



TENTATIVE PROGRAM (as of 06/04/2022)



Conference Time Zone – New York, USA (EST)

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



Wednesday (06/04/2022)

08:45 – 09:00: *Opening - Welcome and Introduction*

Antonio Correia (Phantoms Foundation, Spain) / **James Hone** (Columbia University, USA)

Mauricio Terrones (PennState University, USA) / **Vincent Meunier** (Rennselaer, USA)

Luigi Colombo (University of Texas at Dallas, USA)

09:00 – 09:40: **Klaus Müllen** (Max Planck Institute for Polymer Research, Germany) P

Graphene and Graphene Nanoribbons

09:40 – 10:20: **Yury Gogotsi** (Drexel University, USA) P

From 2D Carbon to 2D Carbides

10:20 – 10:50: **Maurizio Prato** (University of Trieste, Italy) K

Chemistry of graphene for applications in energy and biomedicine

10:50– 11:30: *Break/ePoster session*

11:30 – 11:40: **Andrea Tomadin** (Università di Pisa, Italy) O

Theory of the effective Seebeck coefficient for photoexcited graphene

11:40 – 11:50: **Adam Rycerz** (Jagiellonian University, Poland) O

Sub-Sharvin conductance and enhanced shot noise in doped graphene

11:50 – 12:00: **Argyrios Varonides** (University of Scranton, USA) O

Electron emission theory via tunneling in forward biased Graphene/n-GaAs Schottky Junctions

12:00 – 12:30: **Marcos A. Pimenta** (UFMG, Brazil) K

Resonance Raman enhancement by the intralayer and interlayer electron-phonon processes in twisted bilayer graphene

12:30 – 12:40: **Artur Dobrowolski** (Lukasiewicz Research Network-Inst. of Microelectronics & Photonics, Poland) O

Determining the number of graphene layers based on Raman response of the SiC substrate

12:40 – 12:50: **Karolina Pietak** (Lukasiewicz Research Network-Inst. of Microelectronics & Photonics, Poland) O

Enhancement of graphene-related and substrate-related Raman modes through dielectric layer deposition

12:50 – 13:00: **Jakub Jagiello** (Lukasiewicz Research Network-Inst. of Microelectronics & Photonics, Poland) O

Investigation of graphene on SiC under neutron irradiation by Raman Spectroscopy

13:00 – 13:10: **Konrad Wilczynski** (Warsaw University of Technology, Poland) O

Phonon anharmonicity in supported single- and multi-layered WS₂ nanosheets – first principles and Raman investigation

13:10 – 13:20: **Christoph Geers** (NanoLockin GmbH, Switzerland) O

Active thermography for the analysis of graphene

13:20 – 14:20: *Lunch Break*

14:20 – 14:50: **Joshua A. Robinson** (Pennsylvania State University, USA) K

Exploring Metals at the Atomic Limit

14:50 – 15:00: **Assael Cohen** (Tel Aviv University, Israel) O

An Innovative Approach for Wafer Scale High Optical Quality TMDs Atomic Layers Growth by MOCVD Technique

15:00 – 15:30: **Joan M. Redwing** (The Pennsylvania State University, USA) K

Step-directed epitaxy of TMDs on sapphire

15:30 – 16:00: Jia Li (Brown University, USA)	K
Flatband, magnetism and superconductivity in twisted trilayer graphene	
16:00 – 16:20: <i>Break/ePoster session</i>	
16:20 – 16:30: Vasili Perebeinos (University at Buffalo, USA)	O
Phonon limited mobility in h-BN encapsulated AB-stacked bilayer graphene	
16:30 – 17:00: Arend van der Zande (University of Illinois, USA)	K
Strain Resilient versus Strain Reconfigurable Systems in 2D Material Heterostructures	
17:00 – 17:30: Peter J. Schuck (Columbia University, USA)	K
Signatures of quantum-dot-like states and strong exciton-plasmon coupling in monolayer WSe ₂ -gold heterostructures	
17:30 Closing	



Thursday (07/04/2022)

09:00 – 09:40: Kyung-Eun Byun (Samsung Advanced Institute of Technology, South Korea)	P
2D Materials for Mass Production	
09:40 – 10:10: Deep Jariwala (University of Pennsylvania, USA)	K
Two-Dimensional Semiconductors for Logic, Memory and Metamaterials	
10:10 – 10:20: Meihui Wang (IBS CMCM, South Korea)	O
Single Crystal, Large-area, Fold-free Monolayer Graphene	
10:20 – 10:30: Da Luo (IBS CMCM, South Korea)	O
Folding and fracture of graphene grown on a Cu(111) foil	
10:30 – 10:40: MD Mahfuzur Rahman (University of Technology Malaysia Johor, Bangladesh)	O
Doped Graphene on Silicon FET for High Drain Current and Applications in RF And Logic Circuits	
10:40 – 10:50: Yaping Qi (Macau University of Science and Technology, Macau SAR)	O
A study on defective graphene: correlating Raman and transport measurements, and towards strain effects	
10:50– 11:10: <i>Break/ePoster session</i>	
11:10 – 11:30: Antonio Agresti (Università degli Studi di Roma “Tor Vergata”, Italy)	I
2D materials to make perovskite-based photovoltaics competitive with the exiting PV technologies	
11:30 – 11:50: Sanna Arpiainen (VTT, Finland)	I
CMOS integration of graphene for multiplexed sensing	
11:50 – 12:10: Lucia Gemma Delogu (University of Padua, Italy)	I
2D materials: from safety to immune-engineering	
12:10 – 12:20: Arianna Gazzi (University of Padua , Italy)	O
MXene-mediated immune cell-cell interactions revealed by enzymatic LIPSTIC labeling	
12:20 – 12:50: Saptarshi Das (PennState, USA)	K
Bio-inspired and Ultra-low-power Multifunctional Devices based on Two-dimensional (2D) Materials	
12:50 – 13:20: Klaus Ensslin (ETH zurich, Switzerland)	K
Quantum devices in graphene	
13:20 – 13:30: Budoor Al Umairi (University of Manchester, UK)	O
Different molecular interactions of graphene sheet and quantum dot nanomaterials	
13:30 – 14:40: <i>Lunch Break</i>	
14:40 – 15:10: Mario Lanza (KAUST, Saudi Arabia)	K
Advanced data encryption using two-dimensional materials	
15:10 – 15:40: Jeewan Kim (MIT, USA)	K
Deterministic wafer-scale growth and transfer of single-domain 2D materials.	
15:40 – 15:50: Nikodem Szpak (University of Duisburg-Essen, Germany)	O
Graphene nanodrums as valleytronic devices	

15:50 – 16:00: **Tymoteusz Ciuk** (Lukasiewicz Research Network-Inst. of Microelectronics & Photonics, Poland) O
Innovative Graphene Hall Effect Sensor for Extreme Temperatures

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

16:30 – 16:50: **Avetik Harutyunyan** (Honda Research institute USA Inc., USA) I
Direct growth of sub-10nm MoS₂ nanoribbons and their width dependent quantum properties

16:50 – 17:10: **Alexandre de Toledo Corrêa** (Gerdau Graphene, Brazil) I
The application of graphene in codings and water dispersion

17:10 – 17:30: **Milan E. Delor** (Columbia University, USA) I
Dark-exciton driven energy funneling into dielectric inhomogeneities in two-dimensional semiconductors

17:30 – 18:00: **Carl H. Naylor** (Intel Corporation, USA) K
2D Materials for Industry

18:00 Closing