflakes deposited carbon yarn-based electrochemical immunosensor towards cortisol measurement**

Journal of Nanostructure in Chemistry (March 2022)  
sekar sriramprabha pandiraj ponpandian viswanathan

**130. TiO<sub>2</sub> anchored carbon fibers as non-invasive electrochemical sensor platform for the cortisol detection**

Materials Letters (February 2022)  
Sekar Madhu, Sriramprabha Ramasamy, Pandiraj Manickam, Ponpandian Nagamony, Viswanathan Chinnuswamy

**129. Evolution of intrinsic 1-3D WO<sub>3</sub> nanostructures: Tailoring their phase structure and morphology for robust hydrogen evolution reaction**

Chemical Engineering Journal (January 2022)  
R Rajalakshmi, A Rebekah, C Viswanathan, N Ponpandian

**128. Enzyme like-colorimetric sensing of H<sub>2</sub>O<sub>2</sub> based on intrinsic peroxidase mimic activity of WS<sub>2</sub> nanosheets anchored reduced graphene oxide**

Journal of Alloys and Compounds (December 2021)  
S Keerthana, A Rajapriya, C Viswanathan, N Ponpandian

**127. An environment-friendly route to explore the carbon quantum dots derived from curry berries (Murrayakoenigii L) as a fluorescent biosensor for detecting vitamin B12**

Materials Letters (November 2021)  
M Preethi, C Viswanathan, N Ponpandian

**126. Enriched oxygen vacancy promoted heteroatoms (B, P, N, and S) doped CeO<sub>2</sub>: Challenging electrocatalysts for oxygen evolution reaction (OER) in alkaline medium**

International Journal of Hydrogen Energy (October 2021)  
A Rajapriya, S Keerthana, A Rebekah, C Viswanathan, N Ponpandian

**125. ZnO-based electrochemical sensors for highly sensitive and selective detection of gallic acid at impact of substrate temperature**

Applied Physics A (October 2021)  
H Amir, D Murugesan, N Ponpandian, C Viswanathan

**124. Development of RF magnetron-sputtered molybdenum oxide-modified carbon cloth thin film as a ferulic acid sensor**

Applied Physics A (October 2021)  
D Murugesan, H Amir, N Ponpandian, C Viswanathan

**123. An electrochemical dopamine sensor based on RF magnetron sputtered TiO<sub>2</sub>/SS thin film electrode**

Materials Letters (October 2021)  
H Amir, N Ponpandian, C Viswanathan

**122. A green path to extract carbon quantum dots by coconut water: Another fluorescent probe towards Fe<sup>3+</sup> ions**

Particuology (October 2021)  
Manoharan Preethi, Chinnuswamy Viswanathan, Nagamony Ponpandian



**121. Sm 3+ rare-earth doping in non-noble metal oxide–WO<sub>3</sub> grown on carbon cloth fibre as a bifunctional electrocatalyst for high-performance water electrolysis**

Sustainable Energy & Fuels (October 2021)  
R Rajalakshmi, C Viswanathan, NJSE Ponpandian

**120. Investigation of morphologically tuned Sb<sub>2</sub>S<sub>3</sub> nanostructures as an effective electrocatalyst for hydrogen evolution reaction**

Colloids and Surfaces A: Physicochemical and Engineering Aspects (August 2021)  
R Murugan, A Rebekah, JA Allen, C Viswanathan, N Ponpandian

**119. Langmuir-Blodgett deposited Na<sub>3</sub>V<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub>-MnO<sub>2</sub> nanocomposite thin film electrodes for hybrid energy storage application**

Materials Science and Engineering: B (August 2021)  
Muthukumar Divagar, Nagamony Ponpandian, Chinnuswamy Viswanathan

**118. Synergetic effect of hierarchical zinc oxide (ZnO) nanostructure with enhanced adsorption and antibacterial action towards waterborne detrimental contaminants**

Applied Nanoscience (July 2021)  
Allen Joseph Anthuvan, Karthick Kumaravel, Viswanathan Chinnuswamy

**117. Rapid one-pot synthesis of PAM-GO-Ag nanocomposite hydrogel by gamma-ray irradiation for remediation of environment pollutants and pathogen inactivation**

Chemosphere (July 2021)  
S Sivaselvam, R Selvakumar, C Viswanathan, N Ponpandian

**116. Boosting the kinetics of oxygen and hydrogen evolution in alkaline water splitting using nickel ferrite/N-graphene nanocomposite as a bifunctional electrocatalyst**

International Journal of Hydrogen Energy (June 2021)  
D Navadeepthy, A Rebekah, C Viswanathan, N Ponpandian

**115. WS<sub>2</sub> hierarchical nanoflowers on rGO with enhanced electrochemical performance for sensitive and selective detection of mesalazine in real sample analysis**

Colloids and Surfaces A: Physicochemical and Engineering Aspects (June 2021)  
S Keerthana, A Rajapriya, S Amirthapandian, C Viswanathan, N Ponpandian

**114. Highly stable and selective LaNiO<sub>3</sub> nanostructures modified glassy carbon electrode for simultaneous electrochemical detection of neurotransmitting compounds**

Colloids and Surfaces A: Physicochemical and Engineering Aspects (June 2021)  
S Priyatharshni, D Navadeepthy, G Srividhya, C Viswanathan, N Ponpandian

