



OCTOBER 22-25. 2018 - CHINA

RECENT PROGRESS IN  
GRAPHENE & 2D MATERIALS  
RESEARCH

PROGRAM BOOK



MAIN ORGANISERS



GUANGXI INDUSTRY AND  
INFORMATION COMMITTEE





# Graphene 2019

Rome (Italy) • June 25-28

The 9<sup>th</sup> edition of the largest European Event in Graphene and 2D Materials

[www.grapheneconf.com](http://www.grapheneconf.com)



**Michael Grätzel**  
EPFL, Switzerland



**Tony F. Heinz**  
Stanford University, USA



**Young Hee Lee**  
SKKU, South Korea



**Zhongjian Liu**  
Peking University, China

## ORGANISERS



## PARTNERS





|                            |           |
|----------------------------|-----------|
| <b>FOREWORD</b>            | <b>4</b>  |
| <b>ORGANISERS</b>          | <b>5</b>  |
| <b>COMMITTEES</b>          | <b>6</b>  |
| <b>SPONSORS</b>            | <b>8</b>  |
| <b>GENERAL INFORMATION</b> | <b>8</b>  |
| <b>EXHIBITORS</b>          | <b>9</b>  |
| <b>PROGRAMME</b>           | <b>10</b> |
| <b>POSTERS LIST</b>        | <b>17</b> |



# FOREWORD

On behalf of the Organising and the International Scientific Committees we take great pleasure in welcoming you to Guilin for the tenth edition of the Recent Progress in Graphene and Two-dimensional Materials Research Conference (RPGR2018).

RPGR is the premier conference focused on graphene and other novel two-dimensional materials in the Asia-Pacific region.

## RPGR2018 Updates:

- 44 Keynotes & Invited Speakers
- 60 posters
- More than 50 oral contributions
- Parallel thematic sessions (Energy, Synthesis, Devices, etc.)
- Industrial Forum to get an updated understanding of Graphene based technologies from worldwide industries.

RPGR2018 is now an established event, attracting global participant's intent on sharing, exchanging and exploring new avenues of graphene-related scientific and commercial developments, in particular in the Asia-Pacific region.

We are indebted to the following Government Agencies and Science Institutions for their help and support: The People's Government of Guangxi Zhuang Autonomous Region, Guangxi Association for Science and Technology, Industry and Information Committee of The Guangxi Zhuang Autonomous Region, The People's Government of Guilin, Institute of Metal Research, Chinese Academy of Sciences, Guangxi University, Guilin University of Electronic Technology, Guilin University of Technology, Guilin Association for Science and Technology.

We also would like to thank all the exhibitors (Abalonyx, Quantum Design China and China International Graphene Industry Union (CIGIU)), speakers and participants that join us this year.

We truly hope that RPGR2018 serves as an international platform for communication between science and business.

*Hope to see you again in the next edition of RPGR2019.*



## MAIN ORGANISERS



Phantoms Foundation



广西科学技术协会  
GUANGXI ASSOCIATION FOR SCIENCE AND TECHNOLOGY

Guangxi Association for Science and Technology



桂林市市徽  
Guilin Government

GUANGXI INDUSTRY AND  
INFORMATION COMMITTEE



## CO-ORGANISERS



Guilin Association for Science and Technology



Guilin University



桂林电子科技大学  
GUILIN UNIVERSITY OF ELECTRONIC TECHNOLOGY

Guilin University of Electronic Technology



Guilin University of Technology



Institute of Metal Research - Chinese Academy of Sciences



## SUPPORTED BY

The People's Government of Guangxi Zhuang Autonomous Region



## GLOBAL PARTNERS





## COMMITTEES

### CONFERENCE CHAIR:

**Antonio H. Castro Neto** (National University of Singapore, Singapore)

### CONFERENCE CO-CHAIR:

**Antonio Correia** (Phantoms Foundation, Spain)

### INTERNATIONAL ADVISORY BOARD MEMBERS:

**Jong-Hyun Ahn** (Yonsei University, Korea)

**Xinhe Bao** (Chinese Academy of Sciences, China)

**Chun-Wei Chen** (National Taiwan University, Taiwan, China)

**HM Cheng** (IMR, China)

**Hyeonsik Cheong** (Sogang University, Korea)

**Po-Wen Chiu** (National Tsing Hua University, Taiwan, China)

**Sung-Yool Choi** (KAIST, Korea)

**Mei-Yin Chou** (Academic Sinica, Taiwan, China)

**Toshiaki Enoki** (Tokyo Institute of Technology, Japan)

**Michael Fuhrer** (Monash University, Australia)

**Hong-Jun Gao** (Chinese Academy of Sciences, China)

**Arindam Gosh** (Indian Institute of Science, Bangalore, India)

**Hu-Jong Lee** (Pohang University of Science and Technology, Korea)

**Minn-Tsong Lin** (National Taiwan University, Taiwan, China)

**Eiji Osawa** (Nano-Carbon Research Institute, Japan)

**Kostya Ostrikov** (Commonwealth Scientific and Industrial Research Organisation, Australia)

**Taiichi Otsuji** (Tohoku University, Japan)

**Seong Jun Park** (Samsung Advanced Institute of Technology, Korea)

**Won-Kyu Park** (Korea Adv. Nano Fab. Center, Korea)

**Young-Woo Son** (Korea Institute for Advanced Study, Korea)

**Ajay. K. Sood** (Indian Institute of Science, Bangalore, India)

**Kazutomo Suenaga** (Association for Iron & Steel Technology, Japan)

**Li-Xian Sun** (Guilin University of Electronic Technology, China)

**Umesh Waghray** (Jawaharlal Nehru Centre for Advanced Scientific Research, India)

**Won Jong Yoo** (Sungkyunkwan University, Korea)

**Jin Zhang** (Peking University, China)

### LOCAL ORGANIZING COMMITTEE:

#### I. Group of Integrated Coordination

*Group leader:* **Chunhua Liang** (Guangxi Association for Science and Technology, China)

*Deputy leader:*

**Qidong Zhu** (Guangxi Association for Science and Technology, China)

**Li-Xian Sun** (Guilin Univ. of Electronic Technology, China)

**Wenying Feng** (Guilin Association for Science and Technology, China)

**II. Group of External Liaison**

*Group leader:* **Li-Xian Sun** (Guilin Univ. of Electronic Technology, China)

*Deputy leader:*

**Bo Chen** (Guangxi Association for Science and Technology China)

**III. Secretariat**

*Group leader:* **Keguang Wei** (Guangxi Association for Science and Technology, China)

*Deputy leader:*

**Jianhua Huang** (Guangxi Association for Science and Technology, China)

**IV. Marketing Group**

*Group leader:* **Ling Zou** (Guangxi Science Popularization Center, China)

*Deputy leader:*

**Xinghua Huang** (Guangxi science and technology consulting center, China)

**V. Group of Committee Affairs**

*Group leader:* **Shaofen Mo** (Guilin Association for Science and Technology, China)

