ACTSEA 2021 Program

Nov. 15 - Nov. 17, 2021 (UTC+8)

(update 2021/11/10)

Monday Nov. 15, 2021	➢ 09:00 – 12:00 Registration ➢ 13:30 – 13:40 Opening Ceremony / ACTSEA Review ➢ 13:40 – 17:19 Poster Session			
Post	Room 1; Chairman: Chuan-Ming Tseng			
13:40 – 17:19 (3min for each post) post ID order	A_P01	Hairus Abdullah Impressive OER Performance on Micro-Tree-Like Ni_3S_2 in Alkaline Solution	B_P11	Yi-Hung Wang Effect of concentration on performance of ZrO_2 nanoparticle electrochemical in Vanadium Redox Flow Batteries
	A_P02	Chi Yuan Lee Integration of High Pressure Resistant Flexible 6-in-1 Microsensor and High Pressure Proton Exchange Membrane Water Electrolyzer	B_P12	Debabrata Mohanty Synthesis and Properties of Li_2MnO_3-$LiMn_{1/3}Co_{1/3}Ni_{1/3}O_2$ Cathode Materials for Lithium-Ion Battery
	A_P03	Chi Yuan Lee PEMWEs MEA Anode Internal Sensing Technology Development	B_P13	Jing-Yu Lai Synthesis and Material Characterisic of $Li_{1.3}Al_{0.3}Ti_{1.7}(PO_4)_3$ Solid Electrolytes for Lithium-ion Battery
	A_P04	Jui-Teng Lee Incorporation of Au@CuSCu$_2$S nanoparticles on ZnO nanosheets for efficient photodark responsive degradation of organic pollutants	B_P14	Jing-Yu Lai Synthesis and Properties of double-layered $Li_2MnO_3LiMn_{1/3}Co_{1/3}Ni_{1/3}O_2$ material for Lithium-Ion Battery
	B_P01	Tai-Feng Hung Polymer-derived Nitrogen-doped Carbon Materials with Hierarchically Porous Architectures toward Capacitive Performances for Lithium-ion Capacitors	E_P01	Enzhu Lin The effects of selectively and randomly deposited Ag nanoparticles on the piezocatalytic activity of $BaTiO_3$ nanocubes/cuboids
	B_P02	Dhanapal Vasu Excellent Electrochemical active $CuFe_2O_4$3D-rGO based Supercapacitor Electrodes with an Ultrahigh Specific Capacitance	E_P02	Tung-Wei Chang Development of nano-sized Fe-based powder for Inductance
	B_P03	Arjunan Karthi Keyan High energetic supercapacitor electrode of $CuCoO_2$P-rGO nanocomposite with ultrahigh specific capacitance	E_P03	Chang-Chun Zheng Preparation of Nitrogen-doped $BaTiO_3$ Thin Films on TiNSi by _Plasma Electrolytic Oxidation
	B_P04	Zhen Chong Performance of Molybdenum-Modified Titanium Oxide as anode for lithium-ion Battery	E_P04	Heng-Jyun Lei Preparation of CeO=$CuCrO_2$ composite by electrospinning method
	B_P05	Chi Yuan Lee Development of Instant Diagnostic Technology for Hydrogenvanadium Flow Battery	E_P05	Bing-Zhen Hsu Porous Structure ZnO-$ZnFe_2O_4$ Catalyst Applied by Hydrogen from Methanol Steam Reforming
	B_P06	Jen Hao Yang Effect of Synthesis Routes on Nickel rich and Cobalt-free Layered Oxides Cathode for Li Ion Batteries	F_P01	Chi Yuan Lee Flexible Integrated Microsensor for In-situ Monitoring of Proton Battery
	B_P07	Xiejing Luo Computational simulation and efficient evaluation on corrosion inhibitors for electrochemical etching on aluminum foil	F_P02	Wei-Cheng Chin Correlation between $NiFe_2O_4$ Cathode Thickness and Hydrogen Production Efficiency for Solid Oxide Electrolyzer Cells
	B_P08	Jia-Hong Du Polarization Reduction of Surface-Modified Garnet Solid_Electrolytes for Solid State Li-ion Battery Applications	F_P03	Kuan-Lin Chen Hydrogen Storage Alloy Tanks for Fuel Cell Assisted Bicycles
	B_P09	Yu-Hsuan Su Synthesis and Electrochemical Properties of Single-Crystal $LiNi_{0.5}Co_{0.2}Mn_{0.3}O_2$ Cathode for Lithium-Ion Batteries	F_P04	Yen-Yu Chen Preparation of Porous Zirconia by Ceramic Photo-polymerization Process
	B_P10	Zih-Heng Hsieh Characterization of spinel cathode material for advanced lithium-ion batteries	F_P05	Jhih-Yu Tang Effect of Dual Phases on Ionic Conduction of Consisting of Doped Ceria and Carbonates

