



11th National Conference on

Recent Trends in Materials Science and Technology – 2024

25-27 June 2024

Venue:

Multipurpose Hall, Students Activity Center (SAC)
IIST Thiruvananthapuram

Programme Schedule

| DAY 1: June 25, 2024 | | |
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| 08:00 – 09:15 | Registration | |
| 09:30-10:30 | Inaugural Function | |
| 10:30 – 11:05 | PL-01 | J. Asir Packiaraj, Director, IPRC Mahendragiri TBA |
| 11:05 – 11:30 | - Tea - | |
| Session 01 | | |
| 11:30 – 12:05 | PL-02 | John Philip, IGCAR Kalpakkam Role of Science and Materials on Technological Development |
| 12:05 – 12:25 | IL-01 | Shaiju S Nazeer, IIST Thiruvananthapuram Infrared Spectroscopy as a tool for cancer diagnosis |
| 12:25 – 12:35 | CL-01 | Sarita Kataria, INST Mohali Irrigation-friendly sensor to manage drought in crops through carbon-based signature volatile sensing |
| 12:35 – 12:45 | CL-02 | Roshbe S Calolsa, VIT Vellore Investigating Ag-Doped PDMS Nanocomposite as a High-Performance Encapsulant for Photovoltaic Devices |
| 12:45 – 13:40 | Lunch Break  | |
| Session 02 | | |
| 13:40 – 14:15 | PL-03 | Sirshendu De, IIT Kharagpur Polymeric hollow fiber membranes: Spinning and their applications |
| 14:15 – 14:50 | PL-04 | Dona Mathew, VSSC Thiruvananthapuram Telechelic polymers: Design opportunities |
| 14:50 – 15:00 | CL-03 | Saisree S, CSIR-NIIST Thiruvananthapuram An Electrochemical Sensor Based on Bio-derived Graphene Quantum Dots as an Electronic Tongue for Acrolein; a Carcinogen in Foods |
| 15:00 – 15.10 | CL-04 | Venu Sreekala Smitha, CWRDM Calicut Isotopically Labeled Fluorescent Carbon Dots Embedded Silica-based Nanocomposites as Tracers for Hydrogeological Investigations |
| 15:10 – 15:20 | CL-05 | Rini Ganguly, Sathya Sai University, Karnataka Resistive Switching in all-Perovskite Core-Shell Nanocrystals with type-I band Alignment: A step towards high density memory |
| 15:20 – 15:45 | Tea Break  | |
| Session 03 | | |
| 15:45 – 16:20 | PL-05 | Manual Stephen, CSIR-CECRI Reformulation of liquid electrolytes for extreme fast charging of lithium- ion batteries |
| 16:20 – 16:55 | PL-06 | Subodh G., Univ of Kerala Design and Development of Ferrite-Decorated Multifunctional Carbonized Cotton Fabrics for Efficient Electromagnetic Interference Shielding |
| 16:55 – 17:05 | CL-06 | S. Gunasekaran, CECRI Karaikudi Electrodeposition of Ni-Mo alloy from sulfamate electrolyte as a cathode for water splitting applications |
| 17:05 – 17:15 | CL-07 | Annmary Tomy, IIST Thiruvananthapuram Electrochemical sensing application of Ni(OH) ₂ and Ni(OH) ₂ -MoS ₂ composite |
| 17:15 – 17:25 | CL-08 | Athira Murali, SCTIMST Thiruvananthapuram Processing, Optimization, and Physico-chemical Characterization of 3D Printed EVA/HA composite for Bone Tissue Engineering |
| 17:30 – 19:00 | Poster Session 1, Venue: Hallway -Admin Block | |
| | | |
| DAY 2: June 26, 2024 | | |
| Session 04 | | |
| 09:30 – 10:05 | PL-07 | A Ajayaghosh, SRM Chennai The Chemistry of Superhydrophobic Nanocomposites for Energy Saving |
| 10:05 – 10:40 | PL-08 | Benny K George, formerly VSSC Understanding carbon materials using Raman spectroscopy: A tutorial |
| 10.40 – 10.50 | CL-09 | Ashitha George, CSIR-NIIST Thiruvananthapuram |

