

# Poster Presentation

## Topic 1: Batteries

(13:00, Sat, Nov 12, Chemical Engineering Building 1F)

No.	Presenting Author	Affiliation	Title
T1-P-001	Gui-Sheng He	Yuan Ze University	Efficiency control of vanadium redox flow batteries
T1-P-002	Asif Latief Bhat	National Yang Ming Chiao Tung University	Phase Control of Lithium Silicates for High Performance Pre-lithiated SiO Anode Materials
T1-P-003	Sheng-Huai Shu	Southern Taiwan University of Science and Technology	Preparation and Electrochemical analysis of SCDC/carbonate Composite Electrolyte for Low Temperature Solid Oxide Fuel Cells
T1-P-004	Ting-Yu Lin	Ming Chi University of Technology	Synthesis and Characterization of LNMO Cathode Materials for Next Generation Lithium-Ion Batteries
T1-P-005	Wei-Jay Sun	Ming Chi University of Technology	Preparation and Characterization of Hybrid Solid Electrolyte for Lithium-Ion Batteries
T1-P-006	Tzu-Chieh Liao	Ming Chi University of Technology	Preparation of Lithium Iron Phosphate Cathode by Aqueous Process for Lithium-Ion Batteries
T1-P-007	Zi-Fan He	National Tsing Hua University	Complementary Operando Electrochemical Quartz Crystal Microbalance and Ultraviolet-visible Spectroscopic Studies: Acetate Effects on Zinc-Manganese Batteries
T1-P-008	Cindy Rusly	National Taiwan University	Achieving High Power Lithium-Sulfur Battery through Amide Interlayer
T1-P-009	Chun Han Kuo	National Tsing Hua University	Improved Stability of Garnet-type solid electrolyte for Li-ion Batteries by Multi-doping strategy
T1-P-010	Pin-Chun Liang	National University of Tainan	Use numerical analysis to comparison the internal characteristics of the liquid and gel polymer battery
T1-P-011	Ya Xin Xu	Feng Chia University	Biodegradable Cellulose Battery
T1-P-012	Chih-Han Yen	National Tsing Hua University	Investigating dendrite suppression gel polymer layer for upgrading conventional electrolyte in lithium metal batteries
T1-P-013	Min-Yuan Feng	National Taipei University of Technology	Design of LiFePO <sub>4</sub> and Porous Carbon Composites with Excellent High-Rate Charging Performance for Lithium-Ion Secondary Battery
T1-P-014	Eyob Belew Abebe	Ming Chi University of Technology	High Energy Ni-rich LiNi <sub>0.9</sub> Co <sub>0.05</sub> Mn <sub>0.05</sub> O <sub>2</sub> Cathode Materials Preparation and Performance evaluations for Li-ion Batteries
T1-P-015	Siew Hoong Zheng	National Cheng Kung University	A Rational Microstructure Design Enabling High Energy Density Quasi/Solid-state Thin-film Battery
T1-P-016	Masashi Kotobuki	Ming Chi University of Technology	Electrochemical window of ceramic electrolytes
T1-P-017	Zih-Jhong Huang	National Taiwan University of Science and Technology	Improving the Performance of Electrode by LTO/TiO <sub>2</sub> Nanowire for Vanadium Redox Flow Battery
T1-P-018	Kumlachew Zelalem Walle	Ming Chi University of Technology	PVDF-HFP/Garnet Hybrid Solid Electrolyte for High-Voltage Cathode Material in All-Solid-State g-C <sub>3</sub> N <sub>4</sub> -Modified Lithium-Metal Batteries
T1-P-019	Ze-Ren Jhang	National Cheng Kung University	Rational Design of Lithium Titanate Oxide with dopants for Improve Conduction by various Processing Condition
T1-P-020	Pin-Cheng Huang	National Cheng Kung University	Synthesis of cubic Li <sub>6.5</sub> La <sub>3</sub> Zr <sub>1.5</sub> Ta <sub>0.5</sub> O <sub>12</sub> Solid Electrolyte Materials for solid-state lithium-ion batteries
T1-P-021	Ray-Rong Tang	National Cheng Kung University	Investigations of Li <sub>3</sub> xLa <sub>2</sub> /3-xTiO <sub>3</sub> Synthesis based on Solid State Reactions
T1-P-022	Yu-Hsuan Chen	National Cheng Kung University	Synthesis of single-crystal nickel-rich layered-oxide cathode by solid state reaction
T1-P-023	Jen-Hao Yang	National Cheng Kung University	Performance improvement of nickel-rich layered cathodes for li batteries based on modified solid state reaction
T1-P-024	Tadesu Hailu Mengesha	Ming Chi University of Technology	A Polydopamine-Modified Garnet-Based Hybrid Solid Electrolyte Membrane for High-Voltage Lithium Metal Batteries

## Topic 2: Capacitors & Fast Charging Devices

(13:00, Sat, Nov 12, Chemical Engineering Building 1F)

