Poster Session
5th March, 2014

ICYS Researcher

PIR-1 Switchable porphyrinoid conjugates - reversible capture/transport of fullerenes and new materials with controllable properties
   **Huynh Thien Ngo** (ICYS-MANA Researcher, NIMS)

PIR-2 Adsorption geometry of pentacene on TiO2 anatase surface resolved by intra-molecular atomic force microscopy imaging
   **César Moreno** (ICYS-Sengen Researcher, NIMS)

PIR-3 Dual-Temperature and pH responsive (Ethylene Glycol)-based nanogels for drug delivery system
   **Yohei Kotsuchibashi** (ICYS-MANA Researcher, NIMS)

PIR-4 Selection of magnetic structure suited for magnetic refrigeration material
   **Ryo Tamura** (ICYS-Sengen Researcher, NIMS)

PIR-5 Nanomechanical cleavage of MoS2 atomic layers
   **Dai-Ming Tang** (ICYS-MANA Researcher, NIMS)

PIR-6 Reversible and instantaneous swelling of inorganic layered materials
   **Fengxia Geng** (ICYS-MANA Researcher, NIMS)

PIR-7 Challenge for the use of non-siliceous mesoporous thin films in device applications
   **Norihiro Suzuki** (ICYS-Sengen Researcher, NIMS)

PIR-8 Dynamic breathing of CO2 by hydrotalcite
   **Shinsuke Ishihara** (ICYS-MANA Researcher, NIMS)

PIR-9 Carrier injection and transport in atomically thin MoS2 layers
   **Song-Lin Li** (ICYS-MANA Researcher, NIMS)

PIR-10 Effect of hydrogen edge passivation on BC3 ribbons
   **Sudipta Dutta** (ICYS-MANA Researcher, NIMS)

PIR-11 Unprecedented simultaneous enhancement in strain tolerance, toughness and strength of Al2O3 ceramic by multiwall-type failure of a high loading of uniformly dispersed carbon nanotubes
   **Mehdi Estili** (ICYS-Sengen Researcher, NIMS)

PIR-12 Fabrication of High-k/hydrogenated-diamond field effect transistors
   **Jiangwei Liu** (ICYS-NAMIKI Researcher, NIMS)

PIR-13 Single particle measurement of Li-ion battery materials
   **Kei Nishikawa** (ICYS-NAMIKI Researcher, NIMS)

PIR-14 It's a small world: applications of advanced SAXS
   **Brian R. Pauw** (ICYS-Sengen Researcher, NIMS)

PIR-15 Advanced anode materials for Lithium-ion batteries and their storage mechanisms at atomic scale
   **Xi Wang** (ICYS-MANA Researcher, NIMS)
PIR-16  Freestanding organometallic nanomembrane for Nano-electronics
    **Hicham Hamoudi** (ICYS-MANA Researcher, NIMS)
PIR-17  Development and applications of a novel optimization method for local orbitals in the first principles order-NDFT program CONQUEST
    **Ayako Nakata** (ICYS-NAMIKI Researcher, NIMS)
PIR-18  Nanoscale design of Lithium-based coordination polymers for energy storage
    **Hamish Hei-Man Yeung** (ICYS-MANA Researcher, NIMS)
PIR-19  Nano-scale characterization of III-V compound based solar cells using scanning probe microscopy
    **Nobuyuki Ishida** (ICYS-Sengen Researcher, NIMS)

**Nano-Materials**

PM-1  All-Nanosheet ultrathin capacitors assembled layer-by-layer via solution-based processes
    **Chengxiang Wang** (MANA, NIMS)
PM-2  New spin-driven multiferroics Sc2NiMnO6 and In2NiMnO6
    **Alexei A. Belik** (MANA Independent Scientist, NIMS)
PM-3  Activation and imaging of intracellular acetyl CoA
    **Hirokazu Komatsu** (MANA, NIMS)
PM-4  Synthesis and structural analysis of disilanyl double-pillared bisheteroarenes
    **Waka Nakanishi** (MANA Scientist, NIMS)
PM-5  Structural and mechanical properties of quaternary TiAlCrN thin films, deposited by cathodic arc deposition
    **Sukkaneste Tungasmita** (Chulalongkorn University)
PM-6  Screening for high affinity plastic antibodies mimicking ELISA method
    **Yusuke Yonamine** (MANA, NIMS)
PM-7  Mineralization of hydroxyapatite upon a unique xanthan gum hydrogel
    **Hironori Izawa** (Tottori University)
PM-8  ‘Soft’ flake capsule as a support for catalytic nanoparticles
    **Qingmin Ji** (MANA Scientist, NIMS)
PM-9  Three-dimensional few-layered graphitic architecture fabricated by substrate-free polymer-based graphitization
    **Xuebin Wang** (MANA, NIMS)
PM-10 Stabilities and mechanical and electronic properties on B-N doped zigzag single-wall carbon nanotubes
    **Vudhichai Parasuk** (Chulalongkorn University)
PM-11 CeO2-CNT/RGO nanocomposites for high performance supercapacitor
    **Raja Rajendran** (MANA, NIMS)
Controlling porphyrin nanoarchitectures at solid surfaces  
Jonathan P. Hill (MANA Scientist, NIMS)