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| | | Enhanced Piezoelectricity from Self-Polarized PVDF Infiltrated Nylon 11 Aerogels with Highly Oriented Polymer Crystals |
| 10:50 – 11:00 | CL-10 | Sujitha. A.S., CUSAT Kochi <i>A paper-based composite electrospun nanofibers composed of gold nanoclusters for the real-time detection of cancer cells</i> |
| 11:00 – 11:20 | Tea Break |  |
| Session 05 | | |
| 11:20 – 11:55 | PL-09 | S Sampath, IISc Bangalore <i>Mono-, Di-, Tri-valent Ion Storage and Rechargeable Batteries</i> |
| 11:55 – 12:30 | PL-10 | Pramod Gopinath, CUSAT <i>Aggregation Induced Emission - Role of alkyl chain length</i> |
| 12:30 – 12:40 | CL-11 | S. Maheswari, ARCI, IITM Research Park <i>Utilization of recovered graphite from end-of-life batteries for energy applications</i> |
| 12:40 – 13:30 | Lunch Break |  |
| 13:30 – 14:20 | Poster Session -2, Venue: Hallway -Admin Block | |
| Session 06 | | |
| 14:30 – 15:05 | PL-11 | Rajan T P D, CSIR-NIIST Thiruvananthapuram <i>Development of Advanced Metal Matrix Composites and Manufacturing Technologies for Structural and Functional Components</i> |
| 15:05 – 15:25 | IL-02 | Chandra Sekhar Rout, Chungbuk National University, Korea <i>MXene-TMDs based hybrids for Supercapacitor applications</i> |
| 15:25 – 15:35 | CL-13 | Shaswati Jyoti, INST Mohali <i>Exploring the Impact of Crystal Structure and Electrical Polarization on Electrocatalytic Oxygen Evolution in the Bi-Fe-O System</i> |
| 15:35 – 15:55 | Tea Break |  |
| Session 07 | | |
| 15:55 – 16:30 | PL-12 | T Pradeep, IIT Madras <i>Can water microdroplets make soil?</i> |
| 16:30 – 17:05 | PL-13 | Mahesh Hariharan, IISER Thiruvananthapuram <i>Null Excitonic Interaction in Greek Cross (+) Aggregate</i> |
| 17:05 – 17:25 | IL-03 | Saritha A, Amrita Vishwa Vidyapeetham <i>Surface engineering of nanofillers: An effective strategy to form versatile nanocomposites</i> |
| 17:25 – 17.45 | | Conference photo |
| 17:45 – | <ul style="list-style-type: none">▪ Felicitatation function▪ Cultural Programme▪ Dinner | |
| DAY 3: June 27, 2024 | | |
| Session 08 | | |
| 09:30 – 10:05 | PL-14 | Subi Jacob George, JNCASR Bangalore <i>Bioinspired Design on Dynamic and Adaptive Supramolecular Polymers</i> |
| 10:05 – 10:40 | PL-15 | Sreekala M S, MG University <i>Green Nanotechnology - Innovations in Sustainable Polymer Nanogenerators</i> |
| 10:40 – 11.00 | Tea Break |  |
| Session 09 | | |
| 11:00 – 11:35 | PL-16 | Reji Philip, RRI Bangalore <i>Nonlinear optical behaviour of novel materials</i> |
| 11:35 – 12:10 | PL-18 | Sabu Thomas, MG University <i>Circular Economy: New Opportunities in Sustainable Nano Materials and Polymer Bio-Nanocomposites</i> |
| 12:20 – 12:40 | Valedictory Function | |
| | Chief Guest | S Sabu Thomas, MG University |
| 12.40 – | Lunch |  |
| 14:00 – | | Lab visit |