

# Detailed Meeting Program

EMN Hong Kong Meeting 2015 December 9 to 12, 2015 Eaton hotel, Hong Kong		
<b>Wednesday Dec. 9</b> <b>Room A (Pearl Ballroom A)</b>		
7:00-8:00AM	Breakfast	
<b>Session: Graphene I    Chair: Gerd Bacher</b>		
8:00-8:25AM	A01: Quasiparticle scattering in epitaxial graphene nanoflakes	<b>Mikhail Fonin</b> University of Konstanz, Germany P29
8:25-8:50AM	A02: Band structure of silicene and phosphorene compared to graphene	<b>Lok Lew Yan Voon</b> The Citadel, USA P30
8:50-9:15AM	A03: Dilute fluorination of graphene: engineering charge transport and spin-flip scattering	<b>Jun Zhu</b> The Pennsylvania State University, USA P30
9:15-9:40AM	A04: Spin transport in graphene on SrTiO <sub>3</sub>	<b>Tamalika Banerjee</b> University of Groningen, The Netherlands P31
9:40-10:05AM	A05: On the quest for intrinsic spin lifetimes in graphene spin-valves	<b>Bernd Beschoten</b> RWTH Aachen University, Germany P32
10:05-10:20AM	Session Break	
<b>Session: Complex Magnets &amp; Skyrmions I    Chair: Mikhail Fonin</b>		
10:20-10:45AM	A06: Néel-type magnetic skyrmions with ferroelectric vortex cores	<b>Istvan Kezsmarki</b> Budapest University of Technology and Economics, Hungary P33
10:45-11:10AM	A07: Skyrmions dressed with ferroelectric polarization and a zoo of multiferroic phases in the lacunar spinel GaV <sub>4</sub> S <sub>8</sub>	<b>Alois Loidl</b> University of Augsburg, Germany P34
11:10-11:35AM	A08: A neutron scattering study of the cycloidal order and Néel-type skyrmion lattice in GaV <sub>4</sub> S <sub>8</sub>	<b>Sandor Bordacs</b> Budapest University of Technology and Economics, Hungary P35
11:35-12:00PM	A09: Electric Field-Induced Skyrmion Distortion and Giant Lattice Rotation in the Magnetoelectric Insulator Cu <sub>2</sub> OSeO <sub>3</sub>	<b>Jonathan White</b> Paul Scherrer Institute, Switzerland P36
12:00-13:00PM	Lunch Break	
<b>Session: Terahertz Technology I    Chair: Toshihiko Kiwa</b>		

13:00-13:25PM	A10: Terahertz spectroscopy on condensed matter	<b>Keisuke Tominaga</b> Kobe University, Japan P37
13:25-13:50PM	A11: MCT heterostructures grown by MBE for IR and THz detectors	<b>Sergey A. Dvoretzky</b> Siberian Branch of the Russian Academy of Sciences, Russia P37
13:50-14:15PM	A12: Current Update in Application of THz Spectroscopy - to Biological System From Medicines	<b>Masae Takahashi</b> Tohoku University, Japan P39
14:15-14:40PM	A13: Exploration of the Interlayer Chemistry in Clay Minerals by Terahertz Spectroscopy	<b>Ingrid Wilke</b> Rensselaer Polytechnic Institute, USA P39
14:40-15:05PM	A14: Generation and detection of continuous THz-waves using InP-based ultrafast devices	<b>Hiroshi Ito</b> Kitasato University, Japan P41
15:05-15:20PM	Session Break	
<b>Session: Complex Magnets &amp; Skyrmions II    Chair: Istvan Kezsmarki</b>		
15:20-15:45PM	A15: Nonreciprocal magnon propagation in a noncentrosymmetric ferromagnet $\text{LiFe}_5\text{O}_8$	<b>Yoshinori Onose</b> University of Tokyo, Japan P42
15:45-16:10PM	A16: Magneto-optical effects in multiferroic materials via toroidal magnon excitations	<b>Nobuo Furukawa</b> Aoyama Gakuin University, Japan P42
16:10-16:35PM	A17: Recent Progress in highly ordered double-perovskite $\text{Bi}_2\text{FeMnO}_6$ epitaxial thin film	<b>Chun-Gang Duan</b> East China Normal University, China P43
16:35-17:00PM	A18: Reproducible formation and features of single bubble state in array of Co/Ni dots	<b>Thomas Hauet</b> University of Lorraine, France P43
17:00-17:25PM	A19: Toward the realization of a single atom magnet	<b>Fabio Donati</b> Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland P44
18: 00PM	Dinner Social	

