



TENTATIVE PROGRAM

21/09/2017

Plenary session - Tuesday September 19, 2017 - Grand Ballroom 1

08:00 – 09:00: Registration

09:00 – 09:15: Opening ceremony

09:15 – 09:45: **George Loh** (National Research Foundation of Singapore (NRF), Singapore)

Singapore Research Innovation Enterprise Journey

09:45 – 10:30: **Andre Geim** (University of Manchester, UK)

Graphene update

10:30 – 11:00: Coffee Break – Poster session A & Exhibition

11:00 – 11:30: **Hui-Ming Cheng** (Chinese Academy of Sciences, China)

Synthesis and OLED use of high-quality graphene by CVD

11:30 – 12:00: **Michael Fuhrer** (Monash University, Australia)

High-Quality Epitaxial Thin Films of Topological Dirac Semimetal Na₃Bi

12:00 – 12:30: **Hong-Jun Gao** (Chinese Academy of Sciences, China)

Construction and Functionality of Novel and Intrinsically Patterned 2D Materials

12:30 – 13:30: Lunch

13:30 – 14:00: Poster Session A

14:00 – 14:30: **Loh Kian Ping** (NUS/CA2DM, Singapore)

Structural Design of 2D Materials for Energy Storage

14:30 -14:45: **Jian Zhang** (Guilin University of Electronic Technology, China)

Graphene derivatives as interface materials for organic photovoltaic cells

14:45 – 15:15: **Xinliang Feng** (Technische Universitaet Dresden, Germany)

Macroscopic Organic 2D Crystals and Beyond

15:15 – 16:00: Coffee Break – Poster session A & Exhibition

16:00 – 16:45: Poster session A

16:45 – 17:15: **Yoshihiro Iwasa** (University of Tokyo, Japan)

Iontronics of 2D materials

17:15 – 17:30: **Min-Hyun Lee** (Samsung Advanced Institute of Technology, South Korea)

2D inserted Metal / Semiconductor interface: an attractive candidate for semiconductor MOSFET contact

17:30 – 17:45: **Haomin Wang** (Shanghai Institute of Microsystem and Information Technology Chinese Academy of Sciences, China)

Multidimensional Hetero-integration of Graphene and h-BN towards Nano-electronics

17:45 – 18:00: **Ravi Sundaram** (Oxford Instruments, UK)

2D MoS₂ and heterostructures: Processing by CVD and ALE and Raman spectroscopy based quality control

Parallel workshops - Wednesday September 20, 2017 - Grand Ballroom 1

Synthesis

09:00 – 09:30: **Wen-Hao Chang** (National Chiao Tung University, Taiwan)

Transition Metal Dichalcogenide Heterojunctions: Synthesis, spin-valley properties and potential applications

09:30 – 10:00: **Wencai Ren** (Chinese Academy of Sciences, China)

CVD growth of 2D transition metal dichalcogenides and carbides

10:00 – 10:15: **Zhikun Zheng** (Sun Yat-Sen University, China)

Interfacial Synthesis of Two-Dimensional Polymers

10:15 – 10:30: **Qisheng Wang** (National University of Singapore, Singapore)

Room-temperature nanosecond spin relaxation in CVD Weyl semimetals

10:30 – 11:00: [Coffee Break – Poster session A & Exhibition](#)

11:00 – 11:30: **Francesca Iacopi** (University of Technology Sydney, Australia)

Promises and challenges of graphene on silicon

11:30 – 11:45: **Simone Taioli** (European Centre for Theoretical Studies in Nuclear Physics and Related Areas (ECT*) & Faculty of Mathematics and Physics, Charles University, Prague, Italy)

Graphene synthesis, carbon foams, pillared graphene, pseudospheres and all that from first-principles, multiscale simulations and experiments

11:45 – 12:00: **Tianru Wu** (Shanghai Inst. of Microsystem and Information Technology, China)

Rational design of Cu-Ni alloy for growth of wafer-sized single crystalline graphene

12:00 – 12:30: **Kourosh Kalantar-Zadeh** (RMIT University, Australia)

From liquid metal core to two-dimensional semiconducting skin

12:30 – 13:30: [Lunch](#)

13:30 – 14:00: [Poster Session A](#)

Devices

14:00 – 14:30: **Goki Eda** (NUS, Singapore)

Excitonic devices based on van der Waals heterostructures

14:30 – 15:00: **Taiichi Otsuji** (Tohoku University, Japan)

