

Oral Presentation

Symposium 1. Materials for Solar Fuel Production and Applications

February 21(TUE)		
Time	Program	
	[Session 1-1] Materials for Solar Fuel Production and Applications	
	Chair: Yung-Jung Hsu (National Chiao Tung University), Kijung Yong (POSTECH)	
10:50-11:30	[SO1-1] Interfacial Engineering of Semiconductor Hybrids for Solar photocatalytic and Photosynthetic Applications (Keynote presentation)	Wonyong Choi (POSTECH)
11:30-12:00	[SO1-2] Nanostructured Semiconductors for Photocatalytic Hydrogen Production (Invited Talk)	Shih-Yuan Lu (National Tsing-Hua University)
Time	Program	
	[Session 1-2] Materials for Solar Fuel Production and Applications	
	Chair: Shih-Yuan Lu (National Tsing-Hua University), Wooyul Kim (Sookmyung Women's University)	
15:50-16:20	[SO1-3] Unassisted photoelectrochemical solar water splitting with designed nanomaterials and devices (InvitedTalk)	Jong Hyeok Park (Yonsei University)
16:20-16:50	[SO1-4] Au@Cu ₂ O core@shell and Au@Cu ₇ S ₄ yolk@shell nanocrystals for peroxidase-assisted photocatalytic applications (Invited Talk)	Yung-Jung Hsu (National Chiao Tung University)
16:50-17:20	[SO1-5] Silver electrocatalysts for efficient and selective CO ₂ reduction to CO production (Invited Talk)	Yun Jeong Hwang (KIST)
17:20-17:50	[SO1-6] Processing and structure design for photocatalytic hydrogen production system (Invited Talk)	Tai-Chou Lee (National Central University)

February 22 (WED)		
Time	Program	
	[Session 1-3] Materials for Solar Fuel Production and Applications	
	Chair: Wooyul Kim (Sookmyung Women's University), Ji-Wook Jang (UNIST)	
10:40-11:20	[SO1-7] TiO ₂ Mesocrystals for Efficient Photocatalyst (Keynote presentation)	Tetsuro Majima (Osaka University)
11:20-11:50	[SO1-8] High Efficiency Solar Production of Liquid Formate from Carbon Dioxide and Water Over a Month on Heterojunction Oxides (Invited Talk)	Hyunwoong Park (Kyungpook National University)
11:50-12:05	[SO1-9] Polyoxometalates-carbon dots hybrids as new material for photo-anodes and photocatalysis applications	Delphine Schaming (University Paris Diderot)
Time	Program	
	[Session 1-4] Materials for Solar Fuel Production and Applications	
	Chair: Hyunwoong Park (Kyungpook National University), Kijung Yong(POSTECH)	
15:50-16:20	[SO1-10] Selective CO ₂ Reduction to Liquid Solar Fuels by Reduction Potential Tuning (Invited Talk)	Young Soo Kang (Sogang University)
16:20-16:50	[SO1-11] Solar Fuel Production for a Sustainable Energy (Invited Talk)	Deryn Chu (US Army Research Laboratory)
16:50-17:20	[SO1-12] Enabling Unassisted Solar Water Splitting by Iron Oxide and Silicon (Invited Talk)	Ji-Wook Jang (UNIST)
17:20-17:50	[SO1-13] Interface engineering in hybrid nanostructures towards improved photocatalysis (InvitedTalk)	Yan-Gu Lin (National Synchrotron Radiation Research Center)
17:50-18:05	[SO1-14] Photoelectrochemical salt-water splitting using Ag ₂ ZnSnSe ₄ photoelectrodes created by selenization of thermal evaporated Ag-Zn-Sn metal alloys	Ci-Ying Lee (Chang Gung University)

February 23(THU)		
Time	Program	
	[Session 1-5] Materials for Solar Fuel Production and Applications	
	Chair: Shaohua Shen (Xi'an Jiaotong University), Wooyul Kim (Sookmyung Women's University)	
09:00-09:15	[SO1-15] CdS-Au-ZnO Z-Scheme nanowire heterostructures for photocatalytic hydrogen evolution	Zhe-Yu Lee (National Chiao Tung University)
09:15-09:30	[SO1-16] Charge Carrier Dynamics of BiVO ₄ /Graphene Nanostructures and Their Using in Photoelectrochemical Water Splitting	Jie-Wen Chen (National University of Tainan)
09:30-10:00	[SO1-17] Synthesis of Nanosheet Photocatalysts and Application (Invited Talk)	Ken-ichi Katsumata (Tokyo University of Science)
10:00-10:30	[SO1-18] Design of Heterostructure Photoelectrodes for Photoelectrochemical CO ₂ Conversion (InvitedTalk)	Doh C Lee (KAIST)
Time	Program	
	[Session 1-6] Materials for Solar Fuel Production and Applications	
	Chair: Yung-Jung Hsu (National Chiao Tung University), Doh C Lee (KAIST)	

