

IIT-NIMS/MANA/GREEN Workshop on Nanostructured Materials for Solar and Electrochemical Energy Conversion

Venue: National Institute for Materials Science (NIMS), Tsukuba, Japan
(Namiki-site, Collaborative Research Building, 4th floor)

Date: March 16, 2011 (Wednesday)

Tentative Program:

******* Morning Session I *******

Chairman: Prof. Yoshio Bando (MANA)

09:00 – 09:15 **Dr. Junichi Sone** NIMS Vice President

Introduction of NIMS

09:15 – 09:30 **Prof. Ashok K. Ganguli** IIT Delhi

Introduction of IIT Delhi

09:30 – 09:55 **Prof. Ashok K. Ganguli** IIT Delhi (Dep. of Chemistry)

Nanostructured materials for photo and electrocatalysis

09:55 – 10:20 **Dr. Masatoshi Yanagida** NIMS, MANA (MANA Scientist)

New structure of dye-sensitized solar cells

10:20 – 10:45 **Prof. B.R. Mehta** IIT Delhi (Dep. of Physics)

Nanostructured switchable mirror, sensor, resistive memory and solar cell devices

******* Photo Session *******

10:45 – 10:55 Group Photo at the Entrance of Collaboration Building

===== 10:55 – 11:20 Coffee Break =====

******* Morning Session II *******

Chairman: Prof. Ashok K. Ganguli (IIT Delhi)

11:20 – 11:45 **Prof. Kohei Uosaki** NIMS, MANA, GREEN (MANA PI)

*Interfacial Arrangements with Atomic/Molecular Resolution for Electrochemical
and Photoelectrochemical Energy Conversion*

11:45 – 12:10 **Prof. Joby Joseph** IIT Delhi (Dep. of Physics)

Holographic photonic structures and applications

12:10 – 12:35 **Dr. Daniele Pergolesi** NIMS, MANA (MANA Scientist)

*Fabrication and Ionic Conducting Properties of Metal Oxide Thin Films for
Solid Oxide Fuel Cell Application*

12:35 – 13:00 **Dr. Lionel Vayssieres** NIMS, MANA (MANA Indep. Scientist)

Quantum-confined metal oxide structures and devices

===== 13:00 – 14:00 Lunch Break =====

***** Afternoon Session *****

Chairman: Prof. Kohei Uosaki (MANA)

14:00 – 14:25 **Prof. S. Mukherjee** IIT Delhi (Mechanical Engineering)

Structures for small scale mechanisms

14:25 – 14:50 **Dr. Ajayan Vinu** NIMS, MANA (MANA Independent Scientist)

Nanostructured carbons and nitrides for fuel cells and sensors

14:50 – 15:15 **Prof. S. Basu** IIT Delhi (Chemical Engineering)

Using fuel cell for electro-reduction of CO₂ to organic compounds

15:15 – 15:40 **Dr. Yoshimi Kubo** NIMS, GREEN (Senior Researcher)

Large-scale production of carbon nanohorns and their application to fuel cells

15:40 – 15:45 **Prof. Yoshio Bando** NIMS, MANA (MANA Chief Operating Officer)

Closing Remarks

===== 15:45 – 16:00 Coffee Break =====

***** Laboratory Tour *****

16:00 – 17:15 MANA Laboratory Tour