<b>Wednesday Dec. 9</b> <b>Room B (Pearl Ballroom B)</b>		
7:00-8:00AM	Breakfast	
<b>Session: General I    Chair: Momoji Kubo</b>		
8:00-8:25AM	B01: Nuclear spin polarization and manipulation in semiconductor quantum systems	<b>Yoshiro Hirayama</b> Tohoku University, Japan P45
8:25-8:50AM	B02: Group IV compounds on insulator for electronic and photonic convergence	<b>Frederic Gardes</b> University of Southampton, UK P46
8:50-9:15AM	B03: Identifying Carbonaceous Promoter in MoS <sub>2</sub> Synthesis Process	<b>Hui Ying Yang</b> Singapore University of Technology and Design, Singapore P47
9:15-9:30AM	B04: Utilization Potential of Daylighting in Building Using Light Pipe in Tropical Climate	<b>Surawut Chuangchote</b> King Mongkut's University of Technology Thonburi, Thailand P47
9:30-9:45AM	B05: Development of Hybrid WO <sub>3</sub> -TiO <sub>2</sub> Nanotubes Film for Solar Hydrogen Generation via Water Electrolysis in a Custom-Designed Water Splitter	<b>Chin Wei Lai</b> University of Malaya, Malaysia P48
10:05-10:20AM	Session Break	
<b>Session: Surface and Interface Analysis I    Chair: Yoshiro Hirayama</b>		
10:20 -10:45AM	B06: Development of Large-Scale Molecular Dynamics Simulator for the Design of Solid Oxide Fuel Cell	<b>Momoji Kubo</b> Tohoku University, Japan P49
10:45-11:10AM	B07: Phenomena in Self-Organized Epitaxial Nanostructure Growth and Structures in the Dimensional Crossover Regimes	<b>Bhupendra N. Dev</b> Indian Association for the Cultivation of Science, India P50
11:10-11:35AM	B08: Electric-field-induced strain transfer effect in multiferroic heterostructures	<b>Tomoyasu Taniyama</b> Tokyo Institute of Technology, Japan P52
11:35-12:00PM	B09: Modifications in atomic structure and correlated electronic properties of Bi <sub>2</sub> Se <sub>3</sub> (0001) surfaces doped with non-metallic elements	<b>Sumalay Roy</b> Max Planck Institute of Microstructure Physics, Germany P53
12:00-13:00PM	Lunch Break	
<b>Session: Nanocomposites for Advanced Technologies I    Chair: Valentinas Snitka</b>		
13:25 -13:50PM	B10: Luminescent supramolecular gel-based transparent polymer film for light management	<b>Hiroataka Ihara</b> Kumamoto University, Japan P54

13:50-14:15PM	B11: Facile synthesis of smart polymeric nanocomposites via click chemistry	<b>Monalisa Mukherjee</b> Amity University, India P55
14:15-14:40PM	B12: Fabrication and characterizations of silver nanoparticles-loaded regenerated cellulose hydrogel: stabilization using graphene oxide and chitosan	<b>Chin-Hua Chia</b> National University of Malaysia, Malaysia P56
14:40-15:05PM	B13: Simulation, Fabrication, and Characterization of High Permittivity Core-Shell Nanocomposites for Energy Storage and Thermal Management Solutions	<b>Nacer Badi</b> University of Tabuk, Saudi Arabia; University of Houston, USA P57
15:05-15:20PM	Session Break	
<b>Session: Graphene II    Chair: Lok Lew Yan Voon</b>		
15:20-15:45PM	B14: Synthesis of Hybrid Graphene-Porphyrin Nanofiber Structures by Ionic Self-Assembly	<b>Valentinas Snitka</b> Kaunas University of Technology, Lithuania P58
15:45-16:10PM	B15: Spin-dependent electronic transport in transition metal dichalcogenides	<b>Mikito Koshino</b> Tohoku University, Japan P59
16:10-16:35PM	B16: Dirac-spectrum dependence of hot carrier dynamics in graphene	<b>Jeng-Chung Chen</b> National Tsing-Hua University, Taiwan P60
16:35-17:00PM	B17: Mechanics of graphene and graphene oxide	<b>Tobin Filleter</b> University of Toronto, Canada P61
17:00-17:25PM	B18: Carbon based energy-saving system —in a case of capacitor	<b>Toyoko Imae</b> National Taiwan University of Science and Technology, Taiwan P62
18:00PM	Dinner Social	

<b>Wednesday Dec. 9</b> <b>Room C (Jordan Room)</b>		
7:00-8:00AM	Breakfast	
<b>Session: Terahertz Technology II    Chair: Keisuke Tominaga</b>		
8:00-8:25AM	C01: Nonlinear optical THz-wave generation and applications	<b>Kodo Kawase</b> Nagoya University, Japan P63
8:25-8:50AM	C02: Catalytic reaction evaluated by a terahertz chemical microscopy	<b>Toshihiko Kiwa</b> Okayama University, Japan P64
8:50-9:15AM	C03: Non-destructive evaluation of organic conducting polymer by ultrabroadband THz-IR-vis spectroscopy	<b>Chiko Otani</b> RIKEN, Japan P65
9:15-9:40AM	C04: Detection of THz Excitation, Manipulation and Destruction of Quantum Orbital Wavepackets in Si:P Using a Voltage Meter	<b>Juerong Li</b> University of Surrey, UK P66
9:40-10:05AM	C05: Developments of terahertz electric-field vector measurement systems and its applications	<b>Shinichi Watanabe</b> Keio University, Japan P67
10:05-10:20AM	Session Break	
<b>Session: Nanoparticulate Catalysis I    Chair: Chiko Otani</b>		
10:20-10:45AM	C06: Plasmonic Nanostructures Induced Surface Photochemistry	<b>Micha Asscher</b> The Hebrew University of Jerusalem, Israel P67
10:45-11:10AM	C07: Relationship between the thermal treatment and photocatalytic activity of hydrogenated titanium dioxide	<b>Joon Ching Juan</b> University of Malaya, Malaysia P68
11:10-11:35AM	C08: Synthesis of rhenium carbide at ambient pressure-temperature used as a catalyst in hydrogen production from coconut shell	<b>Miguel Avalos-Borja</b> IPICyT, Mexico P69
11:35-12:00PM	C09: Catalysis by gold	<b>Peter Miedziak</b> Cardiff University, UK P70
12:00-13:00PM	Lunch Break	
<b>Session: Complex Magnets &amp; Skyrmions III    Chair: Alois Loidl</b>		
13:00-13:25PM	C10: Chiral magnetic skyrmions -insight from materials specific theory	<b>Stefan Blügel</b> Forschungszentrum Jülich, Germany P71
13:25-13:50PM	C11: Chiral interactions in thin film magnets	<b>Christopher H. Marrows</b> University of Leeds, UK P72