Fullerene nanoarchitectonics: From zero to higher dimensions  
Lok Kumar Shrestha (MANA Scientist, NIMS)

Porous boron nitride materials: Template-free fabrication and H₂ adsorption properties  
Qunhong Weng (MANA, NIMS)

Osteogenic differentiation of mesenchymal stem cells on boron nitride nanotubes  
Xia Li (MANA, NIMS)

Light-induced nanoscale morphological changes of azobenzene self-assembled monolayers  
Daisuke Ishikawa (MANA, NIMS)

Powder metallurgy routes toward Al-BN nanotube composites, their morphologies, structures and mechanical properties  
Maho Yamaguchi (MANA, NIMS)

Ultra-rapid production of fullerene (C_{60}) nanorods  
Rekha Goswami Shrestha (MANA, NIMS)

Synthesis of highly luminescent terbium-doped layered cerium hydroxides pillared by sulfate ions and its luminescence switching properties  
Jinghua Wu (MANA, NIMS)

Flexible ultraviolet photodetectors with broad photoresponse based on branched ZnS-ZnO heterostructure nanofilms  
Wei Tian (MANA, NIMS)

Tunneling current driven rotation of Pt-porphyrin dimers on Au(111) surface  
P. Mishra (MANA, NIMS)

Fabrication and characterization of alumina flake reinforced bioinspired nacre-like bulk lamellar composites  
Arcan F. Dericioglu (Middle East Technical University)

Nanoporous materials for energy storage application  
Ajayan Vinu (The University of Queensland)

Rectification effect of PTCDI-C7 on transparent ITO thin films  
Arramel Arramel (MANA, NIMS)

Synthesis and properties of macromolecular [2]rotaxanes composed of block and random copolyesters as an axle component  
Valentina Stephanie (Tokyo Institute of Technology)

STEM images of chemically-synthesized, atomically-precise gold nano-clusters  
Hassan S. Al Qahtani (MANA, NIMS)
PS-4  Bound states in graphene point contacts
     **Hai-Yao Deng** (MANA, NIMS)

PS-5  The effects of ambient gas on the properties of organic nano-floating-gate memory
     **Xu Gao** (MANA, NIMS)

PS-6  Boltzmann transport theory of graphene double-layer systems
     **Katsunori Wakabayashi** (MANA Independent Scientist, NIMS)

PS-7  Raman spectroscopy study of atomically thin molybdenum ditelluride
     **Mahito Yamamoto** (MANA, NIMS)

PS-8  Annealing effect on the transport properties of p-type WSe$_2$ thin layers
     **Katsuyoshi Komatsu** (MANA, NIMS)

PS-9  Spin-selective topological insulator towards spintronics applications
     **Longhua Wu** (MANA, NIMS)

PS-10 Theory on depinning and coercivity in ferromagnetic thin films
      **Bin Xi** (ESICMM, NIMS)

PS-11 A novel artificial hip joint: Alumina layer on Ti alloy
      **R. Khanna** (Chubu University)

PS-12 Charge transport control of graphene by helium ion irradiation
      **Shu Nakaharai** (MANA Scientist, NIMS)

PS-13 One-dimensional superconductivity in niobium-nitride nanowires on suspended carbon nanotubes
      **S. Moriyama** (MANA Independent Scientist, NIMS)

PS-14 Multilevel operation of single-electron tunneling with heterogeneous binary molecules in a Si-based device structure
      **Hoon-Seok Seo** (MANA, NIMS)

PS-15 Hexagonal boron nitride as a substrate for electrical studies of polydiacetylene chains
      **Marina Makarova** (MANA, NIMS)

