

Oral Presentation

Symposium 3. Advanced Materials for Energy Storage

February 21(TUE)		
Time	Program	
	[Session 3-1] Advanced Materials for EnergyStorage	
	Chair: Palani Balaya (National University of Singapore)	
09:00-09:45	[SO3-1] Interface Formation and Design of All-solid-state Lithium Batteries (Keynote speaker)	Kiyoshi Kanamura (Tokyo Metropolitan University)
09:45-10:15	[SO3-2] Current Challenges in Fabrication and Analysis of Oxide Based All-Solid-State Li-Batteries (Invited speaker)	Martin Finsterbusch (Forschungszentrum Juelich GmbH)
Time	Program	
	[Session 3-2] Advanced Materials for EnergyStorage	
	Chair: Jang Wook Choi (KAIST)	
10:45-11:15	[SO3-3] Interfacial Phenomena in Solid-state Batteries (Invited speaker)	Kazunori Takada (National Institute for Materials Science)
11:15-11:45	[SO3-4] Critical Interfacial Issues in Rechargeable High Energy Density Lithium Batteries (Invited speaker)	Xiangxin Guo (Shanghai Institute of Ceramics, CAS)
11:45-12:15	[SO3-5] Interface Formation and Design of All-solid-state Rechargeable Lithium Batteries (Invited speaker)	Takeshi Kimura (Tokyo Metropolitan University)
Time	Program	
	[Session 3-3] Advanced Materials for EnergyStorage	
	Chair: Kiyoshi Kanamura (Tokyo Metropolitan University)	
15:50-16:20	[SO3-6] Crystal Water Containing Materials for Post-Lithium-Ion Batteries (Invited speaker)	Jang Wook Choi (KAIST)
16:20-16:50	[SO3-7] Requisites to Trigger Oxygen Redox Chemistry in Sodium Excess Layered Oxides (Invited speaker)	Masashi Okubo (University of Tokyo)
16:50-17:05	[SO3-8] Synthesis and Electrochemical Performance of Na ₂ MnSiO ₄ as a Cathode Material for Sodium-ion Battery	Markas Law (National University of Singapore)
17:05-17:35	[SO3-9] Green Electrode Materials for Lithium Batteries (Invited speaker)	Moon Jeong Park (POSTECH)
17:35-17:50	[SO3-10] Lithium 2,5-Pyridinedicarboxylate as a Stable and High-Capacity Organic Anode Material for Lithium-ion Batteries	Harihara Padhy (National University of Singapore)
17:50-18:15	[SO3-11] Shape-tunable Low-Temperature Synthesis of High-Crystalline Transition Metal Dichalcogenide Quantum Dots	Hye-jeong Park (Sungkyunkwan University)

February 22 (WED)		
Time	Program	
	[Session 3-4] Advanced Materials for EnergyStorage	
	Chair: Xiangxin Guo (Shanghai Institute of Ceramics, CAS)	
10:40-11:10	[SO3-12] Solution-Processable Li- and Na-ion Conducting Solid Electrolytes for All-Solid-State Batteries (Invited speaker)	Yoon Seok Jung (UNIST)
11:10-11:40	[SO3-13] Lithium Garnets for Advanced Batteries (Invited speaker)	Murugan Ramaswamy (Pondicherry University)
11:40-12:10	[SO3-14] Electrochemical Synthesis of Ion Conducting Polymer Separators for Li-ion Batteries (Invited speaker)	Philippe Knauth (Aix Marseille University)
Time	Program	
	[Session 3-5] Advanced Materials for EnergyStorage	
	Chair: Naoaki Yabuuchi (Tokyo Denki University)	
15:50-16:20	[SO3-15] Probing Defects in Battery Materials by Combined NMR/DFT calculations (Invited speaker)	Dany Carlier (Bordeaux University)
16:20-16:50	[SO3-16] Na ⁺ transport and effect of transition metal layers in P2-type: neutron scattering and atomistic modeling study (Invited speaker)	Max Avdeev (Australian Nuclear Science and Technology Organisation)
16:50-17:20	[SO3-17] Fast-ion conducting materials for high rate performance batteries (Invited speaker)	Stefan Adams (National University of Singapore)

February 23(THU)		
Time	Program	
	[Session 3-6] Advanced Materials for EnergyStorage	
	Chair: Jinwoo Lee(POSTECH)	
09:00-09:30	[SO3-18] Rational design of soluble catalysts for Li-O ₂ batteries (Invited speaker)	Kisuk Kang (Seoul National University)