Terahertz Light Emission and Lasing in Graphene-based van der Waals 2D Heterostructures

15:00 – 15:15: Speaker to be defined

Title to be defined

15:15 -15:30: **Qian Yang** (University of Manchester, UK)

Capillary Condensation in Nano-capillaries With Angstrom Precision

15:30 – 16:00: [Coffee Break – Poster session A & Exhibition](#)

16:00 – 16:30: **Kah-Wee Ang** (National University of Singapore, Singapore)

Black Phosphorus Electronic and Optoelectronic Devices

16:30 – 16:45: **Jinhong Du** (Institute of Metal Research, Chinese Academy of Sciences, China)

Flexible Organic Optoelectronic Devices Based on Graphene Transparent Conductive Electrodes

16:45 – 17:15: **Lu Jiong** (National University of Singapore, Singapore)

Gate-tunable stark effect and charge impurities in black phosphorus

17:15 – 17:45: **Moon-Ho Jo** (Pohang University of Science and Technology, South Korea)

Coplanar Electrical Circuitry defined on an Atomically Thin Semiconductor Layer by Polymorphic Heteroepitaxy

Parallel workshops - Wednesday September 20, 2017 - Grand Ballroom 2

Thermal & Electrical properties

09:00 – 09:30: **Kedar Hippalgaonkar** (IMRE, Singapore)

Thermal and Thermoelectric Physics in 2D MoS₂

09:30 – 09:45: **Lei Miao** (Guilin University of Electronic Technology, China)

Tellurium Nanowires / Reduced Graphene Oxide Composite Films for Flexible Thermoelectrics

09:45 – 10:15: **Justin Song** (Nanyang Technological University, Singapore)

Anomalous carrier dynamics in topological edge states

10:15 – 10:30: **Arindam Ghosh** (Indian Institute of Science, India)

Electrical access to protected conduction states in graphene

10:30 – 11:00: [Coffee Break – Poster session A & Exhibition](#)

Energy

11:00 – 11:30: **Michihisa Yamamoto** (University of Tokyo, Japan)

Graphene-based Cooper pair splitters

11:30 – 12:00: **Li-Xian Sun** (Guilin Univ. of Electronic Technology, China)

Functionalized graphene oxides for gas adsorption, gas sensing and energy storage

12:00 – 12:15: **Henrique Rosa** (National University of Singapore, Singapore)

Nonlinear optical effects in 2D materials: harmonic generation and self-diffraction

12:15 – 13:30: Lunch

13:30 – 14:30: Poster Session A

14:30 – 14:45: **Appalakondaiah Samudrala** (Sungkyunkwan University, South Korea)

Possible superconductivity of WS₂: An Abinitio study

14:45 – 15:00: **Akinobu Kanda** (University of Tsukuba, Japan)

Search for Unusual Andreev Reflection in a Bilayer Graphene/Layered Superconductor NbSe₂ Junction

15:00 -15:15: **Ivan Verzhbitskiy** (NUS, Singapore)

Quantum phase superconductor-insulator transition in multi-phase LixMoS₂ nanosheets

15:15 – 15:30: **Vinicius Rosa** (National University of Singapore, Singapore)

Graphene as a coating to induce osteogenesis on titanium

15:30 – 16:00: Coffee Break – Poster session A & Exhibition

16:00 – 16:30: **Young-Woo Son** (Korea Institute for Advanced Study, South Korea)

Structural and electronic phase transitions in transition metal dichalcogenides

16:30 – 16:45: **Vijila Chellappan** (Institute of Materials Research and Engineering, A-STAR, Singapore)

Optical Transitions and Valley Polarization in 2D Transition Metal Dichalcogenides

16:45 – 17:15: **Shu-Jung Tang** (National Tsing Hua University, Taiwan)

Single-layer Dual Germanene Phases on Ag(111)

17:15 – 17:30: **Alexandra Carvalho** (National University of Singapore, Singapore)

Defects and doping in phosphorene

17:30 – 18:00: **Barbaros Oezylmaz** (CA2DM/NUS, Singapore)

Spin transport studies in graphene and black phosphorus

19:00 : **Conference Dinner. GRAND SHANGHAI RESTAURANT.** 390 Havelock Road, King's Centre, Level 1, Singapore 169662. [More info](#)

Plenary session - Thursday September 21, 2017 - Grand Ballroom 1

09:00 - 09:30: **Frank Koppens** (ICFO, Spain)

Graphene CMOS camera for visible and infrared light

09:30 – 10:00: **Gwan-Hyoung Lee** (Yonsei University, South Korea)