**113. Removal of 1-naphthylamine using magnetic graphene and magnetic graphene oxide functionalized with Chitosan**

Environmental Nanotechnology, Monitoring & Management (May 2021)  
A Rebekah, D Navadeepthy, G Bharath, C Viswanathan, N Ponpandian

**112. Correction: NiCo<sub>2</sub>O<sub>4</sub> nanoparticles inlaid on sulphur and nitrogen doped and co-doped rGO sheets as efficient electrocatalysts for the oxygen evolution and methanol oxidation reactions**

Nanoscale Advances (May 2021)  
A Rebekah, C Viswanathan, N Ponpandian

**111. Direct Growth of MoS<sub>2</sub> Hierarchical Nanoflowers on Electrospun Carbon Nanofibers as an electrode material for High-Performance Supercapacitors**

Journal of Alloys and Compounds (April 2021)  
A Rajapriya, S Keerthana, C Viswanathan, N Ponpandian

**110. Enhanced electrochemical activities of morphologically tuned MnFe<sub>2</sub>O<sub>4</sub> nanoneedles and nanoparticles integrated on reduced graphene oxide for highly efficient supercapacitor electrodes**

Nanoscale Advances (March 2021)  
R Rajalakshmi, KP Remya, C Viswanathan, N Ponpandian



**109. Magnetic nanoparticle-decorated graphene oxide-chitosan composite as an efficient nanocarrier for protein delivery**

Colloids and Surfaces A: Physicochemical and Engineering Aspects (February 2021)  
A Rebekah, S Sivaselvam, C Viswanathan, D Prabhu, Ravi Gautam, N Ponpandian

**108. NiCo 2 O 4 nanoparticles inlaid on sulphur and nitrogen doped and co-doped rGO sheets as efficient electrocatalysts for the oxygen evolution and methanol oxidation reactions**

Nanoscale Advances (February 2021)  
C Viswanathan, N Ponpandian

**107. Fe<sub>2</sub>O<sub>3</sub>/polyaniline supramolecular nanocomposite: A receptor free sensor platform for the quantitative determination of serum creatinine**

Analytica Chimica Acta (November 2020)  
R Sriramprabha, M Sekar, R Revathi, C Viswanathan, J Wilson

**106. Substrate Temperature Induced Enhanced Selectivity and Sensitivity for Nanomolar Gallic Acid Detection on RF Magnetron Sputtered ZnO/GS Thin Film Electrode**

Sensors and Actuators A: Physical (November 2020)  
P. Sivasakthi, H Amir, Sornambikai S, N Ponpandian, C Viswanathan

**105. Enhanced removal of emerging pharmaceutical contaminant ciprofloxacin and pathogen inactivation using morphologically tuned MgO nanostructures**

Journal of Environmental Chemical Engineering (October 2020)  
S Sivaselvam, P Premasudha, C Viswanathan, N Ponpandian

**104. Morphologically tuned LaMnO<sub>3</sub> as an efficient nanocatalyst for the removal of organic dye from aqueous solution under sunlight**

Journal of Environmental Chemical Engineering (October 2020)  
S Priyatharshni, S Rajesh Kumar, C Viswanathan, N Ponpandian

**103. Magnetic graphene/chitosan nanocomposite: A promising nano-adsorbent for the removal of 2-naphthol from aqueous solution and their kinetic studies**

International Journal of Biological Macromolecules (September 2020)  
A Rebekah, G Bharath, Mu Naushad, C Viswanathan, N Ponpandian

**102. Engineering the surface of graphene oxide with bovine serum albumin for improved biocompatibility in Caenorhabditis elegans**

Nanoscale advances (September 2020)  
S Sivaselvam, A Mohankumar, G Thiruppathi, P Sundararaj, C Viswanathan, N Ponpandian

**101. Effect of CuO, MoO<sub>3</sub> and ZnO nanomaterial coated absorbers for clean water production**

SN Applied Science (September 2020)  
T Arunkumar, D Murugesan, C Viswanathan, G Neri, David Denkenberger

**100. <https://doi.org/10.1016/j.ijbiomac.2020.05.113>**

Materials & Design (July 2020)  
KP Remya, D Prabhu, R Justin Joseyphus, A Chandra Bose, C Viswanathan, N Ponpandian

**99. A nanocomposite of NiFe 2 O 4–PANI as a duo active electrocatalyst toward the sensitive colorimetric and electrochemical sensing of ascorbic acid**

Nanoscale Advances (June 2020)  
D Navadeepthy, M Thangapandian, C Viswanathan, N Ponpandian

**98. Zn-substituted MnCo<sub>2</sub>O<sub>4</sub> nanostructure anchored over rGO for boosting the electrocatalytic performance towards methanol oxidation and oxygen evolution reaction (OER)**

International Journal of Hydrogen Energy (May 2020)  
N. Ponpandian A. Rebekah, Sengeni Anantharaj, C. Viswanathan



## 97. Towards Wearable Sensor Platforms for the Electrochemical Detection of Cortisol

Journal of The Electrochemical Society (March 2020)

M Sekar, R Sriramprabha, Praveen Kumar Sekhar, Shekhar Bhansali, N Ponpandian, Manickam Pandiaraj, C Viswanathan

## 96. Mesoporous nickel oxide nanostructures: influences of crystalline defects and morphological features on mediator-free electrochemical monosaccharide sensor application

Nanotechnology (March 2020)

R Sriramprabha, M Sekar, J Wilson, N Ponpandian, C Viswanathan

## 95. Effect of cation substitution in MnCo<sub>2</sub>O<sub>4</sub> spinel anchored over rGO for enhancing the electrocatalytic activity towards oxygen evolution reaction (OER)

