Basic Research Innovation Collaboration Center (BRICC)
4100 N Fairfax Drive | Suite 450 | Arlington, VA 22203

Agenda Day 1 | Wednesday, January 25, 2023

Time	Topic	Speaker
8:00-8:30	**Registration**	
8:30-9:00	**Welcome and Introductions**	
9:00-9:30	Solution Processed Two-Dimensional Structures for Applications	Dr. Pulickel Ajayan, Rice University
9:30-10:00	Hybrid 2D Material Foams and its Composites	Dr. Arvind Agarwal, Florida International University
10:00-10:30	**BREAK**	
10:30-11:00	Hybrid-Materials Valley Optoelectronics for Photon Spin Communication	Dr. Ramesh Ramamoorthy**,** University of California, Berkeley
11:00-11:30	Magnetic van der Waals Heterostructure PhotoSpintronics	Dr. Xiaodong Xu, University of Washington
11:30-1:00	**LUNCH**	
1:00-1:30	Remote Epitaxy of Metals and Dielectrics for Van der Waals Nanoelectronics	Dr. Bharat Jalan, University of Minnesota
1:30-2:00	Viscous Electronics in 2D Materials: Microscopic Insight into Electron Hydrodynamics from First-Principles Calculations	Dr. Marco Bernardi, California Institute of Technology
2:00-2:30	Synthesis of 2D Material Inks for Aerosol Jet 3D Printing, Including Development of the Printing Chemistry	Dr. Rahul Panat, Carnegie Mellon University
2:30-3:00	Functionalization MXenes with Organosilanes to Increase Shelf Life for Effective Ink Formulation	Dr. Alfred Addo-Menshah, Texas A&M International University
3:00-3:15	**BREAK**	
3:15-3:45	Scalable Synthesis of Traditional Metal Dichalcogenides Engineered by the Pulsed Laser Ablation in Liquids Technique for 3D Printed Architectures	Dr. Kelly Nash, University of San Antonio
3:45-4:15	Materials Intelligence through Data Analytics and Structure-Property Research	Dr. Helen Tuner, Chaminade University
4:15-4:45	Fabrication, Functionalization, and Characterization of Low-Cost Flexible Nanocomposite Materials as Electronic Components	Dr. Jacob Wei, Texas Southern University
4:45:5:00	Closing Remarks	
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Agenda Day 2 | Thursday, January 26, 2023

Time	Topic	Speaker
8:00-8:30	**Registration**	
8:30-9:00	Investigation of Atomic Switches at 6G/THz Frequencies	Dr. Deji Akinwande, UT Austin
9:00-9:30	Synthesis and Characterization of Transition Metal Dichalcogenide Layers and Heterostructures	Dr. Joan Redwing and Dr. Mauricio Terrones, Pennsylvania State University
9:30-10:00	Controlling Properties of 2D Materials using Ferroelectric Thin Films	Dr. Mukti Rana, Delaware State University
10:00-10:30	**BREAK**	
10:30-11:00	Synthesis, Properties, and Applications of Titanium base MAX Phases and MXene Alloys	Dr. Robert Vajta and Dr. Baburaj Eranezhuth, Rice University
11:00-11:30	Synthesis of 2D Graphene Sheets and Fabrication of 3D Printed Polymer Composites	Dr. Vijaya Rangari, Tuskegee University
11:30-12:30	**LUNCH**	
12:30-1:00	AI-accelerated Crystal Image Data Analysis	Dr. Ming Tang, Rice University
1:00-1:30	Formation of Complex 3D Metal Architecture using 3D Printed Polymers as Electroplating Scaffolds	Dr. Fareed Dawan, Southern University and A&M College
1:30-2:00	Synthesis, Properties, and Applications of Titanium base MAX Phases and MXene Alloys	Dr. Viktor Hadjiev and Dr. Jim Meen, University of Houston
2:00-2:30	Nanoscale Helical Ribbons for Efficient Generation of THz Radiation	Dr. Francesca Cavallo**,** University of New Mexic
2:30-3:00	Exploration and Characterization of the Electric, Magnetic and Thermal, Properties of 2D Layered Materials	Dr. Kevin Storr, Prairie View A&M University
3:00-3:15	**BREAK**	
3:15-3:45	Modeling and Simulation to Identify Promising Material Combinations for Achieving Targeted Sets of Properties: Computational Study of 2D heterostructures for Device Application	Dr. Pedro Derosa, Louisiana Tech University
3:45-4:15	Synthesis and Exfoliation of 2D Transition Metal Dichalcogenides	Dr. Byron Freelon, University of Houston
4:15-4:45	D Layered Materials and their Heterostructures for TeraHertz Applications – Synthesis, Characterization, and Modeling	Dr. Ajit Kelkar, Dr. Ram Mohan, Dr. Shyam Aravamudhan, North Carolina AT&T State University
4:45-5:00	Closing Remarks	

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