13:50-14:15 PM	C12: Magnetic textures in chiral magnetic thin films	<b>Theodore Monchesky</b> Dalhousie University, Canada P73
14:15-14:40PM	C13: Ultrafast dynamic of magnetic vortex under perpendicular AC magnetic field	<b>Ruifang Wang</b> Xiamen University, China P74
14:40-15:05PM	C14: Exciting skyrmions and helices in chiral magnets	<b>Markus Garst</b> University of Cologne, Germany P75
15:05-15:20PM	Session Break	
<b>Session: General II Chair: Joon Ching Juan</b>		
15:20-15:45PM	C15: Hydrophobic and self-healing light-to-heat conversion membrane for water distillation	<b>Peng Wang</b> King Abdullah University of Science and Technology, Saudi Arabia P76
15:45-16:10PM	C16: The investigation of electrical transport properties and the fabrication of optoelectronic devices	<b>Zuliang Du</b> Henan University, China P76
16:10-16:35PM	C17: Fabrication and Properties of Ag Nanowire Transparent Conductive films by Organic Precursor Painting Reduction Method	<b>Yamato Hayashi</b> Tohoku University, Japan P77
16:35-16:50PM	C18: Ultrahigh electrocatalytic activity of Pd coated on 3D reduced graphene oxide aerogel paper toward an oxidation reaction of ethylene glycol in alkaline solution	<b>Atiweena Krittayavathananon</b> Vidyasirimedhi Institute of Science and Technology, Thailand P79
18:00PM	Dinner Social	

<b>Thursday Dec. 10</b> <b>Room A (Pearl Ballroom A)</b>		
7:00-8:00AM	Breakfast	
<b>Session: Ultrathin Inorganic Materials I    Chair: Susumu Komiyama</b>		
8:00-8:25AM	A20: Extremely High Sensitivity of Charge Transport to Magnetic Field in Ferromagnet/Insulator/Semiconductor Hybrid Structures	<b>Nikita Volkov</b> Siberian Branch of Russian Academy of Science, Russia P80
8:25-8:50AM	A21: First-principles simulation on piezoresistivity in semiconducting nanomaterials	<b>Koichi Nakamura</b> Kyoto University, Japan P81
8:50-9:15AM	A22: Exciton and Valley dynamics in transition metal di-chalcogenides mono-layers and their alloys: an optical investigation	<b>Thierry Amand</b> Toulouse University, France P83
9:15-9:40AM	A23: Electronic and magnetic properties of hybrid two-dimensional structures	<b>JaeDong Lee</b> DGIST, Korea P84
9:40-10:05AM	A24: Thermoelectric properties and Resonant Raman spectra in transition metal dichalcogenides	<b>Teng Yang</b> Institute of Metal Research, CAS, China P84
10:05-10:20AM	Session Break	
<b>Session: Terahertz Technology III    Chair: Nikita Volkov</b>		
10:20-10:45AM	A25: A New Method of Microscopy in the Terahertz	<b>Susumu Komiyama</b> The University of Tokyo, Japan P85
10:45-11:10AM	A26: Narrowband Terahertz Emitter based on GaAs based High Electron Mobility Transistors	<b>Jae-Hyung Jang</b> Gwangju Institute of Science and Technology, Korea P86
11:10-11:35AM	A27: Original Probes and Circuits for Terahertz and Infrared Near Field Microscopy	<b>Tahsin Akalin</b> IEMN, DHS Dpt., Lille University, France P87
11:35-12:00PM	A28: Full-range Gate-controlled Terahertz Phase Modulation with Graphene Metasurfaces	<b>Qiong He</b> Fudan University, China P88
12:00-13:00PM	Lunch Break	
<b>Session: Surface and Interface Analysis II    Chair: Jörg Kröger</b>		
13:00-13:25PM	A29: Transmission-induced metal-dielectric multilayered metamaterial	<b>Yi-Jun Jen</b> National Taipei University of Technology, Taiwan P88

