



National Conference on
Sustainable Science and Technology for Viksit Bharat
(SSTV 2025)

Technical Session-I

Theme: Aerospace, Electronics, Instrumentation & Strategic Sector (AEISS)

Thursday, March 6, 2025, 15:30-17:30 Hrs

Venue: Conference Hall, CSIR-IMMT, Bhubaneswar

Chair: Dr. B. Subudhi
Director, NIT Warangal

Co-Chair: Dr. R. Sakthivel
Chief Scientist, CSIR-IMMT

Moderator: Binapani Behera
Principal Scientist, CSIR-IMMT

Time Slot	Code	Title of the Talk	Name & Affiliation
15:30-15:50	KEYNOTE	Introduction about NAL's Wind Tunnel Test Facilities for Aerospace Growth towards Viksit Bharat	Bikshapathi Manupati <i>CSIR-NAL</i>
15:50-16:00	AEISS-O-1	India in Focus: Leveraging Satellite Imagery for Sustainable Development	A. N. Satyanarayana <i>Sreenidhi Insitute of Science and Technology</i>
16:00-16:10	AEISS-O-2	Development of Calcium Niobate (Ca ₂ Nb ₂ O ₇) Material with High Curie temperature (TC) for High Temperature Sensor Applications	P. Sivagnanapalani <i>CSIR-NAL</i>
16:10-16:20	AEISS-O-3	Estimation of parameters of second order plus dead time using relay feedback method	D. Kishore <i>Adikavi Nannaya University</i>
16:20-16:30	AEISS-O-4	Upgradation of Variable Mach number Flexible Nozzle Control System for sustaining Testing Capability of 0.6m Trisonic Wind Tunnel Facility at CSIR-NAL	Swetha <i>CSIR-NAL</i>
16:30-16:40	AEISS-O-5	Integration, Inspection and Functionality Testing on Two Seater Indigenously Developed Aircraft at CSIR-NAL	Navaneetha S <i>CSIR-NAL</i>
16:40-16:50	AEISS-O-6	Sustainable Aerospace Technology using Acoustic Metamaterials for Quieter Aircraft Cabin Designs	Balakrishnan B <i>CSIR-NAL</i>
16:50-17:00	AEISS-O-7	Microencapsulated self-healing nanocomposites embedded with CNT for aerospace applications	V. Naveen <i>CSIR-NAL</i>
17:00-17:10	AEISS-O-8	Power-Aware HPC: Strategies for Energy-Efficient Computing	Pankaj Saini <i>CSIR-4PI</i>
17:10-17:20	AEISS-O-9	Intelligent Vision-Based Navigation for Autonomous Drones in GPS-Denied Environments: A Machine Learning-Driven Approach to Obstacle Avoidance and Real-Time Localization	Rajesh Ponnusamy <i>CSIR-NPL</i>
17:20-17:30	AEISS-O-10	Design and realization of hinge moment balance using Taguchi approach for aerodynamic loads measurements on wind tunnel model	Manjunatha C <i>CSIR-NAL</i>



National Conference on
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Technical Session-II

Theme: Agri, Chemicals & Healthcare (ACH)

Thursday, March 6, 2025, 15:30-17:30 Hrs

Venue: SSB Hall, CSIR-IMMT, Bhubaneswar

Chair: Dr. M. R. Vishnu Priya
Chief Scientist, CSIR-CCMB

Co-Chair: Dr. N.K. Dhal
Chief Scientist, CSIR-IMMT

Moderator: Barsha Marandi
Principal Scientist, CSIR-IMMT

Time Slot	Code	Title of the Talk	Name & Affiliation
15:30-15:50	KEYNOTE	Indigenous Process Technologies for Fluoro-Agrochemicals	A. Krishnaiah <i>CSIR-IICT</i>
15:50-16:00	ACH-O-1	Antimicrobial Footwear Insock for School Students	Loganathan T <i>CSIR-CLRI</i>
16:00-16:10	ACH-O-2	Liquid Metal Alloy as Catalyst for CO ₂ Reduction to Carbon: A Review	Mahesh Kumar Gagrai <i>CSIR-CGCRI</i>
16:10-16:20	ACH-O-3	Indigenous Technologies for the Production of Valuable Seaweed Products: Need of Viksit Bharat	Ramavatar Meena <i>CSIR-CSMCRI</i>
16:20-16:30	ACH-O-4	Exploring the chemical scaffolds in Natural products for its healthcare benefits	J. S. Momo Hmungshel A <i>CSIR-IIIM</i>
16:30-16:40	ACH-O-5	Advanced Two-Stage Gasification Technology: A Sustainable way to Generate CO ₂ -free Syngas	Rupesh K Singh <i>CSIR-CIMFR</i>
16:40-16:50	ACH-O-6	Phenol Degradation by Dairy Biomass	M. Rama Krishna <i>CSIR-IICT</i>
16:50-17:00	ACH-O-7	Eradication of chemo-resistant stem-like cells by a novel small molecule: A Promising Pre-clinical candidate for the treatment of Breast Cancer	Fayaz Malik <i>CSIR-IIIM</i>
17:00-17:10	ACH-O-8	Strengthening Child Nutrition: The Significance of Nutrition Rehabilitation Center in treating the SAM Tribal Children in Sukinda, Odisha	Heleena Jati <i>Rama Devi Women's University</i>
17:10-17:20	ACH-O-9	Degradation of Rhodamine B dye using biochar and synthesized ZnO/biochar photocatalysts to study the synergistic effect of photocatalysis and adsorption	A. K. Behera <i>VSSUT, Burla</i>
17:20-17:30	ACH-O-10	SERS detection and photocatalytic degradation study on Polystyrene Microplastics (PS-MPs) in water	Kamali Kesavan <i>CSIR-IMMT</i>



