

Wednesday, September 30

Venue: Convention Hall 300/Conference Room 405

Research Frontier of Developing Energy and Environmental-friendly Materials

The topics in this section are focused on recent progress in a variety of fields related to energy-related functional and sustainable materials including fuel cells, photovoltaics, nano-functional systems, etc.

Session Organizer: Tatsuya Nabeshima

Session 4 / 5	
Universe Evolution and Matter Origin / Research Frontier of Developing Energy and Environmental-friendly Materials	
	Chair: Fumihiko Ukegawa, University of Tsukuba
9:00-9:10	Kazuyuki Kanaya Director, Center for Integrated Research in Fundamental Science and Engineering, University of Tsukuba Opening Address and Introduction to CiRfSE
9:10-9:45	Guillaume Unal Tentative: LHC/ATLAS and Higgs CERN, Switzerland
	Chair: Eiji Nishibori, University of Tsukuba
9:45-10:20	Bo Iversen Center for Materials Crystallography (CMC), Aarhus University Watching nanocrystals form
10:20-10:45	Break
	Chair: Shinichi Esumi, University of Tsukuba
10:45-11:20	Roy Lacey State University of New York at Stony Brook Particle correlation studies in RHIC-BES: Probes for the critical end point in the QCD phase diagram
	Chair: Junji Nakamura, University of Tsukuba
11:20-11:55	Junfa Zhu National Synchrotron Radiation Laboratory, University of Science and Technology of China Applications of synchrotron radiation soft X-ray spectroscopies in the studies of energy-related functional materials
11:55-13:00	Lunch (3F Convention Hall 300)
Session 5: Research Frontier of Developing Energy and Environmental-friendly Materials (4F Conference Hall 405)	
	Chair: Yutaka Moritomo, University of Tsukuba
13:00-13:35	Cheng-Hao Chuang Department of Physics, Tamkang University X-ray spectroscopic study for different surface bonding environments of graphene oxide

13:35-14:05	Shin-ichi Adachi	Photon Factory, Institute of Materials Structure Science (IMSS), KEK
	Visualizing bond formation in solution with femtosecond X-ray scattering	
14:05-14:15	Break	
14:15-14:45	Yoshihisa Harada	The Institute for Solid State Physics (ISSP), Synchrotron Radiation Research Organization, the University of Tokyo
	A new perspective on the structure of water: An electronic structure study	
14:45-15:10	Hideharu Niwa	Division of Physics, Faculty of Pure and Applied Sciences, University of Tsukuba
	<i>Operando</i> soft X-ray emission spectroscopy of non-Pt oxygen reduction catalysts for polymer electrolyte fuel cells	
15:10-15:20	Break	
	Chair: Junfa Zhu (National Synchrotron Radiation Laboratory, University of Science and Technology of China)	
15:20-15:55	Yu Kwon Kim	Department of Chemistry and Department of Energy Systems Research, Ajou University
	Enhanced catalytic activity of chemically modified TiO ₂ nanocrystals	
15:55-16:25	Shin-ichiro Fujita	Division of Applied Chemistry, Faculty of Engineering, Hokkaido University
	Mechanism of methanol synthesis over Cu/ZnO: Difference between CO ₂ and CO hydrogenations	
16:25-16:35	Break	
	Chair: Tatsuya Nabeshima, University of Tsukuba	
16:35-17:05	Tsuyoshi Takata	Global Research Center for Environment and Energy based on Nanomaterials Science (GREEN), NIMS
	Development of photocatalysts for water splitting under visible light irradiation	
17:05-17:30	Junpei Kuwabara	Tsukuba Research Center for Interdisciplinary Materials Science (TIMS), Graduate School of Pure and Applied Sciences, University of Tsukuba
	Practical synthetic method of conjugated polymer materials for organic photovoltaics	