13:25-13:50PM	A30: Light polarization as sensitive probe of nanomaterials properties	<b>Jan Mistrik</b> University of Pardubice, Czech Republic P90
13:50-14:15PM	A31: Highly spin-polarized electronic interface states: a common feature of ferromagnetic metal-organic interfaces	<b>Wolfgang Weber</b> IPCMS, Université de Strasbourg, France P91
14:15-14:40PM	A32: Quantum analysis of localized surface plasmons in an asymmetric nano-structure of matamaterial	<b>Byoung Ham</b> Gwangju Institute of Science and Technology, Korea P91
14:40-15:05PM	A33: Nano-scale phenomena induced by electric field in scanning tunneling microscopy and their applications	<b>Wei-Bin Su</b> Institute of Physics, Academia Sinica, Taiwan P92
15:05-15:20PM	Session Break	
<b>Session: Graphene III    Chair: Cristian V. Ciobanu</b>		
15:20-15:45PM	A34: Graphene on Metal Surfaces: Adsorption and Intercalation	<b>Jörg Kröger</b> Technical University of Ilmenau, Germany P94
15:45-16:10PM	A35: Dirac physics in artificial graphene	<b>Esa Rasanen</b> Tampere University of Technology, Finland P95
16:10-16:35PM	A36: Optical conductivity of quasifreestanding multilayer epitaxial graphene on the C-face of SiC at low and high energies	<b>Iman Santoso</b> Universitas Gadjah Mada, Indonesia P96
16:35-17:00PM	A37: High-performance Supercapacitor of Ultrahigh Porous N-doped Reduced Graphene Oxide Aerogel Coated on Carbon Fiber Paper	<b>Montree Sawangphruk</b> Vidyasirimedhi Institute of Science and Technology, Thailand P96
17:30PM	Dinner Social	

<b>Thursday Dec. 10</b> <b>Room B (Pearl Ballroom B)</b>		
7:00-8:00AM	Breakfast	
<b>Session: Complex Magnets &amp; Skyrmions IV</b> <b>Chair: Guido Burkard</b>		
8:00-8:25AM	B19: Anatomy of Dzyaloshinskii-Moriya interaction and mechanisms of its tuning at transition metal interfaces	<b>Mairbek Chshiev</b> INAC-SPINTEC, Univ. Grenoble Alpes, CEA, CNRS, F-38000 Grenoble, France P97
8:25-8:50AM	B20: Determination of interfacial Dzyaloshinskii-Moriya Interaction Energy in the Inversion Symmetry Broken Systems	<b>Chun-Yeol You</b> Inha University, Korea P98
8:50-9:15AM	B21: Spin Orbit Torques for ultra-low Power Computing	<b>Weisheng Zhao</b> Beihang University, China P99
9:15-9:40AM	B22: Spintronics with 2D Materials	<b>Yongbing Xu</b> Nanjing University, China; York University, UK P99
9:40-10:05AM	B23: Interfacial contribution of the spin-orbit torques in heavy metal/ferromagnet/oxide structures	<b>Byong-Guk Park</b> Korea Advanced Institute of Science and Technology, Korea P101
10:05-10:20AM	Session Break	
<b>Session: Graphene IV</b> <b>Chair: Mairbek Chshiev</b>		
10:20-10:45AM	B24: Interplay of Spin and Valley in 2D materials	<b>Guido Burkard</b> University of Konstanz, Germany P101
10:45-11:10AM	B25: Structure and Properties of certain Graphene-based 2-D Nanomaterials	<b>Cristian V. Ciobanu</b> Colorado School of Mines, USA P102
11:10-11:35AM	B26: Optical signatures of states bound to vacancy defects in monolayer MoS <sub>2</sub>	<b>Michael N. Leuenberger</b> University of Central Florida, USA P103
11:35-12:00PM	B27: Spin transport in two-dimensional materials and van der Waals heterostructures	<b>Saroj Prasad Dash</b> Chalmers University of Technology, Sweden P104
12:00-13:00PM	Lunch Break	
<b>Session: Terahertz Technology IV</b> <b>Chair: Jae-Hyung Jang</b>		
13:00-13:25PM	B28: Electro-optic sampling of terahertz pulses based on non-collinear Cherenkov phase-matching	<b>Masahiko Tani</b> University of Fukui, Japan P104

13:25-13:50PM	B29: Extreme Nonlinear Terahertz Optics	<b>Tsuneyuki Ozaki</b> INRS-EMT, Canada P106
13:50-14:15PM	B30: Terahertz Transitions in Narrow-Gap Carbon Nanotubes and Graphene Nanoribbons	<b>Mikhail E. Portnoi</b> University of Exeter, UK P107
14:15-14:40PM	B31: THz laser sources using cascaded stimulated polariton scattering	<b>Andrew Lee</b> Macquarie University, Australia P109
14:40-15:05PM	B32: Development of GaN/AlGaN based Terahertz Quantum Cascade Lasers	<b>Wataru Terashima</b> RIKEN, Japan P110
15:05-15: 20PM	Session Break	
<b>Session: Novel Materials for Electrochemical Energy Storage and Conversion I    Chair: Masahiko Tani</b>		
15:20-15:45PM	B33: Nanosheet-derived Metal-oxide Electrodes for Electrochemical Capacitors and their Applications to Thin Film Devices	<b>Masaru Miyayama</b> The University of Tokyo, Japan P111
15:45-16:10PM	B34: A Simple Synthesis of Porous Graphene Based Nanomaterials as Anode Materials for Li-ion Batteries	<b>Yuanzhe Piao</b> Seoul National University, Korea P112
16:10-16:35PM	B35: Looking for New Electrode Materials for Na and Li ion batteries: a good way to discover original redox mechanism	<b>Valerie Pralong</b> Laboratoire CRISMAT-ENSICAEN/CNRS, France P113
16:35-17:00PM	B36: <i>Ab-initio</i> Computations on Electrode Material System of Lithium Battery	<b>Qianfan Zhang</b> Beihang University, China P113
17:30PM	Dinner Social	

