

Oral Presentation

Symposium 8. Critical Materials for Energy

February 20 (MON)

Time	Program	
	[Session 8-1] Critical Materials for Energy	
	Chair: Soon-Jik Hong (Kongju Nat. Univ.)	
15:10-15:40	[SO8-1] Synthesis of Alloys from Scrap Magnet Material (invited speaker)	Ryan T. Ott (AmesLab)
15:40-15:55	[SO8-2] Recovery and Purification of Critical Materials from Solar Cell Industry	YU-CHI WANG (Nat. ChengKung Univ)
15:55-16:10	[SO8-3] Effect of raw material on combustion synthesis of Ti powder	Kyoung-Tae Park (KITECH)
16:10-16:25	[SO8-4] Electroreduction of Indium Tin Oxide using Solid Oxide Membrane in molten salts	Sukcheol Kwon (ChungnamNational University)
16:25-16:40	[SO8-5] Electroreduction of Zirconium Oxide by using Inert Anode in molten salts	BUNGUk YOO (ChungnamNational University)
16:40-16:55	[SO8-6] Zirconium recycling from spent acid of nuclear fuel cladding by electro-winning in BaF ₂ -ZrF ₄ molten salt.	Jeong hun Choi (Chungnam National University)
16:55-17:10	[SO8-7] Extraction mechanism of rare earth elements contained in permanent magnet using molten Bismuth	Sun-woo Nam (KITECH)
17:10-17:25	[SO8-8] Recovery of tantalum from used tantalum capacitors by hydrometallurgy	Kuan-Yan Lin (Nat. ChengKung Univ)

February 21(TUE)

Time	Program	
	[Session 8-2] Critical Materials for Energy	
	Chair: Seok-Jun Seo(KITECH)	
09:00-09:30	[SO8-9] Recycling of Silicon Carbide Using Anaerobic Floatation Method from Silicon Slurry (Keynote presentation)	Wei-Sheng Chen (Nat. ChengKung)
09:30-09:45	[SO8-10] Extraction behavior of dysprosium from rare earth magnet by using molten magnesium	Yongsu Kim (Univ. of Science and Technology)
09:45-10:00	[SO8-11] Direct sinter-less fabrication of TaC powder by combustion synthesis process	JaeJin Sim (KITECH)
10:00-10:15	[SO8-12] Recovery and Separation of Valuable Metals from Cathode Materials of Spent Lithium-ion Batteries (LIBs) by ion Exchange	Kai-Lun Chiu (Nat. ChengKung Univ.)
10:15-10:30	[SO8-13] A synthesis process of Mn-Zn ferrite powder from spent battery by hydrometallurgy	Chin-Ting Liao (Nat. ChengKung Univ)
Time	Program	
	[Session 8-3] Critical Materials for Energy	
	Chair: Ryan T. Ott (AmesLab.)	
10:50-11:20	[SO8-14] Investigation of microstructure and thermoelectric properties of spark plasma sintered p-type Bi ₂ Te ₃ +75%Sb ₂ Te ₃ based alloys (invited speaker)	Soon-Jik Hong (Kongju National Universtiy)
11:20-11:35	[SO8-15] Enhanced thermoelectric performance through the dispersion of Ta ₂ O ₅ nanoparticles in Bi _{0.5} Sb _{1.5} Te ₃ matrix	Eun Bin Kim (KongjuNational Universtiy)
11:35-11:50	[SO8-16] Large scale production of high efficient and robust p-type Bi-Sb-Te based thermoelectric materials by powder metallurgy	Babu Madavali (KongjuNational Universtiy)
11:50-12:05	[SO8-17] Simultaneous enhancement in thermoelectric power factor and reduction of thermal conductivity through the dispersion of β- Zn ₄ Sb ₃ alloy in	Peyala Dharmiah, (KongjuNational Universtiy)
12:05-12:20	[SO8-18] Morphology-controlled synthesis of high aspect ratio akaganeite nano rods with improved yield content	Hessan Khalid (Univ. of Science and Technology)
Time	Program	
	[Session 8-4] Critical Materials for Energy	
	Chair: Il-Kyu Park (Seoul Nat. University of Science and Technology)	
15:50-16:05	[SO8-19] Analysis of aluminum based nozzle for high pressure hydrogen gas storage cylinder	Dae-Kyeom Kim (Univ. of Science and Technology)
16:05-16:20	[SO8-20] The Multimodal Luminescence Property of ZnSe:Eu/ZnS (Core/Shell) Quantum Dots	Ji Young Park (KITECH)
16:20-16:35	[SO8-21] Microstructural Characterization of Powder Metallurgy Processed Copper-Iron Alloy	Sardar Farhat Abbas (Univ. of Science and Technology)