

Canada-Japan Nanotechnology Workshop 2013

January 29th – 30th, 2013

Venue: Room 605, 6th floor, Conference Tower, Tokyo Big Sight, Japan

January 29th, 2013 – Sessions & Keynote Lectures

10:00-10:05 Opening

Eiji Muromachi, National Institute for Materials Science (NIMS)

10:05-10:15 Welcome

Ministry of Education, Culture, Sports, Science and Technology in Japan (MEXT)

10:15-10:25 Welcome

Embassy of Canada

10:25-12:00 Overview of Nanotechnology in Japan and Canada

Chair – Hong Guo, McGill University,

Toshimi Shimizu, National Institute of Advanced Industrial Science
and Technology (AIST)

10:25-10:55 Keynote 1 – Overview of Science and Technology Policy and Nanotechnology Initiatives in Japan

Masanori Nagai, Office for Materials Science and Nanotechnology Development
Research Promotion Bureau, MEXT

10:55-11:30 Keynote 2 – Overview of Nanotechnology Assets in Canada

Arthur Carty, Waterloo Institute for Nanotechnology (WIN)

11:30-12:00 Keynote 3 – TIA-Nano

Toshihiko Kanayama, AIST

12:00-13:20 Lunch

– Room 602

13:20-14:20 Session 1 – Energy and Environment

Chair – Takao Mori, NIMS

13:20-13:40 Rechargeable Hybrid Aqueous Batteries

Pu Chen, WIN

13:40-14:00 Cathode interface structure in solid-state lithium batteries

Kazunori Takada, NIMS

14:00-14:20 Intensively synergetic ^{137}Cs nanosorbent incorporated with polymer spongiform for scalable purification without post filtration
Shuji Tsuruoka, Shinshu University/ Nagano Techno Foundation

14:20-15:20 Session 2 – Energy and Environment
Chair – Alain Francq, WIN

14:20-14:40 Novel organic semiconducting materials via on-surface assembly of molecular building blocks
Dmitrii F. Perepichka, McGill University

14:40-15:00 How Can We See Molecules in Motion and Reaction?
Masanori Koshino, AIST

15:00-15:20 Energy-Harvesting CMOS-MEMS device platform technology by University of Tokyo Takeda Open Super-cleanroom Environment
Yoshio Mita, The University of Tokyo

15:20-15:35 Coffee Break

15:35-16:35 Session 3 – Nanoelectronics
Chair – Koji Ishibashi, RIKEN

15:35-15:55 Non-volatile Resistance Switch Employing Simple Metal Nanogap Electrode
Yasuhisa Naitoh, AIST

15:55-16:15 Luminescent Properties of Silicon Nanostructure
Peter Mascher, McMaster University

16:15-16:35 Optical Nanoantennas: Physics and Application
Tadaaki Nagao, NIMS

16:35-17:55 Session 4 – Quantum Electronics
Chair – Dolores Martinez, NanoQuebec

16:35-16:55 Optically controlled quantum dot spins for quantum information processing
Yoshihisa Yamamoto, Stanford University/National Institute of Informatics/RIKEN

16:55-17:15 Quantum Dot Spectroscopy by Atomic Force Microscopy
Peter Grutter, McGill University

17:15-17:35 Superconducting Quantum Circuits
Yasunobu Nakamura, The University of Tokyo

17:35-17:55 Design of Nano Quantum Device for Manipulating Majorana Fermions
Xiao Hu, NIMS

17:55-18:25 Nano Business Matching
Chair – Yoshio Bando, NIMS

17:55-18:10 Keynote 4 – Nano Business Matching
Masahide Hayashi, Nanotechnology Business Creation Initiative

18:10-18:25 Keynote 5 – Nanotechnology the Next 15 Years: Creating the Future with Life
Carlo Montemagno, Alberta Nanotechnology Accelerator

18:25 Closing
Toshimi Shimizu, AIST

18:45-20:30 Reception – Al Porto, 8th floor, Conference Tower, Tokyo Big Sight

January 30th, 2013 – Sessions & Presentations

10:00-11:00 Session 5 – Biomaterials
Chair – Chris Haugen, National Institute for Nanotechnology (NINT)

10:00-10:20 Effective Purification of Single-Wall Carbon Nanotubes by Biological Separation Techniques
Takeshi Tanaka, AIST

10:20-10:40 Quantum dot cytotoxicity and ways to reduce it
Françoise Winnik, University of Montreal/NIMS

10:40-11:00 Bioorthogonal evolution for functionalized molecular recognition
Yoshihiro Ito, RIKEN

11:00-12:20 Session 6 – Nanostructures/Tools
Chair – Kiyoshi Yase, AIST

11:00-11:20 Innovative Supra-molecule derived from Calix[4]arene as Material Harvesting System
Takashi Arimura, AIST

11:20-11:40 New materials for future lithium secondary battery
Tetsuya Osaka, Waseda University

11:40-12:00 Epsilon-Near-Zero Control for Brighter SERS Labels and Nanoscale IR Imaging
Gilbert Walker, University of Toronto

12:00-12:20 Nanotube Properties for Novel Materials and Devices
Dmitri Golberg, NIMS

12:20 **Poster Session**

12:20-13:10 **Presentation on Display Booths of Nanotech 2013 Exhibition**

12:20-12:30 **Charles Endo**
AGY Consulting Inc.

12:30-12:40 **Takeo Yamada**
AIST

12:40-12:50 **Koji Ishibashi**
RIKEN

12:50-13:00 **Takao Mori**
NIMS

13:00-13:10 **Embassy of Canada**

13:10-13:30 **Summary and Recommendation**
Arthur Carty, WIN
Tetsuji Noda, NIMS

13:30 **Closing**
Junichi Sone, NIMS