

1 & 2DM

CONFERENCE & EXHIBITION

TOKYO (JAPAN) - JANUARY 29-30, 2019

TENTATIVE PROGRAM (as of 22/01/2019)

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



Tuesday (29/01/2019)

08:00 – 08:40: *Registration*

08:40 – 08:50: *Opening Ceremony - Welcome and Introduction.*

08:50 – 09:30: **Sumio Iijima** (Meijo University, Japan) P

09:30 – 10:00: **Suguru Noda** (Waseda University, Japan) K

Production and Functionalization of Carbon Nanotubes for Energy Devices

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

10:45 – 11:15: **Danny Porath** (The Hebrew University of Jerusalem, Israel) I

From 1D DNA nanowires to 2D nanotube networks

11:15 – 11:30: **Hisashi Sugime** (Waseda University, Japan) O

An interdigitated electrode with dense carbon nanotube forests on conductive supports for electrochemical biosensors

11:30 – 11:50: **Yutaka Ohno** (Nagoya University, Japan) I

Carbon nanotube thin films for wearable electronics application

11:50 – 12:05: **Atsuko Sekiguchi** (National Institute of Advanced Industrial Science and Tech, Japan) O

Lightweight high-performance Cu/Carbon Nanotube composites

12:05 – 12:35: **Kazutomo Suenaga** (AIST, Japan) I

Structures and properties of one-dimensional materials

12:35 – 14:00: *Cocktail Lunch (offered by 1and2DM 2019)*

14:00 – 14:30: **Yoshihiro Iwasa** (University of Tokyo, Japan) K

Berry Phase Controlled Optical Responses in 1D & 2D Transition Metal Dichalcogenides

14:30 – 14:45: **Ryosuke Senga** (AIST, Japan) O

Nanoscale optical and vibrational spectroscopy of low-dimensional materials

14:45 – 15:00: **Pranjal Kumar Gogoi** (National Institute of Advanced Industrial Science and Technology (AIST), Japan) O

Momentum Conservation Driven Ultrafast Charge Transfer Dynamics of Interlayer Excitons in vdW Heterostructure

15:00 – 15:15: **Victor Ryzhii** (Tohoku University, Japan) O

Vertical injection in black phosphorus-graphene heterostructures for terahertz lasing

15:15 – 15:45: **Taiichi Otsuji** (Tohoku University, Japan) K

Graphene-based van der Waals Heterostructures towards a New Type of Quantum-Cascade Terahertz Lasers

15:45 – 16:15: *Coffee Break / Poster Session & Exhibition*

16:15 – 16:45: *Poster Session*

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| 16:45 – 17:15: Sung-Yool Choi (KAIST, Korea) | I |
| Engineering graphene electrodes for flexible display applications | |
| 17:15 – 17:45: Francesco Bonaccorso (IIT-Graphene Labs / BeDimensional, Italy) | K |
| A step forward toward the large scale production and industrialization of graphene | |
| 17:45– 18:00: Ryszard J. Kaleńczuk (West Pomeranian University of Technology, Poland) | O |
| MOF derived interconnected structured porous carbon for high-performance supercapacitor | |
| 18:00 – 18:15: Wei Weng (Donghua University, China) | O |
| Graphene Composite Fibers for Flexible Supercapacitors | |
| 18:15 – 18:30: Siamak Eqtessadi (Abalonyx AS, Norway) | O |
| Thermally reduced graphene oxide for CO2 capture technology | |



Wednesday (30/01/2019)

Parallel Session - I

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|---|---|
| 09:00 – 09:15: Nojoon Myoung (Chosun University, South Korea) | O |
| Valley-Mixing-Induced Splitting in Conductance Resonances through a Single Magnetic Quantum Dot in Graphene | |
| 09:15 – 09:30: Mustafa Eginligil (Nanjing Tech University, China) | O |
| Magneto-photoconductivity in 2D strong spin-orbit coupling systems | |
| 09:30 – 09:45: Jaedong Lee (DGIST, South Korea) | O |
| Creation and manipulation of valley magnetic domain toward valleytronic current processing | |
| 09:45 – 10:00: Adolfo De Sanctis (University of Exeter, UK) | O |
| Laser-irradiated 2D materials: a new path towards straintronic devices | |
| 10:00– 10:20: Bruno Dlubak (Unite Mixte de Physique CNRS-Thales, France) | I |
| Introducing 2D Materials for Magnetic Tunnel Junctions | |

10:20 – 10:50: *Coffee Break*

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| 10:50 – 11:10: Shinsuke Kashiwagi (HORIBA Scientific, Japan) | I |
| Correlated Tip-Enhanced Optical Spectroscopy and SPM on 2D materials | |
| 11:10 – 11:25: Aina Reich (neaspect GmbH, Germany) | O |
| Scattering-type scanning near-field optical microscopy as a versatile tool for the characterization of 1D and 2D materials | |
| 11:25 – 11:40: Koji Harano (The University of Tokyo, Japan) | O |
| Direct Electron Microscopic Analysis of Individual Reaction Events in Single-Walled Carbon Nanotubes | |
| 11:40 – 11:55: Hyunmin Kim (DGIST, South Korea) | O |
| Transient SHG microscopy on atomically thin 2D materials | |
| 11:55 – 12:10: Yukihiro Endo (University of Tokyo, Japan) | O |
| Structure analysis of Ca-intercalated bilayer graphene by total-reflection high-energy positron diffraction | |
| 12:10 – 12:30: Yong-Hoon Kim (KAIST, Republic of Korea) | I |
| Quantum-hybridization negative differential resistance from halide perovskite nanowires and vertical graphene junctions | |