International Journal of Hydrogen Energy (February 2020)

A Rebekah, E Ashok Kumar, C Viswanathan, N Ponpandian

## 94. ZnO nanorods integrated flexible carbon fibers for sweat cortisol detection

ACS Applied Electronic Materials (January 2020)

Sekar Madhu, Allen Joseph Anthuvan, Sriramprabha Ramasamy, Pandiaraj Manickam, Shekhar Bhansali, Ponpandian Nagamony and Viswanathan Chinnuswamy

## 93. Comparative Study of Biological (Phoenix loureiroi Fruit) and Chemical Synthesis of Chitosan-Encapsulated Zinc Oxide Nanoparticles and their Biological Properties

Arabian Journal for Science and Engineering (September 2019)

Narendra Narain Murugan Rajan Allen Joseph Anthuvan Kasipandi Muniyandi Naveen Kumar Kalagatur Saravanan ShanmugamSaikumar Sathyanarayanan Viswanathan Chinnuswamy Parimelazhagan Thangaraj

## 92. MnCo<sub>2</sub>O<sub>4</sub>-rGO hybrid magnetic nanocomposite modified glassy carbon electrode for sensitive detection of L-tryptophan

Journal of The Electrochemical Society (June 2019)

A Rebekah, Thangavelu Kokulnathan, Tzyy-Jiann Wang, C Viswanathan, N Ponpandian

## 91. Two dimensional $\gamma$ -MoO<sub>3</sub> nanosheets decorated carbon cloth electrodes for high-performance supercapacitors

Colloids and Surfaces A: Physicochemical and Engineering Aspects (May 2019)

D Murugesan, S Prakash, N Ponpandian, P Manisankar, C Viswanathan

## 90. Synthesis and Characterization of Hexagonal Prism like Zinc Oxide for Electrochemical Determination of Gallic Acid in Wine Samples

International Journal of ELECTROCHEMICAL SCIENCE (May 2019)

Wen-Han Chang Kesavan Ganesh , Allen Joseph Anthuvan , Shen-Ming Chen , Kumuthini Rajendran , Tse-Wei Chen, Viswanathan Chinnuswamy , Shih-Yi Lee

## 89. $\gamma$ -MoO<sub>3</sub> nanostructure on carbon cloth substrate for dopamine detection

Nanotechnology (April 2019)

M. Murugesan, K. Movlaee, Giovanni Neri, Ponpandian N, C Viswanathan

## 88. Nitrogen doped carbon nanofibers loaded with hierarchical vanadium tetrasulfide for the voltammetric detection of the non-steroidal anti-prostate cancer drug nilutamide

Microchimica Acta (March 2019)

Kumuthini Rajendran, Thangavelu Kokulnathan, Shen-Ming Chen, Joseph Anthuvan Allen, Chinnuswamy Viswanathan, Helen Annal Therese

## 87. Effect of nano-coated CuO absorbers with PVA sponges in solar water desalting system

Applied Thermal Engineering (February 2019)

T Arunkumar, D Murugesan, Kaiwalya Raj, David Denkenberger, C Viswanathan, R Velraj

## 86. Design and fabrication of MEMS based intracranial pressure sensor for neurons study

Vacuum (February 2019)

N Manikandan, S Muruganand, M Divagar, C Viswanathan



**85. Carbon fiber based electrochemical sensor for sweat cortisol measurement**

Scientific reports (January 2019)

M Sekar, M Pandiaraj, S Bhansali, N Ponpandian, C Viswanathan

**84. Circumferential growth of zinc oxide nanostructure anchored over carbon fabric and its photocatalytic performance towards p-nitrophenol**

Superlattices and Microstructures (January 2019)

Joseph Anthuvan Allen, Duraisamy Murugesan, Chinnuswamy Viswanathan

**83. Surface Imprinted Ag Decorated MnO<sub>2</sub> Thin Film Electrodes for the Synergic Electrochemical Detection of Bacterial Pathogens**

Journal of The Electrochemical Society (January 2019)

M Divagar, R Sriramprabha, S Sornambikai, N Ponpandian, C Viswanathan

**82. Self-assembly of nanostructured hydroxyapatite spheres for photodegradation of methylene blue dye**

Materials Today: Proceedings (January 2019)

I Reeta Mary, R Leethiyal, P Sekar, D Mangalaraj, C Viswanathan, N Ponpandian

**81. Effect and Safety Evaluation of Hydrothermal Synthesis on Graphene and GO/MgO Nanocomposite for Visible light Photocatalytic Activity**

International Journal of Contemporary Applied Researches (November 2018)

S Krishna Moorthy, D Murugesan, N Ponpandian, C Viswanathan

**80. N-Doped graphene with anchored ZnFe<sub>2</sub>O<sub>4</sub> nanostructures as an anode for lithium ion batteries with enhanced reversible capacity and cyclic performance**

New Journal of Chemistry (September 2018)

Dhandapani Navadeepthy, Subramani Bhuvaneshwari, Raju Prakash, Chinnusamy Viswanathan, Nagamony Ponpandian

**79. Tin Oxide/Reduced Graphene Oxide Nanocomposite-Modified Electrode for Selective and Sensitive Detection of Riboflavin**

Journal of The Electrochemical Society (August 2018)

