GRAPHENE FOR US ONLINE

International Online Conference ★ February 23-24, 2021 ★

TENTATIVE PROGRAM (as of 22/02/2021)

zoom Video Conferencing

Conference Time Zone – New York, USA (EST)

K: Keynote lecture / I: Invited Lecture / O: Oral / FP: FlashPoster

Tuesday (23/02/2021)

08:50 – 09:00: *Opening - Welcome and Introduction*
Antonio Correia (Phantoms foundation, Spain) / **James Hone** (Columbia University, USA) / **Mauricio Terrones** (PennState University, USA) / **Vincent Meunier** (Rennsselaer, USA) / **Luigi Colombo** (UTDallas, USA)

09:00 – 09:30: **Jun Lou** (Rice University, USA) K
Electrochemical Behaviors of Two-Dimensional Materials for Energy and Environmental Applications
09:30 – 10:00: **Francesco Bonaccorso** (BeDimensional, Italy) K
Large-scale production of 2D crystals for energy applications
10:00 – 10:30: **Richard Kaner** (UCLA, USA) K
Graphene Synthesis and Applications in Supercapacitors

10:30– 11:00: Break / ePoster session / Exhibition

PARALLEL SESSION 1
11:00 – 11:20: **Gordon Harling** (CMC Microsystems, Canada) I
Accessing Infrastructure for Prototyping and Measurement
11:20 – 11:40: **Gordon Rinke** (AMO GmbH, Germany) I
Wafer Scale Integration of Graphene - 2D Experimental Pilot Line at AMO
11:40 – 12:00: **Elías Torres Alonso** (Graphenea, Spain) I
Graphenea Foundry: a platform for the manufacture of graphene-based devices
12:00 – 12:10: **Niels Wijnaendts van Resandt** (Heidelberg Instruments, USA) O
Direct Write Lithography Tools and Applications
12:10 – 12:30: **Mario Lanza** (KAUST, Saudi Arabia) I
Wafer-scale integration of two-dimensional materials in high-density memristive crossbar arrays for artificial neural networks
12:30 – 12:50: **An Chen** (Semiconductor Research Corporation, USA) I
Nanoelectronics Research for Computing beyond CMOS
12:50 – 13:00: **Mohamed Boukhicha** (BNL, USA) O
Large-scale Lithium-intercalated Multilayer Graphene Production

PARALLEL SESSION 2
11:00 – 11:20: **Adina Luican-Mayer** (University of Ottawa, Canada) I
Visualizing 2D materials at the atomic scale
11:20 – 11:30: **Andrey Krayev** (HORIBA Scientific, USA) O
Nanoscale Structural Peculiarities in Mono- to Few-Layer Crystals of Ti3C2Tx MXene Revealed by TERS.
11:30 – 11:50: **Sonia Conesa Boj** (TU Delft, The netherlands) I
From crafting to visualization: low-dimensional TMD nanostructures under the electron microscope lamppost
11:50 – 12:10: **Avik Ghosh** (University of Virginia, USA) I
Unconventional switching using topological properties of electrons in graphene based heterostructures

12:10 – 12:30: **Bruno Dlubak** (CNRS/Thales, France) I
Spin filtering in graphene based magnetic tunnel junctions
12:30 – 12:50: **Aida Ebrahimi** (Pennsylvania State University , USA) I
All-Ink Dopamine Sensors with Ultralow Detection Limit Enabled by One-Step Annealing of Graphene Ink
12:50 – 13:00: **Salvatore Polverino** (Università degli studi di Genova, Italy) O
Few-layer graphene-based sustainable cement mortar

13:00 – 14:00*: Lunch Break*

14:00 – 14:30: **Dmitri Efetov** (ICFO, Spain) K
Competing phases of correlated Chern insulators in Superconducting Twisted Bilayer Graphene
14:30 – 15:00: **Emanuel Tutuc** (The University of Texas at Austin, USA) K
Correlated Insulators and Topological Transport in Twisted Double Bilayer Graphene
15:00 – 15:30: **Arend Van der Zande** (University of Illinois, USA) K
Electromechanical systems enabled by interfacial slip in 2D material heterostructures
15:30 – 16:00: **Abhay Pasupathy** (Columbia University, USA) K
Quantum phenomena in moire heterostructures