<b>Thursday Dec. 10</b> <b>Room C (Jordan Room)</b>		
7:00-8:00AM	Breakfast	
<b>Session: General III Chair: Jamal Berakdar</b>		
8:00-8:25AM	C19: Extreme detection based on plasmonic nanoblock	<b>Soon-Hong Kwon</b> Chung-Ang University, Korea P114
8:25-8:50AM	C20: Fe-excess Ions as Electronic Charge Suppliers for Zero Thermal Expansion in the Normal State of $\text{Fe}_{1.16}\text{Te}_{0.6}\text{Se}_{0.4}$	<b>Wen-Hsien Li</b> National Central University, Taiwan P115
8:50-9:15AM	C21: Electron emission from diamond surfaces for night vision applications	<b>Richard B. Jackman</b> University College London, UK P117
9:15-9:40AM	C22: Electric detection of spin fluctuation	<b>Zhiyong Qiu</b> Tohoku University, Japan P117
10:05-10:20AM	Session Break	
<b>Session: Complex Magnets &amp; Skyrmions V Chair: Wen-Hsien Li</b>		
10:20-10:45AM	C23: Engineering magnetic order in multiferroic nano composites	<b>Jamal Berakdar</b> Martin-Luther-Universität Halle-Wittenberg, Germany P118
10:45-11:10AM	C24: Coupled Gyration in Vortex-Antivortex Lattices	<b>Sang-Koog Kim</b> Seoul National University, Korea P119
11:10-11:35AM	C25: Skyrmions in Frustrated Magnets	<b>Maxim Mostovoy</b> University of Groningen, The Netherlands P120
11:35-12:00PM	C26: Skyrmions in confined Geometry	<b>Mingliang Tian</b> Hefei Institute for Physical Science, CAS, China P121
12:00-13:00 PM	Lunch Break	
<b>Session: Nonlinear Systems I Chair: Thomas Elsaesser</b>		
13:50-14:15PM	C27: Bose-Einstein condensation of photons and periodic potentials for light	<b>Martin Weitz</b> University of Bonn, Germany P121
14:15-14:40PM	C28: Stochastic Resonance in Nonlinear Electron Devices and Its Application	<b>Seiya Kasai</b> Hokkaido University, Japan P122
14:40-15:05PM	C29: Modeling ribosomal movement	<b>Tamir Tuller</b> Tel Aviv University, Israel P123

15:05-15: 20PM	Session Break	
<b>Session: Nonlinear Systems II    Chair: Martin Weitz</b>		
15:20-15:45PM	C30: Nonlinear charge dynamics in solids induced by ultrashort electric field transients	<b>Thomas Elsaesser</b> Max-Born-Institut für Nichtlineare Optik und Kurzzeitspektroskopie, Germany P124
15:45-16:10PM	C31: Nonlinear optical response of nanomaterials	<b>Yoshihiko Takeda</b> National Institute for Materials Science, Japan P125
16:10-16:35PM	C32: Wavelength conversion using quadratic optical nonlinearities in compound semiconductors	<b>Takashi Kondo</b> The University of Tokyo, Japan P126
16:35-17:00PM	C33: Fibered Optomechanical Sensing with III-V semiconductor disks	<b>Biswarup Guha</b> University of Paris Diderot, France P127
17:30PM	Dinner Social	

**Thursday Dec. 10**  
**Room D (Diamond Ballroom 7)**

7:00-8:00AM	Breakfast	
<b>Session: Graphene V    Chair: Masataka Hasegawa</b>		
8:00-8:25AM	D01: Opportunities for spintronics with novel 2d materials	<b>Jaroslav Fabian</b> University of Regensburg, Germany P128
8:25-8:50AM	D02: Towards all-electric spintronics in 2D carbon platforms	<b>Aires Ferreira</b> University of York, UK P129
8:50-9:15AM	D03: Controlling Spin Currents in Graphene and Two Dimensional Materials	<b>Miguel A. Cazalilla</b> National Tsing Hua University, Taiwan P130
9:15-9:40AM	D04: Graphene reduction dynamics probed with photo-electron spectroscopy	<b>Wei Yen Woon</b> National Central University, Taiwan P130
9:40-10:05AM	D05: Ion transport in 2D materials	<b>Wenzhong Bao</b> Fudan University, China P131
10:05-10:20AM	Session Break	
<b>Session: General IV    Chair: Jaroslav Fabian</b>		
10:20-10:45AM	D06: RFID tags composed of organic CMOS circuits	<b>Hiroyuki Matsui</b> The University of Tokyo, Japan P131
10:45-11:10AM	D07: <i>Ab initio</i> theory of point defects in 2D transition metal dichalcogenides	<b>Biplab Sanyal</b> Uppsala University, Sweden P132
11:10-11:25AM	D08: Interpreting core-level spectra of oxidizing phosphorene: Theory and Experiment	<b>Baojuan Dong</b> Institute of Metal Research, CAS, China P133
12:00-13:00 PM	Lunch Break	
<b>Session: Plasma Electronics and Lasers I    Chair: Aires Ferreira</b>		
13:00-13:25PM	D09: Graphene synthesis by plasma process towards high-throughput production	<b>Masataka Hasegawa</b> AIST, Japan P133
13:25-13:50PM	D10: Group-IV Quantum-Heterostructure Formation Based on Low-Energy Plasma CVD towards Electronic Device Application	<b>Masao Sakuraba</b> Tohoku University, Japan P135
13:50-14:15PM	D11: H Atom Density Diagnostics in High-Pressure Microwave Hydrogen Plasma by Power Balance Calorimetry and Actinometry	<b>Takahiro Yamada</b> Osaka University, Japan P136

