



1st Bilateral Meeting On

Smart Materials for Energy and Environmental Technology (Smart MEET-2022)

Jointly Organized by Institute of Nano Science and
Technology (INST), Mohali
Central Scientific Instruments Organization (CSIR-CSIO)

Date: 25th March, 2022
Venue: INST auditorium, Mohali

Scope of the Event

Materials & Technologies for Energy and
Environmental remediation

- Energy Harvesting Materials and Devices
- Thin Films and Smart Coatings
- Polymer based Sensors & Actuators
- Waste to Wealth Creation
- Organic Frameworks/Functional Porous Materials
- Technology for Sensing Environmental Pollutants

About INST, Mohali

Institute of Nano Science and Technology (INST), an autonomous institution of the Department of Science and Technology (DST), Government of India, is dedicated towards addressing the challenges related to Nanoscience and Nanotechnology. INST is at the forefront of interdisciplinary research accompanied by the development of technologies to address problems in the field of environment, energy, quantum materials, nanoelectronics, nanobiotechnology, soft nanostructures and chemical biology. It has made tremendous contributions towards the progress and promotion of nanoscience and nanotechnology in the country.

About CSIR-CSIO

CSIR-CSIO is a multi-disciplinary organisation having well equipped laboratories and expertise in the area of Micro-nano optics, Advanced materials & manufacturing, Intelligent machines and communication, Intelligent sensors & Systems, Imaging for Avionics & Biomedical applications. The organisation is contributing substantially towards the growth of the scientific instruments for various industries in the country with high degree of credibility.



Web: inst.ac.in, csio.res.in

Important Dates:

- ✚ **Deadline of Registration & Abstract Submission: 8th March 2022.**
- ✚ **Acceptance of Abstracts and participation: 11th March 2022.**

Email: smartmeet2022@inst.ac.in

Register: <https://forms.gle/z2A3KfDJrWRYRtQe8>

Chief Patrons

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Organizing Team

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Mr. Mukesh Raja

CSIR-CSIO, Chandigarh

Dr. Suman Singh
Dr. Akash Deep
Dr. Amit L. Sharma
Dr. Kamlesh Kumar
Dr. Avishek Saha
Dr. Girish C. Mohanta
Dr. Navneet S. Aulakh

Inaugural session

9:30-9:35 hr	Welcome and Opening Remarks
9:35-9:45 hr	Prof. Amitava Patra (Director, INST)
9:45-9:55 hr	Prof. S. Anantha Ramakrishna (Director, CSIR-CSIO)

Session Theme: Thin film and Applied 2D Materials (Session Chair: Dr. Suvankar Chakraborty, INST)

10:00-10:25 hr	Dr. Sunita Mishra (CSIR-CSIO) <i>Lead free perovskite materials for photovoltaic application</i>
10:25-10:50 hr	Dr. Abir De Sarkar (INST) <i>Insights into applied 2d materials for energy conversion and next generation electronics</i>
10:50-11:15 hr	Dr. Neelam Kumari (CSIR-CSIO) <i>Thin film coatings for thermal management</i>

Tea break & Technology display: 11:15 to 11:45 hr

Session Theme: Sensors and Diagnostics (Session Chair: Dr. Inderpreet Kaur, CSIR-CSIO)

11:45-12:10 hr	Dr. Aviru Basu (INST) <i>Design and development of MEMS based sensors for rapid clinical diagnostics of trace analytes</i>
12:10-12:35 hr	Dr. Umesh Tiwari (CSIR-CSIO) <i>Fibre optics based biosensing</i>
12:35-13:00 hr	Dr. Sanyasinaidu Boddu (INST) <i>Lanthanide ions doped luminescent nanomaterials for forensic and security applications</i>

Lunch break: 13:00 to 14:00 hr

Session Theme: Waste to Wealth and Catalysis (Session Chair: Dr. Kamalakannan Kailasam, INST)

14:00-14:25 hr	Dr. Akash Deep (CSIR-CSIO) <i>Conversion of e-waste into nanoproducts</i>
14:25-14:50 hr	Dr. Kaushik Ghosh (INST) <i>Strategy to adopt various approaches for the development of sustainable society</i>
14:50-15:15 hr	Dr. Pooja Devi (CSIR-CSIO) <i>Materials engineering for energy recovery from wastewater</i>
15:15-15:40 hr	Dr. Ramendra S Dey (INST) <i>Design and chemistry of emerging materials for nanoscale electrocatalytic application</i>

Tea break, Poster session & Technology display : 15:40 to 16:50 hr

(Session Chair: Dr. Abhay Sachdeva, CSIR-CSIO)

16:50-17:05 hr	Dr. Sunita Mehta (CSIR-CSIO) <i>Fabrication of novel bioinspired membranes and their potential applications</i>
17:05-17:20 hr	Ms. Mamta (INST) <i>Tracking electronic band alignment across 2D bridge-channel MoS₂ during charge transport</i>
17:20-17:35 hr	Mr. Subham Patial (CSIR-CSIO) <i>Conversion of plastic waste into functional material for energy application</i>
17:35-17:50 hr	Ms. Zinnia Mallick (INST) <i>Implementation of piezoelectric charges for strain modulated optical response</i>

Concluding session

17:50-17:55 hr	Poster awards
17:45-17:55 hr	Concluding Remarks
17:55-18:00 hr	Vote of thanks