

Material Architectonics on Sustainable Action

MASA 2014

July 18, 2014

Auditorium, WPI-MANA building, Namiki, NIMS, Tsukuba

Program

9:50-10:00: Opening (Chair: Naito Masanobu)

Yoshihito Osada (Research Supervisor of JST-PRESTO “Nanosystem and Emergent Functions”, RIKEN)

Masakazu Aono (Director-General of MANA, NIMS)

10:00-10:45: Session I (Chair: Renzhi Ma)

Minoru Osada (MANA, NIMS)

LEGO-like game with 2D nanosheets

Yuki Nagao (JST-PRESTO; JAIST), Karthik Krishnan, Hiroko Iwatsuki, Mitsuo Hara, Shusaku Nagano

Proton transport in organized polyimide thin films

Hidenori Noguchi (MANA, NIMS)

Electrocatalytic activity of various types of h-BN for the oxygen reduction reaction

10:45-11:00: A short break

11:00-11:30: Session II (Chair: Yoko Yamakoshi)

Akira Wada (JST-PRESTO; RIKEN)

Development of Molecular Evolution Technology for Selection of Target Binding Peptides/Proteins

Kohsaku Kawakami (MANA, NIMS), Hironori Izawa, Yuki Daimon, Katsuhiko Ariga

Biomedical Nanoarchitectonics Using Biocompatible Polymers and Cyclodextrin

11:30-12:30: Group Photo, Lunch

12:30-13:30: Session III (Chair: Lok Kumar Shrestha)

Jonathan Hill (MANA, NIMS)

Porphyrin Assembly: Wires and Chirality

Yoko Yamakoshi (JST-PRESTO; ETH-Zürich)

New class of MRI contrast agents: disease-targeting and higher enhancement

Renzhi Ma (MANA, NIMS)

Rational Synthesis and Molecular Assembly of Redoxable Nanosheets

Kazunori Sugiyasu (AKTD, NIMS)

Living Supramolecular Polymerization

13:30-14:15: Session IV (Chair: Yuhei Miyauchi)

Tadaaki Nagao (MANA, NIMS; JST-CREST)

Nanogap Tuned Plasmonic Nanosystems for Sensing and Energy Application

Yuhei Hayamizu (JST-PRESTO; TIT)

Engineering Bio-nano Interface with Self-organized Peptides on Two-dimensional Nanomaterials

Joel Henzie (MANA, NIMS), Maryam Jahan

Creating New Functionality Using Colloidal Synthesis and Self-Assembly

14:15-14:45: Break

14:45-15:30: Session V (Chair: Joel Henzie)

Yuhei Miyauchi (JST-PRESTO; Nagoya Univ.)

Emergence of Novel Optical Properties in Hybrid-low-dimensional Nanocarbon Systems

Hiroshi Yabu (JST-PRESTO; Tohoku Univ.)

Creation of Functional Organic-Inorganic Composite Particles by Self-Organization Process

Masaaki Ichiki (JST-PRESTO; AIST), Kazutaka Sueshige, Yuki Amano, Ikjoo Byun, Beomjoon Kim, Tadatomo Suga

Nano-transfer Technology for the Handling Process of Thin-film Capacitor

15:30-16:15: Session VI (Chair: Jonathan Hill)

Miho Tagawa (JST-PRESTO; Nagoya Univ.), Oleg Gang, Takumi Isogai, Sakiko Nakada, Eri Akada, Shunta Harada, Toru Ujihara

DNA-mediated Nanoparticle Crystallization

Waka Nakanishi (MANA, NIMS)

Control of Structures and Properties of Non-planar Conjugated Molecules

Yusuke Yamauchi (JST-PRESTO; MANA, NIMS)