09:30-10:00	[SO3-19] Two dimensional materials in energy storage applications (Invited speaker)	Guangyuan Wesley Zheng (Agency for Science Technology and Research)
10:00-10:30	[SO3-20] Synthesis and evaluation of composite cathodes for high performance Li/S batteries (Invited speaker)	Zumabay Bakeno (Nazarbayev University)
Time	Program	
	[Session 3-7] Advanced Materials for Energy Storage	
	Chair: Kisuk Kang (Seoul National University)	
10:50-11:05	[SO3-21] Structural dependence of Li ₂ O ₂ on the surface characteristics of carbon electrodes in Li-O ₂ batteries	Raymond A Wong (RIKEN)
11:05-11:20	[SO3-22] Nanostructured Oxygen Catalysts Prepared by Facile Methods for High Performance Zn-Air Batteries	Bing Li (IMRE)
11:20-11:35	[SO3-23] Synthesis and Characterization of Silver Electrocatalysts for the Oxygen Redox Reaction in the Zn-Air Batteries	Yuan-Yuan Yao (Chang Gung University)
11:35-11:50	[SO3-24] Effect of mesoporous carbon cathode on discharge product morphology and recharge potential in a Li-O ₂ battery	Arghya Dutta (KAIST)
Time	Program	
	[Session 3-8] Advanced Materials for Energy Storage	
	Chair: Dany Carlier (Bordeaux University)	
13:30-14:00	[SO3-25] High-Capacity Positive Electrodes with Multi-Electron Redox Reaction for Rechargeable Lithium Batteries (Invited speaker)	Naoaki Yabuuchi (Tokyo Denki University)
14:00-14:30	[SO3-26] Fast rate capable electrode materials with higher energy density than LiFePO ₄ :4.2V-LiVPO ₄ F (Invited speaker)	Byoungwoo Kang (POSTECH)
14:30-15:00	[SO3-27] Design of Battery Electrodes for High Performance Li-ion Batteries (Invited speaker)	Chang-Jun Bae (KIMS)
15:00-15:30	[SO3-28] Few Layered black phosphorus nanosheets for Li/Na storage (Invited speaker)	Qingyu Yan (Nanyang Technological University)
Time	Program	
	[Session 3-9] Advanced Materials for Energy Storage	
	Chair: Byoungwoo Kang (POSTECH)	
15:50-16:20	[SO3-29] Phase Transition Analysis between LiFePO ₄ and FePO ₄ at Various Temperatures (Invited speaker)	Yuki Oriksa (Ritsumeikan University)
16:20-16:35	[SO3-30] Enhanced cyclic stability of in-situ carbon coated LNMC cathode materials for lithium ion batteries	Govindan Sundararajan (IIT Madras)
16:35-16:50	[SO3-31] New insights on the phase transitions occurring at high voltage (E > 4.3V vs. Li ⁺ /Li) in the LiCoO ₂ systems (Li:Co ≥ 1)	Marie Duffiet (Umicore)
16:50-17:05	[SO3-32] High Performance ZnV ₂ O ₄ as Anode Material for Energy Storage Applications	Irish Valerie Buiser Maggay (Chung Yuan Christian University)

February 24(FRI)

Time	Program	
	[Session 3-10] Advanced Materials for Energy Storage	
	Chair: Palani Balaya (National University of Singapore)	
09:00-09:30	[SO3-33] Magnéli Phase Titanium Oxides as A New Class of Supercapacitor Materials (Invited speaker)	Nae-Lih Wu (National Taiwan University)
09:30-09:45	[SO3-34] Spongy balls composed MnO ₂ /MWCNTs nanocomposites supported on stainless steel substrate for supercapacitor	Nilesh Chodankar (Chonnam National University)
09:45-10:00	[SO3-35] Chemistry of Metal Extraction as a Tool to Activate Carbon for Supercapacitors	Seung-Mo Lee (KIMM)
10:00-10:15	[SO3-36] Solution processed Mn ₃ O ₄ nanoparticles for electrochemical double layer supercapacitors	M. Shaheer Akhtar (Chonbuk National University)
10:15-10:30	[SO3-37] Desalination batteries with Mn-based electrode and porous dendritic Ag-(Cu) electrode for asymmetric systems	JungYong Seo (Sungkyunkwan University)
Time	Program	
	[Session 3-11] Advanced Materials for Energy Storage	
	Chair: Dany Carlier (Bordeaux University)	
10:50-11:20	[SO3-38] Development of New Redox Couples for High-Performance Redox Flow Batteries (Invited speaker)	Hye Ryung Byon (KAIST)
11:20-11:35	[SO3-39] High Energy Efficiency and Stability for Photoassisted Aqueous Lithium-Iodine Redox Batteries	Georgios Nikiforidis (KAIST)