R Sriramprabha, M Divagar, N Ponpandian, C Viswanathan

**78. Detection of typhoid fever by diatom-based optical biosensor**

Environmental Science and Pollution Research (July 2018)

Viji Selvaraj, Anbazhagi Muthukumar, Ponpandian Nagamony, C Viswanathan

**77. Amine-functionalized diatom frustules: a platform for specific and sensitive detection of nitroaromatic explosive derivative**

Environmental Science and Pollution Research (July 2018)

Viji Selvaraj, Neethi Thomas, Allen Joseph Anthuvan, Ponpandian Nagamony, C Viswanathan

**76. Surfactant-free solvothermal synthesis of Hydroxyapatite nested bundles for the effective photodegradation of cationic dyes**

Journal of Physics and Chemistry of Solids (May 2018)

I Reeta Mary, S Sonia, D Navadeepthy, D Mangalaraj, C Viswanathan, N Ponpandian

**75. Self-assembled SnO<sub>2</sub>/reduced graphene oxide nanocomposites via Langmuir-Blodgett technique as anode materials for Li-ion batteries**

Materials Letters (May 2018)

Sriramprabha Ramasamy, Ponpandian Nagamony, C Viswanathan

**74. Trace level electrochemical determination of the neurotransmitter dopamine in biological samples based on iron oxide nanoparticle decorated graphene sheets**

Inorganic Chemistry Frontiers (January 2018)

Thangavelu Kokulnathan, Allen Joseph Anthuvan, Shen-Ming Chen, C Viswanathan, Krishna Kadirvelu



## **73. Nanostructured SnO<sub>2</sub> integrated conductive fabrics as binder-free electrode for neurotransmitter detection**

Sensors and Actuators A: Physical (January 2018)

Sekar Madhu, Pandiaraj Manickam, Michelle Pierre, Shekhar Bhansali, Ponpandian Nagamony, C Viswanathan

## **72. Facile synthesis of monodispersed 3D hierarchical Fe<sub>3</sub>O<sub>4</sub> nanostructures decorated r-GO as the negative electrodes for Li-ion batteries**

Materials Research Bulletin (January 2018)

S Rajesh Kumar, Jong Guk Kim, C Viswanathan, Won Bae Kim, R Kalai Selvan, N Ponpandian

## **71. N-doped Graphene/ZnFe<sub>2</sub>O<sub>4</sub>: a novel nanocomposite for intrinsic peroxidase based sensing of H<sub>2</sub>O<sub>2</sub>**

Materials Research Bulletin (November 2017)

D Navadeepthy, A Rebekah, C Viswanathan, N Ponpandian

## **70. Selective and low potential electrocatalytic oxidation and sensing of L-cysteine using metal impurity containing carbon black modified electrode**

Analytical Methods (November 2017)

Sundaram Sornambikai, Mohammed Rafiq Abdul Kadir, Annamalai Senthil Kumar, Nagamony Ponpandian, Chinnuswamy Viswanathan

## **69. Textile Fiber Electrode to Monitor Uric Acid as a Marker for Assessing Wound Chronicity**

ECS Transactions (October 2017)

Michelle Pierre, Sohini RoyChoudhury, Yogeswaran Umasankar, Pandiaraj Manickam, Sekar Madhu, Renny E Fernandez, Viswanathan Chinnuswamy, Norman Munroe, Shekhar Bhansali

## **68. Facile approach for synthesis of GO/ZnO nanocomposite for highly efficient photocatalytic degradation of organic dyes under visible light**

Nano Hybrids and Composites (September 2017)

S Krishna Moorthy, C Viswanathan, N Ponpandian

## **67. Fabric based wearable biosensor for continuous monitoring of steroids**

ECS Transactions (July 2017)

Pandiaraj Manickam, Sekar Madhu, Renny Edwin Fernandez, C Viswanathan, Shekhar Bhansali

## **66. LaCoO<sub>3</sub> nanostructures modified glassy carbon electrode for simultaneous electrochemical detection of dopamine, ascorbic acid and uric acid**

Journal of The Electrochemical Society (February 2017)

S Priyatharshni, A Tamilselvan, C Viswanathan, N Ponpandian

## **65. Effect of Yb substitution on room temperature magnetic and dielectric properties of bismuth ferrite nanoparticles**

Journal of Applied Physics (October 2016)

KP Remya, S Amirthapandian, M Manivel Raja, C Viswanathan, N Ponpandian

## **64. Electrochemical simultaneous detection of dopamine, ascorbic acid and uric acid using LaMnO<sub>3</sub> nanostructures**

Journal of The Electrochemical Society (June 2016)

S Priyatharshni, M Divagar, C Viswanathan, D Mangalaraj, N Ponpandian

## **63. Exchange spring magnetic behavior in BaFe<sub>12</sub>O<sub>19</sub>/Fe<sub>3</sub>O<sub>4</sub> nanocomposites**

Journal of Magnetism and Magnetic Materials (May 2016)

KP Remya, D Prabhu, S Amirthapandian, C Viswanathan, N Ponpandian

## **62. Influence of supporting electrolytes on the structure of electrodeposited SnO<sub>2</sub> thin films for energy storage applications**

Ionics (April 2016)

D Vasanth Raj, N Ponpandian, C Viswanathan



## **61. Green Synthesis and Characterization of Bioceramic Hydroxyapatite (HAP) Nanosheets and Its Cellular Study**

Advanced Science, Engineering and Medicine (March 2016)  
Murugesan Manoj, Ramesh Subbiah, Palaniappan Meena, Devanesan Mangalaraj, Nagamony Ponpandian, Chinnuswamy Viswanathan, Kwideok Park

