

DEPARTMENT OF PHYSICS AND NANOTECHNOLOGY, SRMIST**LIST OF RESEARCH PUBLICATIONS - March 2025**

S. NO	AUTHORS	TITLE OF PUBLICATION	YEAR	SOURCE TITLE	IMPACT FACTOR	DOI
1	Ashwini S. Gadge, Prakash Bobde, V. Ganesh and R. S. Gedam	Novel green synthesis of Gd-doped TiO ₂ nanoparticles for environmental remediation: statistical modeling and process optimization	2025	New Journal of Chemistry	2.7	https://doi.org/10.1039/D5NJ00856E
2	Dharmalingam Nagaraj, Kathirvel Venugopal	Disposable stencil-printed electrochemical sensor for the detection of salicylic acid and indole-3-acetic acid in tomato extract	2025	Microchemical Journal	4.9	https://doi.org/10.1016/j.microc.2025.113285
3	P Baskaran, KD Nisha	Enhanced photovoltaic efficiency of hierarchically structured Cu ₂ MnSnS ₄ -PVP counter electrodes for platinum-free dye-sensitized solar cells	2025	Journal of Alloys and Compounds	5.8	https://doi.org/10.1016/j.jallcom.2025.179713
4	Sharine Priscilla, G. Devanand Venkatasubbu, Sahabudeen Sheik Mohideen	Chitosan-coated titanium dioxide nanoparticles: fabrication, characterisation and toxicological evaluation in Drosophila melanogaster	2025	Nanotechnology for Environmental Engineering	0	https://doi.org/10.1007/s41204-025-00422-y

5	Haritha J Mani Rahulan K N. Angeline Little Flower T. Sharmila Sabari Girisun T C Annie Sujatha R	Systematic Analysis of Nonlinear Optical Properties in Pristine and Rare-Earth-Doped Zn ₂ V ₂ O ₇ for Low-Power Optical Limiting Applications	2025	Optical Materials	3.8	https://doi.org/10.1016/j.optmat.2025.116974
6	Selva Boopalan A, ,Mani Rahulan K N. Angeline Little Flower A.Dhanusha ,Sabari Girisun T C ,, Annie Sujatha R	Synergistic effects of europium doping on MOF-5: exploring its photoluminescent and non-linear optical behaviour for enhanced optical limiting	2025	Nanoscale	5.8	https://doi.org/10.1039/D4NR04931D
7	Shrestha Dutta, Rudra Banerjee	Electronic structure engineering of Zr-doped Ti ₃ C ₂ and Ti ₃ CN MXenes for efficient hydrogen evolution reaction	2025	Physica B: Condensed Matter	2.8	https://doi.org/10.1016/j.physb.2025.417148
8	Kanchan Kumar Devender, Muthu Mariappan Sivalingham, Vinoth Elangovan, Jayaram Archana, Mani Navaneethan and Harish Santhana Krishnan.	Small or Sharp Edged? Impact of Facets-Controlled Ag{111} Nanoprism on the Gas Sensing Redox Characteristics of WO ₃	2025	Langmuir	3.7	https://doi.org/10.1021/acs.langmuir.4c03446
9	M. Varun Karthik, L. N. Patro, J. Arout Chelvane, K. Kamala Bharathi	Influence of Mn Precursor Adjustments on the Structural and Electrochemical Behavior of P2-Type Na _{0.65} Ni _{0.25} Mn _{0.75} O ₂ Cathodes for Sodium-Ion Batteries	2025	ACS Applied Energy Materials	5.5	https://doi.org/10.1021/acs.aem.5c00294

10	Akash Marsalin, Rajaboopathi Mani	From formation to functionality: Insights into mesocrystal development and applications	2025	Journal of Solid State Chemistry	3.2	https://doi.org/10.1016/j.jssc.2025.125331
11	Abhishek S Shekhawat, Navaneeth Krishnan AB, Aarti Diwan, Dhatchayani Murugan, Akila Chithravel, Lakshya Daukiya, Anand M Shrivastav, Tulika Srivastava, Shailendra K Saxena	Harnessing carbon electrodes in molecular junctions: progress and challenges in device engineering	2025	Nanoscale	5.8	https://doi.org/10.1039/D4NR05242K
12	Deb Kumar Rath, Shivansh Raj Pandey, Abhishek S Shekhawat, Love Bansal, Bhumika Sahu, Nikita Ahlawat, Shailendra K Saxena, Subin Kaladi Chondath, Rajesh Kumar	Resonant Fano interaction in B1g/B3g Raman mode under Off-Resonant Excitation in V2O5 μ -crystals: Thermal phonon as facilitator	2025	iScience	4.6	https://doi.org/10.1016/j.isci.2025.112137
13	Lokeswaran Ravi, Prince Wesley Vanaraj, S. Shashi Kumar Ravikirana	Effect of T6 Treatment on AA6061 Composite Reinforced with AlCoFeNiMn HEA Particles via Friction Stir Processing	2025	Metals and Materials International	3.3	https://doi.org/10.1007/s12540-025-01935-6