13:40 – 17:19 (3min for each post) post ID order	F_P06	Yuan-Jie Tsai A Modified Solid-State Reaction Method to Synthesize Proton-Conducting $BaCe_{0.5}Zr_{0.3}Y_{0.2}O_{3-\delta}$ Electrolyte with Improved Sinterability	F_P20	Ayano Iizuka Computer simulation via phase-field method to consider the effect of magnetic field on the formation process of spontaneous superlattice structure using dynamic auroral PLD
	F_P07	Sheng-Wei Lee Nd-doped LSCF nano-fibrous cathode for proton-conducting solid oxide fuel cells	F_P21	Yi-Chu Han The study of 8YSZ electrolyte fabrication of the tubular solid oxide fuel cells by the dip-coating method
	F_P08	Chia-Chieh Shen Small Fuel Cell Powered Vehicle	F_P22	Yi-Le Liao The Research of the Mechanism of in-situ Sintering Solid Oxide Fuel Cell
	F_P09	Liangdong Fan Intermediate temperature solid oxide fuel cell with nanoscale electrodes fabricated by one-step sintering technology	H_P01	Yi Hsiang Lai Processing and performance of oxidation-resistant layers on graphite
	F_P10	Liangdong Fan Enhancement of Oxygen Reduction Reaction activity of Cobalt Based Cathode in Solid Oxide Fuel Cell	H_P02	Chien-Chih Chiang Influence of Unipolar Pulsed Two-Stage Rise Voltage on Wear Resistance of Carbon Steel Surface Using MAO method
	F_P11	Azam Khan Preparation and Characterization of $YxBa_{2-x}Co_2O_5+\delta$ Cathode Material for Solid Oxide Fuel Cell	H_P03	Kai-Yo Huang Analysis of the microstructure and dielectric properties on $CaCu_3Ti_4O_{12}$-based dielectric ceramic materials
	F_P12	Ko-Yun Chao Preparation and Properties of $Y_xSr_{1-x}yTiO_{3-\delta}$ anode for Solid Oxide Fuel Cells	H_P04	Ming-Zhe Lu High temperature stability $BaTiO_3$-$Bi_{0.5}Na_{0.5}TiO_3$-based dielectric ceramics of formulation improvement and material properties analysis
	F_P13	Ko-Yun Chao Preparation and Characterization of High Temperature Mixed Proton-electron Conductors	H_P05	Gourav Mundhra Use of a composition-graded solid electrolyte for determination of Gibbs energy of formation of lanthanum hafnate A prospective TBC material for turbine applications
	F_P14	Takeshi Kawai Spontaneous formation of superlattice thin film with perovskite $A^{3+}B^{3+}O_3$ structure using dynamic aurora PLD and its effect on physical properties	H_P06	Tsung-Yang Ho High Performance Solid State SO_2 sensor using Nano-structured Oxides
	F_P15	Haruki Zayasu Preparation and characterization of epitaxially grown YSZ thin films on porous silicon substrates for SOFC applications	H_P07	Chien-Chih Chiang Effects of MAO Coating on the Hardness and Corrosion Resistance of 6032 Aluminium Alloy
	F_P16	Kaoru Ogata Spontaneous formation of superlattice thin films on substrates having heterogenious structure using dynamic aurora PLD	H_P08	Bo-Cheng Lai Dielectric properties of $CaO–B_2O_3–SiO_2$ glass-ceramics in the millimeter-wave range of 20–60 GHz frequency
	F_P17	Kazuto Yoshida Low temperature synthesis of PZT thin films with giant piezoelectric displacement on glass substrate by domain engineering from molecular-designed	L_P01	Mu-Tsun Tsai Luminescence Investigation of Chromium-doped Forsterite Phosphor Thin Films
	F_P18	Ryoya Nishimura The effect of starting materials on low-temperature preparation of $Li_{6.5}La_3Zr_{1.5}Ta_{0.5}O_{12}$ single crystal using the flux method	L_P02	Mu-Tsun Tsai Luminescence Investigation of Blue-emitting Cordierite Phosphor Thin Films
	F_P19	Seiji Sogen Synthesis of PZT thin film with single crystal-like ferroelectricity on SUS substrate	L_P03	Chien-Chih Chiang Structures and Photoluminescence Properties of $(Ba/Sr)_{1-x}MgAl_{10}O_{17}Eux_2$/Phosphors