PS-16 Photoisomerization-induced manipulation of single-electron tunnelling in a silicon-based double tunnel junction
      **Ryoma Hayakawa** (MANA Independent Scientist, NIMS)

PS-17 Optical control of carrier transport in polymeric transistors with photochromic spiropyran molecules
      **Yasushi Ishiguro** (MANA, NIMS)

PS-18 Exploring novel half metallic materials for spintronic applications by first-principles calculations
      **Madhav Prasad Ghimire** (MANA, NIMS)

PS-19 Novel functionalities in mechanically bent single-crystal SnO$_2$ wires
      **Makoto Sakurai** (MANA Scientist, NIMS)

PS-20 Electronic property of bilayer graphene on pristine and rhenium-doped MoS$_2$
      **Mei-Yan Ni** (MANA, NIMS)
PS-21 Josephson effect of three-band superconductors with time-reversal symmetry breaking
Zhao Huang (MANA, NIMS)

PS-22 Reversible linear-cyclic polymer topology control utilizing rotaxane switch
Takahiro Ogawa (Tokyo Institute of Technology)

PS-23 Domain structure and electro-optic effect in perfectly surface crystallized glass-ceramics
Yoshihiro Takahashi (Tohoku University)

PS-24 An automated atomic precision lithography tool
James Hugh Gervase Owen (Zyvex Labs)

PS-25 Peptide-based neuromorphic nanostructures
Rhiannon Creasey (MANA, NIMS)

PS-26 STM observation on the edge-state of the atomically-thin Bi film: a promising candidate for the 2D topological insulator
Katsumi Nagaoka (MANA Scientist, NIMS)

PS-27 AFM observations of SWCNT treated by organic/inorganic dispersion solvents
Difei Miao (MANA, NIMS)

PS-28 Development of compact multiple scanning probe AFM/KFM for local potential distribution measurement
Yoshitaka Shingaya (MANA Scientist, NIMS)

PS-29 Vortex Imaging on one-atom-thick superconductor Si(111)-(\(\sqrt{7} \times \sqrt{3}\))-In
Shunsuke Yoshizawa (MANA, NIMS)

Nano-Power

PP-1 Highly effective in-situ photocatalytic reduction of graphene oxide with layer-by-layer assembled titania nanosheet
Xingke Cai (MANA, NIMS)

PP-2 Luminescent lighting diodes from compositionally modulated semiconductor quantum structures
Somobrata Acharya (Indian Association for the Cultivation of Science)

PP-3 Decision making photonic device: conformation induced discrimination between picric acid and nitro derivatives/anions with Cu-Pyrene array
Venkata Krishnan (Indian Institute of Technology Mandi)

PP-4 Reduced TiO\(_2\) nanotube arrays for photoelectrochemical water splitting
Qing Kang (MANA, NIMS)

PP-5 Photosensitization of TiO\(_2\) with gold: Targeting a broadband visible light harvesting
Lequan Liu (MANA, NIMS)

PP-6 Fabrication of silicon-based light emitting diodes
Naoto Shirahata (MANA Independent Scientist, NIMS)
In situ observation of potential–induced Si oxide growth by hard X-ray photoelectron spectroscopy

**Takuya Masuda** (MANA-GREEN, NIMS)

Utilization of double resonance sum frequency generation (DR-SFG) to investigate the interfacial vibrational and electronic structure at solid/liquid interface

**Hidenori Noguchi** (MANA Scientist, NIMS)

Study on the structures of bio-model interfaces by vibration spectroscopy

**Ya Zhang** (MANA, NIMS)

Tuning the strain in oxygen ion and proton conducting oxides by thin film pulsed laser deposition

**Daniele Pergolesi** (Paul Scherrer Institut)

Unraveling the oxygen reduction reaction mechanism and activity of novel electrocatalysts for low temperature alkaline fuel cells

**Emiliana Fabbri** (Paul Scherrer Institut)

AUNPS/LDHS nanoarchitectonics as catalysts for artificial photosynthesis

**Gabriela Carja** (Technical University "Gh. Asachi" of Iasi)

Detection of cellular DNA damage induced by TiO$_2$ and PEG-modified TiO$_2$ nanoparticles using sensor cells and BTG2 promoter

**Karim Samy El-Said** (MANA, NIMS)

Poly(ethylene glycol)-block-polymers mediated anti-fouling for Aptamer-Factor IX interaction on Au surface by SPR