15:05-15: 20PM	Session Break	
<b>Session: Complex Magnets &amp; Skyrmions VI    Chair: Biplab Sanyal</b>		
15: 20-15:45PM	D12: Magnetic anisotropy : theoretical insight and prospects	<b>Nathalie Guihery</b> Universit éToulouse 3-Paul Sabatier, France P137
15:45-16:10PM	D13: Frustration-induced symmetric skyrmion lattices in triangular magnets	<b>Hikaru Kawamura</b> Osaka University, Japan P139
16:10-16:35PM	D14: Electric field – Magnetic field phase diagram of cycloidal multiferroic BiFeO <sub>3</sub>	<b>Rogério de Sousa</b> University of Victoria, Canada P140
16:35-17:00PM	D15: Exploring the structural, optical, and magnetic properties of Cu <sub>2</sub> OSeO <sub>3</sub>	<b>Heribert Wilhelm</b> Diamond Light Source Ltd., UK P141
17:30PM	Dinner Social	

<b>Friday Dec. 11</b> <b>Room A (Pearl Ballroom A)</b>		
7:00-8:00AM	Breakfast	
<b>Session: Complex Magnets &amp; Skyrmions VII Chair: Hong Wang</b>		
8:00-8:25AM	A38: Multiferroicity from charge and spin frustration in complex oxides	<b>Manuel Angst</b> Forschungszentrum Jülich, Germany P141
8:25-8:50AM	A39: Dramatic pressure-driven enhancement of bulk skyrmion stability in Cu <sub>2</sub> OSeO <sub>3</sub>	<b>Henrik M. Ronnow</b> Ecole Polytechnique federale de Lausanne (EPFL), Switzerland P143
8:50-9:15AM	A40: Ferroelectric Control of Dynamic Magnetic Permeability	<b>Chenglong Jia</b> Lanzhou University, China P144
9:15-9:40AM	A41: Dynamics of magnetic skyrmions in multiferroics	<b>Masahito Mochizuki</b> Aoyama Gakuin University, Japan P144
9:40-10:05AM	A42: Magnetic skyrmions in nanowire and nanodisk	<b>Yan Zhou</b> The University of Hong Kong, Hong Kong P146
10:05-10:20AM	Session Break	
<b>Session: Microwave and Millimeterwave I Chair: Manuel Angst</b>		
10:20-10:45AM	A43: Millimeter-Wave Multiband RFIC Chips for Next-Generation Communications and Sensing Systems	<b>Cam Nguyen</b> Texas A&M University, USA P146
10:45-11:10AM	A44: Development of On-Wafer Micro-Coaxial Technology for Microwave and Millimeterwave Applications	<b>Hong Wang</b> Nanyang Technological University, Singapore P147
11:10-11:35AM	A45: Microwave Absorption of Magnetic Nanoparticles and Their Composites with Epoxy Resin Matrix	<b>XingLong Dong</b> Dalian University of Technology, China P148
11:35-12:00PM	A46: Multiscale structured ultrathin metal surface for microwave manipulation by spoof surface plasmon polariton	<b>Jun-Jun Xiao</b> Harbin Institute of Technology, China P149
12:00-13:00PM	Lunch Break	
<b>Session: Terahertz Technology V Chair: Figen Kaya</b>		
13:00-13:25PM	A47: Digital Metasurfaces for Advanced Terahertz Imaging	<b>Willie Padilla</b> Duke University, USA P151
13:25-13:50PM	A48: Terahertz-Field-Induced Break Down in Metal Particles	<b>Makoto Nakajima</b> Osaka University, Japan P152

13:50 -14:15PM	A49: Enhancement of THz signal intensity by plasmonic monopole nanoantenna	<b>Ekmele Ozbay</b> Bilkent University, Turkey P153
<b>Session: Novel Materials for Electrochemical Energy Storage and Conversion II Chair: Willie Padilla</b>		
14:15-14:40AM	A50: ESR Studies of Titania Nanotubes Produced by Hydrothermal Process	<b>Figen Kaya</b> Yildiz Technical University, Turkey P153
14:40-15:05AM	A51: Reactive magnetron sputtering: a unique method to grow new materials in thin film form for energy applications	<b>Jean-Francois Pierson</b> University of Lorraine, France P154
15:05-15:20PM	Session Break	
<b>Session: Novel Materials for Electrochemical Energy Storage and Conversion III Chair: Yuanzhe Piao</b>		
15:20-15:45PM	A52: Engineering the thermal conductivity in thermoelectric chalcogenides	<b>Antoine Maignan</b> Laboratoire CRISMAT-ENSICAEN/CNRS, France P155
15:45-16:10PM	A53: Solid Electrolytes for Dye-Sensitized Solar Cells	<b>Zhong-Sheng Wang</b> Fudan University, China P156
16:10-16:35PM	A54: Interfacial Modification for Efficient Inverted Polymer Solar Cells	<b>Xin Guo</b> Dalian Institute of Chemical Physics, CAS, China P157
16:35-17:00PM	A55: Higher Manganese silicide: understanding the Mn-Si phase diagram towards better thermoelectric properties	<b>Franck Gascoin</b> Laboratoire CRISMAT-ENSICAEN/CNRS, France P158
17:30PM	Dinner Social	