16:00 – 16:30: *Break / ePoster session / Exhibition*

16:30 – 17:00: **Matthew Yankowitz** (University of Washington, USA) K
Tunable correlated and topological states in twisted monolayer-bilayer graphene
17:00 – 17:30: **Michael Fuhrer** (Monash University, Australia) K
2D Topological Insulators for Low-Energy Electronics
17:30 – 17:40: **Fida Ali** (Sungkyunkwan University, South Korea) O
Density of Interface States in Layered-WSe2 Semiconductor
17:40 – 17:50: **Tien Dat Ngo** (Sungkyunkwan University, South Korea) O
Fermi-level de-pinning at the intrinsic WSe2-metal junction via van der Waals bottom contacts
17:50 – 18:00: **Pawan Srivastava** (Sungkyunkwan University, South Korea) O
Resonant tunneling through twisted black phosphorus homostructures

18:00 End of day 1

Wednesday (24/02/2021)

08:30 – 09:00: **Robert Wallace** (The University of Texas at Dallas, USA) K
An update on contact reactions with TMDs
09:00 – 09:30: **Joan Marie Redwing** (The Pennsylvania State University, USA) K
Progress in epitaxial growth of wafer-scale TMD monolayers
09:30 – 10:00: **Zhihong Chen** (Purdue University, USA) K
2D Materials for Back-end-of-line Interconnect Application
10:00 – 10:05: **Filippo Giubileo** (CNR-SPIN Università di Salerno, Italy) FP
Transition metal dichalcogenide monolayers as gate controlled field emitters

10:05– 10:30: Break / ePoster session / Exhibition

10:30 – 11:00: **Philip Kim** (Harvard University, USA) K
Josephson Junctions based on van der Waals heterostuctures
11:00 – 11:30: **Kaustav Banerjee** (University of California, USA) K
Next-generation integrated electronics uniquely enabled by van der Waals materials and heterostructures
11:30 – 11:40: **Folkert de Vries** (ETH Zurich, Switzerland) O
Gate-Defined Josephson Junctions in Magic-Angle Twisted Bilayer Graphene
11:40 – 12:10: **Jim Schuck** (Columbia University, USA) K
Nonlinear twistoptics at symmetry-broken interfaces
12:10 – 12:40: **Jia Li** (Brown University, USA) K
Tuning moirè flatband in magic-angle twisted bilayer graphene

12:40 – 13:10: **Stephan Roche** (ICREA/ICN2, Spain) K
Topological Spin Transport in Quantum Materials and Entanglement
13:10 – 13:20: **Pablo Piskunow** (Catalan Institute of Nanoscience and Nanotechnology, Spain) O
Hinge Spin Polarization in Magnetic Topological Insulators Revealed by Resistance Switch

13:20 – 14:00*: Lunch Break*

14:00 – 14:10: **Stephen Power** (Trinity College Dublin, Ireland) O
Manipulating valley currents in graphene nanostructures
14:10 – 14:20: **Megan Steves** (The Pennsylvania State University, USA) O
Correlating nonlinear optical properties with atomic-level structure in 2D-polar metals
14:20 – 14:30: **Andrea Tomadin** (Università di Pisa, Italy) O
Microscopic theory of plasmon-enabled resonant terahertz detection in bilayer graphene
14:30 – 14:40: **Raúl Guerrero** (Centro de Física de Materiales, Spain) O
Rhombohedral Phase in Trilayer-graphene
14:40 – 15:10: **Ado Jorio** (Universidade Federal de Minas Gerais, Brazil) K
Phonon localization in low-angle twisted bilayer graphene
15:10 – 15:40: **Jerzy Sadowski** (Brookhaven National Laboratory, USA) K
Interlayer coupling effects in the 30deg-twisted bilayer graphene

15:40 – 16:40: *Break / ePoster session / Exhibition*

16:40 – 17:10: **Jamie Warner** (University of Texas at Austin, USA) K
Air Stable Noble Metal Dichalcogenide 2D layered Materials
17:10 – 17:40: **Rodney Ruoff** (UNIST/CMCM, South Korea) K
F-diamane from AB-stacked graphene

17:40: Closing