*Deputy leader:*

**Xinghua Huang** (Guangxi science and technology consulting center, China)

**Yin Luo** (Grand Bravo Guilin, China)

**VI. Reception Group**

*Group leader:* **Haijun Qin** (Guangxi Association for Science and Technology, China)

*Deputy leader:*

**Youping Peng** (Guilin Association for Science and Technology, China)

**Fen Xu** (Guilin Univ. of Electronic Technology, China)

**VII. Group of Results Application**

*Group leader:* **GuboZhong** (Guangxi Association for Science and Technology, China)

*Deputy leader:*

**Chuanguo Ma** (Guilin Univ. of Electronic Technology, China)

**Ming Li** (Guilin University of Technology, China)

**Zhao Cheng** (Luzhai County of Liuzhou, China)

**VIII. Volunteer Worker**

*Group leader:* **Youping Peng** (Guilin Association for Science and Technology, China)

*Deputy leader:*

**Guoxin Chen** (Guilin Univ. of Electronic Technology, China)

**IX. Finance Group**

*Group leader:* **Chunjue Liao** (Guangxi Association for Science and Technology, China)

**SECRETARIES:**

**Natalia León** (Phantoms Foundation, Spain)

**Concepción Narros Hernández** (Phantoms Foundation, Spain)



## SPONSORS



桂林市市徽



Quantum Design China



FlatChem  
CHEMISTRY OF FLAT MATERIALS



## GENERAL INFO

### INTERNET ACCESS

**USERNAME:** dagongguan

**PASSWORD:** no need

### COFFEE BREAKS & LUNCHES

Check the programme book for timetables

### SOCIAL MEDIA

Share with us your vision of the conference. Post your photos and comments

**TWITTER:** @RPGR2018

**HASHTAG:** #RPGR2018





## EXHIBITORS



Abalonyx AS is a Norway based company engaged in production and R&D related to graphene oxide and graphene oxide derivatives since 2008. We produce and sell single layer graphene oxide (GO) and thermally reduced graphene oxide (rGO) in Kg-quantities and are presently developing several derivatives for special applications, including protective coatings for autoparts, a process for remediation of water contaminated with heavy metals and radionuclides based on a GO-based scavenger-system. We are also involved in collaborative development of modified GO and rGO for use in composites for construction materials, certain sports equipment and energy storage in several collaborative projects. Our sister company, Graphene Batteries AS uses a special rGO-grade in its battery developments. We actively work with our customers to tune our GO and rGO to their needs.



**中国国际石墨烯资源产业联盟**  
CHINA INTERNATIONAL GRAPHENE INDUSTRY UNION

In order to implement the 'Made in China 2025' and 'the 13th Five-year Plan', China International Graphene Industry Union (CIGIU) was established in accordance with the requirements of scientific and technological innovation which are set by the Ministry of Science and Technology with approval from China Society for the Promotion of Science and Technology Commercialization. CIGIU is an international non-profit organization with members worldwide including universities, research institutions, internationally recognized & major graphene-domain-focused enterprises, and financial investment groups and associations. CIGIU aims at worldwide industrial development of graphene and has headquarter based in Beijing, China.



Founded in 1982, Quantum Design International (QDI) is a privately held corporation that develops and markets automated temperature and magnetic field testing platforms for materials characterization. These systems offer a variety of measurement capabilities and are in widespread use in the fields of physics, chemistry, biotechnology, materials science and nanotechnology. Building on its expertise in the global marketing and distribution of its own scientific instruments, QDI eventually broadened its scope to distribute quality scientific instruments from other manufacturers through an international network of wholly owned subsidiaries in every major technological center around the world. With offices in the USA, Japan, China, India, Korea, Taiwan and Brazil, as well as thirteen European countries, QDI is strategically located in the world's key centers for scientific research, providing local marketing, sales and technical support.



## MONDAY OCTOBER 22, 2018

08:00 - 09:00

### REGISTRATION

09:00 - 09:30

### OPENING CEREMONY

#### PLENARY SESSION - BANQUET HALL

|               |   |   |
|---------------|---|---|
| 09:30 - 10:15 | <b>Kostya Novoselov</b> (University of Manchester, UK)<br>Materials in the Flatland | P |
|---------------|---|---|

#### COFFEE BREAK - POSTER SESSION & EXHIBITION

|               |   |   |
|---------------|---|---|
| 10:45 - 11:15 | <b>Hui-Ming Cheng</b> (Chinese Academy of Sciences, China)<br>Fabrication of Graphene and Other 2D Materials by Exfoliation | K |
| 11:15 - 11:45 | <b>Zhongfan Liu</b> (Peking University, China)<br>CVD Graphene: Scalable Growth and Beyond                                  | K |
| 11:45 - 12:15 | <b>Wanlin Guo</b> (Nanjing University of Aeronautics & Astronautics, China)<br>Emerging Hydrovoltaic Technology             | K |
| 12:15 - 12:45 | <b>Hailin Peng</b> (Peking University, China)<br>High-Mobility 2D Crystals: Controlled Synthesis and Functional Devices     | K |

#### BUFFET LUNCH

|               |   |   |
|---------------|---|---|
| 14:15 - 14:45 | <b>Jun Chen</b> (Nankai University, China)<br>Inorganic/organic and carbon composites for Li/Na Batteries   | K |
| 14:45 - 15:00 | <b>Zhenyuan Xia</b> (Chalmers University of Technology, Sweden)<br>Three-Dimensional Multilayer Graphene-Fe <sub>2</sub> O <sub>3</sub> Foam Composites and Their Application in Energy Storage | O |
| 15:00 - 15:15 | <b>Hai Wang</b> (Guilin University of Technology, China)<br>Consideration on the structure of Mo-based anode materials for improving lithium storage performance                                | O |
| 15:15 - 15:45 | <b>Xiangfeng Duan</b> (University of California, USA)<br>Van der Waals Integration beyond 2D Materials  | K |

#### COFFEE BREAK - POSTER SESSION & EXHIBITION

|               |   |   |
|---------------|---|---|
| 16:30 - 17:00 | <b>Qiaoliang Bao</b> (Monash University, Australia)<br>Photonic and Optoelectronic Device Applications Based on 2D Materials                                  | I |
| 17:00 - 17:30 | <b>Goki Eda</b> (NUS, Singapore)<br>Photonics of 2D semiconductors  | I |
| 17:30 - 18:00 | <b>Jian-Bin Xu</b> (The Chinese University of Hong Kong, China)<br>Optoelectronic Devices Based on Graphene-Like Materials and their Related Heterostructures | I |

P: PLENARY LECTURE / K: KEYNOTE LECTURE / I: INVITED LECTURE / O: ORAL CONTRIBUTION

**NOTE:** program as of 16/10/2018.

For updates please check the RPGR 2018 web page [www.rpqrconf.com/2018/program.php](http://www.rpqrconf.com/2018/program.php)

