

International Conference on Recent Trends in 2D Nanomaterials: Synthesis, Properties and Applications: A Virtual Event

Date: **February 24-26, 2021**

Wednesday, February 24, 2021

Inaugural Session: 8:55 am - 9: 30 am		
Time (IST)	Event	By
8.55 am to 8.57 am	Saraswati Vandana	Online
8.58 am to 9.00 am	About conference	Dr. Dattatray J. Late, FRSC (Convener)
9.00 am to 9.04 am	Welcome of Guest	Prof. Sandesh Jadkar (Head, Dept of Physics, SPPU, Pune)
9.05 am - 9.06 am	Welcome address	Lt Gen V. K. Sharma AVSM (VC, Amity University Maharashtra, Mumbai & Amity University Madhya Pradesh)
9.07 am to 9.10 am	Welcome address	Prof. Nitin Karmalkar (VC, SPPU, Pune)
9.11 am to 9.13 am	Welcome address	Dr. Bharat B. Kale (DG, C-MET, Pune)
9.14 am to 9.17 am	Welcome address	Prof. Dr. Kamal Kant Dwivedi Senior Vice-President, Ritnand Balved Education Foundation, Amity University, Noida
9.18 am to 9.23 am	Guest Of Honor Address	Prof. Dr. W. Selvamurthy, President, Amity Science, Technology and Innovation Foundation, Director General for Amity Directorate of Science and Innovation and Chair Professor for Life Sciences. Chancellor, Amity University, Chhattisgarh.
9.24 am to 9.26 am	Vote of Thanks	Dr. H. M. Pathan FICS, (Convener)

Session 1 Chair: Prof. Prof. Sandesh Jadkar & Prof. Sanjay Dhole (SPPU, Pune)

Plenary Talk:

9:30 am - 10:15 am: **Prof. Saroj Kumar Nayak**, IIT Bhubaneswar, India

Giant enhancement of thermal conductivity of aluminium-graphene composite through electron phonon engineering

Invited Talk-1: 10: 15 am - 11:00 am : **Prof. Sumeet Walia**, RMIT University, Melbourne, VIC, 3001, Australia

Two-dimensional materials for electronics, optoelectronics and antipathogenic coatings

Invited Talk-2:

11: 00 am - 11:45 am Prof. Prashant Kumar, IIT Patna, India

Free-standing borophene

Invited Talk-3: 11: 45 am - 12.30 pm: **Prof. Shyama Rath**, University of Delhi, Delhi, India
Layer and temperature dependent Raman spectroscopy of two-dimensional MoSe₂

Lunch Break

Session 2 Chair: Prof. Suresh Gosavi & Prof. Vikas Mathe (SPPU, Pune, India)

Keynote Talk: I

2:00 pm - 2:45 pm: **Prof. Wilfrid Prellier** (Associate Editor, AIP Advances), CRISMAT, CNRS UMR, France

Functional Oxide thin film for electronic and medical applications

Invited Talk-4: 2.45 pm to 3.30 pm **Prof. Mandar M. Deshmukh**, TFIR, Mumbai, India
Superconductivity and magnetism in van der Waals materials

Invited Talk-5: 3.30 pm to 4.15 pm: **Prof: Saurabh Lodha**, IITB, Mumbai, India
Few-layer TMDs and their heterostructures for high performance photodetection

Invited Talk-6: 4.15 pm TO 5.00 pm: **Dr. Andres Castellanos-Gomez**, Instituto de Ciencia de Materiales de Madrid- Madrid, Spain.

Title: Straintronic devices based on 2D Materials

Invited Talk-7: 5.00 pm -5.45 pm: **Prof. Manoj K. Singh**, CUH, Haryana, India.
Development and Charge Injection Study of large-area Two Dimensional Materials for Nano-electronic Devices

Session 3: Chair: Prof. Y. D. Kolekar & Prof. N. B. Chaure (SPPU), Prof. Pravin Walke (UOM)

Oral Presentations: 7.00 pm to 8.30 pm

7:00 pm - 7:10 pm **Oral Presentation-1**

7:10 pm - 7:20 pm **Oral Presentation-2**

7:20 pm - 7:30 pm **Oral Presentation-3**

7:30 pm - 7:40 pm **Oral Presentation-4**

7:40 pm - 7:50 pm **Oral Presentation-5**

7.50: pm - 8:00 pm **Oral Presentation-6**

8:00 pm - 8:10 pm **Oral Presentation-7**

8:10 am - 8:20 pm **Oral Presentation-8**

Thursday, February 25, 2021

Session 4 Chair: Prof. D. S Joag (SPPU)& Prof. P. S. Anil Kumar (IISc, India)

Keynote Talk: II: 9:00 am - 9:45 am **Prof. Mark C. Hersam** (Associate Editor, ACS Nano),
Northwestern University, USA
Chemically Tailored 2D Materials for Electronic and Energy Technologies