Two-dimensional van der Waals Heterostructures for Device Applications

10:00 – 10:30: **Kyung-Eun Byun** (Samsung Advanced Institute of Technology, South Korea)

Graphene and atom-thick 2D materials: Device Application Prospect

10:30 – 11:00: **Coffee Break – Poster session B & Exhibition**

11:00 – 11:15: **Sharon Xiaodai Lim** (National University of Singapore, Singapore)

Templating Nanotraffic Light - Tricoloured Blinking Silver Nanoclusters on Graphene Oxide Film

11:15 – 11:30: **Ningning Dong** (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

Optically Induced Transparency and Extinction in Dispersed MoS₂, MoSe₂ and Graphene Nanosheets

11:30 – 11:45: **Lai-Peng Ma** (Institute of Metal Research, Chinese Academy of Sciences, China)

A Versatile p-type Dopant for High-performance Flexible Graphene Transparent Electrode and its Application in Optoelectronic Devices

11:45 – 12:00: **Xiaoyan Zhang** (Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences, China)

MoS₂/Carbon Nanotube Core–Shell Nanocomposites for Enhanced Nonlinear Optical Performance

12:00 – 12:30: **Henrique Rosa** (National University of Singapore, Singapore)

Ultrafast fiber lasers based in 2D saturable absorbers

12:30 – 13:30: **Lunch**

13:30 – 14:00: **Poster Session B**

14:00 – 14:30: **Stephan Roche** (ICREA, ICN2, Spain)

Advances in 2D Materials-based Spintronics: A theoretical perspective

14:30 – 14:45: Speaker to be defined

14:45 – 15:00: **Branislav K. Nikolic** (University of Delaware, USA)

Origins of Nonlocal Resistance in Multiterminal Graphene: Spin Hall and Valley Hall vs. Other Competing Effects

15:00 – 15:15: **LiangJian Zou** (Institute of Solid State Physics, Chinese Academy of Sciences, China)

Strong magnetic field driven chiral density wave state in pressured black phosphorus

15:15 – 15:30: **Jisang Hong** (Pukyong National University, South Korea)

Magnetism of two-dimensional hafnene layer

15:30 – 16:00: [Coffee Break – Poster session B & Exhibition](#)

16:00 – 16:30: **Mei-Yin Chou** (Academia Sinica, Taiwan)

Computational Studies of Novel Two-Dimensional Materials and Their Heterostructures

16:30 – 16:45: **Kenji Iida** (Institute for Molecular Science, Japan)

Change in Electronic Properties of Hetero-Interface Systems by Applied Bias Voltage

16:45 – 17:00: **Martin-Isbjorn Trappe** (CA2DM / CQT, Singapore)

Prospects of density-potential functional theory for 2D materials

17:00 – 17:15: **Derek Ho** (National University of Singapore, Singapore)

Theory of Coulomb Drag in Spatially Inhomogeneous Materials

17:15 -17:30: **Dmitry Kvashnin** (National University of Science and Technology MISiS, Russia)

2D Copper Oxide. Experimental evidence on graphene and theoretical investigations

17:30 – 17:45: **Aleksandr Rodin** (NUS, Singapore)

Quasi-Rashba Dispersion in Buckled Square Lattices

17:45 – 18:00: **I.V. Sankar** (Sungkyunkwan University, South Korea)

Correlated Polaronic Effects in the Kane-Mele Model

Industrial Forum – Thursday September 21, 2017 - Grand Ballroom 2

09:00 – 09:30: **Janardhan Balapanuru** (Grafoid Inc., Canada)

Graphene-based Membranes and Composites for Various Industrial Applications

09:30 – 10:00: **Slaven Garaj** (NUS, Singapore)

Graphene-based membranes for ionic sieving

10:00 – 11:00: [Coffee Break – Poster session B & Exhibition](#)

11:00 – 11:30: **Francesco Bonaccorso** (IIT-Graphene Labs / BeDimensional, Italy)

Scaling up prospective for the production of 2D crystals

11:30 – 11:45: **Gary Rubin** (2DM, Singapore)

Production of High Quality Graphene at 2DM

11:45 – 12:00: **Takuya Yasutake** (Oita university, Japan)

Effect of pH on the exfoliation of K-THF-GICs

12:00 – 12:15: **Songfeng Pei** (Institute of Metal Research, China)

Mass production of graphene and its application for functional anti-corrosive coatings