# TUESDAY OCTOBER 23, 2018

| PARALLEL WORKSHOP 1 - CHAMBER QIN             |  |   |
|---|--|---|
| 09:00 - 09:30                                 | <b>Aitor Mugarza</b> (ICN2, Spain)<br>Engineering nanoporous graphene with atomic precision  | I |
| 09:30 - 09:45                                 | <b>Geng Li</b> (Institute of Physics - CAS, China)<br>Construction of graphene/silicene heterostructure by Si intercalation  | O |
| 09:45 - 10:00                                 | <b>ZhengMing Wu</b> (SwissLitho AG, Switzerland)<br>Fabrication of sub-20 nm Metal Electrodes on 2D Materials without a Charged Particle Beam  | O |
| POSTER SESSION & EXHIBITION                   |  |   |
| COFFEE BREAK - POSTER SESSION & EXHIBITION    |  |   |
| 11:00 - 11:30                                 | <b>Jinsong Hu</b> (Institute of Chemistry - CAS, China)<br>2D Germanium Selenide for Photovoltaics and Optoelectronics   | I |
| 11:30 - 12:00                                 | <b>Ching-Yuan Su</b> (National Central University, Taiwan, China)<br>Rational Design of Nanostructured and Functionalized Graphene and Their Applications for Electronics and Energy Devices   | I |
| 12:00 - 12:30                                 | <b>Li Tao</b> (Southeast University, China)<br>Emerging 2D Xenes for Innovative Nanoelectronics  | I |
| BUFFET LUNCH                                  |  |   |
| PARALLEL WORKSHOP 3 - CHAMBER QIN             |  |   |
| 14:00 - 14:30                                 | <b>Takamasa Kawanago</b> (Tokyo Institute of Technology, Japan)<br>Two-Dimensional Inorganic/Organic Hetero Interface for Field-Effect Transistor Applications                                 | I |
| 14:30 - 15:00                                 | <b>Keun Su Kim</b> (Yonsei University, South Korea)<br>Bandgap engineering of two-dimensional semiconductors   | I |
| 15:00 - 15:15                                 | <b>Carla Bittencourt</b> (University of Mons, Belgium)<br>Molybdenum Disulfide as Surface Enhanced Raman Scattering Substrates for Sensing Polycyclic Aromatic Hydrocarbons                    | O |
| 15:15 - 15:30                                 | <b>Shaolin Zhang</b> (Guangzhou University, China)<br>Preparation and mechanism of molybdenum diselenide nanosheets for ethanol detection  | O |
| 15:30 - 16:00                                 | <b>Yen-Fu Lin</b> (National Chung Hsing University, Taiwan, China)<br>Performance potential and limit in van der Waals MoTe <sub>2</sub> Transistors   | I |
| COFFEE BREAK - POSTER SESSION & EXHIBITION    |  |   |
| PARALLEL SESSION PhD STUDENTS 1 - CHAMBER QIN |  |   |
| 16:30 - 16:45                                 | <b>Suyan Shan</b> (Wenzhou Medical University, China)<br>The fibroblast growth factor modified nitrogen-containing graphene for regeneration of photo-damaged retinal pigment epithelial cells | O |
| 16:45 - 17:00                                 | <b>Huibing Lu</b> (Guilin University of Technology, China)<br>Controllable synthesis of 2D Cr-doped MoO <sub>2.5</sub> (OH) <sub>0.5</sub> nanosheets and application in Li-ion Batteries      | O |
| 17:00 - 17:15                                 | <b>Wang Zhi</b> (Institute of Metal Research – CAS, China)<br>Electric-field control of magnetism in a few-layered van der Waals ferromagnetic semiconductor                                   | O |
| 17:15 - 17:30                                 | <b>Munindra</b> (Delhi Technological University, India)<br>Quantum Capacitance Effect in Graphene-Metal-Oxide-Semiconductor Field Effect Transistor with Large Area Graphene Channel           | O |
| 17:30 - 17:45                                 | <b>Rizwan Ur Rehman Sagar</b> (Tsinghua University, China)<br>Magneto-transport Properties of Graphene Foam  | O |
| 17:45 - 18:00                                 | <b>Inyong Moon</b> (Sungkyunkwan University, South Korea)<br>Measurements of Fermi Level and Doping Concentration of 2D Transition Metal Dichalcogenide Using Kelvin Probe Force Microscopy    | O |
| 18:00 - 18:15                                 | <b>Mohan Ghimire</b> (Sungkyunkwan University, South Korea)<br>Graphene-CdSe quantum dot hybrid as a platform for the control of carrier temperature   | O |
| 18:15 - 18:30                                 | <b>Dewu Yue</b> (Sungkyunkwan University, South Korea)<br>High Performance Two-dimensional Semiconductors established by using a Benzyl Viologen Interlayer                                    | O |

**TUESDAY OCTOBER 23, 2018****PARALLEL WORKSHOP 2 - CHAMBER HAN**

|                      |   |   |
|----------------------|---|---|
| <b>09:00 - 09:30</b> | <b>Slaven Garaj</b> (NUS, Singapore)<br>Nanofluidics with graphene and graphene-oxide membranes   | I |
| <b>09:30 - 09:45</b> | <b>Zhao Wang</b> (Guangxi University, China)<br>Low-temperature superlubricity of suspended graphene  | O |
| <b>09:45 - 10:00</b> | <b>Scheyla Kuester</b> (ÉTS/NanoXplore Inc., Canada)<br>Electrical properties and electromagnetic shielding effectiveness of PC/ABS/graphene nanoplatelets nanocomposites | O |

**10:00 - 10:30****POSTER SESSION & EXHIBITION****10:30 - 11:00****COFFEE BREAK - POSTER SESSION & EXHIBITION**

|                      |  |   |
|----------------------|--|---|
| <b>11:00 - 11:15</b> | <b>Lihong Bao</b> (Institute of Physics – CAS, China)<br>Black Phosphorus and Its Analogue: Electrical Transport Properties and Devices  | O |
| <b>11:15 - 11:30</b> | <b>Ruisong Ma</b> (Institute of Physics – CAS, China)<br>Direct Four-Probe Measurement of Grain-Boundary Resistivity and Mobility in Millimeter-Sized Graphene                     | O |
| <b>11:30 - 11:45</b> | <b>Hui Chen</b> (Institute of Physics – CAS, China)<br>Recovering edge states of graphene nanoislands on Ir(111) by silicon intercalations   | O |
| <b>11:45 - 12:00</b> | <b>Claas Julian Reckmeier</b> (neaspec, Germany)<br>Cryogenic near-field imaging and spectroscopy at the 10-nanometer-scale  | O |
| <b>12:00 - 12:15</b> | <b>Hai Wang</b> (Max Planck Institute for Polymer Research, Germany)<br>Tailoring Graphene: from optical control of carrier density to bandgap engineering in graphene nanoribbons | O |
| <b>12:15 - 12:30</b> | <b>Lin Wang</b> (Shanghai Institute of Technical Physics, China)<br>Toward Sensitive Terahertz Detection Based on Two-dimensional Materials  | O |

