



KINKEN-KIST joint symposium 2018

Auditorium, Institute for Materials Research, Tohoku University, Japan

July 4 (Wed) - 5 (Thu), 2018

July 4 (Wed)

- 9:30-10:00 Registration
- 10:00-10:15 Opening remarks, Koki Takanashi (IMR)
- 10:15-10:30 Introduction of PSI and KIST, Joonyeon Chang (PSI, KIST)

Session 1. Spintronics I

- 10:30-11:00 “Current-driven creation, translation, and annihilation of ferromagnetic skyrmions observed by scanning transmission X-ray microscopy”
Jun Woo Choi (Center for Electronic Materials, PSI, KIST)
- 11:00-11:30 “Nonreciprocal propagation of electromagnetic waves, magnons, and acoustic waves in multiferroics”
Yoshinori Onose (Physics of Crystal Defects, IMR)
- 11:30-12:00 “Spintronics phenomena in topological semimetals”
Kentaro Nomura (Theory of Solid State Physics, IMR)
- 12:00-13:30 Lunch (Group Photo)

Session 2. Electronic materials

- 13:30-14:00 “Simple and scalable artificial neuron based on ovonic threshold switch (OTS)”
Suyoun Lee, (Center for Electronic Materials, PSI, KIST)
- 14:00-14:30 “Microfabrication of functional thin films using $\text{LaAlO}_3/\text{BaO}_x$ water-soluble sacrificial templates”
Takayuki Harada (Low Temperature Physics, IMR)
- 14:30-15:00 “Complex hydrides for all solid-state battery electrolytes”
Sangryun Kim (Hydrogen Functional Materials, IMR)
- 15:00-15:30 Break

Session 3. Devices and microstructure materials

- 15:30-16:00 "Three-dimensional organic field - effect transistors based on self-organization of organic semiconductor: Insulating polymer blends"
Jung Ah Lim (Center for Opto-Electronic Materials and Devices Research, PSI, KIST)
- 16:00-16:30 "Temperature effect on the microstructure of FeCo porous produced by liquid metal dealloying: its long-range ordering and transformation behavior"
Soo-Hyun Joo (Non-Equilibrium Materials, IMR)
- 16:30-17:00 "Quantum phase transition in electric-field-induced 2D superconductors"
Tsutomu Nojima (Laboratory of Low Temperature Materials Science, IMR)

July 5 (Thu)

Session 4. Spintronics II

- 9:00-9:30 "Transmission line model for materials with Spin - momentum locking"
Seokmin Hong (Center for Electronic Materials, PSI, KIST)
- 9:30-10:00 "Spin-Hall magnetoresistance in ferrimagnetic Co-Gd / nonmagnetic Pt layers"
Takeshi Seki (Magnetic Materials, IMR)
- 10:00-10:30 "Control of spin caloritronic effects in nanostructured materials"
Masaki Mizuguchi (Collaborative Research Center on Energy Materials, IMR)
- 10:30-10:50 break

Session 5. Semiconductor Devices

- 10:50-11:20 "Low dimensional nanostructured semiconductors for electronic and optoelectronic device applications"
Do Kyung Hwang (Center for Opto-Electronic Materials and Devices Research, PSI, KIST)
- 11:20-11:50 "GaN growth and blue LED on novel oxide substrate ScAlMgO₄"
Shigeyuki Kuboya (Physics of Electronic Materials, IMR)
- 11:50-12:00 Closing remarks, Joonyeon Chang (KIST) and Koki Takanashi (IMR)