TENTATIVE PROGRAM (as of 06/03/2026)

P: Plenary / K: Keynote lecture / I: Invited Lecture / O: Oral contribution

Monday (March 09, 2026) - PLENARY

08:45 – 10:00: Opening
10:00 – 10:45: **Kostya Novoselov** (NUS, Singapore) P
Dynamic van der Waals heterostructures

10:45– 11:30: Coffee Break / Poster Session / Exhibition

Session Chair: **Barbaros Ozyilmaz (NUS, Singapore)**

11:30 – 12:00: **Takashi Taniguchi** (NIMS / MANA, Japan) K
Crystals growth of Boron Nitride and their quantum applications
12:00 – 12:30: **Satheesh Krishnamurthy** (University of Surrey, UK) I
Defect-Engineered TiO_2–MXene Heterostructures via Atmospheric Plasma Jet Printing: A scalable process
12:30 – 13:00: **Andrea Ferrari** (Cambridge Graphene Centre / University of Cambridge, UK) K
Graphene-Enabled Chemometric Raman Imaging
13:00 – 13:20: **Mohammed Y Safirulla** (India AI mission, MeitY, India) I
AI for Science

13:20 – 14:20*: Lunch (offered by the organizers)*
14:20 – 14:45*: Poster Session I*

14:45 – 15:30: **Panel discussion I**

Session Chair: **Mandar M. Deshmukh** (TFIR, India)

15:30 – 16:00: **Sunita Verma** (MeitY, India) I
Graphene and 2D initiatives at MeitY
16:00 – 16:30: **Sanjay Mathur** (University of Cologne, Germany) K
Direct Synthesis of Two-Dimensional Metal Chalcogenides Through Molecular Preorganization
16:30 – 17:00: **Rajeev Ahuja** (Indian Institute of Technology (IIT) Ropar, India) K
Advanced Materials for next-generation Energy and Semiconductor technology

17:00 – 17:45: *Coffee Break / Poster Session / Exhibition*

17:45: End of day 1

Tuesday (March 10, 2026)

WORKSHOP 6 - Advanced Characterization of 2DM and heterostructures

Session chair: Prof. Ravikumar, IIT Madras

09:00 – 09:15: **Suchithra P** (Indian Institute of Science, India) O
Unravelling Structural Complexity in Twisted Multilayer Graphene: A Microscopy Perspective
09:15 – 09:30: **Raj Ganesh Jegadeesan** (Ta Instruments, India) O
Enhance Composites Research and Development with Advanced Material Analysis
09:30 – 09:45: **Arvind Barak** (Renishaw, India) O
Applications of Raman Spectroscopy in 2D Materials
09:45 – 10:00: **Sinu Mathew** (St. Berchmans College,Mahatma Gandhi University, India) O
Tailoring of the luminescence of hexagonal boron nitride (h-BN) using focused Helium ion beams

10:00– 11:00: Coffee Break / Poster Session / Exhibition

WORKSHOP 2 – 2DM Chemistry and composites

Session chair: Dr. Sandip Chatterjee

11:00 – 11:30: **Bharti** (CFEES - DRDO, India) I
Synthesis of graphene based nano composite for removal of toxicants from water
11:30 – 12:00: **Premlal Pillai** (University of Manchester, UK) I
From Materials to Impact: Graphene Membranes for Net-Zero Water Treatment
12:00 – 12:15: **Harimohan Sharma** (GLA University, India) O
Engineering of Synergistic Fe-O Bonding in FePc-Graphene Oxide Quantum Dots Composite to Benchmark Oxygen Reduction Activity Beyond Pristine FePc
12:15 – 12:30: **Monika Singh** (GLA University, India) O
Tailoring of Fe-N-C Single Atom Catalyst’s Coordination Spheres via S-Doping for Oxygen Reduction Reaction Activity: A DFT Study
12:30 – 13:00: **Christian N. Nwosu** (University of Manchester, UK) I
Thermo-Mechanical Evaluation of Graphene Enhanced Elastomer Nanocomposites for Industrial Applications