**12:30 - 14:00****BUFFET LUNCH****PARALLEL WORKSHOP 4 - CHAMBER HAN**

|                      |   |   |
|----------------------|---|---|
| <b>14:00 - 14:30</b> | <b>Jijun Zhao</b> (Dalian University of Technology, China)<br>Computational design of novel 2D electronic and magnetic materials                  | I |
| <b>14:30 - 15:00</b> | <b>Pilkyung Moon</b> (NYU Shanghai, China)<br>Theory of Dirac Electrons in a Dodecagonal Graphene Quasicrystal                                    | I |
| <b>15:00 - 15:15</b> | <b>Haihua Tao</b> (Shanghai Jiao Tong University, China)<br>Patterning Graphene Film by Magnetic-assisted UV Photochemical Oxidation              | O |
| <b>15:15 - 15:45</b> | <b>Taishi Takenobu</b> (Nagoya University, Japan)<br>Electrochemically Doped Light-Emitting Devices of Transition Metal Dichalcogenide Monolayers | I |

**15:45 - 16:30****COFFEE BREAK - POSTER SESSION & EXHIBITION****PARALLEL SESSION PhD STUDENTS 2 - CHAMBER HAN**

|                      |   |   |
|----------------------|---|---|
| <b>16:30 - 16:45</b> | <b>Valentino Romano</b> (University of Messina, Italy)<br>An industrial scalable approach for graphene/CNT hybrid flexible supercapacitors              | O |
| <b>16:45 - 17:00</b> | <b>Hamin Park</b> (KAIST, South Korea)<br>Interlayer interaction in a van der Waals heterostructure of transition metal dichalcogenide and hexagonal BN | O |
| <b>17:00 - 17:15</b> | <b>Gwang Hyuk Shin</b> (KAIST, South Korea)<br>Si-MoS <sub>2</sub> Vertical Heterostructure for High Responsivity Photodetector                         | O |
| <b>17:15 - 17:30</b> | <b>Zhaolong Chen</b> (Peking University, China)<br>High Brightness Blue/UV LED Enabled by Directly Grown Graphene Buffer Layer                          | O |
| <b>17:30 - 17:45</b> | <b>Xing Xin</b> (Institute of Metal Research – CAS, China)<br>Circular Graphene Platelets with Grain Size and Orientation Gradients Grown by CVD        | O |
| <b>17:45 - 18:00</b> | <b>Qinwei Wei</b> (Institute of Metal Research – CAS, China)<br>Green Controlled Synthesis of Graphene Oxide by Water Electrolytic Oxidation            | O |
| <b>18:00 - 18:15</b> | <b>Jinhua Sun</b> (Chalmers University of Technology, Sweden)<br>Molecular pillar approach to construct functionalized graphene for energy storage      | O |
| <b>18:15 - 18:30</b> | <b>Jinshu Li</b> (Sungkyunkwan University, South Korea)<br>Quasiparticle interference (QPI) in twisted bilayer graphene                                 | O |

## TUESDAY OCTOBER 23, 2018

### 2018 NEW MATERIALS INDUSTRIALIZATION INVESTMENT FORUM

ORGANISED BY CIGIU - CHINA INTERNATIONAL GRAPHENE INDUSTRY UNION

08:30 - 09:00

#### Sign-in

09:00 - 09:10

#### Opening

CIGIU presentation (video)

09:10 - 09:30

#### Speeches

- **Ruxiang Ruan**, Permanent Vice Chairman of CIGIU
- Leaders from Guilin Municipal Science and Technology Bureau
- **Antonio Correia**, President of Phantoms Foundation
- **Francesco Bonaccorso**, Member of the Development Committee of European Graphene Flagship

09:30 - 10:30

#### Report Presentation

- **Konstantin Novoselov**, winner of 2010 Nobel Prize in Physics, Professor at the University of Manchester
- **Hui-Ming Cheng**, Academician of Chinese Academy of Sciences and the Third World Academy of Sciences

10:30 - 11:00

### COFFEE BREAK

11:00 - 12:00

#### Special Lectures

- Promotion of projects in Rugao Advanced Carbon Materials Industrial Park  
**Wu Rong**, Vice Director of People's Government of Changjiang Town
- Financial and Investment Institutions  
**TBD**
- Intelligent graphene instrument and equipment industrialization  
**Yu Geliang**, Professor at Nanjing University, President of Wuxi Feiman Technology Co. Ltd.
- TS carbon fiber conductor and graphene-like advanced carbon nanomaterials  
**Jason Huang**, Member of CIGRE SC B2, Executive Committee Member of USNC CIGRE.

12:00

#### End

## WEDNESDAY OCTOBER 24, 2018

| PLENARY SESSION - BANQUET HALL |   |  |
|--------------------------------|---|--|
| 09:00 - 09:30                  | <b>Li-Xian Sun</b> (Guilin University of Electronic Technology, China)<br>Interfacing graphene with nanoparticles for energy and gas storage as well as sensors   | I  |
| 09:30 - 10:00                  | <b>Xuebin Yu</b> (Fudan University, China)<br>Graphene-Supported Complex Hydrides as Advanced Hydrogen Storage Materials  | I  |
| 10:00 - 10:15                  | <b>Fengxia Geng</b> (Soochow University, China)<br>Novel Inorganic Layered Materials: From Interlayer Chemistry, Delamination, toward Energy Storage Applications   | O  |
| 10:15 - 11:00                  |   | COFFEE BREAK - POSTER SESSION & EXHIBITION |
| 11:00 - 11:30                  | <b>Mauricio Terrones</b> (The Pennsylvania State University, USA)<br>A review of Defects in 2D Metal Dichalcogenides: Doping, Alloys, Interfaces, Vacancies and Their Effects in Catalysis & Optical Emission | K  |
| 11:30 - 12:00                  | <b>Hua Zhang</b> (NTU, Singapore)<br>Synthesis and Applications of Novel Two-Dimensional Nanomaterials  | K  |
| 12:00 - 12:15                  | <b>Jiang Pu</b> (Nagoya University, Japan)<br>Room Temperature Valley Polarized LEDs of Monolayer Transition Metal Dichalcogenides  | O  |
| 12:15 - 12:30                  | <b>Chuan Xu</b> (Institute of Metal Research – CAS, China)<br>CVD-Grown High-Quality Ultrathin Mo <sub>2</sub> C Crystals and Their Vertical Heterostructures with Graphene                                   | O  |
| 12:30 - 14:00                  |   | BUFFET LUNCH                               |
| 14:00 - 14:30                  | <b>Francesco Bonaccorso</b> (IIT-Graphene Labs/BeDimensional, Italy)<br>Large scale production of 2D-materials for energy applications  | I  |
| 14:30 - 14:45                  | <b>Jong Min Kim</b> (Kyung Hee University, South Korea)<br>Use of Doped-Graphene Transparent Conductive Electrodes for High-Performance Si-Quantum-Dots-Based Solar Cells                                     | O  |
| 14:45 - 15:00                  | <b>Junying Wang</b> (Institute of Coal Chemistry – CAS, China)<br>Co-synthesis of atomic Fe and few-layer graphene towards superior electrocatalysts of O <sub>2</sub> and CO <sub>2</sub>                    | O  |
| 15:00 - 15:15                  | <b>Mustafa Eginligil</b> (Nanjing Tech University, China)<br>Circular Photogalvanic Photocurrents in 2D Materials   | O  |
| 15:15 - 15:45                  | <b>Yoshihiro Iwasa</b> (The University of Tokyo, Japan)<br>Symmetry Controlled Optical Properties in TMD Nanostructures   | I  |
| 15:45 - 16:15                  |   | COFFEE BREAK - POSTER SESSION & EXHIBITION |
| 16:15 - 16:45                  | <b>Lance Li</b> (Taiwan Semiconductor Manufacturing Company, Taiwan, China)<br>Continue the transistor scaling with 2D materials: Challenges and Perspective  | K  |
| 16:45 - 17:15                  | <b>Hongjun Gao</b> (Chinese Academy of Sciences, China)<br>Construction of Novel 2D Atomic/molecular Crystals and Its physical Property   | K  |
| 17:15 - 17:45                  | <b>Young-Woo Son</b> (Korea Institute for Advanced Study, South Korea)<br>Effects of interlayer interactions on physics of layered crystals   | I  |
| 17:45 - 18:00                  | <b>Zhibo Liu</b> (Institute of Metal Research – CAS, China)<br>The boundaries of 2D Mo <sub>2</sub> C superconducting crystals  | O  |
| 18:00 - 18:15                  | <b>Deliang Bao</b> (Institute of Physics, China)<br>Fabrication of Millimeter-Scale, Single-Crystal One-Third-Hydrogenated Graphene with Anisotropic Electronic Properties                                    | O  |

