

OS2: Micro/Nanoscale Heat and Fluid Flow

TAIKAN

November 7, 2006

- 14:20-14:30 **OS-2 Opening Address**
Taku Ohara (Tohoku University, Japan)
- 14:30-15:50 **Invited Talk I (Chair: Takashi Tokumasu)**
- OS2-1 **The Interfacial Interaction on Flow and Heat Transfer at Nanoscale**
14:30-15:10 Xin-Gang Liang (Tsinghua University, China)
- OS2-2 **Determination of Reaction Coefficient of Nitrogen Atoms with Solid**
15:10-15:50 **Carbon by Implementing DSMC Simulations with Experiments**
Shigeru Yonemura, Kenichi Nanbu (Tohoku University, Japan), Chul Park (KAIST, Korea) and Hideto Takekida (Tohoku University, Japan)
- 15:50-16:00 Break
- 16:00-17:20 **Invited Talk II (Chair: Hirofumi Daiguji)**
- OS2-3 **Study on Liquid Flow Characteristics in Microtubes**
16:00-16:40 Feng He and Pengfei Hao (Tsinghua University, China)
- OS2-4 **Three-Dimensional Measurement in a Micro-Flow via Micro-Digital**
16:40-17:20 **Holographic Particle-Tracking Velocimetry**
Shin-ichi Satake (Tokyo University of Science, Japan), Tomoaki Kunugi (Kyoto University, Japan), Kazuho Sato (Toyota Industries, Japan), Tomoyoshi Ito (Chiba University, Japan) and Jun Taniguchi (Tokyo University of Science, Japan)

November 8, 2006

- 9:00-10:20 **Invited Talk III (Chair: Shigeru Yonemura)**
- OS2-5 **Quantum Molecular Dynamics Study on Energy Transfer to an**
9:00-9:40 **Electron in Surface Collision Process of an Ion**
Masahiko Shibahara (Osaka University, Japan), Shin-ichi Satake and Jun Taniguchi (Tokyo University of Science, Japan)

- OS2-6 **Transport Phenomena in Nanofluidic Channels -Nanofluidic Modeling**
9:40-10:20 Hirofumi Daiguji (The University of Tokyo, Japan)
- 10:20-10:30 Break
- 10:30-11:50 **Invited Talk IV** (Chair: Masahiko Shibahara)
- OS2-7 **Thermal Conductivity of a Finite Length Single-Walled Carbon**
10:30-11:10 **Nanotube**
Shigeo Maruyama and Junichiro Shiomi (The University of Tokyo, Japan)
- OS2-8 **Thermal Wave Front Propagation in Nanoribbon**
11:10-11:50 Tatiana Zolotoukhina (Toyama University, Japan)
- 11:50-13:20 Lunch
- 13:20-15:00 **Poster Session** (Chair: Taku Ohara)
- OS2-P1 **A Numerical Investigation on Surface Plasmon Resonance Biosensor with Bimetallic Silver-Gold Film Structure**
Hyuk Rok Gwon, Hyung Sub Shim, Kyung Chul Ro, Hong Sun Ryou and Seong Hyuk Lee (Chung-Ang University, Korea)
- OS2-P2 **Development of Pressure Sensitive Molecular Film for High Knudsen Number Conditions**
Hideo Mori, Yu Matsuda, Tomohide Niimi, Hiroyuki Uenishi and Yoshiki Sakazaki (Nagoya University, Japan)
- OS2-P3 **Ion Pump by the Thermally Anisotropic Brownian Ratchet Microchip**
Takeo Nakano, Taku Ohara and Daichi Torii (Tohoku University, Japan)
- OS2-P4 **Modeling of Ion-Atom Collisions Considering Resonant Charge Exchange**
Shigeru Yonemura, Soichiro Oishi and Kenichi Nanbu (Tohoku University, Japan)

- OS2-P5 **Micro-Scale Heat Transport Modeling Using Equation of Phonon Radiative Transfer**
Atsushi Sakurai, Shigenao Maruyama (Tohoku University, Japan), Koji Miyazaki (Kyushu Institute of Technology, Japan) and Atsuki Komiya (Tohoku University, Japan)
- OS2-P6 **Heat Conduction of Single-Walled Carbon Nanotube Isotope-Superlattice Structures**
Junichiro Shiomi and Shigeo Maruyama (The University of Tokyo, Japan)
- OS2-P7 **Computational Simulation on Acceleration of Micro/Nano Particle in Supersonic Jet by Electrostatic Force**
Hidemasa Takana, Kazuhiro Ogawa, Tetsui Shoji and Hideya Nishiyama (Tohoku University, Japan)
- OS2-P8 **Dissociation Phenomena of H₂ on Pt(111) Surface**
Takashi Tokumasu (Tohoku University, Japan)
- OS2-P9 **Effect of Channel Diameter on Micro Discharges in a Narrow Channel**
Lizhu Tong, Shigeru Yonemura, Hidemasa Takana and Hideya Nishiyama (Tohoku University, Japan)
- OS2-P10 **Molecular Scale Governing Factor on Characteristics of Thermal Energy Transfer at Solid-Liquid Interfaces**
Daichi Torii, Taku Ohara and Kenji Ishida (Tohoku University, Japan)
- OS2-P11 **A Molecular Dynamics Simulation on a Growth of Bubble Nuclei in a Decompressed Liquid**
Shin-ichi Tsuda, Shu Takagi and Yoichiro Matsumoto (The University of Tokyo, Japan)
- OS2-P12 **On Precursor Film Formed Ahead Advancing Contact Line of Traveling Droplet on Solid Substrate**
Ichiro Ueno, Takumi Konisho, Tomoya Kawase and Takuya Watanabe (Tokyo University of Science, Japan)

OS2-P13

**Thermal Conductivity and Interfacial Thermal Resistance in
Double-Layered Nanofilms by Nonequilibrium Molecular Dynamics
Simulations**

Shuai-Chuang Wang, Xin-Gang Liang (Tsinghua University, China)