# Poster Session
## 11th March, 2015

### ICYS Researcher

**PIR-1** *Atomic Layer Deposited High-k Insulators on Hydrogenated-diamond for Field Effect Transistors*
**Jiangwei W. Liu** (ICYS-Namiki, NIMS)

**PIR-2** *Everything Changes: Probing MOF Formation in a Model System*
**Hamish Yeung** (ICYS-MANA, NIMS)

**PIR-3** *NMR Detection of Enantiomeric Purity without Formation of Diastereomers*
**Jan Labuta** (ICYS-Sengen, NIMS)

**PIR-4** *Theoretical study on huge magnetization plateau in $Cu_3Mo_2O_9$*
**Ryo Tamura** (ICYS-Sengen, NIMS)

**PIR-5** *An Improved Method for Calculating Electron Inelastic Mean Free Paths*
**Bo Da** (ICYS-Namiki, NIMS)

**PIR-6** *Ferrocene-Functionalized π-Conjugated Systems: Structural Dynamics and Electronic Properties*
**Atsuro Takai** (ICYS-Sengen, NIMS)

**PIR-7** *Efficient optimization of local orbitals and eigenstate calculations in first-principles order-N DFT program CONQUEST*
**Ayako Nakata** (ICYS-Namiki, NIMS)

**PIR-8** *Synthesis of mesoporous titanium (based) oxide thin films for device applications*
**Norihiro Suzuki** (ICYS-Sengen, NIMS)

**PIR-9** *Temperature-Responsive Mixed Core Nanoparticles Consisting of Statistical and Block Copolymers*
**Yohei Kotsuchibashi** (ICYS-Namiki, NIMS)

**PIR-10** *Origin of Magnetism in Graphene: Theoretical Perspective*
**Sudipta Dutta** (ICYS-MANA, NIMS)

**PIR-11** *Single Particle Measurement for Negative Electrode Materials of Li-ion Batteries*
**Kei Nishikawa** (ICYS-GREEN, NIMS)

**PIR-12** *Graphene and Boron Nitride Nanosheets: Synthesis, Supercapacitors and Composite*
**Xue-Bin Wang** (ICYS-Namiki, NIMS)

**PIR-13** *Switch-like transport behavior of HTS conductor under AC field*
**Yasuyuki Miyoshi** (ICYS-Sengen, NIMS)

**PIR-14** *Nanostructured polymer nanocapsules: toward new catalysts, functional films and membranes*
**Gaulthier Rydzek** (ICYS-MANA, NIMS)

**PIR-15** *Quantum state-resolved $CH_4$ dissociation on Pt(111): coverage dependent barrier heights*
**Hirokazu Ueta** (ICYS-Sengen, NIMS)

**PIR-16** *Mechanically reliable thermoelectric (TE) nanocomposites by dispersing and embedding TE-nanostructures inside a tetragonal $ZrO_2$ matrix: The concept and experimental demonstration in graphene oxide – 3YSZ system*
**Mehdi Estili** (ICYS-Sengen, NIMS)

**PIR-17** *From Molecular Switches to Molecular Wires: Versatility of Porphyrinoid*
**Huynh Thien Ngo** (ICYS-Namiki, NIMS)

**PIR-18** *Construction of boron-doped diamond superlattice for high power devices*
**Alexandre Fiori** (ICYS-MANA, NIMS)

**PIR-19** *Dislocation structures in Si for photovoltaic application*
**Karolin Jiptner** (ICYS-MANA, NIMS)

## Nano-Materials

**PM-16** *Self-assembling Pyrazinacenes*
**Jonathan P. Hill** (WPI-MANA, NIMS)

**PM-17** *Nanoporous fullerene nanomaterials: 3D nanocarbon materials*
**Lok Kumar Shrestha** (WPI-MANA, NIMS)

**PM-18** *Mesoporous crystalline fullerene ($C_{70}$) cube*
**Partha Bairi** (WPI-MANA, NIMS)

**PM-19** *In situ fabrication and photocurrent analysis of axial CdS/p-Si nanowire junctions by high-resolution TEM*
**Chao Zhang** (WPI-MANA, NIMS)