# WEDNESDAY OCTOBER 24, 2018

| INDUSTRIAL FORUM - CHAMBER HAN             |  |   |
|--|--|---|
| 09:00 - 09:20                              | <b>Zakuan Azizi Shamsul</b> (NanoMalaysia Berhad, Malaysia)<br>Malaysia's Graphene Commercialization Progress National Graphene Action Plan 2020   | I |
| 09:20 - 09:35                              | <b>Shanshan Huo</b> (Graphene Enabled Systems Ltd, UK)<br>A New Model for Accelerating the Commercialisation of Graphene and other 2D Materials Research from Universities               | O |
| 09:35 - 09:55                              | <b>Daniel Chua</b> (NUS, Singapore)<br>New varieties of Metal Sulphides/Phosphides for Electronics and Clean Energy applications   | I |
| 09:55 - 10:15                              | <b>Rune Wendelbo</b> (Abalonix AS, Norway)<br>Graphene Oxide Derivatives, Properties and Applications  | I |
| COFFEE BREAK - POSTER SESSION & EXHIBITION |  |   |
| 10:15 - 10:45                              | <b>Chang-Hua Liu</b> (National Tsing Hua University, Taiwan, China)<br>Developing ultrathin light emitters and metalenses based on van der Waals materials                               | I |
| 11:05 - 11:25                              | <b>Shintaro Sato</b> (Fujitsu Laboratories Ltd., Japan)<br>Application of Graphene and Graphene Nanoribbons to Electronic Devices Including Ultrasensitive Gas Sensors                   | I |
| 11:25 - 11:40                              | <b>Zongping Chen</b> (Zhejiang University, China)<br>Precision synthesis of structurally defined graphene nanoribbons by chemical vapor deposition                                       | O |
| 11:40 - 12:00                              | <b>Jason Jieshan Qiu</b> (Beijing University of Chemical Technology, China)<br>Synthesis and Applications of Carbon Dots   | I |
| 12:00 - 12:15                              | <b>Zhirun Hu</b> (The University of Manchester, UK)<br>Printed Graphene For Chipless RFID Applications   | O |
| 12:15 - 12:30                              | <b>Xiao Sun</b> (Peking University, China)<br>Rapid Growth of Large Single-Crystalline Graphene with Ethane  | O |
| BUFFET LUNCH                               |  |   |
| 12:30 - 14:00                              | <b>Hao-Lin Hsu</b> (Kun Shan University, Taiwan, China)<br>Application of Carbon Aerogel in the Adsorption of Polycyclic Aromatic Compounds from Diesel Exhaust                          | O |
| 14:15 - 14:30                              | <b>Muhammad Zahid</b> (Istituto Italiano di Tecnologia, Italy)<br>Effect of 2D Nanomaterials on Gas Permeability and Mechanical Properties of Thermoplastic Polyurethane Nanocomposites  | O |
| 14:30 - 14:45                              | <b>Jian Zheng</b> (Institute of Chemistry – CAS, China)<br>Single Layer TMD Fabrication and Rolling up into Nanoscrolls  | O |
| 14:45 - 15:00                              | <b>Chengli Jiao</b> (Qingdao Institute of BioEnergy and Bioprocess Technology – CAS, China)<br>Induced Assembly of Two-Dimensional Metal–Organic Framework Nanosheets for Gas Separation | O |
| 15:00 - 15:20                              | <b>Yihe Zhang</b> (China University of Geosciences, China)<br>Graphene Composites as Energy, Catalyst, Environmental and Biomedical Materials, and Full Utilization of Graphite-Mining   | I |
| 15:20 - 15:35                              | <b>Jian Zhang</b> (Guilin University of Electrical Technology, China)<br>Graphene quantum dots as interface materials for organic photovoltaic cells                                     | O |
| COFFEE BREAK - POSTER SESSION & EXHIBITION |  |   |
| 15:35 - 16:15                              | <b>Hongyang Liu</b> (Guilin University of Electronic Technology, China)<br>Nano-Graphene Based Catalyst for Efficient Light Alkane Activation  | I |
| 16:35 - 16:55                              | <b>Min Zhu</b> (South China University of Technology, China)<br>Highly reversible conversion reactions in lithiated SnO <sub>2</sub> based thin film anode materials                     | I |
| 16:55 - 17:15                              | <b>Lei Miao</b> (Guilin University, China)<br>Enhanced Thermoelectric Performance in Graphene Quantum Dots/Te Nanowires Flexible Hybrid Film   | I |
| 17:15 - 17:30                              | <b>Zheng Zhang</b> (University of Science and Technology Beijing, China)<br>Defects engineering for monolayer MoS <sub>2</sub> homojunction construction                                 | O |
| 17:30 - 17:45                              | <b>Lei Tao</b> (Institute of Physics, Chinese Academy of Sciences, China)<br>Band engineering of double-wall Mo-based hybrid nanotubes   | O |
| 17:45 - 18:00                              | <b>Hao Luo</b> (Tsinghua University, China)<br>Probing and Modulating Interface Interactions in 2-Dimensional Materials and Their Heterostructures                                       | O |