National Conference on
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Technical Session-III

Theme: Agri, Chemicals & Healthcare (ACH)

Friday, March 7, 2025, 10:15-11:45 Hrs

Venue: Conference Hall, CSIR-IMMT, Bhubaneswar

Chair: Dr. M. R. Vishnu Priya
Chief Scientist, CSIR-CCMB

Co-Chair: Dr. B. Nayak
Chief Scientist, CSIR-IMMT

Moderator: Dr. Deepak Nayak
Principal Scientist, CSIR-IMMT

Time Slot	Code	Title of the Talk	Name & Affiliation
10:15-10:25	ACH-O-11	Microbial Biotransformation: An efficient approach for the production of pharmaceutically important compounds and aroma chemicals	Vikash Babu <i>CSIR-IIIM</i>
10:25-10:35	ACH-O-12	Utility of calcium carbide sludge for masonry block manufacturing	Balasubramanian S R <i>CSIR-SERC</i>
10:35-10:45	ACH-O-13	Studies on the properties of geopolymer mortars with recycled fine aggregates	S. Maheswaran <i>CSIR-SERC</i>
10:45-10:55	ACH-O-14	Experimental study on corroded rebar splices with threaded couplers	G. Nasima <i>CSIR-SERC</i>
10:55-11:05	ACH-O-15	Resilient and Intelligent Transportation Systems: An Integrated Approach to Autonomous Perception, Ad-Hoc Networks, and Smart Mobility	Rashmi Chaudhry <i>NSUT, Delhi</i>
11:05-11:15	ACH-O-16	Safe and Sustainable Climate-Resilient Building Construction Techniques in North East India – A Case Study	Dipak Basumatari <i>CSIR-NEIST</i>
11:15-11:25	ACH-O-17	Prediction Models for Modulus of Elasticity Development in High-Volume Fly Ash Concrete	Vijaya Bhaskara G S <i>CSIR-SERC</i>
11:25-11:35	ACH-O-18	Mechanical and durability properties of recycled aggregate	Bhashya V <i>CSIR-SERC</i>
11:35-11:45	ACH-O-19	Environment, earth and societal advancements with principles of sustainability	B. D. Mahalik <i>CSIR-IMMT</i>



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Technical Session-IV

Theme: Mining, Minerals, Metals and Materials (4M)

Friday, March 7, 2025, 10:15-12:05 Hrs

Venue: SSB Hall, CSIR-IMMT, Bhubaneswar

Chair: Dr. Manish Jha
Chief Scientist, CSIR-NML

Co-Chair: Dr. S. P. Das
Chief Scientist, CSIR-IMMT

Moderator: Santosh D Barma
Principal Scientist, CSIR-IMMT

Time Slot	Code	Title of the Talk	Name & Affiliation
10:15-10:35	KEYNOTE	Synthesis of Ti-based MAX phase ceramics and its Composites	L. Rangaraj <i>CSIR-NAL</i>
10:35-10:45	4M-O-1	A study on properties of PZT tape and its integration on LTCC for sensor applications	Benudhar Sahoo <i>CSIR-NAL</i>
10:45-10:55	4M-O-2	Improved oxidation and hot corrosion resistance of nimonic alloy by glass-ceramic based multilayer functionally graded coating	Sumana Ghosh <i>CSIR-CGCRI</i>
10:55-11:05	4M-O-3	Development and Utilisation of Indigenous Titanium Metal and Chemical Technologies for our Strategic Requirement and a path from Import Dependency to Technological Sovereignty	Subash Chandra Mallick <i>LN Indtech Services Pvt Ltd</i>
11:05-11:15	4M-O-4	Chromitites from Indus Suture Zone ophiolite, Ladakh Himalaya: An overview of PGE and trace element composition	Ranjit Nayak <i>Sri Sri University</i>
11:15-11:25	4M-O-5	Design plots for effective efficiency estimation of solar air heater roughened artificially by diagonally chamfered cuboids	Man Singh Azad <i>CSIR-CMERI</i>
11:25-11:35	4M-O-6	Nickel-Catalyzed Graphene Enhances the Microplasma Illumination Properties of Boron-doped Diamond Films	K. J. Sankaran <i>CSIR-IMMT</i>
11:35-11:45	4M-O-7	Suppression of Iron Ore Mine Dust with Eco-Friendly Dust	Soumya Ranjan Mallick <i>GEC Keonjhar</i>
11:45-11:55	4M-O-8	Path Planning of a Modular Multi-Segmented Robot having Finite Dimension	Dilip Kumar Biswas <i>CSIR-CMERI</i>
11:55-12:05	4M-O-9	Evolution of phase, microstructure in CoCrFeMnNi high entropy alloy prepared by spark plasma sintering	Ajit Panigrahi <i>CSIR-IMMT</i>