No.	Presenting Author	Affiliation	Title
T2-P-001	Kai-Ting Ho	National University of Tainan	Mesoporous carbon derived from carbon black used for electric double-layer capacitor in organic electrolytes without adding of electron conductive filler
T2-P-002	Ting-Jui Chang	National University of Tainan	Identifying the optima composition for conductive carbon black in EDLC electrodes
T2-P-003	Yung Hsiang Chang	National Dong Hwa University	Synthesis of Potassium Titanate Nanorods as a Wide Potential Window Supercapacitor
T2-P-004	Chung-Hsien Wu	National Taipei University of Technology	Ligand Incorporating Sequence-dependent ZIF67 Derivatives as Active Material of Supercapacitor: Competition between Ammonia Fluoride and 2-Methylimidazole
T2-P-005	Yu-Chun Chen	National Taipei University of Technology	Heterostructure Bismuth Oxide-Bismuth Sulfide with Carbon Yolk-Shell Structure Composite for Supercapacitor
T2-P-006	Chang-Feng Wu	National Taipei University of Technology	Novel Synthesis of ZIF67-Derived MnCo <sub>2</sub> O <sub>4</sub> Nanotubes using Electrospinning and Hydrothermal Techniques for Supercapacitor
T2-P-007	Cheng Yu Xiao	National Taipei University of Technology	Binder-free Synthesis of Metal Organic Framework Derived Cobalt Sulfide on Carbon Cloth for Efficient Energy Storage Devices
T2-P-008	Hsiao-Wen Huang	National Taipei University of Technology	Facile Synthesis of Metal Organic Framework-Derived Cobalt Sulfide on Ni foam as the Binder-free Electrode of Battery Supercapacitor Hybrid
T2-P-009	Kuen-Hsien Wu	Southern Taiwan University of Science and Technology	Porous-Silicon Supercapacitors for Applications of Self-Powered Ultra-Violet Photodetecting Devices
T2-P-010	Wan-Ling Liao	Ming Chi University of Technology	Mesoporous NaTi <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> with highly sp <sup>2</sup> -coordinated carbon coatings as an efficient anode for sodium-ion capacitors
T2-P-011	Xiang-Yu You	National Taipei University of Technology	Design of Novel Self-assembled MXene and ZIF67 Derivative Composites as Efficient Electroactive Material of Energy Storage Device
T2-P-012	Po Chun Tai	National Taipei University of Technology	Synthesis of Cigarette Filter-Derived Activated Carbon Using Various Activating Agents for Flexible Capacitive Supercapacitors
T2-P-013	Yu-Cheng Cao	National Taipei University of Technology	Improving energy storage ability of ammonium-decorated cobalt fluoride using selenization as efficient active material of supercapacitor
T2-P-014	Ramesh Aravind Murugesan	Vellore Institute of technology	Electrochemical Asymmetrical Supercapacitor Performance of Two Dimensional 1T/2H MoS <sub>2</sub> -Ti <sub>3</sub> C <sub>2</sub> Tx in Seawater Electrolyte
T2-P-015	Jinx Xian Lin	National Taipei University of Technology	Application of iron oxide nanofilms prepared by electroplating in supercapacitors
T2-P-016	Xin-Zhang Chen	Providence University	Improved Pseudocapacitive Performance of Symmetric Polypyrrole-MnO <sub>2</sub> Electrode with Polymer Gel Electrolyte
T2-P-017	Ching-Lun Lee	Providence University	Eco-friendly strategies for all solid-state flexible supercapacitor: Moving toward, safe and high-performance energy devices
T2-P-018	Chia-Jung Chi	National Taipei University of Technology	Study on Electrochemical Properties of Perovskite CsPbI <sub>3</sub> Electrode in Different Aqueous Solutions
T2-P-019	Yu-De Lin	National Kaohsiung University of Science and Technology	High performance Mullite ceramic as insulating layer in MOS capacitor

## Topic 3: Photoelectrochemistry

(13:00, Fri, Nov 11, Chemical Engineering Building 1F)

No.	Presenting Author	Affiliation	Title
T3-P-001	Ke-Wo Yang	National Dong Hwa University	Surface-Plasmon-Assisted Electrochemical CO <sub>2</sub> Reduction on Nanostructured Silver Electrodes
T3-P-002	Chen Pang Shiu	Ming Hsin University of Science and Technology	Photodegradation of methyl-orange using Ag/TiO <sub>2</sub> composite nanofibers
T3-P-003	Xiang-Yu Rui	National Dong Hwa University	Enhanced Photoelectrochemical Performance of In-doped Ag <sub>2</sub> S/ZnO Heterostructural Nanowires
T3-P-004	Yan-Wei Huang	National Dong Hwa University	Deposition of Selenium Thin Film for Photoelectrochemical Hydrogen Production
T3-P-005	Ching-Cheng Chang	National Taiwan University of Science and Technology	NIR Photoelectrochromic Device with Indoor Thermal Management for Self-powered Smart Windows
T3-P-006	Ya-Lun Chug	National Formosa University	Photocatalytic Properties of Magnesium Tin Coupled Oxides
T3-P-007	Prashanth Venkatesan	National Tsing Hua University	Utilization of the Sub Bandgap Energy of Mo-Doped BiVO <sub>4</sub> Photoanode for the Enhanced Photoelectrochemical Reaction via Triplet-Triplet Annihilation Upconversion
T3-P-008	Ahmed Fouad Musa	National Tsing Hua University	Cesium Thiocyanate for Stable and Pure Phase of $\alpha$ -Formamidinium Lead Triiodide Based Perovskite Solar Cells
T3-P-009	Chih-Yun Wang	National Tsing Hua University	The Enhance of Localized Surface Plasmonic Resonance on Tungsten Oxide Nanowire Framework