## THURSDAY OCTOBER 25, 2018

| PLENARY SESSION - BANQUET HALL |  |   |
|--------------------------------|--|---|
| 09:00 - 09:15                  | <b>He Tian</b> (Tsinghua University, China)<br>Novel 2D devices based on graphene, BP and perovskite   | O |
| 09:15 - 09:45                  | <b>Feng Miao</b> (Nanjing University, China)<br>Electronic Transport and Device Applications of 2D Materials   | I |
| 09:45 - 10:15                  | <b>Mario Lanza</b> (Soochow University, China)<br>Building the hardware of future artificial intelligence systems: two-dimensional materials based electronic synapses | I |
| 10:15 - 11:15                  | COFFEE BREAK - POSTER SESSION & EXHIBITION   |   |
| 11:15 - 11:45                  | <b>Wencai Ren</b> (Chinese Academy of Sciences, China)<br>Graphene Oxide: Green Synthesis and Membrane Applications  | K |
| 11:45 - 12:00                  | <b>Samaneh Etemadi</b> (Abalonyx AS, Norway)<br>Graphene Oxide acidity modifications   | O |
| 12:00 - 12:30                  | <b>Mikito Koshino</b> (Osaka University, Japan)<br>Effective theory for the flat band in the twisted bilayer graphene  | I |
| 12:30                          | CLOSING & RPGR2019 ANNOUNCEMENT  |   |

# POSTERS LIST

alphabetical order

\*Only posters submitted by full registered participants  
are listed below (as of 16/10/2018)

| AUTHORS   | INSTITUTION                      | TOPIC                             | POSTER TITLE   | N° |
|---|----------------------------------|-----------------------------------|--|----|
| <b>Jong-Guk Ahn</b><br>Younghee Park, Hyunseob Lim  | ONU<br>China                     | Optical properties & Spectroscopy | Surface Enhanced Raman Spectroscopy at Nanogap between Au Nanoparticles Separated by 2D hexagonal Boron Nitride                  | 29 |
| <b>Zizheng Ai</b>   | SKLCM<br>China                   | Energy Applications               | BNNS@Ti <sub>3</sub> C <sub>2</sub> Intercalation Electrocatalyst for Hydrogen Evolution Reaction                                | 42 |
| <b>Atsushi Ando</b>   | AST<br>Japan                     | Synthesis                         | Morphology and electrical studies on NaCl-assisted CVD synthesis of WS <sub>2</sub>  | 1  |
| <b>Branson Belle</b><br>M. Navayanan Kuty, O. Koybasi, Ø. Dahl , A. S. Azar, T. Taniguchi, K. Watanabe, E. Monakhov | SINTEF<br>Norway                 | Devices                           | Gamma ray radiation effects on hBN encapsulated Graphene Field Effect Transistors  | 37 |
| <b>Milan Blaskovic</b><br>Slaven Garaj  | NUS<br>Singapore                 | Other Applications                | Tunable interaction between graphene and a DNA molecule  | 60 |
| <b>Yichao Cai</b>   | Nankai University<br>China       | Chemistry & Electrochemistry      | Graphene and Carbon Nanotube in Na-CO <sub>2</sub> Battery   | 14 |
| <b>Yung-Huang Chang</b><br>Yu-jih Huang, Yuan-Tsung Chen, Chien-Sheng Huang   | YunTech<br>Taiwan, China         | Optical properties & Spectroscopy | Tunable Band Gap Energy from WS <sub>x</sub> Se <sub>y</sub> Monolayer   | 30 |
| <b>Chang-Hsiao Chen</b><br>H.-C. Chang, C.-L. Tu, K.-I Lin, J. Pu, T. Takenobu, C.-N. Hsiao                         | FCU<br>Taiwan, China             | Synthesis                         | Chemical Vapor Deposition Synthesis of Large-Area Monolayer InSe   | 2  |
| <b>An-Jin Cho</b><br>Jang-Jeon Kwon   | Yonsei University<br>South Korea | Energy Applications               | Evaluation of a WSe <sub>2</sub> /MoS <sub>2</sub> Heterojunction in the Perspective of a Transparent Thin-film Solar Cell       | 43 |
| <b>Hailiang Chu</b>   | GUET<br>China                    | Other Applications                | Effect of Reduced Graphene Oxide on the Electrochemical Properties of Overlithiated Oxide Cathode Materials for Li-Ion Batteries | 61 |
| <b>Lingzhi Cui</b><br>X. Chen, B. Liu, K. Chen, Z. Chen, Y. Qi, H. Xie, F. Zhou, M. H. Rümmeli, Y. Zhang, Z. Liu    | Peking University<br>China       | Synthesis                         | Highly Conductive Nitrogen-doped Graphene Grown on Glass Towards Electrochromic Applications                                     | 3  |
| <b>Xueping Cui</b><br>Jian Zheng  | ICCAS<br>China                   | Synthesis                         | Fabrication of Transition Metal Dichalcogenides Nanoscrolls  | 4  |
| <b>Xi Dai</b><br>Fang Wan, Linlin Zhang, Hongmei Cao, Zhiqiang Niu  | Nankai University<br>China       | Energy Applications               | Freestanding graphene/VO <sub>2</sub> composite films for highly stable aqueous Zn-ion batteries with superior rate performance  | 44 |
| <b>Bing Deng</b><br>Zhongfan Liu, Halin Peng  | Peking University<br>China       | Synthesis                         | Graphene as Electronic Materials: Controlled Growth of Single-Crystal Graphene Wafer   | 5  |
| <b>Jianqiu Deng</b>   | GUET<br>China                    | Energy Applications               | High-performance V-based electrode materials for Na-ion batteries  | 45 |
| <b>Jie Gao</b>  | GUET<br>China                    | Energy Applications               | Enhanced Thermoelectric Performance in Graphene Quantum Dots/T <sub>6</sub> Nanowires Flexible Hybrid Film                       | 46 |