14	B. Ranjith ,Lalitha Gnanasekaran , P.C. Karthika , Jothi Ramalingam Rajabathar , Hamad A. Al-Lohedan , Woo Kyoung Kim , Vasudeva Reddy Minnam Reddy , Mohit Kapoor , Suresh Singh , Mahimaluru Lavanyaj h , Gautham Devendrapandi	Enhancing the activity of transition metal-based sulfides via synergistic effects for electrochemical overall water splitting	2025	International Journal of Hydrogen Energy	8.1	https://doi.org/10.1016/j.jhydene.2025.01.349
15	Manikandan Elumalai, Aravind Baskaran, Sankar Ganesh Ramaraj , Vivekananthan Sadaiyandi, Niraj Kumar ,P.C. Karthika ,Nagappan Rajendiran	Effective sensing of environmental pollutants: Hydrogen sulphide and Methylene blue by using gold nanoparticles	2025	Surfaces and Interfaces	5.7	https://doi.org/10.1016/j.surfin.2025.106118
16	Rohini Anandan , Piraviperumal Malar	Broadband feeble light detection using n-Si/ quasi- 1D Sb ₂ Se ₃ heterojunction photodetectors	2025	Sensors and Actuators A: Physical	4.1	https://doi.org/10.1016/j.sna.2025.116428

17	Shalini Shanmuganathi; Tharani Selvam; Durgalakshmi Dhinasekaran; Ashwin Kishore Munusamy Rajendran; Balakumar Subramanian; Ajay Rakkesh Rajendran	Synergistic Ti3C2 MXene/MoS2 heterostructure: Unlocking ultra-fast, durable, and high-efficiency energy storage for next-generation supercapacitors	2025	Applied Physics Letters (APL)	3.5	https://doi.org/10.1063/5.0252049
18	Jenitha Moses, Naveen T Bharanitharan, Tharani Selvam, Durgalakshmi Dhinasekaran, Ashwin Kishore Munusamy Rajendran, Balakumar Subramanian, Ajay Rakkesh Rajendran	Boosting Ion Transport Kinetics in Sulfolane-Modified Aqueous Electrolytes for High-Performance Zinc-Ion Batteries with V ₂ C MXene Cathodes	2025	Small Methods	10.7	https://doi.org/10.1002/smtd.202500028
19	Harini Loganathan, Durgalakshmi Dhinasekaran and Ajay Rakkesh Rajendran	Electrochemical Non-Enzymatic Biosensing of Cortisol Using ZnO-Graphene Nanocomposite	2025	Journal of The Electrochemical Society	3.1	10.1149/1945-7111/adb912
20	Batol Abbas, A.V. Ravindra	Nano UiO-66 and UiO-66-NH ₂ MOFs as Bifunctional Electrocatalysts for Water-Splitting: A Comparative Study	2025	Molecular Catalysis	3.9	https://doi.org/10.1016/j.mcat.2025.115025

21	Gone Rajender, Yuvashree Jayavelu, B. Leena, Kovendhan Manavalan, T. Venkatappa Rao, D. Paul Joseph	Interfacial bonding and efficient charge carrier separation in MgTiO ₃ nanoparticles decorated graphitic carbon nitride heterojunction and its impact on the enhanced visible light photocatalysis	2025	Journal of Alloys and Compounds	5.8	https://doi.org/10.1016/j.jallcom.2025.179982
22	Deepak Pandidurai, Raju Attada, Rohit Chakraborty, Amita Kumari, Prashant Kumar	Widespread monsoon extreme rainfall events over central Indian region: influence of dynamics and thermodynamics	2025	Climate Dynamics	3.8	http://dx.doi.org/10.1007/s00382-025-07641-8
23	Karolinekersin Enoch, and Anbumozhi Angayarkanni	Unravelling the rheological and multifunctionality of Justicia adhatoda-impregnated carboxymethyl cellulose hydrogels for drug delivery systems.	2025	International Journal of Biological Macromolecules	7.7	https://doi.org/10.1016/j.jbiomac.2025.141419
24	Karolinekersin Enoch, and Anbumozhi Angayarkanni.	Development of Mn ₃ O ₄ nanoparticles and Justicia adhatoda extract incorporated Carboxymethyl cellulose/Carbopol hydrogels: Rheological and in vitro bioactivity for sustained drug delivery system.	2025	International Journal of Biological Macromolecules	7.7	https://doi.org/10.1016/j.jbiomac.2025.141713

