

37th ISTC Japan Workshop on Advanced Nanomaterials in Russia/CIS

12-13 December, 2005, Tsukuba, Japan

[First Day]

December 12, 2005

Place: Conference Room, Collaborative Research Building, NIMS, Tsukuba

[Opening Session]

< Chairman : Mr. Fujita, General Manager, International Affairs Office,
NIMS >

09:30-09:35 *Opening Address*

Prof. Teruo Kishi, President, National Institute for Materials Science (NIMS)

09:35-09:40 *Welcome Address*

Ms. Junko Kawamura, Deputy Director-General, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT)

09:40-10:10 *“ISTC Functions & Some Information on Related R&D Policy in RF ”*

Mr. Toshihiko. Oguru, Deputy Executive Director, ISTC, Moscow, RF

Mr. Alexander Zaluzhny, Senior Project Manager, ISTC, Moscow, RF

[Session 1] General Overview

< Chairman : Prof. Bando, NIMS Fellow, Director-General, International Center for Young Scientists, NIMS >

10:10-10:50 *“Modern Problems of Nanostructured Advanced Materials Science”*

Prof. Rostislav A. Andrievskiy, Principal Scientist, Department of Functional Materials,
Institute of Problems of Chemical Physics, Chernogolovka, Moscow region,
RF

10:50-11:30 *“Self-Organizing Functional Nanostructures: A Frontier of Advanced Nanomaterials”*

Dr. Hiroshi Yokoyama, Director, Nanotechnology Research Institute,
National Institute of Advanced Industrial Science and Technology (AIST), JP

11:30-12:00 Open discussion

[All participants on the floor are expected to make comments]

12:00-13:00 **LUNCH**

[Session 2] Physics (1)

< Chairman : Dr. Nakayama >

13:00-13:30 *“Structures, Properties and Applications of Multi-Terminal Carbon Nanotube Junctions”*

Prof. Leonid A. Chernozatonskiy, Principal Researcher, Department of Material Research Science, Head of NanoMaterial Modelling group,

Institute of Biochemical Physics, Moscow, RF

13:30-14:00 *“Novel Inorganic Nanotubes: Properties and Functions”*
Prof. Dmitri Golberg, Associate Director, Nanosynthesis & Analysis Group,
Nanomaterials Laboratory, NIMS, JP

14:00-14:30 *“Synthesis and Application of Nano-Carbon Film Materials”*
Prof. Alexander N. Obratsov, Department of Physics,
Moscow State University, Moscow, RF

14:30-15:00 **Coffee break**

[Session 3] Physics (2)
 < Chairman : Dr. Golberg >

15:00-15:30 *“Manipulation of Intermolecular Bonds between C60 Molecules Using a Tip of STM”*
Dr. Tomonobu Nakayama, Associate Director, Electro-Nano Characterization
Group, Nanomaterials Laboratory, NIMS, JP

15:30-16:00 *“Quantum Dots and Lasers formed by Metamorphic Growth”*
Prof. Alexey E. Zhukov, Leading Researcher, Center for
Nanoheterostructures, Laboratory of Semiconductor Heterostructures,
A.F.Ioffe Physico-Technical Institute, St. Petersburg, RF

16:00-16:30 *“Superconducting Nanostructures as Quantum Bits”*
Dr. Yuri Pashkin, Principal Researcher, Fundamental Research Laboratories,
NEC Corporation, JP

16:30-17:00 Open discussion & Coffee break
 [All participants on the floor are expected to make comments]

[Session 4] Chemistry (1)
 < Chairman : Dr. Ohno >

17:00-17:30 *“Search for New Materials for Fuel Cell Catalysis”*
Dr. Nelli R. Khasanova, Researcher, Inorganic Chemistry Department,
Laboratory of Inorganic Crystallochemistry,
Moscow State University, Moscow, RF

17:30-18:00 *“Design of Nano-structure in Doped CeO₂ Solid Electrolytes for Low Temperature Operation of Solid Oxide Fuel Cells Application”*
Dr. Toshiyuki Mori, Senior Researcher, Eco-Energy Materials Group,
Ecomaterials Center, NIMS, JP

<This Session will be continued next morning>

18:00- **Reception** *all participants, audience of the WS are welcome to join

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[Second Day]

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[Session 5] Chemistry (2) * continued from previous day
< Chairman : Dr. Mori >

09:30-10:00 *“A New Aspect in the Computational Nanomaterial Science: Odd Electrons in Molecular Chemistry, Surface Science, and Solid State Magnetism”*

Prof. Elena F. Sheka, Principal Scientist, Scientific Research Department,
Peoples' Friendship University of the Russian Federation, Moscow, RF

10:00-10:30 *“Quantum Simulations on Nanomaterials”*

Dr. Takahisa Ohno, Director General, Computational Materials Science
Center, NIMS, JP

10:30-11:00 Open discussion & Coffee break

[All participants on the floor are expected to make comments]

[Session 6] Biology (1)

< Chairman : Prof. Osaka >

11:00-11:30 *“Binanotechnological Analysis of Affine Surfaces for Sensitive Bacteria Detection”*

Dr. Sergey G. Ignatov, Leading Scientist, Department #50,
State Research Center for Applied Microbiology, Obolensk, Moscow region,
RF

11:30-12:00 *“Detection of Biomolecular Recognition Based on Intrinsic Molecular Charges”*

Dr. Yuji Miyahara, Director, Bioelectronics Group, Biomaterials Center,
NIMS, JP

12:00-12:30 *“Nanoparticles as a Drug Delivery System”*

Prof. Alexander P. Kaplun, Department of Biotechnology,
M.V. Lomonosov Moscow State Academy of Fine Chemical Technology,
Moscow, RF

12:30-13:30 **LUNCH**

[Session 7] Biology (2)

< Chairman : Dr. Miyahara >

13:30-14:00 *“Bioartificial Pancreas. Membrane and Insulin Producing Cells from ES Cells”*

Prof. Hiroo Iwata, Director, Institute for Frontier Medical Sciences, Kyoto
University, JP

14:00-14:30 *“Multicomponent Ti-based Films for Load-Bearing Implants”*
Prof. Dmitry V. Shtanskiy, Leading Scientist, Scientific – Educational Center
of SHS,
Moscow State Institute of Steel and Alloys (Technological University),
Moscow, RF

14:30-15:00 *“Titania Gel Layers and Particles for Biomedical Applications”*
Prof. Akiyoshi Osaka, Head, Biomaterials Laboratory, Department of
Bioscience and Biotechnology, Okayama University, JP

15:00-15:30 Open discussion
[All participants on the floor are expected to make comments]

[Closing Remark]

15:30 Closing Remarks
Dr. Tetsuji Noda, Vice President, NIMS

16:00- **Lab Tours**
