

Nano-Materials 2

- 13:30 - 13:50 Toward Higher Performance Permanent Magnets for Automotive Applications
Kazuhiro Hono (MANA Principal Investigator, NIMS)
- 13:50 - 14:10 Electromechanical Properties and Engineering of Nanotubes, Nanowires,
Nanobelts and Nanocones in a Transmission Electron Microscope
Dmitri Golberg (MANA Principal Investigator, NIMS)
- 14:10 - 14:25 Oxide Nanosheets: New Solution to Nanoelectronics
Minoru Osada (MANA Scientist, NIMS)
- 14:25 - 14:40 Novel Electrochromic Materials and Their Solid-state Devices
Masayoshi Higuchi (MANA Independent Scientist, NIMS)
- 14:40 - 15:00 *Coffee Break*

Nano-Bio

- 15:00 - 15:30 Intelligent Nanostructured Surface for Cell Sheet Tissue Engineering (**Invited**)
Teruo Okano (Professor, Tokyo Women's Medical University)
- 15:30 - 15:50 Detection of biomolecular recognition using bio-transistors
Yuji Miayahara (MANA Principal Investigator, NIMS)
- 15:50 - 16:05 Bio compatibility Evaluation of Bioabsorbable Magnesium Alloys
Akiko Yamamoto (MANA Scientist, NIMS)
- 16:05 - 16:10 *Break*
- 16:10 - 16:30 Nano-particle Assisted Therapy
Yukio Nagasaki (MANA Satellite Principal Investigator;
Professor, Tsukuba University)
- 16:30 - 16:45 Manipulation of Stem Cell Functions by Patterned Polymer Surfaces
Guoping Chen (MANA Scientist, NIMS)
- 16:45 - 17:00 Novel Biointerface with Well-Defined, Concentrated Polymer Brushes
Obtainable by Surface-Initiated Living Radical Polymerization.
Chiaki Yoshikawa (MANA Independent Scientist, NIMS)
- 17:00 - 17:15 Photoresponsive Biointerfaces for Cell Analysis
Jun Nakanishi (MANA Independent Scientist, NIMS)

February 26th

Nano-Materials 3

- 9:15 - 9:45 Single Molecule Origami and Morse Code of RNA (Invited)
Anthony Cheetham (Professor, University of Cambridge)
- 9:45 - 10:15 Control of Composition, Structure, and Morphology of Mesostructured Materials
(Invited)
Kazuyuki Kuroda (Professor, Waseda University)
- 10:15 -10:35 *Coffee Break*

Nano-System 1

- 10:35 - 11:05 Atomic-scale Structure and Dynamics of Magnetic Nano-systems **(Invited)**
Roland Wiesendanger (Professor, University of Hamburg)
- 11:05 - 11:25 MANA-CNSI Overview
James Gimzewski (MANA Satellite Co-Director & MANA Satellite
Principal Investigator; Professor, UCLA)
- 11:25 - 11:45 Nano Superconductivity as a Novel Source of THz Electromagnetic Wave
Xiao Hu (MANA Principal Investigator, NIMS)
- 11:45 - 12:00 Nanoscale Electrical Transport Measurement by Multiple-scanning-probe
Microscopes
Osamu Kubo (MANA Scientist, NIMS)
- 12:00 - 12:15 Synthesis and Impurity Doping in Germanium Nanowires as the Basis for
Next- generation Semiconductor devices
Naoki Fukata (MANA Independent Scientist, NIMS)
- 12:15 -13:30 *Lunch*

Nano-System 2

- 13:30 - 14:00 Electric-field-induced Superconductivity in an Insulator **(Invited)**
Masashi Kawasaki (Professor, Tohoku University)
- 14:00 - 14:20 Graphene SQUID
Hideaki Takayanagi (MANA Satellite Principal Investigator;
Professor, Tokyo University of Science)

- 14:20 - 14:40 Atomic Switch for Neural Networking Systems
Tsuyoshi Hasegawa (MANA Principal Investigator, NIMS)
- 14:40 - 14:55 Connection of Molecular Nanowires to Single Functional Molecules
Yuji Okawa (MANA Scientist, NIMS)
- 14:55 - 15:15 *Coffee Break*
- 15:15 - 16:10 **Brief Presentations for posters**
- 16:15 - 18:15 **Poster Session**
- 19:00 - 21:00 *Banquet*

February 27th

ICYS 1

- 9:30 - 9:45 Engineering the Properties of Heusler Alloys for Spintronic Devices.
Rajanikanth Ammanabroulu (ICYS Researcher, NIMS)
- 9:45 - 10:00 Chemical Order in Ternary Complex Metallic Alloys
Cezar Gomez (ICYS-MANA Researcher, NIMS)
- 10:00 - 10:15 Nano Structured Materials Design with Phase Separation
Byung-Joo Park (ICYS Researcher, NIMS)
- 10:15 - 10:30 Templated Synthesis of Electrically Conductive Organic Materials
Yasuhiro Shirai (ICYS-MANA Researcher, NIMS)
- 10:30 - 10:50 *Coffee Break*

ICYS 2

- 10:50 - 11:05 Nanopatterning Self-assembling Polymers
Michael Lee (ICYS-MANA Researcher, NIMS)
- 11:05 - 11:20 Development of High Field Superconducting Magnets
David Uglietti (ICYS Researcher, NIMS)
- 11:20 - 11:35 Three-dimensional Imaging with Confocal Scanning Transmission Electron
Microscopy
Ayako Hashimoto (ICYS Researcher, NIMS)

11:35 - 11: 50 *Ab initio* Molecular Dynamics: an Atomic-scale Simulation Approach
to Nanoscience and Nanotechnology
Robert Scipioni (ICYS-MANA Researcher, NIMS)

11:50 - 13:30 *Lunch*

Nano-Green 1

13:30 - 14:00 Drastic Current Increase in Microbial Fuel Cell by the Addition of Fe₂O₃ (**Invited**)
Kazuhiro Hashimoto (Professor, University of Tokyo)

14:00 - 14:30 Toward First-principles Electrochemistry (Invited)
Nicola Marzari (Professor, Massachusetts Institute of Technology)

14:30 - 14:50 High-throughput Synthesis of Zeoliticimidazolate Frameworks and Application
to CO₂ Capture
Kohei Uosaki (MANA Satellite Principal Investigator;
Professor, Hokkaido University)

14:50 - 15:05 Ab Initio MD Study on Redox Reactions in Electrolyte Solutions of DSSC
Yoshitaka Tateyama (MANA Independent Scientist, NIMS)

15:05 - 15:25 *Coffee Break*

Nano-Green 2

15:25 - 15:45 Design of Catalytically Active Site for Catalytic Conversion of Biomass
Keiichi Tomishige (MANA Satellite Principal Investigator;
Professor, University of Tsukuba)

15:45 - 16:05 Highly Efficient Dye-sensitized Solar Cells
Liyuan Han (MANA Principal Investigator, NIMS)

16:05 - 16:25 Tailoring Nanostructured Oxide Thin Films for the Miniaturization of
Solid Oxide Fuel Cells
Enrico Traversa (MANA Principal Investigator, NIMS)

16:25 - 16:40 Design of Nanoarchitected Electrodes for Next-generation Batteries
Yusuke Yamauchi (MANA Independent Scientist, NIMS)

16:40 - 16:45 Closing Remarks
Yoshio Bando (MANA Chief Operating Officer, NIMS)