13:00– 14:00: Lunch
14:00 – 14:30*: Poster Session II*

WORKSHOP 1 - Sensors and Biomedical Applications

Session chair: Dr. Chandrani Pramanik

14:30 – 15:00: **Debarun Sengupta** (Shiv Nadar Institution of Eminence, India) I
Carbonaceous nanomaterial polymer composites-based soft sensors for human motion monitoring
15:00 – 15:30: **Monica Focsan** (Babes-Bolyai University, Romania) I
Multifunctional Graphene-Based Plasmonic Nanoplatforms for Enhanced Sensing and Imaging
15:30 – 16:00: **Dipak Kumar Goswami** (Indian Institute of Technology – Kharagpur, India) I
Stimulus-Gated 2D Materials-based PUF Watermarking for Hardware Security
16:00 – 16:15*:* **Ramesh A** (Centre for Materials for Electronics Technology (C-MET), India) O
Next-Generation Thermal Care: Flexible Graphene-Based Infant Warmers for NICUs

16:15 – 16:45*: Coffee Break / Poster Session / Exhibition*

19:00*: Conference Dinner*

WORKSHOP 7 - Energy Applications of 2D Materials

10:30 – 11:00: *Coffee Break / Poster Session / Exhibition*

Session chair: Dr. Milind Kulkarni

11:00– 11:30: **Sterlin Leo Hudson** (Banaras Hindu University, India) I
Graphene and graphene-based materials for hydrogen storage applications
11:30 – 12:00: **Rahul R Salunkhe** (IIT Jammu, India) I
Bimetallic Heterostructures as Effective Anode Materials for Sodium-Ion Capacitors
12:00 – 12:30: **M. M. Shaijumon** (IISER Thiruvananthapuram, India) I
Engineered 2-Dimensional Heterostructures for Electrocatalysis
12:30 – 13:00: **Anuj Kumar** (GLA University, India) I
Unveiling the ORR Mechanism on FePc: From Fundamentals to Practical Applications

13:00 – 14:00*: Lunch*
14:00 – 14:30*: Poster Session II*

WORKSHOP 5 - Photonics, Plasmonics, Phononics, 2D Magnetism and Spintronics

Session chair: Dr. Sangeeta Semwal

14:30 – 15:00: **Prasana Kumar Sahoo** (IIT Kharagpur, India) I
Engineering Exciton in 2D Lateral Heterostructures for Reconfigurable Optoelectronic Devices
15:00 – 15:30: **Surendra Babu Anantharaman** (IIT Madras, India) I
Strong Light-Matter Interactions in 2D Materials for Optoelectronic Devices
15:30 – 16:00: **Shruti Pandey** (ANSYS, India) I
Simulation of 2D Material Optoelectronic Devices Using Ansys Lumerical

16:00 – 16:30: *Coffee Break / Poster Session / Exhibition*

16:30 – 17:00: **Gopal Dixit** (IIT Bombay, India) I
Ultrafast Lightwave Engineering in 2D materials
17:00 – 17:30: **Narayanan Tharangattu Narayanan** (Tata Institute of Fundamental Research-Hyderabad, India) I
Band Engineering of 2D TMDs for Spin and Valleytronics
17:30 – 18:00: **Chandan Kumar** (Indian Institute of Science – Bangalore, India) I
Phonon Dynamics in Reconstructed Twisted Homo and Hetero bilayer System

19:00*: Conference Dinner*

WORKSHOP 4 - Nanographenes and related 2D-based nanostructures

Session chair: Dr. S. Rajesh Kumar

09:00 – 09:30: **Pitamber Mahanandia** (National Institute of Technology, India) I
Investigation of mobility of graphene-based field effect transistor using ferroelectric gate
09:30 – 10:00: **Tomohiro Otsuka** (Tohoku University, Japan) I
High-Frequency Quantum Devices with Graphene and 2D Materials towards Quantum Information Processing
10:00 – 10:15: **Deepu J Babu** (IIT Hyderabad, India) O
Nanoporous Two-Dimensional Materials for Gas Separations

