



12th National Conference on Recent Trends in Materials Science and Technology – 2025

18-20 December 2025

Venue:

Multipurpose Hall, Students Activity Center (SAC)
IIST Thiruvananthapuram

Programme Schedule

DAY 1: December 18, 2025		
08:00 – 09:30	Registration	
09:30 – 10:00	Inaugural Function : Chief Guest: Prof. C T Aravindakumar , VC MG University	
10:00 – 10:30	Keynote Lecture	C T Aravindakumar, MG University Advanced Materials for Sustainable Water Remediation
10:30 – 10:50	Tea Break	
Session 01		
10:50 – 11:20	PL-01	Edamana Prasad, IIT Madras Organo and Hydro Gels: Design, Synthesis and Materials Applications
11:20 – 11:50	PL-02	Renjith S Pillai, VSSC Thiruvananthapuram Metal-Organic Frameworks and Porous Organic Polymers in the Space Sector
11:50 – 12:20	PL-03	Roy Joseph, SCTIMST Thiruvananthapuram Design & Development of Metal-free Radiopaque Polymeric Embolic Materials for Clinical Use
12:20 – 12:30	CL-01	Ann Mathew, VSSC Intrinsically Self-healable Polysiloxanes
12:30 – 12:40	CL-02	P V Deepthika, Kamaraj College of Engineering and Technology Design and Development of a Smart Solar Tracking System for Sustainable Energy Applications
12:40 – 12:50	CL-03	Pavadharani Velliangiri, CSIR – CECRI Dual-axis Strain Gauge by Laser Scribed Graphene
12:50 – 14:00	Lunch Break	
Session 02		
14:00 – 14:30	PL-04	Durai Prabhakaran, IIT Jammu Advanced Composites – Hybrid Fibres and Their Role on Mechanical Properties
14:30 – 14:50	InL-01	Abdul Habid P, Chemraw Calicut Super Hydrophobic Coating: State-of-the-Art Moisture Protection for Sustainable Wood Products
14:50 – 15:20	PL-05	Palash Kumar Basu, IIST Development of Optically Activated Nanocrystalline Metal Oxide-based Reliable Gas Sensor: An Alternative of Si-Based MEMS Platform
15:20 – 15:35	Tea Break	
Session 03		
15:35 – 16:05	PL-06	Swapna S Nair, Central University of Kerala Engineered Nanostructures for Bioimaging and sensing
16:05 – 16:35	PL-07	K A Rajesh, CIPET Kochi Mechanical Properties and Fracture Behaviour of Coir Reinforced PLA Biocomposites
16:35 – 16:45	CL-04	Parthiban S, KPR Institute of Engineering and Technology Flexible Transparent Conducting Thin Films with Electromagnetic Interference Shielding Property for Aeronautical Applications
16:45 – 16:55	CL-05	Aswathy E, NIT Calicut Gluten-Free, Diabetic-Friendly Edible Cutlery: Transforming Industrial Waste into Marketable Products
16:55 – 17:05	CL-06	Ramya R, SRM Institute of Science And Technology Novel Solid-crafted Trimetallic Trifled Nanocomposite for Bond Making/Breaking & Persistent Anti-bacterial Action
17:05 – 17:45	Flash Talks	
18:00 – 19:30	Poster Session 1, Venue: Multipurpose hall, SAC	
DAY 2: December 19, 2025		
Session 04		
09:30 – 10:00	PL-08	Kothandaraman R, IIT Madras Reinforcing a Lithium-ion Battery Cathode (NCA) with Mn Doping
10:00 – 10:30	PL-09	Suresh C H, SRIBS Kottayam Molecular Electrostatic Potential as a Design Tool for CO ₂ -Responsive Materials and Noncovalent Assemblies