**Thangavel Lakshmipriya** (University of Tsukuba)

Induction of albumin expression in HepG2 cells using immobilized simplified recombinant fibronectin protein

**Yuuki Nishida** (MANA, NIMS)

Orally administered redox nanoparticles internalize in the inflamed tissue and prevent the colitis-associated colon cancer

**Long Binh Vong** (University of Tsukuba)

Silica-containing redox nanoparticle for the application to peritoneal dialysis

**Takuma Matsumura** (University of Tsukuba)

Collagen-functionalized single-walled carbon nanotubes for stem cell labeling

**Hongli Mao** (MANA, NIMS)

Influence of nanotopography and biochemical cues on the cellular behavior

**Shimaa A. Abdellatef** (MANA, NIMS)

Design and construction of gold nanoparticle displaying clustered carbohydrate for effective oligonucleotide delivery to hepatic parenchymal cells

**Yutaka Ikeda** (University of Tsukuba)
| PL-9  | Highly stable PEGylated silica nanocomposite - A new drug carrier for oral drug delivery | Md. Amran Hossain (University of Tsukuba) |
| PL-10 | Mesenchymal stem cells response to treatment with surface charged gold nanoparticles | Li Jia En Jasmine (MANA, NIMS) |
| PL-11 | Design of protein-loaded redox injectable gel for long-term local treatment | Junya Kaneko (University of Tsukuba) |
| PL-12 | Development of nitroxide radicals-containing polymer for ROS-scavenging in cigarette smoke | Yukio Nagasaki (University of Tsukuba) |
| PL-13 | A robust approach for the surface modification of gold nanorods using hydroxyl terminated alkanethiols | Qinghui Shou (MANA, NIMS) |
| PL-14 | Self-healing 4-arm PEG hydrogels via selective metal-ligand interaction | Takeshi Sato (MANA, NIMS) |
| PL-15 | Therapeutic implications of targeting energy metabolism in breast cancer | Babita Shashni (University of Tsukuba) |
| PL-16 | Microstructure of calcium phosphate coatings on bioabsorbable Mg/Mg alloys formed in an aqueous solution | Sachiko Hiromoto (MANA Scientist, NIMS) |
| PL-17 | Nanopatterned structures formed by polymer self-assembly for stem cell function regulation | Lingfeng Guo (MANA, NIMS) |
| PL-18 | Design and evaluation of novel boron-containing redox nanoparticles for high performance boron neutron capture therapeutics | Zhenyu Gao (University of Tsukuba) |
| PL-19 | Photoactivatable substrates: New platform for collective migration study | Jun Nakanishi (MANA Independent Scientist, NIMS) |
| PL-20 | Synthesis and characterization of phosphoryl serine-derived temperature-responsive polymers for anti-inflammatory therapy | Yasuhiro Nakagawa (MANA, NIMS) |
| PL-21 | “PEGylated and quaternized polyamine nanogel”, a brand-new bile acid sequestrant, ameliorates lipoprotein profiles and reduces atherosclerosis in mice | Takashi Matsuzaka (University of Tsukuba) |
| PL-22 | Fabrication of zeolite-polymer composite nanofibers for the adsorption of uremic toxins | Koki Namekawa (MANA, NIMS) |
| PL-23 | Design of clickable smart polymers for enrichment of dilute biomarkers | Koichiro Uto (MANA, NIMS) |
| PL-24 | Development of redox therapy for periodontitis using redox injectable gel | Makiko Saita (Kanagawa Dental University) |
Polymer coating as a method of cytocompatibility improvement of magnesium alloy ZM21

Agnieszka Witecka (MANA, NIMS)

G-quadruplex structure extend the immunostimulatory effect of CpG oligodeoxynucleotides

Tomohiko Yamazaki (MANA Scientist, NIMS)

Redox-nanoparticle assisted delivery of drugs for treatment of prostate cancer

Sindhu Thangavel (University of Tsukuba)

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Richard Charvet (ADOCIA)

Polymersomes for wound healing therapeutics

Carlos Agudelo, Winnik Francoise (Universite de Montreal, Canada)

Boron-nitride nanotubes grafted with thermoresponsive and zwitterionic polymers

Jukka Niskanen (Universite de Montreal, Canada)

Regulation of cell aggregation on nanoengineered polysaccharide interfaces

Piotr Kujawa (MANA, NIMS)

High throughput electron transfer from carbon dots to chloroplast: A rationale of enhanced photosynthesis.

Sourov chandra (MANA, NIMS)