10:15– 11:30: Coffee Break / Poster Session / Exhibition

WORKSHOP 8 - Growth, Synthesis Techniques and Integration Methods

Session chair: Sh. S.K. Marwaha

11:30 – 12:00: **Ayan Roy Chaudhuri** (Indian Institute of Technology Kharagpur, India) I
Modulating Charge-Transfer Doping and Lateral Heterojunctions in $MoSe_2$ Monolayers via Epitaxial High-k Dielectric Thin Films
12:00 – 12:30: **Anup Kumar Keshri** (Indian Institute of Technology Patna, India) I
Scaling-up Graphene Production
12:30 – 12:45: **Ramaswamy Kadari** (Centre for Materials for Electronics Technology (C-MET), India) O
Recovery and upcycling of spent graphite into high-performance Graphene oxide and conductive ink
12:45 – 13:00: **Visakh V Mohan** (Centre for Materials for Electronics Technology (C-MET), India) O
Two-Dimensional Materials for Advanced Optoelectronics: From Material Design to Device Integration

13:00 – 14:00*: Lunch*
14:00 – 14:30*: Poster Session II*

WORKSHOP 3 - Functional Graphene and 2D Material Systems

Session chair: Sh. Surendra Gotherwal

14:30 – 15:00: **Ashok Keerthi** (The University of Manchester, UK) I
From molecular design to quantum states: graphene nanoribbons with atomic precision
15:00 – 15:15: **Soumya Mondal** (Tata Steel Limited (India), India) O
Graphene Nanoplatelets: Potential Additive for Performance Improvement of Re-treaded Tyre
15:15 – 15:30: **Shirish H Sonawane** (National Institute of Technology, India) O
Fundamentals and Process Engineering of Graphene Exfoliation: Layer Separation Mechanisms to Next-Generation Functional Applications
15:30 – 15:45: **Rahul Sasikumar** (Centre for Materials for Electronics Technology (C-MET), India) O
Addressing leakage current in graphene supercapacitors using electret-coated separators
15:45 – 16:00: **Abimannan S** (Indian Institute of Science, India) O
High-yield Water-Based Production of Pristine Graphene Nanosheets for Industrial Applications

16:00 – 17:00: *Coffee Break / Poster Session / Exhibition*

17:00 – 17:15: **Rashmi Shende** (Tata Steel Limited, India) O
Graphene infused Calcium Sulfonate Complex Grease
17:15 – 17:30: **Stanly Jacob K** (C-MET, Thrissur, India) O
Reduced graphene oxide incorporated Carbon aerogel as capacitive electrode of Lithium Ion Capacitor
17:30 – 17:45: **Neetu Prasad** (SR University, India) O
Deep Learning-Assisted Spatio-Temporal Modeling of Graphene Oxide Reduction Dynamics for Tunable Bandgap Engineering

19:00*: Conference Dinner*

INDUSTRIAL FORUM

Session chair: Dr. Debashish Bhattacharjee

09:00 – 09:30: **Jitender Kumar** (TACC Limited, India) I
Advancing Graphene Derivatives: From Scalable Synthesis to High-Performance Industrial Applications
09:30 – 09:45: **Shubhadeep Maity** (MATrexia Advanced Technologies Pvt. Ltd., India) O
Scaling Graphene for Industrial Applications
09:45 – 10:00: **Kamesh Gupta** (India Graphene Engineering and Innovation Centre, Trivandrum, India) O
Vision and Way-forward for Scaling Graphene Commercialization
10:00 – 10:30: **Manju Gunawardana** (LOLC, Sri Lanka) I
Pre-formed Acidic Oxidizing Medium (PAOM): A Paradigm Shift in Graphene Oxide Synthesis Unlocking Simultaneous Speed, Quality, and Industrial Scale

10:30– 11:00: Coffee Break / Poster Session / Exhibition

Session chair: Mr. Ankur Khaitan
11:00 – 11:30: **PS Jayan** (CUMI, India) I
Process-Defined Graphene: Engineering Commercial Success
11:30 – 12:00: **Kazuo Muramatsu** (Incubation Alliance.Inc., Japan) I
Mass Production and Advanced Application of Graphene Flower® and Related Products
12:00 – 12:30: **Sushmitha Veeralingam** (INL, Portugal) I
Sustainable Production of Two-Dimensional Crystals for Nanofiltration Membranes and Flexible Electronics
12:30 – 12:45: **Arun Kuniyil** (Hindustan Petroleum Corporationb Ltd, India) O
Sustainable Production of Carbon Nanotubes via CO_2 Free Methane Decomposition Enabling Hydrogen Generation
12:45 – 13:00: **Andrea Ubezio** (Heidelberg Instruments, Switzerland) O
Advanced 2D Materials Devices Fabrication with NanoFrazor

