

**The Second International Symposium on
Interdisciplinary Materials Science (ISIMS-2009)**

March 9-10, 2009

Tsukuba

(Tsukuba International Congress Center)

Program

March 9 (Monday)

9:20 - Opening
Akira Ukawa (Executive Advisor to the President, University of Tsukuba)

Session 1 Functionality in Molecular Assembly

chairmen: Yutaka Moritomo, Toshiaki Hattori

9:30 - 10:10 **Nanoparticles of Switchable Iron (II) Spin-crossover Materials: Molecular Engineering in Confined Media**
Jean-François Létard (Université Bordeaux)

10:10 - 10:35 **Functionality of Prussian Blue Lattice Mediated by Guest-host Interaction**
Yutaka Moritomo (University of Tsukuba)

10:35 - 10:45 Break

10:45 - 11:10 **Molecular Donor-Acceptor Compounds as Functional Components of Organic Field-Effect Transistors**
Tatsuo Hasegawa (National Institute of Advanced Industrial Science and Technology)

11:10 - 11:35 **Ferromagnetic Properties of Alkali-Metal Clusters Arrayed in Zeolite Crystals**
Yasuo Nozue (Osaka University)

11:35 - 12:00 **Physical Properties in Nano-Assembled Materials: Endohedral Atoms and Molecules in Confined Nanospaces**
Katsumi Tanigaki (Tohoku University)

12:00 - 13:30 Lunch

13:30 - 15:20 **Poster Session**

Session 2 Specific Field and Functional Molecules

Chairmen: Toshiharu Teranishi, Tatsuya Nabeshima

15:30 - 16:20 **Supramolecular Fluorescent Probes for Bioimaging**

Bradley D. Smith (University of Notre Dame)

16:20 - 16:55 **Molecular Response System Based on Hexaphenylethanes : Toward the Realization of Unimolecular Memory and Multi-functional Properties**

Takanori Suzuki (Hokkaido University)

16:55 - 17:05 Break

17:05 - 17:40 **Photochemistry on Nano-engineered Au Structures**

Hiroaki Misawa (Hokkaido University)

17:40 - 18:00 **Reactivity of Disilyne with a Silicon-Silicon Triple Bond**

Masaaki Ichinohe (University of Tsukuba)

18:30 - Reception

March 10 (Tuesday)

Session 3 Surface and Interface Science

chairmen: Kikuo Yamabe, Takaki Kanbara

9:00 - 9:40 **Spin Detection with a Scanning Tunneling Microscope**

Qi-Kun Xue (Tsinghua University)

9:40 - 10:00 **Atomically Controlled Diamond Surfaces**

Norio Tokuda (National Institute of Advanced Industrial Science and Technology)

10:00 - 10:20 **Microscopic Analysis on Surface Roughness of SiO₂ Films Grown on Atomically Flat Si (111)**

Ryu Hasunuma (University of Tsukuba)

10:20 - 10:30 Break

10:30 - 11:10 **STM/AFM Studies of Self-Assembled Monolayers and Molecular Recognition**
Masahiko Hara (Tokyo Institute of Technology)

11:10 - 11:30 **Forming Highly Ordered Arrays of DNA Nanofibers by Solvent Evaporation**
Hidenobu Nakao (National Institute for Materials Science)

11:30 - 13:00 Lunch

Session 4 Environmental and Biomaterial Science and Technology

chairmen: Yukio Nagasaki, Keiichi Tomishige

13:00 - 13:30 **Biomass - A Solution for Energy and Environment**
Mohammad Asadullah (University of Rajshahi)

13:30 - 13:50 **Development of Catalysts for Conversion of Biomass to Fuels and Value-added Chemicals**
Keiichi Tomishige (University of Tsukuba, JST, MANA)

13:50 - 14:20 **Green Chemistry: Transformation of Carbon Dioxide to Carbonates**
Hiroyuki Yasuda (National Institute of Advanced Industrial Science and Technology)

14:20 - 14:30 Break

14:30 - 15:00 **Nano Photocatalysis: An Ultimate Green Technology for a Sustainable Society**
Jinhua Ye (National Institute for Materials Science)

15:00 - 15:30 **Synthesis of Renewable Chemicals by Catalytic Conversion of Non-food Biomass**
Atsushi Fukuoka (Catalysis Research Center, Hokkaido University)

15:30 Closing
Youiti Ootuka (TIMS, University of Tsukuba)