



TENTATIVE PROGRAM (as of 15/02/2019)

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



Thursday (14/02/2019)

08:00 – 08:50: Registration

08:50 – 09:00: Opening Ceremony- Welcome and Introduction.

09:00 – 09:30: **Tomas Palacios** (MIT, USA) K

The Graphene Revolution: From electronics to synthetic cells

09:30 – 09:45: **Egon Pavlica** (University of Nova Gorica, Slovenia) O

Characterization of chitosan-graphene oxide membrane and its application in ethanol fuel cells

09:45 – 10:00: **Argyrios Varonides** (University of Scranton, USA) O

Enhanced performance of a Graphene/n-GaAs Schottky Barrier Solar Cell by means of an AlGaAs/GaAs thin multi-quantum well layer

10:00– 10:45: Coffee Break / Poster Session & Exhibition

10:45 – 11:15: **Arben Merkoci** (ICREA-ICN2, Spain) K

Graphene-based biosensors for diagnostics

11:15 – 11:35: **Li-Xian Sun** (Guilin Univ. of Electronic Technology, China) I

Graphene composites for energy storage and sensors

11:35 – 11:55: **Abhay Narayan Pasupathy** (Columbia University, USA) I

Spectroscopy of Twisted Bilayer Graphene

11:55 – 12:10: **Elena del Corro** (Instituto Catalán de Nanociencia y Nanotecnología, Spain) O

Differential ion adsorption in graphene electrodes quantified by in situ Raman spectroscopy

12:10 – 12:25: **Keith Paton** (National Physical Laboratory, UK) O

Terahertz time-domain spectroscopy as novel metrology tool for liquid-phase exfoliated few-layer graphene

12:25 – 14:00: Cocktail Lunch / Poster Session & Exhibition

14:00 – 14:30: **Philip Kim** (Harvard University, USA) K

Atomic reconstruction at van der Waals interface in twisted 2D Materials

14:30 – 15:00: **Eva Andrei** (The State University of New Jersey, USA) K

Poke, twist, buckle: strategies for band structure engineering in 2D materials

15:00 – 15:30: **Yury Gogotsi** (Drexel University, USA) K

MXene, Graphene or Their Hybrid? A Guide to Finding the Best Material for the Job

15:30 – 15:50: **Xi Ling** (Boston University, USA) I

Chemical vapor deposition of MXenes and their characterization

15:50 – 16:05: **Ángel Morales-García** (University of Barcelona, Spain) O

CO₂ chemical trapping on two-dimensional MXenes

16:05– 16:45: Coffee Break / Poster Session & Exhibition

16:45 – 17:15: **Humberto Terrones** (Rensselaer Polytechnic Institute (RPI), USA) K

The Next Challenge for Graphene

17:15 – 17:30: Morten Gjerding (Technical University of Denmark, Denmark)	O
The Computational 2D Materials Database: High-throughput modeling and discovery of atomically thin crystals	
17:30 – 17:45: Eduardo Marino (UFRJ, Brazil)	O
Quantum-electrodynamical approach to the exciton spectrum in Transition-Metal Dichalcogenides	
17:45– 18:00: Maicol Ochoa (National Institute of Standards and Technology - UMD, USA)	O
Generalized Voigt broadening in Graphene-based electromechanical nanosensors	
18:00 – 18:15: Damien Tristant (Rensselaer Polytechnic Institute, USA)	O
Vibrational Analysis Beyond the Harmonic Regime in Few-Layer Black Phosphorus	
18:15 – 18:30: Euyheon Hwang (Sungkyunkwan University, South Korea)	O
Plasmon-pole approximation for many-body effects in graphene	



Friday (15/02/2019)

Parallel Session I

09:00 – 09:20: Katayun Barmak (Columbia University, USA)	I
Synthesis and Characterization of Transition Metal Dichalcogenides	
09:20 – 09:40: Avetik Harutyunyan (Honda Research institute USA Inc., USA)	I
Graphene: Growth Peculiarities on Liquid Substrate and Some Unique Applications	
09:40 – 09:55: Antonio Esau Del Rio Castillo (Istituto Italiano di Tecnologia, Italy)	O
Wet jet mil exfoliation: High-quality 2D crystals at the fingertips for industrial applications	
09:55 – 10:10: Benjamin Huet (Penn State University, USA)	O
Chemical Vapor Synthesis of Ultra Flat Crack-Free Highly-Crystalline Single-Layer Graphene on Cu substrates	
10:10 – 10:25: Micah Green (Texas A&M University, USA)	O
Process Safety and Scale-up of Graphene Oxide Synthesis and Storage	
10:25 – 10:40: Neeraj Mishra (Istituto Italiano di Tecnologia , Italy)	O
Going beyond copper	

10:40 – 11:15: *Coffee Break / Poster Session & Exhibition*

11:15 – 11:35: Won Jong Yoo (Sungkyunkwan University, Korea)	I
Recent Advances in 2D Materials and Devices Processing	
11:35 – 11:50: Min Sup Choi (Columbia University, USA)	O
Transferred via contacts for high quality 2D and hetero-structured devices	
11:50 – 12:05: Bjarke Jessen (Technical University of Denmark, Denmark)	O
Lithographic band structure engineering of graphene	
12:05 – 12:20: Nikolai Kalugin (New Mexico Tech, USA)	O
Covalent functionalization of graphene for chromatographic separation of chiral pharmaceuticals	
12:20 – 12:35: Yin-Ting Yeh (The Pennsylvania State University, USA)	O
Light-Emitting Transition Metal Dichalcogenide Monolayers under Cellular Digestion	