Invited Talk-8: 9: 45 am - 10:30 am: **Prof. T. Pradeep**, (Associate Editor, ACS Nano)
IIT Madras, India

Invited Talk-9: 10: 30 am - 11:15 am: **Prof. Kanishka Biswas** (Associate Editor, ACS Applied Energy Materials), JNCASR, Bengaluru, India
Nanostructured Thermoelectric Energy Conversion

Invited Talk-10: 11: 15 am – 12:00 noon: **Prof. Chandra Sekhar Rout**, (Associate Editor, RSC Advances), Jain University, Bengaluru, India
Tuning the Physicochemical Properties of 2D Materials for Energy Storage Applications

Lunch Break

Session 5 Chair: Prof. R. B. Sharma & Prof. N. B. Chaure, (SPPU, Pune)

Keynote Talk: III

2:00 pm - 2:45 pm: **Prof. Manish Chhowalla** (Associate Editor, ACS Nano), University of Cambridge, UK
Catalysis using metallic 2D Materials

Invited Talk-11: 2.45 pm to 3.30 pm: **Prof. Narendra Kurra**, IISER-TVM, India
MXenes: From Redox Charge Storage to High-Rate Energy Devices

Invited Talk-12: 3.30 pm to 4.15 pm: **Prof. Fabiana Arduini** (Associate Editor, Microchemical Journal), University of Rome Tor Vergata, Rome, Italy
Carbon black as an outstanding and affordable nanomaterial for electrochemical (bio) sensor Design

Invited Talk-13: 4.15 pm to 5.00 pm **Dr. Pranati Nayak**, Oxford University, UK
Laser Induced Graphene Based On-chip Electrodes for Biosensing

Invited Talk-14: 5.00 pm to 5.45 pm: **Prof. Ruchi Gupta** (Associate Editor, RSC Advances), University of Birmingham, UK
Leaky Waveguide Sensors and Microsystems for Water Monitoring and Clinical Diagnostics

Session 6 Chair: Dr. Suhas Jejurikar (UOM) and Dr. Shweta Jagtap & Dr Adinath Funde (SPPU, Pune), Poster session via Google meet. 6.00 PM to 8.00 PM

Friday, February 26, 2021

Session 7 Chair: Dr. B. L. V. Prasad (CSIR-NCL, Pune, India)& Dr. D. M. Phase (UGC DAE Consortium for Scientific Research, Indore, India)

Keynote Talk: IV: 8.45 am to 9.30 am : **Prof. Satishchandra B. Ogale, IISER, Pune, India**
2D Materials for Clean Energy and Environmental Applications

Invited Talk-15: 9.30 am to 10.15 am: **Prof. Deep Jariwala, University of Pennsylvania, USA**
Two-Dimensional Materials for Advanced Logic, Memory and Photonics

Invited Talk-16: 10.15 am to 11.00 am: **Prof. Abhay Sagade, SRM Uni., Chennai, India**
Device Scaling for Novel Low-Dimensional Materials in High-Frequency Nanoelectronics Applications

Invited Talk-17: 11.00 am to 11.45 am: **Dr. Shivani Sharma, IOP, Academia Sinica, Taiwan**
Ammonia sensor using WS₂ nanosheet.

Invited Talk-18: 11.45 am to 12.30 pm: **Dr. C. S. Gopinath, CSIR-NCL, Pune, India.**
Why the Thin Film form of Photocatalyst Approach is Superior for Solar Hydrogen Generation in Direct Sunlight

Invited Talk-19: 12.30 pm to 1.15 pm: **Prof. Parasharam M. Shirage, IIT, Indore, India**
2D Metal Oxide Materials for Multifunctional Applications

Lunch Break

Session 8 Chair: Dr Niranjan Ramgir (BARC, Mumbai) and Dr. Bhaskar R. Sathe (BAMU) & Dr. Bhalchandra Kakade (SRM University, Chennai)

Invited Talk-20: 2.00 pm to 2.45 pm: **Prof. Jai Singh, HGU, Sagar, India**
Synthesis and Characterization of Two dimensional Graphene and MoS₂

Invited Talk-21: 2.45 pm to 3.30 pm: **Prof. Kalyan Raidongia, IIT Guwahati, India**
Energy from the Nanofluidic Transport of Water through Nanochannels between Packed Silica Spheres

Invited Talk-22: 3.30 pm to 4.15 pm: **Prof. Sapna Sinha, Osaka University, Japan**
Importance of graphene in studying different nanomaterials via TEM.

Invited Talk-23: 4.15 pm to 5.00 pm **Dr. Sadhu K. Kolekar, University of South Florida, USA.**
Structural and Electronic properties of Dirac semimetals: PtTe₂ and PtSe₂

Tea Break

5:15 PM – 5:45 PM Valedictory: Closing Remarks and Prize distribution