13:40 – 17:19 (3min for each post) post ID order	M_P01	Chung-Lun Yu ZnO-$ZnCr_2O_4$ Catalyst Fabricated by Glycine Nitrate Process and Used for Hydrogen Generation with the Steam Reforming of Methanol	P_P01	Chien-Chih Chiang Synthesis and Characteristic of III-VI Metal Chalcogenide semiconductor nanoparticle
	M_P02	Zhen-Yu Sun $CuCrO_2$-TiO_2 Nanocomposites Prepared by Glycine Nitrate Process and Photodegradation the Organic Dye with Ultraviolet Light	P_P02	Gu-Yan Liao Characteristics of La^{3+} dopants in CeO_2 thin films for resistance random access memory application
	M_P03	Yung-Fu Wu Nickel Recovery from Spent Plating Solution by Chemical Precipitation		
	M_P04	Yung-Fu Wu Anticorrosion for 304 Stainless Steel by Using TiO_2Ag_2O Protection Layer		
	M_P05	Chin-Wei Hung Fabrication of $CuYO_2$ Nanofibers by Electrospinning		
	M_P06	Yu-Feng You Preparation of Janus Structure ZnOCuO Composite Oxide Particle		
	M_P07	Shu-Yi Tsai Effect of adding mesoporous silica KIT-6 of $V_2O_5WO_3TiO_2$ catalyst for selective catalytic reduction		
	M_P08	Qiaofeng Han Synthesis of $Bi_4O_5I_2BiOI$ heterojunction with improved visible-light photocatalytic activity		
	M_P09	Min Ao The effect of La_2O_3 addition on intermetallic-free aluminium matrix composites reinforced with TiC and Al_2O_3 ceramic particles		
	M_P10	Ying-Chieh Lee A Study of Low-Temperature Sintering of Al_2O_3 Ceramics with TiO_2 and Nb_2O_5 addition		
	M_P11	Li-En Chen Electrostatic separation for recycling silicon from the crushed photovoltaic modules		
	M_P12	Zihan Kang Novel Bi_2WO_6/g-C_3N_4/ZnO Z-scheme heterojunctions with g-C_3N_4 interlayer modulated by piezoelectric polarization for efficient piezo-photocatalytic decomposition of harmful organic pollutants		
	M_P13	Mi Chen Characerization of Graphene/CNTs Hybrid Conductive Film by Screen Printing		
	M_P14	Wan-Chien Wu Developments of Calcium Sulfate Coating on Ti_6Al_4V Substrate by Flame Spray		
	M_P15	Ti Hsin High entropy piezo-catalyst oxide for dye-degradation		