**PM-20** *Self-Oscillating Polymer Brushes: Design of Autonomous Functional Surface and Evaluation of the Dynamic Properties*
**Tsukuru Masuda** (Department of Materials Engineering, School of Engineering, The University of Tokyo)

**PM-21** *Control of conjugated molecules at the air-water interface*
**Waka Nakanishi** (WPI-MANA, NIMS)

**PM-22** *Orientation of J-aggregates on Aligned PTFE Layers*
**Toshihiko Tanaka** (National Institute of Technology, Fukushima College)

**PM-23** *Reduction of Graphene Oxide using the Photocatalytic Activity of Ti- and Nb-Oxide Nanosheets*
**Asami Funatsu** (WPI-MANA, NIMS)

**PM-24** *Interaction of Silica Nanoparticles: Controlling Surface Chemistry for Nanofluids*
**Christopher Hassam** (WPI-MANA, NIMS)

**PM-25** *Luminescent Property of Liquid Pyrenes with Different Degree of Core-isolation*
**Fengniu Lu** (WPI-MANA, NIMS)

**PM-26** *Synthesis and Assembly of Shaped Silver Nanocrystals*
**Joel Henzie** (WPI-MANA, NIMS)

**PM-27** *$MoS_2$ Nanosheets Wrapped with Porous Carbons for Hybrid Supercapacitor Applications*
**Qunhong Weng** (WPI-MANA, NIMS)

**PM-28** *Hard-template Synthesis of Well-dispersed Hollow Mesoporous Silica Nanoplates*
**Junzheng Wang** (WPI-MANA, NIMS)

**PM-29** *Study on gigantic hydration swelling of layered perovskite oxide in aqueous solution of various organoammonium ions*
**Yeji Song** (WPI-MANA, NIMS)

**PM-30** *Formation of microcrystals by mechanical compression of Langmuir monolayer*
**Daisuke Ishikawa** (WPI-MANA, NIMS)

**PM-31** *Synthesis of Zinc-Containing Hydroxyapatite Nanocrystals towards Catheter Surface Modification*
**Tania Penaflor** (Nagoya University of Technology)

**PM-32** *Biomass-Directed Mass Production of BN Nanosheets for Highly Thermoconductive Polymeric Composites*
**Xiangfen Jiang** (WPI-MANA, NIMS)

**PM-33** *High-pressure-torsion (HPT) synthetic route toward light metal/alloy matrix composites reinforced with boron nitride nanotubes*
**Yanming Xue** (WPI-MANA, NIMS)

## Nano-System

**PS-1** *AFM Solid-state nano-gears manipulation on HOPG*
**Jianshu Yang** (Nanoscience Group and MANA satellite, CEMES / CNRS)

**PS-2** *Quantum-dot behavior in ultra-thin gold nanowires*
**Satoshi Moriyama** (WPI-MANA, NIMS)

**PS-3** *Self-limiting surface oxidation of atomically thin $WSe_2$*
**Mahito Yamamoto** (WPI-MANA, NIMS)

**PS-4** *Graphoepitaxial patterning of polymer nanowire transistor with highly aligned polymer chains*
**Seungjun Oh** (WPI-MANA, NIMS)

**PS-5** *Photocurrent generation of perylene diimides on a nanogap device*
**Arramel Arramel** (WPI-MANA, NIMS)

**PS-6** *Effect of Ionic Conductivity on the Response Speed of a $SrTiO_3$ Based All-solid-state Electric-double-layer Transistor*
**Takashi Tsuchiya** (WPI-MANA, NIMS)

**PS-7** *New Mechanism to Realize Topological States*
**Rui Yu** (WPI-MANA, NIMS)

**PS-8** *Defect manipulation induced new functionality in mechanically bent $SnO_2$ microrods*
**Makoto Sakurai** (WPI-MANA, NIMS)

**PS-9** *Polarity-Reversible Transistors Based on Atomically-Thin Film of α-$MoTe_2$*
**Shu Nakaharai** (WPI-MANA, NIMS)