SAKIGAKE Magic: My Recent Advances in Functional Nanospace Materials

16:15-16:30: Break

16:30-18:30 Poster Session and Mixing

18:30: Closing

Poster Session

- P-1) Takuya Masuda (ANCC, NIMS; JST-PRESTO), Hideki Yoshikawa, Hidenori Noguchi, Tadahiro Kawasaki, Masaaki Kobata, Keisuke Kobayashi, and Kohei Uosaki
In situ Characterization of Electrochemical Growth of Si Oxide by Hard X-ray Photoelectron Spectroscopy
- P-2) Daisuke Inoue, Kazuki Sada, Akira Kakugo (JST-PRESTO; Fac. Sci. Hokkaido Univ.)
Preferential Self-organization of Microtubule Network under External Mechanical Stimuli
- P-3) Gladstone Christopher Jayakumar (MANA, NIMS, CSRI-CLRI), Nagarajan Usharani, Kohsaku Kawakami, Jonnalgadda Raghava Rao
Antagonistic Efficacy and Biocompatibility Evaluation of Self Assembling Protein Nanoparticles for Biotherapeutics
- P-4) Huynh Thien Ngo (MANA, NIMS), Jonathan Hill, Katsuhiko Ariga
Functional Porphyrinoid Conjugates - Complex Organic Systems toward Functional Materials
- P-5) Chenning Zhang (AKTD, NIMS), Tetsuo Uchikoshi, Toshiyuki Nishimura, Yoshio Sakka, Naoto Hirosaki
Surface Modification of Ca- α -SiAlON: Eu²⁺ Phosphor Particles by SiO₂ coating and Fabrication of its Deposit by Electrophoretic Deposition (EPD) Process
- P-6) Mahito Yamamoto (MANA, NIMS), Sheng Tsung Wang, Meiyang Ni, Yen-Fu Lin, Wen-Bin Jian, Kenji Ueno, Katsunori Wakabayashi, Kazuhito Tsukagoshi
Strong Enhancement of Raman Scattering from a Bulk-Inactive Vibrational Mode in Few-Layer MoTe₂
- P-7) Mehdi Estili (ICYS, NIMS), Yoshio Sakka
Simultaneous Toughening, Strengthening and Softening of a Ceramic Material Using Multi-walled Carbon Nanotubes
- P-8) Lok Kumar Shrestha (MANA, NIMS), Yusuke Yamauchi, Jonathan P. Hill, Kunichi Miyazawa, Katsuhiko Ariga
Porous Fullerene Materials
- P-9) Batu Ghosh (MANA, NIMS), Naoto Shirahata
Silicon-based Hybrid Light Emitting Diodes
- P-10) Xu GAO (MANA, NIMS), Shinya Aikawa, Nobuhiko Mitoma, Meng-Fang Lin, Takio Kizu, Toshihide Nabatame, Kazuhito Tsukagoshi
Probing the Effects of Self-Formed Copper Oxide Contact Interlayer in Oxide Thin Film Transistors
- P-11) Atsufumi Hirohata (JST-PRESTO; Univ. York)
Development of a Nano-spin Motor
- P-12) Tomoaki Yamada (JST-PRESTO, Nagoya Univ.), Osami Sakata, Hiroshi Funakubo, Masahito Yoshino, Takanori Nagasaki
Pb(Zr,Ti)O₃ Nanorod-Array toward Enhanced Piezoelectric Responses: Attempts at Self-Assembled Growth and Characterizations
- P-13) Jin Nakamura (AKTD, NIMS), Toshihiro Kasuga, Yoshio Sakka
Enhancement of Crystalline Plane Orientation in Vaterite towards Tuning of Calcium Ion Release

- P-14) Wei Tian (MANA, NIMS), Dmitri Golberg, Yoshio Bando
Ultraviolet Photodetectors with Superior Photoresponse Constructed from ZnO based Heterostructures
- P-15) Takio Kizu (MANA, NIMS), Shinya Aikawa, Nobuhiko Mitoma, Maki Shimizu, Xu Gao, Meng-Fang Lin, Toshihide Nabatame, Kazuhito Tsukagoshi
Amorphous InWO TFT with High Mobility and Stability by Low-temperature Process
- P-16) Masashi Ikeuchi (JST-PRESTO; Univ. Tokyo)
3-D Microfabrication of Fibrous and Hollow Structures with Biocompatible Polymers for Tissue Regeneration
- P-17) Yoshihisa Shimizu (MANA, NIMS)
Photoactivatable Substrates: New Platform for Collective Migration Study
- P-18) Masanobu Naito (JST-PRESTO; NIMS)
Cyclodextrin-based Ultra-Hydrosolubilizer of [60]Fullerene and Its Biomedical Application
- P-19) Takashi Nakanishi, Ken Okamoto (MANA, NIMS)
An Exotic Liquid Matter: Functional Organic Liquids
- P-20) Hiroshi Fudouzi (AKTD, NIMS), Tsutomu Sawada
Opal Photonic Crystal Films: Scalable Coating Process and Prospective Applications
- P-21) Kazunori Sugiyasu (AKTD, NIMS)
Picket-Fenced Polythiophene and its Diblock Copolymers that Afford Microphase Separations Comprising a Stacked and Isolated Polythiophene Ensemble
- P-22) Naoto Shirahata (JST-PRESTO; MANA, NIMS)
Synthesis of Luminescent Germanium Nanoparticles