13:00 – 14:00*: Lunch*
14:00 – 14:30*: Poster Session II*

Session chair: Mr. KRS Narayanan

14:30 – 15:00: **Auroprakash Rout** (Tata Steel Limited, India) I
Innovating with Graphene - Tata Steel's New Materials Business
15:00 – 15:30: **Dorye Esteras** (ICN2/Apeiron Intelligence, Spain) I
Automatic workflows for the simulation and optimisation of emergent magnetic materials
15:30 – 15:45: **Mitesh Modi** (Levidian, United Arab Emirates) O
Beyond the Breakthrough: Why Graphene Still Hasn´t Scaled - and What We're Going to Do About It

15:45– 16:45: Coffee Break / Poster Session / Exhibition

16:45 – 17:45: **Panel discussion II**

19:00*: Conference Dinner*

Wednesday (March 11, 2026) - PLENARY

Session chair: Takashi Taniguchi

09:00 – 09:45: **Pulickel Ajayan** (Rice University, USA) P
Materials of Carbon-Boron-Nitrogen Compositions
09:45 – 10:15: **Barbaros Ozyilmaz** (NUS, Singapore) K
Dilute interlayer cobalt doping induced ferromagnetism in semiconducting BP and superconducting $NbSe_2$
10:15 – 10:45: **Mandar M. Deshmukh** (TFIR, India) K
2D superconducting materials for fundamental science and technology

10:45– 11:15: Coffee Break / Poster Session / Exhibition

Session chair: To be defined

11:15 – 11:45: **Rupesh S. Devan** (Indian Institute of Technology Indore, India) I
Impact of MAX phase purity on performance of 2D layered MXenes in the energy sector
11:45 – 12:15: **Chandra Sekhar Rout** (JAIN University, India) I
MXene-TMDs Based Hybrids for Energy Storage Applications
12:15 – 12:45: **Rakhi Raghavan Baby** (CSIR-NIIST, India) I
Ti-based MXenes as Emerging 2D Materials for High-Performance Supercapacitor Applications
12:45 – 13:15: **Peter Boggild** (DTU Physics, Denmark) K
Terahertz Spectroscopy for Wireless Electrical Characterization of 2DM

13:15 – 14:00*: Lunch (offered by the organizers)*
14:00 – 14:30*: Poster Session II*

14:30 – 16:10: PhD Students // Tracks 1, 2 and 3
14:30 – 16:15 Industrial Forum

16: 15– 17:30*: Coffee Break / Poster Session / Exhibition*

17:30*: End of day 3*

PhD Students // Track 1

Session chair: Y. Purushotham

14:30-14:40: **Brateen Datta** (IIT Kharagpur, India) O
Designing Tunable Screen-Printed Graphitic Electrodes for Point-of-Care Diagnosis Platforms
14:40-14:50: **Ganesh Gadudhula** (SRM Institute of Science & Technology, India) O
Photon-Assisted Reduction of Inter-Sheet Resistance in Graphene Networks for Conductive Coatings
14:50-15:00: **Dipanjana Mondal** (IISER Thiruvananthapuram, India) O
Native Oxide MoSe2 – MoO2 Heterostructure-based photoinduced Self-powered Gas Sensor for Selective NO2 and H2 detection
15:00-15:10: **Shubham Yadav** (BITS-Pilani, Hyderabad Campus, India) O
Engineering Defect States via Oxygen Passivation in Monolayer MoSe2 for Enhanced Photodetection
15:10-15:20: **Abhishek Ghosh** (Nicolaus Copernicus University in Toruń, Poland, Poland) O
Purcell enhancement by the edge states of zig-zag graphene nanoflakes
15:20-15:30: **Bashirunnisa Ananya** (University of Manchester, UK)
Enhanced Removal of Multiple Emerging Pollutants: Tetracycline, Bisphenol A, PFAS from Water using Graphene Oxide Vortex Ring
15:30-15:40: **Raghavv Raghavender Suresh** (Indian Institute of Technology Kharagpur, India) O
Silver-modified Laser Induced Graphene Electrodes for Electrochemical Non-Enzymatic Salivary Urea Sensing