**PS-10** *Organic thin film transistors based on photochromic channel layers.*
**Mir Waqas Alam** (WPI-MANA, NIMS)

**PS-11** *Multiple-probe SPM Measurements of the Electrical Resistance of Suspended Graphene under Controlled Isotropic Strain*
**Qiao Li** (WPI-MANA, NIMS)

**PS-12** *Improved crystallinity of large-area $MoS_2$ thin film through annealing process*
**Sinae Heo** (WPI-MANA, NIMS)

**PS-13** *New Approach to Molecular Self-Assembly Through Formation of Dipeptide-Based Unique Architectures by Artificial Supersaturation*
**Pradyot Koley** (WPI-MANA, NIMS)

**PS-14** *Formation mechanism of quasi-bound states in graphene quantum point contacts*
**Katsunori Wakabayashi** (WPI-MANA, NIMS)

**PS-15** *Controlling CuPc molecular condensation/diffusion with STM tip*
**Katsumi Nagaoka** (WPI-MANA, NIMS)

**PS-16** *Edge Effect on Vacancy State in Semi-infinite Graphene*
**Hai-Yao Deng** (WPI-MANA, NIMS)

**PS-17** *Theory and Material Design for Topological States with Spin-Polarized Edge Current towards Spintronics*
**Longhua Wu** (WPI-MANA, NIMS)

**PS-18** *Configuration stability and electronic structure of Al, N doped Si*
**Tomoe Yayama** (WPI-MANA, NIMS)

**PS-19** *Modification of Superconducting Atomic-Layer Indium on Silicon by Transition Metal Phthalocyanines*
**Shunsuke Yoshizawa** (WPI-MANA, NIMS)

**PS-20** *Viewing Josephson Vortex at Atomic Step of Surface Superconductor*
**Takuto Kawakami** (WPI-MANA, NIMS)

**PS-21** *Controlling Self-assembly of Spin-active Molecules towards Multifunctional Soft-materials*
**Agnieszka Zielinska** (WPI-MANA, NIMS)

**PS-22** *Transport property of a self-assembled nanometer-scale superconducting ring*
**Hironori Ito** (National Institute for Materials Science (NIMS)

**PS-23** *The ballistic and diffusive conductance of carbon nanotubes with Multi-Probe Scanning Probe Microscope (MP-SPM)*
**Difei Miao** (WPI-MANA, NIMS)

**PS-24** *A Current-driven Supramolecular Motor with In-situ surface Chiral Directionality Switching*
**Saranyan Vijayaraghavan** (WPI-MANA, NIMS)

**PS-25** *Potential energy surface by linear regression, application to Si and $SiO_2$*
**Hiori Kino** (WPI-MANA, NIMS)

**PS-26** *Electronic Localization Effects Through a Large Graphene Sheet*
**Saurabh Srivastava** (WPI-MANA, NIMS)

**PS-27** *KFM measurement of neuromorphic network system with MP-SPM*
**Yoshitaka Shingaya** (WPI-MANA, NIMS)

**PS-28** *Electrical characterization of polyaniline networks using multiple-probe system*
**Higuchi Rintaro** (WPI-MANA, NIMS)

**PS-29** *Fully-Printed Organic Thin-Film Transistors on Paper*
**Takeo Minari** (WPI-MANA, NIMS)

**PS-30** *Neuromorphic Atomic Switch Networks for Natural Computing*
**Adam Z. Stieg** (California NanoSystems Institute (CNSI), University of California Los Angeles (UCLA))

**PS-31** *Resistive Switching in Percolative Nanoparticle Thin Films*
**Adam Z. Stieg** (California NanoSystems Institute (CNSI), University of California Los Angeles (UCLA))

**PS-32** *Nanomechanical Sensors (MSS) for Breath/Blood Diagnostics on Mobile Platforms*
**Genki Yoshikawa** (WPI-MANA, NIMS)

**PS-33** *Silicene on metal surfaces*
**Ryuichi Arafune** (WPI-MANA, NIMS)

## Nano-Power

**PP-1** *Oxygen Reduction Reaction at various types of Boron Nitride modified on Gold*
**Elumalai Ganesan** (GREEN, NIMS)