12:15 – 12:30: **Mindaugas Lukosius** (IHP, Germany)

Large area graphene synthesis on CMOS compatible materials

12:30 – 13:30: Lunch

13:30 – 14:00: Poster Session B

14:00 – 14:30: **Marc Chaigneau** (HORIBA Scientific, France)

Tip Enhanced Optical Spectroscopy of 2D materials

14:30 – 14:45: **Marcus Klein** (Suragus GmbH, Germany)

Challenges and Insights by Electrical Characterization of Layer Area Graphene Layers

14:45 – 15:00: **Kazuto Hatakeyama** (National Institute of Advanced Industrial Science and Technology, Japan)

The factor of ion permeation through graphene oxide membrane

15:00 -15:30: **Paul Wiper** (AIXTRON, UK)

Advances in 2D materials production: from R&D to commercialization

15:30 – 16:00: Coffee Break – Poster session B & Exhibition

16:00 – 16:30: **Norbert Fabricius** (KIT & ISC, Germany)

International standardization on graphene and other 2D materials: Status and future prospects

16:30 – 17:00: **Sung-Yool Choi** (KAIST, South Korea)

Computational Studies of Novel Two-Dimensional Materials and Their Heterostructures

17:00 – 17:30: **Barbaros Oezylmaz** (CA2DM/NUS, Singapore)

Graphene Technology Development and Industry Validation at CA2DM-OII

17:30 – 18:00: **Sean P. Flanigan** (NUS Enterprise, Singapore)

Research Outputs and Technology Transfer of Early Stage University Research

Plenary session - Friday September 22, 2017 - Grand Ballroom 1

09:00 - 09:30: **Chul-Ho Lee** (Korea University, South Korea)

Photon and Energy Conversion through Atomically Thin Semiconductor Heterojunctions

09:30 – 10:00: **Chi Dongzhi** (IMRE, A*STAR, Singapore)

Developing manufacturing-viable growth method for 2D semiconducting TMDCs

10:00 – 10:30: **Johnson Goh Kuan Eng** (A*STAR IMRE, Singapore)

Towards 2D Valleytronics

10:30 – 11:00: [Coffee Break – Poster session B & Exhibition](#)

11:00 – 11:30: **Won Jong Yoo** (Sungkyunkwan University, South Korea)

Contact resistance of two dimensional materials

11:30 – 11:45: **Suman Kalyan Pal** (IIT Mandi, India)

Emerging 2D/0D Heterostructures: Spectroscopic Studies and Device Applications

11:45 – 12:00: **Adam Babinski** (University of Warsaw, Poland)

Quantum interference in Raman scattering in few monolayer – MoTe₂

12:00 – 12:15: **Chengbing Qin** (Shanxi University, China)

Robust micropatterning on graphene oxide based on fluorescence lifetime image for information storage

12:15 – 12:30: **Daniele Vella** (National University of Singapore, Singapore)

Towards realization of two-dimensional electroabsorption modulators

12:30 – 12:45: **Joong Tark Han** (Korea Electrotechnology Research Institute/University of Science and Technology, South Korea)

Flexible Electrode Technology Based on Chemically-Modified Graphene Nanosheets

12:45 – 13:00: **Shinya Hayami** (Kumamoto University, Japan)

Tunable Pressure Effects in Graphene Oxide Layers

13:00 – 14:00: [Lunch](#)

14:00 – 14:30: [Poster Session B](#)

14:30 – 15:00: **Yuanbo Zhang** (Fudan University, China)

Gate-controlled Two-dimensional materials

15:00 – 15:15: **Marcin Mucha-Kruczynski** (University of Bath, UK)

Electronic band structure and van der Waals coupling of ReSe₂ revealed by high-resolution angle-resolved photoemission spectroscopy

15:15 – 15:30: **Thomas Whitcher** (National University Singapore, Singapore)

Investigation into the electronic, optical and structural properties of Perovskites

15:30 – 15:45: **Nicolas Leconte** (University of Seoul, South Korea)

Disorder induced Failure of Topological Protection in Fractal Quantum Hall Effect

15:45 – 16:00: **Bent Weber** (Nanyang Technological University, Singapore)

Quasiparticle interference of the Dirac Line Node Material ZrSiS

16:00 – 16:15: **Chi-Te Liang** (National Taiwan University, Taiwan)

Unusual Renormalization Flow in Strongly Insulating Monolayer Epitaxial Graphene on SiC

16:15– 16:45: [Closing, RPGR2018 announcement & farewell coffee](#)