## Topic 4: Electrochemical Technologies

(13:00, Sat, Nov 12, Chemical Engineering Building 1F)

No.	Presenting Author	Affiliation	Title
T4-P-001	Yi-Heng Tu	National Tsing Hua University	A highly efficient faradaic desalination system utilizing MnO <sub>2</sub> and polypyrrole-coated titanium electrodes
T4-P-002	Michael Chen	National Dong Hwa University	Dual-functional Flower-like Cu <sub>1.8</sub> Se Nanosheets as High-sensitive H <sub>2</sub> O <sub>2</sub> Detector and Efficient SERS Substrate
T4-P-003	Sheng-Jie Huang	National Taipei University of Technology	Ni-W Alloy Electrodeposited Materials and Electrochemical Properties
T4-P-004	Akilarasan Muthumariappan	National Taipei University of Technology	In-Situ Synthesis of Bimetallic Chalcogenide Srs/Bi <sub>2</sub> S <sub>3</sub> Nanocomposites as an Efficient Electrocatalyst for the Selective Voltammetric Sensing of Maleic Hydrazide Herbicide
T4-P-005	Ming-Han Tsai	National Yang Ming Chiao Tung University	Direct electrocatalytic oxidation of ammonia on Cu(OH) <sub>2</sub> catalyst supported by Ni foam
T4-P-006	Ying-Hsuan Wang	National Tsing Hua University	Controlled Aerosol-based Synthesis of Raspberry-structured Silver-carbon hybrid nanoparticle cluster and Vanadium Oxides Nanoparticle for Capacitive Deionization Applications
T4-P-007	Yu-Mei Huang	National Tsing Hua University	Influence of Carbon Surface Functionalization to the Synthesis of Platinum Nanowires on Carbon
T4-P-008	Yan-Wei Chen	National United University	Electrocatalytic Properties of Schiff Bases for Oxygen Evolution Reaction in Alkaline Electrolytes
T4-P-009	Hao-Rong Weng	National Defense University	In-situ/operando visualizing the effect of ChCl/EG-based deep eutectic solvent electrolytes on dendrite suppression of zinc anode in high-temperature cycling
T4-P-010	Yi-Ting Guo	National Taiwan University of Science and Technology	selectivity Enhancement of H <sub>2</sub> O <sub>2</sub> via Nitrogen doping Engineering of reduced Graphene Oxide as Self-antibiofouling Dissolved Oxygen Sensor
T4-P-011	Jing-Chun Huang	National Tsing Hua University	B-GQD@Polyaniline nanofibers and ZIF-8 derived carbon as novel and effective asymmetric electrodes for enhanced hybrid capacitive deionization
T4-P-012	Jing-Sen Yang	National Taiwan University of Science and Technology	Ab-initio Atomistic Structures and Electrochemical Properties of Argyrodite Li <sub>6</sub> PS <sub>5</sub> Cl Electrolyte for Solid-state Lithium Batteries
T4-P-013	Kai-Hung Cheng	National Tsing Hua University	Effect of Cyanide Ion Concentration on Electroless Silver Plating
T4-P-014	Muneer Hussain	National Taipei Institute of Technology	Comparative study and analysis of electrochemical behaviour of iron oxide electrodes
T4-P-015	Ya-Ju Juang	Industrial Technology Research Institute (ITRI)	On-Line Electrochemical Sensor for Residual Chlorine and Heavy Metal Detection

## Topic 5: Electrochemical Driven Conversion

(13:00, Fri, Nov 11, Chemical Engineering Building 1F)

No.	Presenting Author	Affiliation	Title
T5-P-001	Mia Rinawati	National Taiwan University of Science and Technology	Tuning A Well Defined Molecular Active Sites Center on Graphene Quantum Dots (GQDs) in a Heterogeneous Electrocatalyst for OER
T5-P-002	Angelina Ersikapna Melanita Tarigan	National Taiwan University of Science and Technology	Activating CoFe Prussian Blue Analogue-decorated Graphene Quantum Dots (GQDs) by UV Ozone Treatment for Hydrogen Evolution Reaction
T5-P-003	Sofiannisa Aulia	National Taiwan University of Science and Technology	Tailoring the Electroactive Sites of Prussian Blue Analogues-Derived Oxygen Electrocatalyst for Rechargeable Zinc-Air Battery
T5-P-004	Wondayehu Yeshewas Alemu	National Taipei University of Technology	Electrochemical CO <sub>2</sub> reduction on Cu-based electrocatalysts in alkaline electrolyte
T5-P-005	Tzu-Chien Wei	National Tsing Hua University	Polymer capped Pd nanoparticles made from recycled Pd and its application as an efficient and economic activator for electroless copper plating