**PP-2** *Remote Electrochemical Monitoring of a Small-Scaled Self-Propelled Object*
**James Guo Sheng Moo** (Nanyang Technological University)

**PP-3** *Proton Conductivity in Graphene Oxide*
**Stephen Lyth** ($I^2$CNER, Kyushu University)

**PP-4** *Epitaxial thin films of battery materials*
**Tsuyoshi Ohnishi** (WPI-MANA, NIMS)

**PP-5** *Characterization of interfacial structure of photoenergy conversion systems by surface vibrational spectroscopy*
**Hidenori Noguchi** (WPI-MANA, NIMS)

**PP-6** *Impact of $H_2$ annealing on SiNW-based solar cells*
**Wipakorn Jevasuwan** (WPI-MANA, NIMS)

**PP-7** *Photoreduction of $CO_2$ over the well-crystallized ordered mesoporous $TiO_2$ with the confined space effect*
**Tao Wang** (WPI-MANA, NIMS)

**PP-8** *$MoS_2$/Graphene Cocatalysts for Efficient Photocatalytic $H_2$ Evolution under Visible Light Irradiation*
**Kun Chang** (WPI-MANA, NIMS)

**PP-9** *Construction of Molecular Layers with Viologen Moieties and Various Metal Complexes on Hydrogen-Terminated Si(111) Surfaces*
**Takuya Masuda** (Surface Characterization Group, Nano Characterization Unit, Advanced Key Technologies Division, NIMS)

**PP-10** *An Inexpensive Bifunctional Nanostructured Catalyst for Oxygen Evolution and Reduction Reactions*
**Maryam Jahan** (WPI-MANA, NIMS)

**PP-11** *Enhancement of electron transfer rate at metal-molecule interfaces by controlling interface structure*
**Shino Sato** (Department of Chemistry, Faculty of Science, Hokkaido University)

**PP-12** *Limited Anodic and Cathodic Electrochemical Potential Window of $MoS_2$: Limitations in Electrochemical Applications*
**Muhammad Zafir Mohamad Nasir** (Division of Chemistry and Biological Chemistry, School of Physical & Mathematical Sciences, Nanyang Technological University)

**PP-13** *Doping and insertion effects on the thermoelectric properties of $Y_xAl_yB_{14}$*
**Satofumi Maruyama** (WPI-MANA, NIMS)

**PP-14** *Enhanced Plasmonic Photocatalysis of Au/$TiO_2$ and BN Mixture*
**Yusuke Ide** (WPI-MANA, NIMS)

**PP-15** *Double-QM/MM Method for Investigating Donor-Acceptor Electron Transfer in Solution*
**Zdenek Futera** (WPI-MANA, NIMS)

**PP-16** *Electrode interface structure of Ru/Organic Dye Co-sensitized Dye-Sensitized Solar Cell: Density Functional Theory Investigation*
**Yusuke Ootani** (National Institute for Materials Science (NIMS))

**PP-17** *Chemical reactivity of metal-supported ceria thin films: A DFT+U study*
**Lucie Szabova** (WPI-MANA, NIMS)

**PP-18** *Theoretical Investigation at Oxide Cathode/Sulfide Electrolyte Interfaces for All-Solid-State Li-Ion Batteries*
**Jun Haruyama** (GREEN, NIMS)

**PP-19** *III-V Nitride-based solar cells with a super-wide absorption spectrum*
**Liwen Sang** (WPI-MANA, NIMS)

## Nano-Life

**PL-1** *Dual thermo/photo-sensitive nanogels used as stabilizers of Pickering high internal phase emulsions*
**Xuewei Zhang** (University of Montreal)

**PL-2** *Preparation and Characterization of Peptide Nanorods as Bio-Carriers for Diabetics Treatments*
**Nagarajan Usharani** (WPI-MANA, NIMS)

**PL-3** *Nanoparticles Retard the Spreading of Cellular Aggregates as Tumor Models.*
**Gregory Beaune** (WPI-MANA, NIMS)

