

## PCOS2011 Program

### November 17

13:00 – 13:05 H. Yuzurihara (Ricoh Company, Ltd.)

Opening Remarks

13:05 – 13:10 N. Yamada (Panasonic Corp.)

Opening Speech

#### *Session 1*

13:10 – 13:30 M. Okuda (Okuda Technical Office)

<Special> 相変化記録研究会から Phase Change Oriented Science へ

13:30 – 14:10 M. Wuttig (RWTH Aachen University of Technology)

<Invited> Phase Change Materials: The Importance of Resonance Bonding and Disorder

14:10 – 14:35 T. Matsunaga (Panasonic)

Structural investigation for a-AIST clarify the difference between the two types of contrastive phase-change mechanisms

14:35 – 15:00 P. Fons (National Institute of Advanced Industrial Science and Technology)

Simultaneous Measurements of Short and Long-range order in GeTe

15:00 – 15:25 R. Lan (Tokyo Institute of Technology)

Thermal Conductivities of Phase Change Material Sb-Te Alloys in solid states

Coffee Break

#### *Session 2*

15:45 – 16:25 M. Hase (Tsukuba University)

<Invited> Ultrafast dynamics of phase change in Ge-Sb-Te materials studied by coherent phonon spectroscopy

16:25 – 17:05 J. Tominaga (National Institute of Advanced Industrial Science and Technology)

<Invited> Magnetic properties of phase-change films hidden in the structures

17:05 – 17:30 Y. Sutou (Tohoku University)

Ge-Cu-Te films for phase change random access memory

17:30 – 17:55 H. Tokoro (University of Tokyo)

Thermodynamic Study on  $\lambda$ -Ti<sub>3</sub>O<sub>5</sub> Exhibiting a Light-induced Metal-Semiconductor Transition

## November 18

### Session 3

- 9:00 – 9:40 K. Miyazaki (Kyushu Institute of Technology)  
<Invited> Enhancement of Thermoelectric Performance by using nano-structures
- 9:40 – 10:05 K. Tajima (Keio University)  
Crystallization behavior of GeSbTe nonthermally amorphized by femtosecond laser pulse irradiation
- 10:05 – 10:30 K. Hira (Keio University)  
GeSbTe 薄膜上の金ナノ粒子における巨大局在表面プラズモン共鳴スイッチング

### Coffee Break

- 10:50 – 11:15 M. Takahashi (Keio University)  
Local Control of energy structure of semiconductor quantum dots using phase change material
- 11:15 – 11:40 T. Toyosaki (Keio University)  
Repetitive Switching of Optical Gate Switch Using Phase-Change Material and Si Waveguide

### Photo and Lunch

### Session 4

- 13:30 – 14:10 T. Tsuruoka (National Institute for Materials Science)  
<Invited> Atomic switch: Development of resistive switching memories based on nanoscale migration of cations in oxide thin films
- 14:10 – 14:35 Y. Sasago (Hitachi, Ltd.)  
Thin-film lateral phase-change memory driven by poly-Si MOS transistor enabling both low cost and high-programming gigabyte-per-second throughput
- 14:35 – 15:00 S. Hosaka (Gunma University)  
Random access multi-levels phase changing using pulse modulation

### Coffee Break

### Session 5

- 15:20 – 15:45 H. Machida (Gas-phase Growth Ltd.)  
Verification of GeSbTe composition in the high aspect hole filled by Chemical Vapor Deposition
- 15:45 – 16:10 A. Tachibana (Kyoto University)  
First principles calculations for growth condition for CVD process of GeSbTe
- 16:10 – 16:35 J. Richter (National Institute of Advanced Industrial Science and Technology)  
An in situ phase-change memory cell study using nanometer scale x-ray optics
- 16:35 – 17:00 T. Odaka (National Institute of Advanced Industrial Science and Technology)  
AFM study for Electric Characteristics of Phase-Change Superlattice Film
- 17:10 – 17:15 N. Yamada (Panasonic Corp.)  
Best Paper Awarding
- 17:15 – 17:20 Y. Ogino (Hitachi Computer Peripherals Co., Ltd.)  
Closing Remarks