25	M. Geerthana J. Archana E. Senthil Kumar M. Navaneethan	Unveiling the potential of copper-doped metal oxides: A novel strategy for high-capacity hybrid supercapatteries with enhanced power, energy density, and cycling stability	2025	International Journal of Hydrogen Energy	8.1	https://doi.org/10.1016/j.jhydene.2025.03.134
26	P. Bharathi, Govind A Vangari, S. Harish, M. Krishna Mohan. J. Archana, M. Navaneethan	Layered MoS2/reduced graphene oxide hybrids for superior ambient NO2 sensing application	2025	Journal of Industrial and Engineering Chemistry	5.9	https://doi.org/10.1016/j.jiec.2025.03.045
27	R. Santhosh, Kamala Kannan, S. Harish, J. Archana, S. Ponnusamy, M. Navaneethan	Interface-driven energy filtering effect and enhanced thermoelectric performance of Ag2Se/SnS composites: An experimental and theoretical insights	2025	Journal of Colloid and Interface Science	9.4	https://doi.org/10.1016/j.jiec.2025.03.045
28	S. Karunakaran, V. Vijay, S. Harish, M. Navaneethan, J. Archana	Synergistic effect of mass and strain field phonon scattering in Bi and Sb co-doped Mg2Si for thermoelectric applications	2025	Materials Science in Semiconductor Processing	4.2	https://doi.org/10.1016/j.mssp.2025.109452
29	S. Priyadharshini, V. Vijay, S. Kamalakannan, J. Archana, M. Navaneethan	Point defect scattering driven low lattice thermal conductivity in p-type Mg3Sb2 for mid-temperature thermoelectric applications	2025	Surfaces and Interfaces	5.7	https://doi.org/10.1016/j.surf.2025.106204

30	Riya Haldar Noah Jacob Gadudhula Ganesh Kaustuv Chatterjee Indrajeet Mandal Anustup Chakraborty Keya Haldar Prabir Pal Goutam Kishore Gupta N. M. Anoop Krishnan Manohar Chirumamilla Mallikarjuna Rao Motapothula Eswaraiah Varrla Amarnath R. Allu	Immobilized Gold Nanoparticles on a Glass-Based Scaffold for Direct Solar-Driven H ₂ from Water Vapor	2025	ACS Materials Letters	9.9	https://doi.org/10.1021/acsmaterialslett.4c02545
31	Agasthiyaraj Lakshmanan, Pooja P. Sarngan, Anitha Christy Antonysamy, Polnati Chiranjeevi, Debabrata Sarkar	Fabrication of novel polyacrylonitrile/polyvinylpyrrolidone- zeolitic imidazolate framework air filter media for high particulate matter removal with effective anti-bacterial activity	2025	Materials Today Communications	3.7	https://doi.org/10.1016/j.mtcomm.2025.112295
32	Pooja P. Sarngan, Dipesh Choudhury, Chandan Kumar Ghosh, Debabrata Sarkar	Designing potent plasmonic Ag/TiO ₂ nanohetero-phase junction for visible light driven photo- catalysis and anti-bacterial effect	2025	Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy	4.3	https://doi.org/10.1016/j.saa.2025.126062

33	K.B. Betsy , Sanjay Kumar Mehta	Role of aerosols on prolonged extreme heatwave event over India and its implication to atmospheric boundary layer	2025	Atmospheric Pollution Research	3.9	https://doi.org/10.1016/j.apr.2025.102513
34	Selda Odabasi Lee, Geon Youn, Dongmin Lee, Yongju Yun, Sandeep Kumar Lakhera, Kijung Yong	Photocatalytic Ammonia Synthesis via Nitrate Reduction on Cu Nanoparticle Decorated Hollow SrTiO ₃ Nanospheres	2025	Ceramics International	5.1	https://doi.org/10.1016/j.ceramint.2025.03.330
35	C. Suresh Prasanna, S. Harish, T. Yamakawa, K. Ikeda, Y. Hayakawa, H. Hamasaki, H. Ikeda & M. Navaneethan	Investigating the effect of microwave growth parameter regulation in the growth and thermoelectric properties of zinc oxide nanorods/carbon fabric for wearable thermoelectric application	2025	Carbon letters	5.4	https://doi.org/10.1007/s42823-025-00890-x
36	Banasree Sadhukhan	Large bulk photovoltaic effect and Fermi-surface-mediated enhancement with chemical potential in ZnGeP ₂	2025	J. Phys.: Condens. Matter	2.3	https://doi.org/10.1088/1361-648X/adbb48