Parallel Session II

09:00 – 09:20: Na Li (milliporesigma, USA)	I
Enabling Cutting-Edge Research through Innovative Materials	
09:20 – 09:35: Gregory Lopinski (National Research Council , Canada)	O
Characterization of solution processable graphene for electronic applications	
09:35 – 09:50: Albert Redo-Sanchez (das-Nano, Spain)	O
Non-contact and non-destructive characterization of mobility, carrier density, and conductivity of graphene	
09:50 – 10:05: Joachim Dahl Thomsen (Technical University of Denmark, Denmark)	O
Anisotropic Oxidation and Unexpected Stability in Suspended Graphene	
10:05 – 10:20: Andrew Pollard (National Physical Laboratory (NPL), UK)	O
Rapid characterisation of the lateral size of commercially-produced graphene and graphene oxide flakes	
10:20 – 10:35: Elizabeth Legge (National Physical Laboratory, UK)	O
Physicochemical Characterisation of Reduced Graphene Oxide for Conductive Thin Films	

10:35 – 11:15: *Coffee Break / Poster Session & Exhibition*

11:15 – 11:35: **Liangbo Liang** (Oak Ridge National Laboratory (ORNL), USA) I
PdSe₂: a Pentagonal Layered Material Bridging the Gap Between 2D and 3D Materials
11:35 – 11:55: **Jun Zhu** (The Pennsylvania State University, USA) I
Topological Kink States and Valleytronics in Bilayer Graphene
11:55 – 12:15: **Yung Woo Park** (Seoul National University, Korea) I
Uniform doping of graphene close to the Dirac point by polymer-assisted assembly of molecular dopants
12:15 – 12:30: **Kristen Kaasbjerg** (Center for Nanostructured Graphene / Technical University of Denmark, Denmark) O
Unprecedented transport properties of monolayer TMD devices: Experiment and theory

Parallel Session - NEMA

09:00 – 09:20: **Mike Leibowitz** (NEMA, USA) I
Graphene Standards – Building a Bigger Business
09:20 – 09:40: **Norbert Fabricius** (KIT, Germany) I
Graphene Flagship: Standardization and Validation
09:40 – 09:55: **Jan Obrzut** (NIST, USA) O
Non-contact measurement of graphene conductivity using a microwave cavity; IEC standard 62607-6-4 and its benefit to the graphene industry
09:55 – 10:10: **John Monica** (Protorae Law, USA) O
Graphene Environmental, Health, and Safety Considerations
10:10 – 10:25: Speaker to be defined O
10:25 – 10:40: Discussion

10:40 – 11:15: *Coffee Break / Poster Session & Exhibition*

Parallel Session III

11:15 – 11:35: **Murni Ali** (NanoMalaysia Berhad, Malaysia) I
National Graphene Action Plan: Progress and commercialisation opportunities
11:35 – 11:55: **Laura Armiento** (Grafoid Inc., Canada) I
Grafoid and Focus Graphite: A Global Mine-to-Market Platform for Green Technology Commercialization
11:55 – 12:10: **Valentino Libero Pio Guerra** (J. Heyrovský Institute of Physical Chemistry of the CAS, v. v. i., Czech Republic)
Selectivity and functionality on graphene
12:10 – 12:25: **Matej Velicky** (Cornell University, USA) O
Physisorption-Mediated Exfoliation of Centimeter-Sized Monolayer MoS₂ on Gold

12:25 – 14:00. *Lunch*

14:00 – 15:00: Round Table
15:00 – 15:30: **Xiaodong Xu** (University of Washington, USA) K
Moiré-excitons in MoSe₂/WSe₂ heterobilayers
15:30 – 15:45: **Jun Yan** (University of Massachusetts, USA) O
The role of dark excitons in biexciton states of 1L-WSe₂
15:45 – 16:00: **Vasili Perebeinos** (University at Buffalo, USA) O
Plasmon-Plasmon Interactions and Radiative Damping of Plasmons in Nanostructured Graphene

16:00 – 16:30: *Coffee Break / Poster Session & Exhibition*

16:30 – 17:00: **Joan M. Redwing** (The Pennsylvania State University, USA) K
Wafer-Scale Synthesis of Single Crystal TMD Monolayers
17:00 – 17:15: **Michael Engel** (IBM, Brazil) O
Graphene-enabled, directed nanomaterial placement from solution for large-scale device integration
17:15 – 17:30: **Pedro Alpuim** (INL, Portugal) O
Photodetectors based on CVD-grown 2D materials in a van der Waals heterostructure
17:30 – 17:45: **Albert Rigosi** (National Institute of Standards and Technology, USA) O

Gateless carrier density tunability in epitaxial graphene devices functionalized with chromium tricarbonyl
17:45 – 18:15: **Robert Wallace** (The University of Texas at Dallas, USA) K
2D Materials for Nanoelectronics: Prospects and Materials Integration Challenges

18:15: Closing and GrapheneForUS2020 announcement