PhD Students // Track 2

Session chair: Sunit S. Rane

14:30-14:40: **Preethu P Satheesh** (SRM Institute of Science and Technology, India) O
Transfer-Free CVD Growth of Graphene on SiO2/Si: A Combined Experimental and Theoretical Study
14:40-14:50: **Vikas Patel** (Indian Institute of Technology Roorkee, India) O
Continuous hydrothermal decomposition of liquid effluent into high-value carbon and hydrogen
14:50-15:00: **Shilpa R** (CSIR NIIST, India) O
MoS2/CNT/Ti3C2Tx ternary nanohybrid for low-overpotential electrocatalytic hydrogen evolution
15:00-15:10: **Aswathy S Nair** (CSIR National Institute for Interdisciplinary Science and Technology, India) O
Low-Cost Process for the Preparation of Highly Oxygenated Graphene Oxide from Indian Graphite Ore
15:10-15:20: **Aswathi Sampanraj** (Indian Institute of Technology Madras, India) O
Interface-controlled thermal transport in monolayer molybdenum disulfide
15:20-15:30: **Avinash Powar** (The University of Manchester (National Graphene Institute)), UK) O
Graphene oxide reinforced polymer nanocomposites using ultra-high-molecular-weight polyethylene oxide and tannic acid
15:30-15:40: **Loree Lipsa** (C V Raman Global University, India) O
PVDF-HFP based free standing hybrid composite films for piezoelectric energy harvesting to power IoT sensors
15:40-15:50: **Yamunadevi Vijayabaskaran** (National Institute of Technology Warangal, India) O
Integrated Corrosion Protection and Electrochemical self-warning and Self-healing Behavior in Hydrodynamically Exfoliated Graphene-Based Polymer Composite Coatings
15:50-16:00: **Varsha Biswas** (Indian Institute of Science Education and Research, Thiruvananthapuram, India) O
Ti3C2Tx MXene-Based Flexible Wearable Sensors for VOCs
16:00-16:10: **Sophy Mariam Varghese** (CSIR-NIIST, (AcSIR), India) O
Synergistic Ti3C2Tx MXene-Reduced Graphene Oxide Anodes for Next Generation High-Performance Asymmetric Supercapacitors

PhD Students // Track 3

Session chair: Rakhi Raghavan

14:30-14:40: **Bhagyalaxmi Pothal** (IIT Madras, India) O
Interface Modulated Interlayer Excitons in Large-Area CVD-Grown Vertical MoS2/WS2 Heterostructures
14:40-14:50: **Gayatri** (University of Warsaw, Poland) O
Interlayer Energy Transfer from Lower-to-Higher Bandgap Material
14:50-15:00: **Hrishikesh Sarma** (Indian Institute of Technology Guwahati, India) O
Thermophysical properties of Natural Deep Eutectic Solvent based Nanofluids for enhanced Heat transfer
15:00-15:10: **Mohammed Aslam Villan** (Indian Institute of Technology Bombay, India) O
Ultrathin, Unsinkable, Janus-Faced Solar–Thermal Interfacial Evaporator for High-Throughput Seawater Distillation and Solar-Water Production
15:10-15:20: **Mohammad Israil Hossain** (University of Manchester, UK) O
Core-shell Graphene Oxide and Carboxymethyl Cellulose Vortex Ring Aerogel Particles for the Adsorptive Removal of Contrasting Azo Dyes from Water
15:20-15:30: **Akash Ghosh** (Indian Institute of Technology Kharagpur, India) O
Development of Natural Rubber Graphene Nanocomposite Foam
15:30-15:40: **Gayathri P** (IIT Madras, India) O
Electrical Transport in Partially Reduced 3D Graphene Aerogels
15:40-15:50: **Ganesh Jadhav** (D. Y. Patil Education Society Kolhapur, India) O
Facile Synthesis of Self-Supported Amorphous Cobalt-Nickel Tungstate Thin Films for High Performance Asymmetric Supercapacitor: Role of Co and Ni variation

