

# Graphene & Beyond

From Atoms to Applications

With special US-EU 2D Sessions May 9-10th.

## AGENDA

### DAY 1 – Wed, May 8, 2019

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#### MORNING SESSION – Graphene and Beyond

Location: Days Inn Penn State, Room: Centre/Arbor

7:30-8:30a      **Breakfast / Registration**

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8:30-8:40a      **Graphene and Beyond Workshop – Welcome**

*Joshua Robinson*, Associate Professor, Dept. of Materials Science & Engineering; Associate Director, Center for Two Dimensional and Layered Materials; Director of User Programs, 2D Crystal Consortium-Materials Innovation Platform; Co-Director, NSF-I/UCRC Center for Atomically Thin Multifunctional Coatings; Materials Research Institute, The Pennsylvania State University

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8:40-9:00a      **2D Highlights at Penn State**

*Mauricio Terrones*, Distinguished Professor of Physics, Chemistry and Materials Science & Engineering; Director, Center for Two Dimensional and Layered Materials; Director, NSF-I/UCRC Center for Atomically Thin Multifunctional Coatings; Co-Director, CRAFT Center, Materials Research Institute, The Pennsylvania State University

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9:00-9:10a      **NSF 2D Crystal Consortium- Materials Innovation Platform (2DCC-MIP)**

*Joan Redwing*, Professor of Materials Science and Engineering and Electrical Engineering; Director 2D Crystal Consortium-Materials Innovation Platform, Materials Research Institute, The Pennsylvania State University

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9:10-10:00a      **KEYNOTE**

*James Hone*, Wang Fong-Jen Professor of Mechanical Engineering, Columbia University  
Moderator: Joshua Robinson

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10:00-10:25a      **Break**

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10:25-11:15a      **EU KEYNOTE: "Investigations of Layered 2D Noble Metal Dichalcogenides"**

*Georg Duesberg*, University of the Federal Armed Forces Munich  
Moderator: Joshua Robinson

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11:15-11:40a      **Break**

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- 11:40a-12:30p**     **DEVICES**  
Moderator: Brian Bersch
- 11:40a-12:05p     *Yin-Ting Yeh*, Research Assistant Professor, The Pennsylvania State University  
Presentation: *"When Low-dimensional Materials Meet Living Bio-Agents: Virus Capture And Cellular Digestion"*
- 12:05-12:30p     *Klaus Ensslin*, Professor, ETH Zürich  
Presentation: *"Quantum Devices In Bilayer Graphene"*
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**12:30-2:00p**     **Lunch** (Room: Linden/Grove)

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## AFTERNOON SESSION – Graphene and Beyond

Location: Days Inn Penn State, Room: Centre/Arbor

- 2:00-5:00p**     **SYNTHESIS/PROPERTIES**  
Moderator: Riccardo Torsi
- 2:00-2:25p     *Matthew Rosenberger*, Postdoc, U.S. Naval Research Laboratory  
Presentation: *"Understanding and Controlling Light Emission in Two-Dimensional Materials: Intrinsic Defects and Extrinsic Perturbations"*
- 2:25-2:50p     *Amber McCreary*, Postdoc, National Institute of Standards and Technology  
Presentation: *"Spin-Phonon Coupling, Spin Waves, and Other Magnetic Phenomena in Layered Quantum Materials via Raman Spectroscopy"*
- 2:50-3:15p     *Abhay Pasupathy*, Associate Professor, Columbia University  
Presentation: *"Properties of Twisted Bilayer Graphene And Transition Metal Dichalcogenides"*
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**3:15 – 3:45p**     **Break**

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- 3:45-4:10p     *Xiao-Xiao Zhang*, Postdoc, Cornell University  
Presentation: *"Probing dark excitons in 2D semiconductors"*
- 4:10-4:35p     *Jeewan Kim*, Associate Professor, Massachusetts Institute of Technology  
Presentation: *"Manufacturing of wafer-scale freestanding 3D and 2D materials for advanced mixed heterostructures"*
- 4:35-5:00p     *Joshua Robinson*, Associate Professor, The Pennsylvania State University  
Presentation: *"New Adventures in Atomically Thin Metals"*
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## EVENING SESSION – Graphene and Beyond

Location: Days Inn Penn State, Room: Willow/Sylvan

**5:00-7:00p**     **Poster Reception**

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**7:00p**     **Dinner on Own**

## DAY 2 – Thu, May 9, 2019

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### MORNING SESSION – Graphene and Beyond

Location: Days Inn Penn State, Room: Centre/Arbor

**8:00-9:00a**      **Breakfast**

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**9:00-9:50a**      **EU KEYNOTE: "Charge and mass transport in complex 2-dimensional anisotropic systems"**  
*Vincenzo Palermo*, Professor, Istituto per la Sintesi Organica e Fotoreattività (ISOF) - CNR; Vice-Director, Graphene Flagship  
Moderator: Mauricio Terrones

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**9:50-10:20a**      **Break**

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**10:20-11:35a**      **PROPERTIES**

Moderator: Shruti Subramanian

10:20-10:45a      *Vladimir Fa'liko*, Professor of Theoretical Physics, The University of Manchester; Director, National Graphene Institute

Presentation: "*Resonantly Enhanced Moiré Superlattice Coupling for Excitons in Transition-Metal Dichalcogenide Heterostructures*"

10:45-11:10a      *Mete Atature*, Professor, Department of Physics, The University of Cambridge

Presentation: "*Solid-State Spin-Photon Interfaces: Old Friends & New*"

11:10-11:35a      *Henri Happy*, Professor, The Lille 1 University of Science and Technology; Institute of Electronic, Microelectronic and Nanotechnology (IEMN)

Presentation: "*Graphene RF electronics on rigid and flexible substrate: From devices to circuits*"

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**11:35a-12:00p**      **Break / Group Photo**

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**12:00-1:30p**      **Lunch (Room: Linden/Grove)**

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