

THE WORLD COMES HERE.

TMS 2023

152nd Annual Meeting & Exhibition

MARCH 19–23, 2023
SAN DIEGO CONVENTION CENTER &
HILTON SAN DIEGO BAYFRONT
SAN DIEGO, CALIFORNIA, USA
#TMSANNUALMEETING



SUBMIT AN ABSTRACT BY JULY 1 FOR THE FOLLOWING TMS2023 SYMPOSIUM:

ADVANCED MATERIALS

2D Materials: Preparation, Properties, Modeling & Applications

Since the discovery of Graphene, interest in basic and applied research in 2D-Materials is on the rise. Challenges and opportunities continue to grow in the areas of process-property-performance correlations in 2D- Materials. Efforts to transfer technology from fundamental R&D to prototyping to manufacturing are being pursued rigorously on a global scale. Studies on materials such as Carbon Nanotubes, Graphene, Hexagonal Boron Nitride, Perovskites, Phosphorene, Transition Metal Dichalcogenides (TMDCs), Xenes (Germanene, Silicene, Stanene) are of interest to the Symposium.

This symposium will include, but will not be limited to the following topics:

- **Scope 1:** Methods of Fabrication, Material Properties - Top-Down Approach – Mechanical Exfoliation, Liquid Phase Exfoliation, Ball-Milling Based Exfoliation - Bottom-Up Approach – Chemical Vapor Deposition, Wet Chemical Synthesis, Hydro/Solvothermal Synthesis Material Properties -Electrical, Electronic, Magnetic, Mechanical, Optical, Structural & Thermal Properties
- **Scope 2:** Modelling & Simulation Band-Structure, Transport Properties, Optical Properties, Device Simulation - Tools & Methods - Data sets of Properties - Standards, Methods
- **Scope 3:** Device Fabrication, Properties & Applications Studies focused on the use of these materials for the fabrication of membranes, 2D-sheets, 2- and 3-Terminal active and passive devices, photodetectors, sensors, transistors, applications in batteries, solar cells, thermoelectrics, topological insulators, ultracapacitors, valleytronics are some of the examples of interest to the Symposium.

ORGANIZERS

Nuggehalli Ravindra, New Jersey Institute of Technology
Madan Dubey, US Army Research Laboratory
Sufian Abedrabbo, Khalifa University
Hesam Askari, University Of Rochester
Gerald Ferblantier, University of Strasbourg - IUT LP / ICube Laboratory - CNRS
Ramana Chintalapalle, University of Texas at El Paso
Joshua Young, New Jersey Institute Of Technology
Adele Carrado, University of Strasbourg - IUT LP / IPCMS - CNRS
Karine Mougín, CNRS - IS2M
Heinz Palkowski, Clausthal University of Technology

SYMPOSIUM SPONSORS

TMS Functional Materials Division
TMS Thin Films and Interfaces Committee

www.tms.org/TMS2023

QUESTIONS?
Contact programming@tms.org