## **60. Novel multiform morphologies of hydroxyapatite: Synthesis and growth mechanism**

Applied Surface Science (January 2016)  
I Reeta Mary, S Sonia, S Viji, D Mangalaraj, C Viswanathan, N Ponpandian

## **59. Synthesis and characterization of MgO nanoparticles by Neem leaves through green method**

Materials Today: Proceedings (November 2015)  
S Krishna Moorthy, CH Ashok, K Venkateswara Rao, C Viswanathan

## **58. Superhydrophobic Ag decorated ZnO nanostructured thin film as effective surface enhanced Raman scattering substrates**

Applied Surface Science (November 2015)  
Naidu Dhanpal Jayram, S Sonia, S Poongodi, P Suresh Kumar, Yoshitake Masuda, D Mangalaraj, N Ponpandian, C Viswanathan

## **57. Formulation of SnO<sub>2</sub>/graphene nanocomposite modified electrode for synergistic electrochemical detection of dopamine**

Advanced Materials Letters (November 2015)  
R Sriramprabha, M Divagar, D Mangalaraj, N Ponpandian, C Viswanathan

## **56. Synthesis of hierarchical WO<sub>3</sub> nanostructured thin films with enhanced electrochromic performance for switchable smart windows**

RSC advances (October 2015)  
S Poongodi, P Suresh Kumar, Yoshitake Masuda, D Mangalaraj, N Ponpandian, C Viswanathan, Seeram Ramakrishna

## **55. Highly selective and sensitive electrochemical detection of dopamine with hydrothermally prepared ?-MnO<sub>2</sub> nanostructures**

Materials Science in Semiconductor Processing (August 2015)  
Muthukumar Divagar, Ramasamy Sriramprabha, Nagamony Ponpandian, Chinnuswamy Viswanathan

## **54. Electrodeposition of macroporous SnO<sub>2</sub> thin films and its electrochemical applications**

Materials Focus (June 2015)  
D Vasanth Raj, N Ponpandian, D Mangalaraj, C Viswanathan

## **53. Core shell hydroxyapatite/Mg nanostructures: surfactant free facile synthesis, characterization and their in-vitro cell viability studies against leukaemia cancer cells (K562)**

RSC Advances (May 2015)  
Manoj Murugesan, Mangalaraj Devanesan, Ponpandian Nagamony, Viswanathan Chinnuswamy

## **52. Highly monodispersed Ag embedded SiO<sub>2</sub> nanostructured thin film for sensitive SERS substrate: growth, characterization and detection of dye molecules**

RSC advances (May 2015)  
Naidu Dhanpal Jayram, S Sonia, Palaniswamy Suresh Kumar, L Marimuthu, Yoshitake Masuda, D Mangalaraj, N Ponpandian, C Viswanathan, Seeram Ramakrishna

## **51. Highly monodispersed Ag embedded SiO<sub>2</sub> nanostructured thin film for sensitive SERS substrate: growth, characterization and detection of dye molecules**

RSC advances (May 2015)  
Naidu Dhanpal Jayram, S Sonia, Palaniswamy Suresh Kumar, L Marimuthu, Yoshitake Masuda, D Mangalaraj, N Ponpandian, C Viswanathan, Seeram Ramakrishna

## **50. Hydrothermal synthesis of novel Zn doped CuO nanoflowers as an efficient photodegradation material for textile dyes**

Materials Letters (April 2015)  
Suganthiraja Sonia, I Jose Annsi, P Suresh Kumar, Devanesan Mangalaraj, Chinnuswamy Viswanathan, Nagamony Ponpandian



**49. Hydrothermal synthesis of highly stable CuO nanostructures for efficient photocatalytic degradation of organic dyes**

Materials Science in Semiconductor Processing (February 2015)  
S Sonia, S Poongodi, P Suresh Kumar, D Mangalaraj, N Ponpandian, C Viswanathan

**48. Improved microbial growth inhibition activity of bio-surfactant induced Ag-TiO<sub>2</sub> core shell nanoparticles**

Applied Surface Science (February 2015)  
D Nithyadevi, P Suresh Kumar, D Mangalaraj, N Ponpandian, C Viswanathan, P Meena

**47. Influence of Growth Parameters on the Formation of Hydroxyapatite (HAp) Nanostructures and Their Cell**

**Viability Studies**

Nanobiomedicine open access (January 2015)  
Murugesan Manoj, Ramesh Subbiah, Devanesan Mangalaraj, Nagamony Ponpandian, Chinnuswamy Viswanathan, Kwideok Park

**46. [PDF] from rsc.org Edge-carboxylated graphene anchoring magnetite-hydroxyapatite nanocomposite for an efficient 4-nitrophenol sensor**

RSC Advances (January 2015)  
G Bharath, VEDIAPPAN VEERAMANI, Shen-Ming Chen, Rajesh Madhu, M Manivel Raja, A Balamurugan, D Mangalaraj, C Viswanathan, N Ponpandian

**45. Enzymatic electrochemical glucose biosensors by mesoporous 1D hydroxyapatite-on-2D reduced**

**graphene oxide**

Journal of Materials Chemistry B (December 2014)  
G Bharath, Rajesh Madhu, Shen-Ming Chen, VEDIAPPAN VEERAMANI, A Balamurugan, D Mangalaraj, C Viswanathan, N Ponpandian