Tuesday **Nov. 16, 2021**	➢ 09:00 – 16:00 Registration ➢ 09:30 – 16:50 Conference Sessions			
	Room 1		Room 2	
	Session Chair: Kuan-Zong Fung			
09:30 – 10:10	**Keynote Session I**	K_1 Chun-Hway Hsueh Enhanced Luminous Transmittance and Solar Modulation by Subwavelength VO_2 Nanoparticle Film for Smart Window Applications		
10:10 – 10:50	**Keynote Session II**	K_3 Yasser Ashraf Gandomi Novel Reactor Design and Experimental Diagnostics for Redox Flow Batteries		
10:50 – 11:10	**Coffee Break**			
	Session Chair: Chien-Ming Lei		Session Chair: Yen-Yu Chen	
11:10 – 11:30	Invited Speaker	H_I01 Kungen Teii Plasma Deposition of High-Quality Cubic Boron Nitride Films for Applications to Ultrahard Coatings and Electronic Devices	Invited Speaker	F_I01 Naoki Wakiya In-situ observation of spontaneous phase separation via spinodal decomposition in Sr-excess $SrTiO_3$ thin film
11:30 – 11:50	Invited Speaker	P_I01 Ngoc Duy Pham Novel P-dopant for Spiro-OMeTAD-based Hole-Transporting Materials towards Efficient and Stable Perovskite Solar Cells	Invited Speaker	B_I04 Van-Duong Dao Environmental energy harvesting based on nanogenerator
11:50 – 12:10	Invited Speaker	P_I02 Al Jumlat Ahmed Thermoelectric Performance of Nano-engineered Perovskite Oxide Materials $Sr_{1-x}La_xTiO_3$ and $Ba_{1-x}La_xTiO_3$	Invited Speaker	F_I03 Yen-Yu Chen Microstructures and Electrical Properties of $BaCeZrYYbO_{3-\delta}$YSZ composites prepared by Solid-State Sintering for Sustainable Energy Application
12:10 – 13:10	**Lunch Break**			
	Session Chair: Horng Show Koo		Session Chair: Shu-Yi Tsai	
13:10 – 13:30	Invited Speaker	P_I03 Hong-Xia Wang Towards Cost-Effective, Stable and Greener Perovskite based Solar Cells and Light Emitting Diode	Invited Speaker	F_I04 Francesco Ciucci High Performance Protonic Ceramic Fuel Cells
13:30 – 13:50	Invited Speaker	E_I01 Horng-Show Koo Recent Progress on Gallium Oxide Ceramic Materials and Thin Films for High-efficiency and Energy-saving Applications	Oral	F_O01 Azam Khan Study of $BaCO_3$ and Samarium-doped Ceria Carbonate Composite Electrolyte for Low-Temperature Solid Oxide Fuel Cells
13:50 – 14:10	Invited Speaker	A_I01 Subramanian Sakthinathan Efficient Electrocatalyst for Hydrogen Evolution Reaction based on_Delafossite Materials supported Carbon composite	Invited Speaker	B_I01 Nghia Van Nguyen Carbon coated Sodium Manganese oxide as a cathode material for Sodium-Ion battery
14:10 – 14:30	Invited Speaker	M_I01 Shan-Tao Zhang Ferroelectric and pyroelectric property in antiferroelectric-based composites	Invited Speaker	B_I02 Manas Ranjan Panda Probing the Li/Na/Storage Mechanism of 2D Transition Metal Dichalcogenides Using Synchrotron-Based X-ray Techniques
14:30 – 14:50	Invited Speaker	M_I02 Nobuhiro Matsushita "Spin-Spray Method" A Novel Solution Process for Preparing Semiconductor Oxide Films with Low Environmental Load	Invited Speaker	B_I03 Debasmita Dwibedi Insights into Stabilization of α-$Na_2Fe(SO_4)_2$ and _Structure/ Polymorphism/ and Electrochemistry Thereof

14:50 – 15:10	**Coffee Break**			
	Session Chair: Alex Chinghuan Lee		Session Chair: Tai-Nan Lin	
15:10 – 15:30	Oral	M_O01 Chia-Wei Huang Chemical Looping Gasification of Spent Coffee Ground Using Iron ore as Oxygen Carrier	Invited Speaker	F_I02 Kuan-Ting Wu The Role of Self-exsolved Heterogeneous Composite Nanoparticles towards Highly Active Fuel Electrode for CO_2H_2O Co-electrolysis
15:30 – 15:50	Oral	M_O02 Asit Kumar Panda A Non-Enzymatic/Biocompatible Electrochemical Sensor based on N-doped Graphene Quantum Dot-incorporated SnS_2 Nanosheets for In Situ Monitoring of Hydrogen Peroxide in Breast Cancer Cells	Invited Speaker	B_I05 Tungabidya Moharana Development of Paper-Based Flexible Supercapacitor Fabricated Using Polypyrrole
15:50 – 16:10	Oral	M_O03 Lien-Hui Kan Investigation on Luminescent Layer of Alkaline-earth Aluminates on Aluminum Alloy	Invited Speaker	B_I06 Prabeer Barpanda Perovskite Lead-based anodes for secondary batteries
16:10 – 16:30	Invited Speaker	L_I01 Sakthivel Gandhi Nanoporous Silica Materials: A Versatile Supporting Material for the Development of 'Phosphor in Glass'	Invited Speaker	B_I07 Tran V. Thu Graphene-$MnFe_2O_4$-polypyrrole ternary hybrids with synergistic effect for supercapacitor electrode
16:30 – 16:50	Oral	L_O01 Pei-Tzu Cheng Optical Properties of Europium doped Calcium Sulfide Prepared by Carbon	Invited Speaker	H_I02 Masahiro YOSHIMURA Continuous(Successive) Fabrication of Nano-Structured Ceramic Materials via Soft, Solution Processing without Firing