10:50-11:30	[SO1-19] Highly efficient photocatalytic CO ₂ conversion to selective hydrocarbons using graphene oxides and related 2D hybrids (Keynote Lecture)	Li-Chyong Chen (National Taiwan University)
11:30-12:00	[SO1-20] Surface and Interface Engineered Heterostructures for Solar Hydrogen Generation (Invited Talk)	Shaohua Shen (Xi'an Jiaotong University)
Time	Program	
	[Session 1-7] Materials for Solar Fuel Production and Applications	
	Chair: Sue-Min Chang (National Chiao Tung University), Boon Siang Yeo (National University of Singapore)	
13:30-14:00	[SO1-21] 2D nanosheet-based hybrid materials for solar fuel production (Invited Talk)	Seong-ju Hwang (Ewha Womans University)
14:00-14:30	[SO1-22] Photocatalytic Activity of Anisotropic-shaped ZnS-AgInS ₂ Solid Solution Nanoparticles (Invited Talk)	Tsukasa Torimoto (Nagoya University)
14:30-15:00	[SO1-23] Surface Modification of TiO ₂ Nanowires for Photoelectrochemical Water Splitting (Invited Talk)	Ying-Chih Pu (National University of Tainan)
15:00-15:30	[SO1-24] Metal Oxide Nanosurfaces and Hetero-interfaces for Solar Harvesting Applications (Invited Talk)	Sanjay Mathur (University of Cologne)
Time	Program	
	[Session 1-8] Materials for Solar Fuel Production and Applications	
	Chair: Tsukasa Torimoto (Nagoya University), Ying-Chih Pu (National University of Tainan)	
15:50-16:20	[SO1-25] The Roles of Surface-Doped Ions in the Photocatalytic Activity (Invited Talk)	Sue-Min Chang (National Chiao Tung University)
16:20-16:50	[SO1-26] Developing and Understanding Catalysts for the Electrochemical Reduction of Carbon Dioxide and the Hydrogen Evolution Reaction (Invited Talk)	Boon Siang Yeo (National University of Singapore)
16:50-17:20	[SO1-27] Interfacial Energetics Controls of Photocatalysts for Efficient Photoelectrochemical Water Splitting (Invited Talk)	Jih-Jen Wu (National Cheng Kung University)
17:20-17:50	[SO1-28] Characterization of Cobalt Oxide Water Oxidation Thin Film Catalysts by Ex-Situ and In-Situ Methods	Gihan Kwon (Northwestern University)
17:50-18:05	[SO1-29] Ternary Cu-Sn-S thin films created via sulfurization of radio frequency magnetron co-sputtering of Cu-Sn metal precursors for Photoelectrochemical Applications	Shu-Wei Hong (Chang Gung University)

February 24 (FRI)

Time	Program	
	[Session 1-9] Materials for Solar Fuel Production and Applications	
	Chair: Liang Li (Soochow University), Kong-Weu Cheng (Chang Gung University)	
09:00-09:15	[SO1-30] TiO ₂ -based nanowires array as efficient photoelectrochemical sensor for practical glutathione detection	Pao-Wen Shao (National Chiao Tung University)
09:15-09:30	[SO1-31] Chemical bath deposited quaternary Ag-Sn-S/Cu-Sn-S thin film electrodes for photoelectrochemical salt-water splitting	Kuan-Yi Lee (Chang Gung University)
09:30-9:45	[SO1-32] Interfacial charge dynamics of N-doped graphene quantum dot-modified BiVO ₄ Photoanodes	KAI AN TSAI (National Chiao Tung University)
09:45-10:00	[SO1-33] Highly efficient solar fuel production on thiocyanate modified and Hydrogen treated nickel nanoclusters loaded TiO ₂	Fu Fang Yu (National Taiwan Ocean University)
10:00-10:30	[SO1-34] Silicon photocathodes coupled with low-cost and earth-abundant catalysts for efficient solar hydrogen production (Invited Talk)	Lifeng Liu (International Iberian Nanotechnology Laboratory)
Time	Program	
	[Session 1-10] Materials for Solar Fuel Production and Applications	
	Chair: Lifeng Liu (International Iberian Nanotechnology Laboratory), Kijung Yong (POSTECH)	
10:50-11:20	[SO1-35] Advances of Atomic Layer Deposition in Photoelectrochemical Water Splitting (Invited Talk)	Liang Li (Soochow University)
11:20-11:50	[SO1-36] Photoelectrochemical Water/Salt-water Splitting Using Multi-component Metal Sulfides/Selenides Electrodes (Invited Talk)	Kong-Weu Cheng (Chang Gung University)
11:50-12:05	[SO1-37] The Synthesis and Charge Carrier Dynamics of CsPb ₂ Br ₅ /g-C ₃ N ₄ Nanoheterostructures and the Related Photocatalytic CO ₂	Zi-wei Liou (National University of Tainan)