**44. Quercetin conjugated superparamagnetic magnetite nanoparticles for in-vitro analysis of breast cancer cell lines for chemotherapy applications**

Journal of colloid and interface science (December 2014)  
S Rajesh Kumar, S Priyatharshni, VN Babu, D Mangalaraj, C Viswanathan, S Kannan, N Ponpandian

**43. Facile in situ growth of Fe<sub>3</sub>O<sub>4</sub> nanoparticles on hydroxyapatite nanorods for pH dependent adsorption and controlled release of proteins**

RSC Advances (October 2014)  
G Bharath, D Prabhu, D Mangalaraj, C Viswanathan, N Ponpandian

**42. Diatom-based label-free optical biosensor for biomolecules**

Applied biochemistry and biotechnology (October 2014)  
S Viji, M Anbazhagi, N Ponpandian, D Mangalaraj, S Jeyanthi, P Santhanam, A Shenbaga Devi, C Viswanathan

**41. Electrochemical behavior of nanostructured SnO<sub>2</sub> thin films in aqueous electrolyte solutions**

Materials science in semiconductor processing (October 2014)  
D Vasanth Raj, N Ponpandian, D Mangalaraj, C Viswanathan

**40. Effect of catalyst concentration on the synthesis of MWCNT by single step pyrolysis**

Advanced Materials Letters (September 2014)  
B V Mohan Kumar, Rajesh Thomas, Ambily Mathew, G Mohan Rao, D Mangalaraj, N Ponpandian, C Viswanathan

**39. Shape evolution and size controlled synthesis of mesoporous hydroxyapatite nanostructures and their morphology dependent Pb (II) removal from waste water**

Rsc Advances (August 2014)  
G Bharath, A Jagadeesh Kumar, K Karthick, D Mangalaraj, C Viswanathan, N Ponpandian

**38. An in vitro analysis of H1N1 viral inhibition using polymer coated superparamagnetic Fe<sub>3</sub>O<sub>4</sub> nanoparticles**

RSC Advances (March 2014)  
S Rajesh Kumar, M Paulpandi, M ManivelRaja, D Mangalaraj, C Viswanathan, S Kannan, N Ponpandian

**37. Rheological behavior?Electrical and thermal properties of polypyrrole/graphene oxide nanocomposites**

Journal of Applied Polymer Science (March 2014)  
P Manivel, S Kanagaraj, A Balamurugan, N Ponpandian, D Mangalaraj, C Viswanathan



## **36. Electrochemical performance of SnO<sub>2</sub> hexagonal nanoplates**

Ionics (March 2014)

D Vasanth Raj, N Ponpandian, D Mangalaraj, A Balamurugan, C Viswanathan

## **35. Effect of NaOH concentration on structural, surface and antibacterial activity of CuO nanorods**

### **synthesized by direct sonochemical method**

Superlattices and Microstructures (February 2014)

S Sonia, Naidu Dhanpal Jayram, P Suresh Kumar, D Mangalaraj, N Ponpandian, C Viswanathan

## **34. Rheological behavior and electrical properties of polypyrrole/thermally reduced graphene oxide**

### **nanocomposite**

Colloids and Surfaces A: Physicochemical and Engineering Aspects (January 2014)

P Manivel, S Kanagaraj, A Balamurugan, N Ponpandian, D Mangalaraj, C Viswanathan

## **33. Hydrophilic polymer coated monodispersed Fe<sub>3</sub>O<sub>4</sub> nanostructures and their cytotoxicity**

Materials Research Express (January 2014)

S Rajesh Kumar, Lucafo Marianna, Sava Gianni, A Joseph Nathanael, SI Hong, Tae Hwan Oh, D Mangalaraj, C Viswanathan, N Ponpandian

## **32. Surfactant free solvothermal synthesis of monodispersed 3D hierarchical Fe<sub>3</sub>O<sub>4</sub> microspheres**

Materials Letters (November 2013)

S Rajesh Kumar, M Manivel Raja, D Mangalaraj, C Viswanathan, N Ponpandian

## **31. Influence of growth and photocatalytic properties of copper selenide (CuSe) nanoparticles using reflux**

### **condensation method**

Applied surface science (October 2013)

S Sonia, P Suresh Kumar, D Mangalaraj, N Ponpandian, C Viswanathan

## **30. Enhanced photocatalytic performance of novel self-assembled floral $\gamma$ -Ga<sub>2</sub>O<sub>3</sub> nanorods**

Current Applied Physics (June 2013)

K Girija, S Thirumalairajan, Astam K Patra, D Mangalaraj, N Ponpandian, C Viswanathan

## **29. Synthesis, morphology, optical and photocatalytic performance of nanostructured $\gamma$ -Ga<sub>2</sub>O<sub>3</sub>**

Materials Research Bulletin (June 2013)

K Girija, S Thirumalairajan, GS Avadhani, D Mangalaraj, N Ponpandian, C Viswanathan

## **28. Electrodeposition of SnO<sub>2</sub> nanoneedles on anodized copper substrates and its electrochemical**

### **performance**

AIP Conference Proceedings (June 2013)

D Vasanth Raj, N Ponpandian, D Mangalaraj, C Viswanathan

## **27. A comparative analysis of green synthesis approach starch capped metal oxides (ZnO & CdO)**

### **nanoparticles and its bacterial activity**

AIP Conference Proceedings (June 2013)