**PL-4** *Nanotopography-mediated Reverse Transfection of Gene into Stem Cells*
**Qingmin Ji** (WPI-MANA, NIMS)

**PL-5** *A novel biointerface that suppresses cell differentiation by scavenging excess reactive oxygen species*
**Yutaka Ikeda** (University of Tsukuba)

**PL-6** *Photoactivatable substrates for dissecting the impact of extracellular mechanical environments on collective migration behavior*
**Jun Nakanishi** (WPI-MANA, NIMS)

**PL-7** *Combination therapy using ROS scavenging nanoparticles for effective treatment of colitis-associated colon cancer*
**Long Binh Vong** (Department of Materials Science, Graduate School of Pure and Applied Sciences, University of Tsukuba)

**PL-8** *Nanomechanics of Cell Components in Osteosarcoma Microenvironment on Micropatterned Surfaces*
**Xinlong Wang** (WPI-MANA, NIMS)

**PL-9** *Development of redox injectable gel with anti-inflammatory function for high performance*
**Hiroyuki Nakagawa** (Department of Materials Science, Graduate School of Pure and Applied Sciences, University of Tsukuba)

**PL-10** *Alignment of Fullerene Nanowhisker and its application for the cellular scaffolds*
**Kosuke Minami** (WPI-MANA, NIMS)

**PL-11** *The Interactions between nano-films of various $TiO_2$ crystalline phases and human Osteosarcoma cell line*
**Shimaa A. Abdellatef** (WPI-MANA, NIMS)

**PL-12** *Immobilization of inactivated Sendai virus via layer-by-layer assembly for cell separation*
**Takaharu Okada** (WPI-MANA, NIMS)

**PL-13** *Apoptotic Cell Membrane-inspired Nanomaterials for Anti-inflammatory Therapy.*
**Yasuhiro Nakagawa** (Graduate School of Pure and Applied Sciences, The University of Tsukuba)

**PL-14** *Changes in Mesenchymal Stem Cell Osteogenesis Profile on Exposure to Surface Modified Gold Nanoparticles*
**Li Jia En Jasmine** (WPI-MANA, NIMS)

**PL-15** *Use Self-assembled Polymer Nanostructured Surfaces as Stem Cells and Cancer Cells Behavior Modulators*
**Lingfeng Guo** (WPI-MANA, NIMS)

**PL-16** *Novel Behaviors of a Lipid-modified DNA Wheel Structure*
**Yusuke Yonamine** (WPI-MANA, NIMS)

**PL-17** *Development of a novel artificial cornea using nanofibrous silk fibroin construct*
**Shinya Hattori** (WPI-MANA, NIMS)

**PL-18** *Biomedical Application of Boron Nitride Nanotubes*
**Xia Li** (WPI-MANA, NIMS)

**PL-19** *Field effect transistor (FET) biosensor functionalized with different probe molecules for identification of amyloid prion protein*
**Shofarul Wustoni** (Graduate School of Advanced Science and Engineering, Waseda University)

**PL-20** *Nanoparticles-induced celllular aggregates*
**Benjamin Brunel** (WPI-MANA, NIMS)

**PL-21** *Effect of cells on biocorrosion of magnesium alloys*
**Akiko Yamamoto** (WPI-MANA, NIMS)

**PL-22** *Design of new PEG/antibody hybrid biointerface that decreases oxidative stress for specific cell cultivation*
**Tomoki Yoshinari** (Department of Materials Science, Graduate School of Pure and Applied Sciences, University of Tsukuba)

**PL-23** *Fabrication and Characterization of Smart Nanofiber Meshes realizing Hyperthermia and Chemotherapy for Cancer therapy*
**Eri Niiyama** (Graduate school of pure and applied sciences, University of Tsukuba)

**PL-24** *Albumin-stabilized gold nanostars for targeted photothermal ablation of cancer cells*
**Jingchao Li** (NIMS)

**PL-25** *Cell uptake of Boron-Nitride Nanotubes Grafted Loaded with Curcumin*
**Jukka Niskanen** (Université de Montréal)