10:30 – 10:40	CL-07	Leena Bhadra, IIT Bombay <i>Materials with a Mission: Redefining Food Protection Through Bio-Based Active Packaging</i>
10:40 – 10:50	CL-08	Jithu Joseph, IIST <i>From Water-in-Salt to Ionic Liquids: The Path to High-Density Energy Storage</i>
10:50 – 11:05	Tea Break ☕	
Session 05		
11:05 – 11:35	PL-10	Smita Jauhari, SVNIT Surat <i>Corrosion Inhibition of Mild steel in Hydrochloric Acid by Schiff base CQMA</i>
11:35 – 12:05	PL-11	Biswapriya Deb, CSIR-NIIST <i>The Materials Science Behind Scalable Smart Windows</i>
12:05 – 12:15	CL-09	Sriram S, Yenepoya University <i>Diode Laser-Induced CoFe-PBA Electrocatalyst for Efficient Oxygen Evolution Reaction</i>
12:15 – 12:25	CL-10	Ruchi Verma, Institute of Nanoscience and Technology Mohali <i>Investigating the Interplay of Catanionic Surfactant and Co-Surfactants with Wo on the Structural Parameters of Hexylammonium Hexanoate-based Water-in-Oil Microemulsions using SAXS</i>
12:25 – 12:35	CL-11	Jagadish Nayak, NIT Raipur <i>Effect of Electromagnetic Forced Convection on Grain Refinement of AA6082/GNPs Nanocomposite</i>
12:35 – 13:35	Lunch Break 🍽️	
Session 06		
13:40 – 14:10	PL-12	Lisa Sreejith, NIT Calicut <i>Smart and Sustainable packaging for a Greener Future</i>
14:10 – 14:30	IL-01	James Raju, University of Hyderabad <i>Laser Annealing: A Process to make Crystalline Oxides Compatible with Polymer Substrates</i>
14:30 – 14:40	CL-12	Naba Kamal Nath, NIT Meghalaya <i>Reimagining Molecular Crystals: Engineering Stimuli-Responsive Smart Materials</i>
14:40 – 14:50	CL-13	Shiva Kumar B N, Manipal Institute of Technology, Bengaluru <i>Investigating Physical, Structural, and Optical Features of Pr³⁺-Ions Doped Multicomponent Telluro-Borate Glasses for Optics and Laser Technology</i>
14:50 – 15:00	CL-14	Eliza D. S. Minz, SCTIMST <i>Polymer-Based Radiopaque Microspheres for Targeted Embolization</i>
15:00 – 15:15	Tea Break ☕	
Session 07		
15:20 – 15:50	PL-13	Nirmala Rachel James, IIST <i>Multifunctional Polymer Composites for EMI Shielding and Antenna Applications</i>
15:50 – 16:00	CL-15	S P Sibi, CSIR-NIIST Thiruvananthapuram <i>A Tool to Speculate Hydrogen Storage Capacity of High Entropy Alloys</i>
16:00 – 16:20	Conference photo	
16:30 – 18:00	Poster Session 2, Venue: Multipurpose Hall, SAC	
18:00 – 20:00	● Cultural Programme ● Dinner 🍽️	
DAY 3: December 20, 2025		
Session 08		
09:30 – 10:00	PL-14	Aruna S T, NAL Bangalore <i>Solution Combustion Synthesized Oxides: A Pathway to Advanced Functional Coatings and Solid Oxide Fuel Cell Technologies</i>
10:00 – 10:10	CL-16	Prince Gupta, Solid State Physics Laboratory, DRDO, Delhi <i>Chemo-Mechanical Polishing of 4" Diameter Silicon Carbide Wafers for Power and RF Device Applications</i>
10:10 – 10:20	CL-17	Vanitha C, NIT Warangal <i>Microstructure - Fatigue property correlation of Hastelloy C276</i>
10:20 – 10:40	InL-02	Industry Presentation
10:40 – 10:55	Tea Break ☕	
Session 09		
10:55 – 11:25	PL-15	Shika Varma, IOP Bhubneswar, IUAC Delhi <i>Decoding Biomolecule–Nanoparticle Interactions for Biosensing</i>
11:25 – 11:55	PL-16	B Santhosh, VSSC Thiruvananthapuram <i>Evolution of Composites in Launch Vehicle and Satellite Applications</i>
12:00 – 12:30	Valedictory Function : Chief Guest: Dr. B Santhosh, Deputy Director, Composites Entity, VSSC Thiruvananthapuram	
12:40 – 14:00	Lunch 🍽️	
14:00 – 15:00	Lab visit	