<b>Friday Dec. 11</b>		
<b>Room B (Pearl Ballroom B)</b>		
7:00-8:00AM	Breakfast	
<b>Session: General V Chair: Andrei Piryatinski</b>		
8:00-8:25AM	B37: Motor molecules	<b>Michel A. Van Hove</b> Hong Kong Baptist University, Hong Kong P159
8:25-8:50AM	B38: Energy storage on carbon allotropes	<b>Michael Probst</b> University of Innsbruck, Austria P159
8:50-9:15AM	B39: Electron transfer in TMDs materials	<b>Seong Chan Jun</b> Yonsei University, Korea P160
9:15-9:40AM	B40: To be updated	<b>Meir Orenstein</b> Department of Electrical Engineering, Technion, Israel P161
9:40-9:55AM	B41: Improved stability of organic light-emitting diodes based on F8BT/TFB with a nickel oxide hole transport layer	<b>Ken Nakakura</b> Nihon University, Japan P161
10:05-10:20AM	Session Break	
<b>Session: Vacuum Electronics I Chair: Michel A. Van Hove</b>		
10:20-10:45AM	B42: Electron Beam Sources From Graphene Edge Emitters	<b>Jeff Tsai</b> National Taiwan Ocean University, Taiwan P161
10:45-11:10AM	B43: On Microfabricated TWTs Based on Planar Helix and Field-Emitter Array	<b>Sheel Aditya</b> Nanyang Technological University, Singapore P163
11:10-11:35AM	B44: Ru-based binary or ternary thin films by atomic layer deposition for a seedless Cu interconnects	<b>Soo-Hyun Kim</b> Yeungnam University, Korea P163
11:35-12:00PM	B45: Lithographically Integrated Microsupercapacitors for Compact, High Performance, and Designable Energy Circuits	<b>Kazufumi Kobashi</b> AIST Nanotube Research Center, Japan P164
12:00-13:00PM	Lunch Break	
<b>Session: General VI Chair: Michael Probst</b>		
13:25-13:50PM	B46: Spectroscopy of Colloidal Quantum Dots: Multistate blinking and scaling of the recombination rates in individual silica coated CdSe/CdS nanocrystals	<b>Anton Malko</b> The University of Texas at Dallas, USA P165

13:50-14:15PM	B47: Exciton Transport, Annihilation, and Photon Emission Properties in Semiconductor Carbon Nanotubes	<b>Andrei Piryatinski</b> Los Alamos National Laboratory, USA P166
14:15-14:40PM	B48: Scanning gate imaging in confined geometries	<b>Richard Steinacher</b> ETH Zurich, Switzerland P167
14:40-14:55PM	B49: Development of Transparent Conducting Films for Flexible Electrochromic Devices	<b>Kanyanee Sanglee</b> King Mongkut's University of Technology Thonburi, Thailand P167
15:05-15:20PM	Session Break	
<b>Session: Graphene VI Chair: Anton Malko</b>		
15:20-15:45PM	B50: Observation of Negative Refraction in Ballistic Graphene Heterojunctions	<b>Hu-Jong Lee</b> Pohang University of Science and Technology, Korea P168
15:45-16:10PM	B51: Interplay of wrinkles, strain, lattice parameter, and small angle rotational domains in Graphene on Iridium	<b>Michael Horn von Hoegen</b> University of Duisburg-Essen, Germany P169
16:10-16:35PM	B52: Ordering in binary and ternary graphene based honeycomb layer alloys	<b>Jacek A. Majewski</b> University of Warsaw, Poland P171
16:35-17:00PM	B53: Comparing graphene growth on Cu(111) vs. oxidized Cu(111)	<b>Meike Stohr</b> University of Groningen, The Netherlands P172
17:30PM	Dinner Social	