| AUTHORS  | INSTITUTION                         | TOPIC                                | POSTER TITLE  | N° |
|--|-------------------------------------|--------------------------------------|---|----|
| <b>Yunpeng Hou</b><br>Pengfeizhou, Huanju Meng, Zhen Zhang, Zhanliang Tao, Jun Chen                              | Nankai University<br>China          | Electrical Properties                | High-performance layered Ni-rich $\text{LiNi}_{1-x-y}\text{Co}_x\text{Al}_y\text{O}_2$ cathode materials for lithium ion batteries                      | 25 |
| <b>Keiichiro Ikeda</b><br>Ryo Nouchi   | OPU<br>Japan                        | Chemistry & Electrochemistry         | Chemical Modification of Graphene Controlled by Substrate Surface Treatment with Self-Assembled Monolayers  | 15 |
| <b>Chan Wook Jang</b><br>Seung-Hyun Shin, Jon Soo Kim, Ju Hwan Kim, Suk-Ho Choi                                  | Kyung Hee University<br>South Korea | Devices                              | Flexible perovskite resistive random access memories employing graphene transparent conductive electrodes   | 38 |
| <b>Kaicheng Jia</b><br>Hailin Peng, Zhongfan Liu   | Peking University<br>China          | Synthesis                            | Copper Containing Carbon Feedstock for Growing High Quality Graphene  | 6  |
| <b>Shan Jingyuan</b>   | Peking University<br>China          | Energy Applications                  | Graphene-Armored Aluminum Foil as Current Collectors for High-voltage Lithium-Ion Battery with Enhanced Performance                                     | 47 |
| <b>Minwoong Joe</b><br>Jinhwan Lee, Changgu Lee  | SKKU<br>South Korea                 | Mechanical Properties                | Dominant in-plane cleavage direction of $\text{CrPS}_4$ monolayer   | 34 |
| <b>Gil-Ho Kim</b><br>Muhammad Atif Khan, Servin Rath   | Kyung Hee University<br>South Korea | Electrical Properties                | Atomically Thin Tunneling Layer for Improved Contact Resistance and Dual Channel Transport in $\text{MoS}_2/\text{WSe}_2$ van der Waals Heterostructure | 26 |
| <b>Ju Hwan Kim</b><br>Dong Hwan Jung, Jong Min Kim, Sung Kim, Suk-Ho Choi  | TUT<br>China                        | Energy Applications                  | Multilayer graphene/conducting polymer/Si nanowires/Si/TiO <sub>x</sub> hybrid solar cells  | 48 |
| <b>Wenjiang Li</b><br>H. Liang, S. Zhou, R. Synders, S. Werner, C. Haebel, P. Gutmann, W. Li, C. Rittencourt     | TBSI<br>China                       | Chemistry & Electrochemistry         | Nanoscale NEXAFS for Probing multi-layer graphene/copper nanowires composite  | 16 |
| <b>Zeng Linchao</b><br>Shaohua Chen, Chuang Yang, Lin Qiu, Huiming Cheng   | Peking University<br>China          | Synthesis                            | Integrated paper-based stretchable LIBs   | 17 |
| <b>Bingzhi Liu</b><br>Zhongran Liu   | Nankai University<br>China          | Energy Applications                  | Oxygen-assisted Growth of Highly Conductive Graphene with Controllable Domain Size on Glass   | 7  |
| <b>Fangming Liu</b><br>Zhenhua Yan, Fangyi Cheng, Jun Chen   | TBSI<br>China                       | Synthesis                            | Anions inserted into graphite interlayers enhancing the electrodedeposited metal hydroxides for oxygen evolution  | 49 |
| <b>Jiamian Liu</b><br>J. Liu, L. Yu, X. Cai, Z. Cai, Q. Yu, L. Tang, A. Mahmood, U. Khan, J. Xi, B. Liu, F. Kang | TBSI<br>China                       | Synthesis                            | Synthesis of wafer-scale single-layer h-BN and its use in proton transport membrane   | 8  |
| <b>Mingqiang Liu</b><br>Y. Hou, S. Feng, C. Teng, L. Tang, J. Liu, J. Ren, B. Liu                                | Guangxi University<br>China         | Synthesis                            | Controlled growth and doping of black phosphorus with tunable properties  | 9  |
| <b>Yang Liu</b>  | Tokyo Tech<br>Japan                 | Chemistry & Electrochemistry Devices | Asymmetric 3d Electronic Structure for Enhanced Oxygen Evolution Catalysis  | 18 |
| <b>Tomooaki Oba</b><br>Takamasa Kawamura, Shunri Oda   | Tokyo Tech<br>Japan                 |                                      | Gated Four-Probe Method for Evaluation of Electrical Characteristics in $\text{MoS}_2$ Field-Effect Transistors   | 39 |
| <b>Takuji Okamoto</b><br>Yoshikazu Ito, Naoka Nagamura, Takeshi Fujita, Yukio Kawano                             | CU<br>South Korea                   | Electrical Properties                | Three-Dimensional Spatial-Topology Effects, Magnetoresistance in Three-Dimensional Porous Graphene  | 27 |
| <b>YoungHee Park</b><br>Seunghyun Shin, Jong-Guk Ahn, Hyunseob Lim   | CU<br>South Korea                   | Optical Properties & Spectroscopy    | Electrochemical Surface Modification of Two-Dimensional Hexagonal Boron Nitride for Generating Midgap Energy States                                     | 31 |

| AUTHORS   | INSTITUTION                         | TOPIC                             | POSTER TITLE   | N° |
|---|-------------------------------------|-----------------------------------|--|----|
| <b>Jieqiong Qin</b><br>Zhong-Shuai Wu   | DICP – CAS<br>China                 | Energy Applications               | Two-Dimensional Pseudocapacitive Nanosheets for All-SolidState Micro-Supercapacitors   | 50 |
| <b>Akira Sasagawa</b><br>T. Okamoto, Y. Harada, S. Nakano, W. Norimatsu, M. Kusunoki, Y. Kawano | Tokyo Tech<br>Japan                 | Optical Properties & Spectroscopy | Direct observation of Plasmons in Graphene Quantum Dots with Scanning Near-Field Optical Microscopy  | 32 |
| <b>Xiaoyu Shi</b><br>Zhong-Shuai Wu, Xinhua Bao   | DICP – CAS<br>China                 | Energy Applications               | Graphene based linear tandem micro-supercapacitors   | 51 |
| <b>Seung-Hyun Shin</b><br>D.-H. Jung, J.-M. Kim, C.-W. Jang, S. Kim, S.-H. Choi                 | Kyung Hee University<br>South Korea | Energy Applications               | Mn <sub>2</sub> PtI <sub>3</sub> Perovskite Solar Cells Employing Flexible n-Type Graphene Transparent Conducting Electrodes   | 52 |
| <b>Seunghyun Shin</b><br>Young Hee Park, Jong-Guk Ahn, Hyunseob Lim                             | CNU<br>South Korea                  | Chemistry & Electrochemistry      | Direct Covalent Functionalization of Single Layer 2H-MoS <sub>2</sub> Electrografting of Diazonium Salt: Influence of S vacancy and S-C bond on Photoluminescence of 2H-MoS <sub>2</sub> | 19 |
| <b>Li Shuan</b><br>Wu Yanqing, Li Xingguo, Zheng Jie  | Peking University<br>China          | Electrical Properties             | Annealing temperature effect on microstructure, optical and electrical properties of nanometer GdYQ <sub>x</sub> high k films  | 28 |
| <b>Shubin Su</b><br>H. Tao, H. Li, Z. Ni, D. Qian, G. Yu, X. Chen                               | SJTU<br>China                       | Synthesis                         | Water-based Graphene Patterning under Ultraviolet Irradiation  | 10 |
| <b>Chia-Liang Sun</b><br>Chia-Heng Kuo, Cheng-Hsuan Lin, Ben-Son Lin                            | CGU<br>Taiwan, China                | Chemistry & Electrochemistry      | Photoassisted Electrochemical Biosensing Using Graphene Oxide Nanoribbons  | 20 |
| <b>Luzhao Sun</b><br>Li Lin, Haolin Peng, Zhongfan Liu  | Peking University<br>China          | Synthesis                         | Visualizing the Fast Growth of Large Single-Crystalline Graphene   | 11 |
| <b>Yan Sun</b><br>Wei Li, Hui Yang, Carla Bittencourt, Wenjiang Li, Rony Snyders                | TUT<br>China                        | Chemistry & Electrochemistry      | In-situ Assembled Mo <sub>2</sub> S <sub>3</sub> /Reduced Graphene Oxide Aerogels as an Efficient Catalyst Application for HER Electrocatalysis  | 21 |
| <b>Zelin Tan</b><br>Ken Liu, Zhi Hong Zhu   | NUDT<br>China                       | Optical Properties & Spectroscopy | Photoluminescence properties of WS <sub>2</sub> under optical irradiation  | 33 |
| <b>Chao Wang</b><br>Qiang Fu, Xinhua Bao  | DICP – CAS<br>China                 | Chemistry & Electrochemistry      | In-situ investigations of the rechargeable aluminum ion battery by XPS, Raman and optical microscope   | 22 |
| <b>Sen Wang</b><br>Zhong-Shuai Wu   | DICP – CAS<br>China                 | Energy Applications               | Scalable Fabrication of Monolithic Micro Supercapacitors with Tailored Geometries for On-Chip Energy Storage   | 53 |
| <b>Yijing Wang</b>  | Nankai University<br>China          | Energy Applications               | Rational design of 1D mesoporous MnO@C nanorods as anode material for improved Li-storage properties   | 54 |
| <b>Jindi Wei</b><br>Gengmin Zhang   | Peking University<br>China          | Devices                           | Fabrication of a graphene edge based field emitter and its electron emission properties  | 40 |
| <b>Chaochao Xu</b><br>Fen Xu, Lixian Sun  | GUET<br>China                       | Energy Applications               | Synthesis of bio-based porous carbon and its application in supercapacitors  | 55 |