Parallel Session - II

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| 09:00 – 09:15: Karolina Drogowska (J. Heyrovsky Institute of Physical Chemistry, Czech Academy of Sciences, Czech Republic) | O |
| Functionalization of the CVD-grown graphene: towards the on-surface chemistry reactions and motion | |
| 09:15 – 09:30: Ewa Mijowska (West Pomeranian University of Technology Szczecin Poland, Poland) | O |
| Carbon based nanostructures - thermal , electrochemical, adsorption, photocatalytical response | |

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| 09:30 – 09:45: Mochen Li (Waseda University, Japan) | O |
| Facile Catalyst Deposition Using Mist for Fluidized-Bed Production of Sub-Millimeter-Long Carbon Nanotubes | |
| 09:45 – 10:00: Daiyu Kondo (Fujitsu Laboratories Ltd., Japan) | O |
| Thermal interface materials made of vertically-aligned multi-walled carbon nanotubes | |
| 10:00 – 10:20: Renzhi Ma (MANA/NIMS, Japan) | I |
| Exploration of Single-layer Nanosheets and Their Assemblies with Emergent Properties | |
| 10:20 – 10:50: <i>Coffee Break</i> | |
| 10:50 – 11:05: Yinfeng Li (Shanghai Jiao Tong University, China) | O |
| Multiscale modeling on the mechanical properties of graphene based two dimensional nanostructures | |
| 11:05 – 11:20: Feng Liu (Kwansei Gakuin University, Japan) | O |
| Topological dipoles and quadrupoles | |
| 11:20 – 11:35: Antonio Pantano (Universita degli Studi di Palermo, Italy) | O |
| Calculation of the Electromechanical Properties of CNTs Under Deformation by Means of a Novel Numerical Model | |
| 11:35 – 11:50: Zeljko Sljivancanin (University of Belgrade Vinca Institute of Nuclear Sciences, Serbia) | O |
| Ab-initio modeling of metal interaction with 2D materials | |
| 11:50 – 12:05: Sung-Ho Salk (POSTECH, South Korea) | O |
| Universal Characters of Superconductivity in the 2-D (Quasi-2-D) Systems of Strongly Correlated Electrons based on the SU(2) Gauge Theory of Slave-boson Approach to t-J Hamiltonian | |
| 12:05 – 12:25: Satoshi Moriyama (MANA, Japan) | I |
| Topological Transport in Graphene/hBN Superlattices | |
| Parallel Session - III | |
| 09:00 – 09:20: Rezal Khairi Ahmad (NanoMalaysia Berhad, Malaysia) | I |
| National Graphene Action Plan: Progress and commercialisation opportunities | |
| 09:20 – 09:40: Andy Zhou (Grafoid Inc., Canada) | I |
| Grafoid and Focus Graphite: A Global Mine-to-Market Platform for Green Technology | |
| 09:40– 10:00: Hasegawa Masataka (AIST, Japan) | I |
| High-throughput synthesis of graphene by plasma CVD and its commercialization | |
| 10:00 – 10:20: Rune Wendelbo (Abalonyx, Norway) | I |
| Graphene Oxide and Graphene Oxide Derivatives, Properties and Applications | |
| 10:20 – 10:50: <i>Coffee Break</i> | |
| 10:50 – 11:10: Shintaro Sato (Fujitsu Laboratories Ltd., Japan) | I |
| Synthesis and application of carbon nanotubes, graphene, and graphene nanoribbons | |
| 11:10 – 11:30: Mindaugas Lukosius (Institute for High Performance Microelectronics, Germany) | I |
| Graphene synthesis on 200 mm wafers | |
| 11:30 – 11:45: Blerina Gjoka (Abalonyx As, Norway) | O |
| Functionalization of Graphene Oxide for Industrial Applications | |
| 11:45 – 12:00: Muhammad Zahid (Istituto Italiano di Tecnologia, Italy) | O |
| Multilayer-Graphene Fillers for Improved Gas Barrier Properties in Polymer Composites | |
| 12:00 – 12:15: Azadeh Motealleh (Abalonyx AS, Norway) | O |
| Development of nitrogen doped graphene derivatives for renewable nano-structured membrane for direct alkaline ethanol fuel cell | |
| 12:15– 12:30: Daria Andreeva-Baeumler (CA2DM / NUS, Singapore) | O |
| Acoustic Implosions for Synthesis of Carbon Materials and Oscillations between Diamond and Graphite phases | |
| 12:30 – 14:30. <i>Lunch</i> | |
| 14:00 – 14:40: Kostya Novoselov (University of Manchester, UK) | P |
| Materials in the Flatland | |

14:40 – 15:10: **Barbaros Ozyilmaz** (National University of Singapore, Singapore) K
Technology Validation of Graphene and other 2D Materials

15:10 – 15:40: **Byung-Hee Hong** (Seoul National Univ. & Graphene Square, South Korea) K
Recent Progress in Commercialization of CVD Graphene Films

15:40 – 16:10: *Coffee Break*

16:10 – 16:40: **Stephan Roche** (ICREA/ICN2, Spain) K
Charge, Thermal and Spin Transport in Graphene Composites & Polycrystalline Heterostructures

16:40 – 17:10: **Akimitsu Narita** (Max Planck Institute for Polymer Research, Germany) I
Bottom-up Chemical Synthesis of Atomically Precise Graphene Nanoribbons and Their Potentials

17:10 – 17:40: **Katsunori Wakabayashi** (Kwansei Gakuin University, Japan) K
Topological Properties of Graphene and Related 2D Materials

17:40 – 18:10: **Mauricio Terrones** (Shinshu University & The Pennsylvania State University, Japan/USA) K
Doped Graphene for Enhanced Raman Spectroscopy

18:10: Closing and 1and2DM2020 announcement