INDUSTRIAL FORUM

Session chair: Manju Gunawardana

14:30 – 14:45: **Salim EL Kazzi** (AIXTRON, Germany) O
A Manufacturable Pathway for Integrating 2D Materials into Advanced Semiconductor Process Flows
14:45 – 15:00: **Arun Prakash Aranga Raju** (Levidian, United Arab Emirates) O
Gas-to-Graphene: Materials Sovereignty in Indian Manufacturing
15:00 – 15:15: **Dhananjay Purushotham** (The Advance carbon company (TACC), India) O
Graphene-Based Paints and Coatings for Enhanced Durability and Corrosion Resistance: An Application Perspective
15:15 – 15:30: **Robert Albrecht** (Sentech Instruments GmbH, Germany) O
Low-Temperature ALD Strategies for Flexible MoS_2-Based 2D Electronics
15:30 – 15:45: **Karthik Soundar** (TACC Limited, India) O
Graphene Oxide–Enhanced Concrete: Proven Performance Gains for Sustainable Infrastructure
15:45 – 16:00: **Chandrani Pramanik** (Tata Steel Limited, India) O
Enhanced Removal of Industrial Water Pollutants Using a Pyrolytic Carbon Fibre–Graphene Oxide–Iron Tri Composite Adsorbent
16:00 – 16:15: **Sree Kumar** (TACC Limited, India) O
Reduced Graphene Oxide as an Efficient Conductive Additive for High-Performance Graphite Anodes

16:15– 17:30: Coffee Break / Poster Session / Exhibition

17:30*: End of day 3*

Thursday (March 12, 2026) – PLENARY

Session chair: A. Seema

09:00 – 09:15: **Rohit Thakur** (Centre for Nano and Soft Matter Sciences, India) O
High-Throughput Solution-Processed Graphene Transistors: Enabling sub-Femtomolar Point-of-Care Immunosensing and Ultra-Low Power Synaptic Neuromorphics
09:15 – 09:30: **Jayasankar Kalidoss** (CSIR- National Institute for Interdisciplinary Science & Technology, India) O
CSIR-NIIST's Technology on Graphene Production from Indian Mineral Resources
09:30 – 09:45: **Nithin Chandran B S** (Indian Institute of Technology Madras, India) O
2D MXenes-derived TiB2 formation in B4C at high temperatures
09:45 – 10:00: **Santosh Kumar M B** (Cochin University of Science and Technology, India) O
Design and development of 2d woven jute fiber nanofiller/epoxy hybrid composites for UAV structural applications
10:00 – 10:30: **Titash Mondal** (Indian Institute of Technology, Kharagpur, India) I
Epoxidized Natural Rubber-Graphene -Based Sensors and Energy Harvesters

10:30– 11:00: Coffee Break

Session chair: Ratheesh

11:00 – 11:15: **Anupma Thakur** (Indian Institute of Science, India) O
Atomistic Design and Engineering of Two-dimensional MXenes for Electrocatalysis
11:15 – 11:30: **Alex James** (DUK, India) O
Performance enhancement of graphene-based electrodes using machine learning techniques
11:30 – 12:00: **Vincenzo Palermo** (CNR-ISOF, Italy) I
Combination of 2D-3D materials with machine learning to detect small ions in complex biological fluids
12:00 – 12:30: **Stephan Roche** (ICREA / ICN2, Spain) K
Artificial Intelligence enabling disruptive 2D materials design & engineering
12:30 – 13:00: **Costas Galiotis** (FORTH/ ICE-HT and University of Patras, Greece) I
Graphene-Based Approaches as Innovative Tools for Remedial and Preventive Cultural Heritage Conservation
13:00 – 13:30: **James G. McHugh** (National Graphene Institute, University of Manchester, UK) I
Stacking Ferroelectricity and Band-Edge Spin Physics in 2D Semiconductors

13:30 – 14:00 Closing & Awards ceremony

14:00: Lunch