| AUTHORS   | INSTITUTION                | TOPIC                        | POSTER TITLE   | N°            |
|---|----------------------------|------------------------------|--|---------------|
| <b>Alkai Yang</b><br>Zhiqiang Luo, Qing Zhao, Jun Chen  | Nankai University<br>China | Energy Applications          | Organic Molecules Grafted onto Graphene Enable Superior Lithium-Ion Batteries  | <b>56</b>     |
| <b>Yusi Yang</b><br>X. Wang, S.-C. Liu, Z. Li, Z. Sun, C. Hu, D. Xue, G. Zhang, J.-S. Hu          | Peking University<br>China | Mechanical Properties        | Weak Interlayer Interaction in Anisotropic GeSe <sub>2</sub>   | <b>35</b>     |
| <b>Minjie Yao</b>   | Nankai University<br>China | Devices                      | Large-Area Reduced Graphene Oxide Composite Films for Flexible Asymmetric Sandwich and Micro-sized Supercapacitors   | <b>41</b>     |
| <b>Shilu Yin</b><br>Lixian Sun, Fen Xu, Yongpeng Xia, Feifei Wang, JinYang Hu, Jinghua Li         | GUET<br>China              | Synthesis                    | Synthesis and electrochemical properties of phosphorus doped GO/porous carbon  | <b>12</b>     |
| <b>Zhengxuan Yin</b><br>Chenchen Wang, Kaixiang Lei, Fujun Li                                     | Nankai University<br>China | Energy Applications          | High Na/K-storage performance of bismuth enabled by ether-based electrolytes   | <b>57</b>     |
| <b>Huanzhi Zhang</b>  | GUET<br>China              | Energy Applications          | Graphene-enhanced Composite Phase Change Materials for Thermal Energy Storage  | <b>58</b>     |
| <b>Jincan Zhang</b><br>Hailin Peng, Zhongfan Liu  | Peking University<br>China | Synthesis                    | Super-clean graphene film: synthesis, transfer and applications  | <b>13</b>     |
| <b>Qiu Zhang</b><br>Zhe Hu, Yanying Lu, Jun Chen  | Nankai University<br>China | Chemistry & Electrochemistry | Two-dimension Sulfide Anodes for Sodium-ion Batteries  | <b>23</b>     |
| <b>Shuqing Zhang</b><br>Xiaolong Zou, Huiming Cheng   | TBSI<br>China              | Theory                       | High temperature half-metalllicity in 2D CoGa <sub>2</sub> X <sub>4</sub> (X=S, Se, Te)                              | <b>36</b>     |
| <b>Shuang Zhou</b><br>S. Zhou, C. Bitencourt, S. Werner, C. Haebel, P. Guttmann, W. Li, R. Sydner | TUT<br>China               | Chemistry & Electrochemistry | Reduced graphene oxide/carbon hybrid aerogels from cellulose and graphene oxide for oil/water separation             | <b>24</b>     |
| <b>Yongjin Zou</b>  | GUET<br>China              | Energy Applications          | Functionalized porous carbon for high performance supercapacitors  | <b>59</b>     |
| <b>Haina Ci</b><br>Zhongfan Liu   | Peking University<br>China | Energy Applications          | Vertically-oriented Graphene Growth at Low Temperature for Solarthermal Applications                                 | <b>1</b>      |
| <b>Yongpeng Xia</b><br>Li Zhao, Xia Yang, Huanzhi Zhang, Fen Xu, Lixian Sun                       | GUET<br>China              | Chemistry & Electrochemistry | Significant improved dehydrogenation of LiAlH <sub>4</sub> doped with two-dimensional Ti <sub>3</sub> C <sub>2</sub> | <b>LATE 2</b> |



# NOTES

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---





# 1 & 2DM

CONFERENCE & EXHIBITION

TOKYO (JAPAN) - JANUARY 29-30, 2019

## 1 & 2D MATERIALS INTERNATIONAL CONFERENCE AND EXHIBITION



**SUMIO IIJIMA**  
Meijo Univ. (Japan)



**KOSTYA NOVOSELOV**  
Univ. of Manchester (UK)

[www.1and2dm.com](http://www.1and2dm.com)

ABSTRACT SUBMISSION

Nov. 09, 2018

EARLY BIRD  
REGISTRATION FEE

Nov. 30, 2018



**TOKYO BIG SIGHT**

CO-LOCATED WITH



**nanotech 2019**  
International Nanotechnology Exhibition & Conference



# GRAFOID

A Complete Solutions Graphene Company

## GRAFOID: POSITIONED FOR COMMERCIALIZATION

GrafoID is a world-leading graphene research and application development company moving towards the commercialization of mass produced, next generation products in partnership with leading global corporations and institutions.

### **GrafoID has achieved:**

- An Expanding Global Presence
- A World Class R&D Facility
- A Critical Energy Materials Business Platform
- A Multi-country Application Development Partnership
- Security of Supply of Source Graphite

GrafoID's business innovation and management vision, our science, in-house engineering, quality control and investments in next generation materials and products leave us well positioned to commercialize our inventions in the global marketplace

[www.GRAFOID.com](http://www.GRAFOID.com)