Wednesday **Nov. 17, 2021**	➢ 08:30 – 16:00 Registration ➢ 09:30 – 16:10 Conference Sessions			
	Room 1		Room 2	
	Session Chair: I-Ming Hung			
09:30 – 10:10	**Keynote Session I**	K_2 Tatsumi Ishihara Tubular Type Solid Oxide Reversible Cell Using $LaGaO_3$ Electrolyte Film Prepared by Dip-coating Method		
10:10 – 10:50	**Keynote Session II**	K_4 Hong Wang High Performance Dielectrics for Passive integration and Energy Storage		
10:50 – 11:10	**Coffee Break**			
	Session Chair: I-Ming Hung		Session Chair: Yen-Yu Chen	
11:10 – 11:30	Invited Speaker	B_I09 Prasant Kumar Nayak High-capacity layered oxide cathode materials for rechargeable Li-ion batteries	Invited Speaker	E_I03 Meng-Fang Lin Nanofiber for triboelectric nanogenerator
11:30 – 11:50	Oral	B_O01 Debabrata Mohanty Effect of different LiTFSI content on Composite Solid Electrolyte with NASICON-type LATP and PVDF–HFP for Solid-State Lithium-ion	Oral	E_O03 Feng Sheng Chao Supercapacitive Properties of Bi-doped $ZnCo_2O_4$ Nanostructure Synthesized by In-situ Hydrothermal Method
11:50 – 12:10	Oral	P_O01 Chia-Yu Chang Development of Visible Light Responsive TiO_2 Photoelectrodes by Metal Nanoparticle Loading	Oral	E_O04 Deng-Li Ko High-stability transparent flexible energy storage based on $PbZrO_3$/ muscovite heterostructure
12:10 – 13:10	**Lunch Break**			
	Session Chair: Te-Wei Chiu		Session Chair: Subramanian Sakthinathan	
13:10 – 13:30	Oral	B_O03 Bruce Chen Roles of Binders on Self-Discharge for Porous Carbon Supercapacitor Electrodes	Invited Speaker	B_I08 P. Muhammed Shafi Three Dimensional NiO Nanonetwork Electrode for Efficient Ultra-fast Electrochemical Energy Storage Application
13:30 – 13:50	Oral	B_O04 Chinghuan Lee Structure evolution and operando analysis methods of fast-charging lithium titanate materials developed in HiGEM research center	Oral	B_O06 Ngoc Thanh Thuy Tran Insight into the degradation mechanism of the Ni-rich NMC cathode materials
13:50 – 14:10	Oral	B_O05 Yu-Si Chen Fe-Cu-Schiff base complexes as Electrocatalysts for Zn-Air Batteries	Oral	F_O02 Liangdong Fan High-performance in-situ Ni nanoparticle exsolved LSTN/LNSDC composites for low-temperature solid oxide fuel cells
14:10 – 14:30	Oral	E_O01 Chih-Heng Lee A DFT Study of the Effect of Degrees of Inversion on the Electronic Structure of Spinel $NiCo_2O_4$	Oral	E_O02 Pao-Wen Shao Flexo-phototronic Effect in Centro-symmetric $BiVO_4$ Epitaxial Films
14:30 – 14:50	Oral	B_O02 Rahmandhika Firdauzha Hary Hernandha SiOxCarbon Multilayer Coating on Silicon Nanoparticles Synthesized via Supercritical CO_2	Oral	E_O03 Feng-Sheng Chao Supercapacitive Properties of Bi-doped $ZnCo_2O_4$ Nanostructure Synthesized by In-situ Hydrothermal Method

14:40 – 15:00	**Coffee Break**		
	Session Chair: Hwai-En Lin		
15:00 – 15:20	Invited Speaker	E_I02 Alice EH Lee Sie Robust tristate reversible electrochemical mirror electrochromic devices	
15:20 – 15:40	Oral	L_O02 Henni Setia Ningsih Synthesis and characterization of Tb-doped Y_4SiAlO_8N powder by spray pyrolysis	
15:40 – 16:00	Oral	E_O04 Deng-Li Ko High-stability transparent flexible energy storage based on $PbZrO_3$/ muscovite heterostructure	
16:00 – 16:20	-Students Award (Post) -Closing Ceremony		