<b>Friday Dec. 11</b> <b>Room C (Jordan Room)</b>		
7:00-8:00AM	Breakfast	
<b>Session: Graphene VII    Chair: Michael Horn von Hoegen</b>		
8:00-8:25AM	C34: Contact resistances in CVD graphene and functionalized graphene sheets for electronic applications	<b>Gerd Bacher</b> University of Duisburg-Essen, Germany P172
8:25-8:50AM	C35: Graphene for metal ion sensors and lipase immobilization	<b>Colin Barrow</b> Deakin University, Australia P173
8:50-9:15AM	C36: Transfer of CVD-Grown Graphene for Organic Electronics	<b>Wi Hyoung Lee</b> Konkuk University, Korea P174
9:15-9:40AM	C37: Multiple electron scatterings in graphene	<b>Hyung-Joon Shin</b> Ulsan National Institute of Science and Technology, Korea P175
9:40-10:05AM	C38: Electronic properties of graphene-hBN heterostructures	<b>Vladimir Falko</b> Lancaster University, UK P175
10:05-10:20AM	Session Break	
<b>Session: Nanocomposites for Advanced Technologies II    Chair: Masaru Miyayama</b>		
10:20-10:45AM	C39: Electrodeposited nanocomposite coatings against high temperature oxidation	<b>Xiao Peng</b> Institute of Metal Research, CAS, China P176
10:45-11:10AM	C40: Applications for Oxides and Nitrides for Plasmonic Energy Transduction	<b>Thang Duy Dao</b> National Institute for Materials Science, Japan P176
11:10-11:35AM	C41: Polymeric Anodes with Enhanced Conductivity for ITO-free Organic Photovoltaic Cells	<b>Pen-Cheng Wang</b> National Tsing Hua University, Taiwan P177
11:35-12:00PM	C42: Novel oxide based nanotubes for storage applications	<b>Cengiz Kaya</b> Yildiz Technical University, Turkey P178
12:00-13:00PM	Lunch Break	
<b>Session: Complex Magnets &amp; Skyrmions VIII    Chair: Demetrio A. da Silva Filho</b>		
13:00-13:25PM	C43: From the Helical to the Skyrmion Lattice Phases: A Neutron Spin Echo Study in MnSi	<b>Catherine Pappas</b> Delft University of Technology, The Netherlands P178

13:25-13:50PM	C44: Confinement of Chiral Skyrmions in Ferroelectric Nanodots	<b>Igor Luk'yanchuk</b> University of Picardie, France P179
13:50-14:15PM	C45: Depth-Profiling of Complex Magnetic Oxide Thin Films by Polarised Neutron Reflectometry	<b>Frank Klose</b> Australian Nuclear Science and Technology Organisation, Australia P180
14:15-14:40PM	C46: Manipulation of Skyrmion dynamics	<b>Ki-Suk Lee</b> Ulsan National Institute of Science and Technology, Korea P181
14:40-15:05PM	C47: Non-equilibrium Transports in Skyrmions	<b>Jiadong Zang</b> University of New Hampshire, USA P182
15:05-15:20PM	Session Break	
<b>Session: Surface and Interface Analysis III    Chair: Catherine Pappas</b>		
15:20-15:45PM	C48: A Theoretical Description of How Molecular Packing Influences the Electronic Coupling at the Donor–Acceptor Interfaces	<b>Demetrio A. da Silva Filho</b> University of Brasilia, Brazil P182
15:45-16:10PM	C49: Novel Interface Structure of Epitaxial Graphene on SiC	<b>Michiko Kusunoki</b> Nagoya University, Japan P183
16:10-16:35PM	C50: Flexible nanoparticle devices for tactile sensing	<b>Watson Kuo</b> National Chung Hsing University, Taiwan P184
16:35-17:00PM	C51: Using computer vision and machine learning to accurately model the electronic structure of non-equilibrium 2-d materials	<b>Isaac Tamblyn</b> University of Ontario, Canada P185
17:30PM	Dinner Social	

# Poster Session

Thursday Afternoon, December 10 15:00-16:00PM

P-01	The Fabrication of Patterned Volumetric Flask-like ZnO Cavities and Their Optical Properties	<b>Ke Cheng</b> Henan University, China
P-02	Magnetic and Magnetoelectric Properties of the $\text{HoFe}_{3-x}\text{Ga}_x(\text{BO}_3)_4$ Multiferroics	<b>Evgeniy Eremin</b> Russian Academy of Science, Siberian Branch, Russia
P-03	Fabric energy harvesters utilizing polyvinylidene fluoride film as a piezoelectric capacitor	<b>Shiori Hara</b> Nihon University, Japan
P-04	Structural Regulation of Inorganic Crystals at Langmuir Monolayer Interface	<b>Binbin Hu</b> Henan University, China
P-05	Control of the physical properties of carbon nanofibers obtained from coaxial electrospinning of PAN and PMMA with adjustable inner/outer nozzle ends	<b>Navaporn Kaerkitcha</b> Kyoto University, Japan
P-06	A PVDF Energy Harvester Utilizing Stretching Mode Vibrations	<b>Morito Kuramae</b> Nihon University, Japan
P-07	Spin Relaxation in Spin—Orbit Coupled Graphene	<b>Manuel Offidani</b> University of York, UK
P-08	Computational Molecular-Level Optimization of a Polymer Consisting of Muscle-Like [c2]Daisy Chains	<b>Yanling Zhao</b> Hong Kong Baptist University, Hong Kong
P-09	Cellulose-based boron-nitride core-shell microbeads containing providing continuous thermally-conductive pathways into insulating resin sheet	<b>Yoshihiro Kameyama</b> Kumamoto University, Japan
P-10	Preparation of polymer microparticles laminated with a conductive carbon skin using supercritical carbon dioxide	<b>Eisaku Sato</b> Kumamoto University, Japan
P-11	Facile Preparation of High-Refractive-Index Polymer Composites via the Direct Polymerization of Methacrylates Containing Heteropoly Acids	<b>Yusuke Hoashi</b> Kumamoto University, Japan
P-12	Transparent polymer films functionalized by a glutamide-based supermolecular gel as circularly polarized luminescence materials	<b>Taisei Goto</b> Kumamoto University, Japan
P-13	Selective Transportation of Cations along Polyelectrolytes using Mega-Gravity	<b>Ryota Sumi</b> Kumamoto University, Japan