K Vidhya, VP Devarajan, C Viswanathan, D Nataraj, G Bhoopathi

## **26. Effect of annealing and electrochemical properties of sol-gel dip coated nanocrystalline V<sub>2</sub>O<sub>5</sub> thin films**

Materials Science in Semiconductor Processing (April 2013)

D Vasanth Raj, N Ponpandian, D Mangalaraj, C Viswanathan

## **25. Shape evolution of perovskite LaFeO<sub>3</sub> nanostructures: a systematic investigation of growth mechanism,**

### **properties and morphology dependent photocatalytic activities**

RSC advances (March 2013)

S Thirumalairajan, K Girija, Neha Y Hebalkar, D Mangalaraj, C Viswanathan, N Ponpandian

## **24. Conducting polyaniline-graphene oxide fibrous nanocomposites: preparation, characterization and**

### **simultaneous electrochemical detection of ascorbic acid, dopamine and uric acid**

Rsc Advances (March 2013)

P Manivel, M Dhakshnamoorthy, A Balamurugan, N Ponpandian, D Mangalaraj, C Viswanathan



## 23. Optical and electrochemical studies of polyaniline/SnO<sub>2</sub> fibrous nanocomposites

Materials Research Bulletin (February 2013)

P Manivel, S Ramakrishnan, Nikhil K Kothurkar, A Balamurugan, N Ponpandian, D Mangalaraj, C Viswanathan

## 22. Organic additives assisted synthesis of mesoporous $\gamma$ -Ga<sub>2</sub>O<sub>3</sub> nanostructures for photocatalytic dye degradation

Semiconductor science and technology (February 2013)

K Girija, S Thirumalairajan, Astam K Patra, D Mangalaraj, N Ponpandian, C Viswanathan

## 21. Novel Synthesis of LaFeO<sub>3</sub> Nanostructure Dendrites: A Systematic Investigation of Growth Mechanism, Properties, and Biosensing for Highly Selective

Crystal growth & design (November 2012)

S Thirumalairajan, K Girija, V Ganesh, D Mangalaraj, C Viswanathan, N Ponpandian

## 20. Controlled synthesis of perovskite LaFeO<sub>3</sub> microsphere composed of nanoparticles via self-assembly process and their associated photocatalytic activity

Chemical Engineering Journal (October 2012)

S Thirumalairajan, K Girija, I Ganesh, D Mangalaraj, C Viswanathan, A Balamurugan, N Ponpandian

## 19. Novel synthesis of silver nanoparticles using 2, 3, 5, 6-tetrakis-(morpholinomethyl) hydroquinone as reducing agent

Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy (September 2012)

P Manivel, A Balamurugan, N Ponpandian, D Mangalaraj, C Viswanathan

## 18. Graphene nanosheets by low-temperature thermal reduction of graphene oxide using RF-CVD

Journal of Experimental Nanoscience (June 2012)

P Manivel, S Ramakrishnan, Nikhil K Kothurkar, N Ponpandian, D Mangalaraj, C Viswanathan

## 17. Electronic transport between Au surface and scanning tunnelling microscope tip via a multipodal cyclodextrin host-metallo?guest supramolecular system

Journal of Physical Organic Chemistry (March 2012)

Nikos Glezos Lasse E. P. Kyllönen, Viswanathan Chinuswamy, Davide Maffeo, Evangelos T. Kefalas, Johanna M. Haider, Zoe Pikramenou, Irene M. Mavridis, Konstantina Yannakopoulou

## 16. Self assembly of Co doped CeO<sub>2</sub> microspheres from nanocubes by hydrothermal method and their photodegradation activity on AO<sub>7</sub>

Materials Letters (November 2011)

N Sabari Arul, D Mangalaraj, Pao Chi Chen, N Ponpandian, C Viswanathan

## 15. Strong quantum confinement effect in nanocrystalline cerium oxide

Materials Letters (September 2011)

N Sabari Arul, D Mangalaraj, Pao Chi Chen, N Ponpandian, C Viswanathan

## 14. Preparation of New Reducing Agent for the Synthesis of Silver Nanoparticles

AIP Conference Proceedings-American Institute of Physics (July 2011)

P Manivel, K Sivashanmugan, C Viswanathan, D Mangalaraj

## 13. Effects of the film thickness on optical constants of transparent CdS thin films deposited by chemical bath deposition

JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS (January 2009)

F Yakuphanoglu, C Viswanathan, P Peranatham, D Soundarajan

## 12. Molecular nanodevices based on functionalized cyclodextrins

physica status solidi (a) (October 2008)

D Velessiotis, D Maffeo, C Millios, E Makarona, C Viswanathan, K Yannakopoulou, I Mavridis, Zoe Pikramenou, N Glezos

## 11. Electrical conductivity and single oscillator model properties of amorphous CuSe semiconductor thin film

Journal of non-crystalline solids (October 2007)

F Yakuphanoglu, C Viswanathan



## 10. The effect of annealing on vacuum-evaporated copper selenide and indium telluride thin films

Materials characterization (August 2007)

P Peranatham, YL Jeyachandran, C Viswanathan, NN Praveena, PC Chitra, D Mangalaraj, Sa K Narayandass

## 9. Sheathing polymer gel fibrils with nanotubules

Macromolecular Symposia (May 2007)

P. Mésini and J.-M. Guenet C. Viswanathan

## 8. Effect of substrate temperature on the properties of vacuum evaporated indium selenide thin films

Crystal Research and Technology: Journal of Experimental and Industrial Crystallography (May 2005)

