

JSPS Asian CORE Program Workshop on Materials Science and Engineering  
(Student Workshop between Department of Materials Science and Engineering, Tsinghua University, and Department of Materials Engineering, The University of Tokyo)

Sponsored by:

Asian CORE program, Japan Society for the Promotion of Science  
Dept. of Material Science and Engineering, Tsinghua University  
Dept. of Materials Engineering, The University of Tokyo  
School of Engineering, The University of Tokyo  
Global Center of Excellence for Mechanical Systems Innovation

May 14 (Friday), 2010

Room 205, Faculty of Engineering Bldg. 4, The University of Tokyo

## PROGRAM

### 9:30-9:45 Opening

Prof. ENOKI, Manabu (U Tokyo, Department head)

Prof. ZHANG, Zhengjun (Tsinghua U, Department head)

### 9:45-11:30 Session 1

LIU, Wei (Tsinghua U): *Electrical Conductivity of Tunable Textured Sm<sup>3+</sup> and Nd<sup>3+</sup> Co-doped CeO<sub>2</sub> Thin Films by RF Magnetron Sputtering*

KASAMATSU, Shusuke (U Tokyo): *First principles investigation of ionic conductivity modulation at zirconia/heterophase interfaces*

LI, Bin (Tsinghua U): *Greatly enhanced oxide-ion conductivity of oriented ultra-thin nanowires for solid oxide electrolytes*

IMAGAWA, Shigeki (U Tokyo): *Photonic band gap formation in a photonic amorphous diamond*

WANG, Rui (Tsinghua U): *Electromagnetic properties of ferrite-based LHMs*

INAZUKA, Daiki (U Tokyo): *Electronic transport and molecular dynamics simulations on a single molecular bridge with water solvent based on non-equilibrium Green's function method*

ZHONG, Caifu (Tsinghua U): *Investigation of Thickness Dependence of Structure and Electric Properties of Sol-Gel Derived BiScO<sub>3</sub>-PbTiO<sub>3</sub> Thin Films*

11:30-11:40 Photo

(11:40-13:30: Lunch)

### **13:30-15:15 Sessin 2**

AMAZUTSUMI, Koji (U Tokyo): *High-resolution X-ray diffraction study on periodically-inverted AlGaAs epilayers*

ZHAN, Peng (Tsinghua U): *Growth of Highly textured ZnO thin films by Pulsed Electron beam Deposition*

MITSUMA, Tasuku (U Tokyo): *STEM/TEM analysis of atomic structures in SrTiO<sub>3</sub> [110] symmetrical tilt grain boundary*

ZOU, Minmin (Tsinghua U): *Fabrication and thermoelectric properties of FeVSb-based half-Heusler compounds*

WANG, Shengkai (U Tokyo): *The reaction of oxygen with Ge(100)- GeO desorption, active oxidation and the transition to passive oxidation*

LAN, Hao (Tsinghua U): *Improvement of Isothermal Oxidation Resistance of CoNiCrAlY(Re) Bond Coat Alloys Modified by Dy*

SAKAMOTO, Motohiro (U Tokyo): *Investigation on the Structure of Molten CaO-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub> Slag by MAS-NMR*

(15:15-15:45: Coffee break)

### **15:45-17:15 Session 3**

LI, Junfeng (Tsinghua U): *Effects of potassium fluoride on the formation of mullite as the only crystal phase in kaolinite*

EGUSA, Daisuke (U Tokyo): *Determination of a unique long-period ordered structure in a Mg<sub>97</sub>Zn<sub>1</sub>Er<sub>2</sub> alloy by aberration-corrected STEM*

LI, Zheng (Tsinghua U): *Magnetic-Field-Dependent Raman Scattering in Multiferroic Bilayer Films: Evidence for Stress-Mediated Magnetoelectric Coupling*

OU, Shourin (U Tokyo): *Numerical simulation of solidification microstructure evolution using moving particle method*

WANG, Lei (Tsinghua U): *Influence of Praseodymium Loading on the Oxygen Storage Capacity of CeO<sub>2</sub>-ZrO<sub>2</sub> Mixed Oxides*

SHIRAIWA, Takayuki (U Tokyo): *Fatigue damage measurement of structural members using low power wireless modules*

### **17:15-17:30 Closing**

Prof. WATANABE, Satoshi (U Tokyo)

Prof. PAN, Wei (Tsinghua U)

### **18:00-20:00 Reception (at Abreuvior, The University of Tokyo Mukougaoka Faculty House)**

<http://www.abreuvior.co.jp/2009/UT/06.html>

Fee: ¥1,000 (student of Dept. Materials Engineering and/or GMSI), ¥2,000 (others)