C Viswanathan, V Senthilkumar, R Sriranjini, D Mangalaraj, Sa K Narayandass, Junsin Yi

## 7. Preparation and characterization of electrodeposited indium selenide thin films

Crystal Research and Technology (April 2005)

S Gopal, C Viswanathan, B Karunakaran, Sa K Narayandass, D Mangalaraj, Junsin Yi

## 6. Influence of substrate temperature on the properties of vacuum evaporated InSb films

Crystal Research and Technology: Journal of Experimental and Industrial Crystallography (April 2005)

V Senthilkumar, S Venkatachalam, C Viswanathan, S Gopal, Sa K Narayandass, D Mangalaraj, KC Wilson, KP Vijayakumar

## 5. On the electrical characteristics of vacuum evaporated indium selenide thin films

Journal of Optoelectronics and Advanced Materials (April 2005)

C Viswanathan, GG Rusu, S Gopal, D Mangalaraj, Sa K Narayandass

## 4. Current Voltage studies on vacuum evaporated In<sub>70</sub>Se<sub>30</sub> thin films

Journal of optoelectronics and advanced materials (March 2005)

J.Yi C.Viswanathan, G.G.Rusu, D.Mangalaraj, Sa.K.Narayandass

## 3. Space charge limited current, variable range hopping and mobility gap in thermally evaporated amorphous

### InSe thin films

Journal of Materials Science: Materials in Electronics (December 2004)

C Viswanathan, S Gopal, M Thamilselvan, K Premnazeer, D Mangalaraj, Sa K Narayandass, Junsin Yi, David C Ingram

## 2. Conduction studies on electrodeposited indium selenide thin films

Ionics (May 2004)

S Gopal, C Viswanathan, M Thamilselvan, K Premnazeer, Sa K Narayandass, D Mangalaraj

## 1. Optical constants of DC magnetron sputtered titanium dioxide thin films measured by spectroscopic

### ellipsometry

Crystal Research and Technology: Journal of Experimental and Industrial Crystallography (August 2003)

B Karunakaran, RT Rajendra Kumar, C Viswanathan, D Mangalaraj, Sa K Narayandass, G Mohan Rao

## Patents

### Granted - 2

1. Method for simultaneous detection and degradation of Smokeless tobacco wastewater and its by products using Photoelectrochemical Oxidation 08-2023 442144 Dr. C. Viswanathan , H.AMIR ,Dr. N. Ponpandian

2. Simultaneous Detection, Quantification, and Degradation of Cigarette Waste Water and its by-products using Photoelectrochemical Method 09-2023 453005 Dr. C. Viswanathan , H.Amir, Dr. N. Ponpandian

## Projects

### Completed - 10

1. Developing Ordered Assembly of Metal Oxide – Polyaniline Nano Hybrid Materials for Multiple Biomarkers Detection in Diabetes Health Monitoring Systems TANSCHÉ 17,71,750/- (April 2021 - April 2024)

2. A lateral flow immunoassay for the diagnosis of breast cancer biomarker based on fluorescence quenching of rare earth quantum dots Others 8,00,000/- (April 2021 - April 2022)

3. Development of electrochemical wearable biosensor in human sweat metabolomics for the detection of biomarker DST – SERB 35,00,000/- (March 2020 - March 2022)

4. Establishment of wearable sensor technology for the development of point of care devices

Others 8,00,000/- (April 2019 - April 2020)



# Bharathiar University

State University | "A<sup>++</sup>" Grade by NAAC | 46<sup>th</sup> Rank in MoE-NIRF  
Maruthamalai Road, Coimbatore, Tamil Nadu - 641 046.

**Dr C VISWANATHAN , Professor , Department of Nanoscience and Technology**

5. Fabrication of novel nanoparticle / thin film alternatively layered coatings of metal oxides CSIR 20,00,000/- (April 2017 - April 2020)
6. Au decorated WO<sub>3</sub>/Graphene nanohybrids as high efficient photoelectrochemical water splitter for hydrogen production DST – SERB 47,00,000/- (April 2017 - April 2021)
7. Synthesis and Analysis of polyamine coated ZnO nanoparticles formulations for seed priming to raise drought tolerance in radish (*Raphanus sativus* L.) DST 37,90,200/- (March 2021 - May 2024)
8. Controlled Growth of Single Crystalline V<sub>2</sub>O<sub>5</sub> nanorod arrays for High Storage Capacity Li-Ion Batteries UGC-MRP 8,39,600/- (April 2009 - March 2011)
9. Langmuir Blodgett Assembly of Ordered Tin oxide / Graphene Nanocomposites film for Energy Storage Applications DST 21,00,000/- (March 2012 - March 2015)
10. Preparation and characterization of Zinc Oxide Nanorods for Ultra-Violet (UV) Sensor Applications DRDO-BU CLS Phase-II Programme 8,90,000/- (April 2010 - April 2013)

## **Ongoing - 2**

1. MXene Nanocomposite Modified Paper Sensing Prototypes for Electrochemical Detection of Contaminants of Emerging Concerns Others 39,69,000/- (December 2024 - March 2027)
2. External magnetic field assisted electrochemical water splitting reactor using flexible electrode of Mo<sub>2</sub>TiC<sub>2</sub>Tx and WOS nanorod hetrostructures DST – SERB 44,74,516/- (March 2024 - March 2027)