

Technical Program – Student Oral Presentation Contest

Qualification

Only students (undergraduate, master, PhD) with valid student ID are eligible. Postdoctoral fellows are excluded. Students interested in participating in the competition should indicate it clearly during the registration process and successfully completed the registration.

Instructions

1. Contestants must arrive at the reporting location 15 min before the start of the designated period (10:00-10:48 or 11:00-11:40 on June 18, 2025).
2. Regular oral presentation: **8 min** (1st alarm: 6 min; 2nd alarm: 8 min), NO Q&A.
3. Contestants must stop reporting immediately after the 2nd alarm.
4. The oral presentation must be presented in **English**.
5. The scoring criteria include research innovation, research completeness, presentation organization and reporting skills.

Awards

1. Best Oral, Excellent, and Honorable Mention Awards will be rewarded in the closing ceremony.
2. Awardees are required to attend the closing ceremony to receive their awards.

June 18th, 2025, 10:00-12:00

Group I, Room 209, Chemical Engineering Building

Time	Title	Speaker
10:00-10:08	Molecular Engineering of Donor-Acceptor-Type Conjugated Microporous Polymers for Dual Effective Photocatalytic Production of Hydrogen	Ahmed Fouad Selim (#254)
10:08-10:16	Plasmon-Enhanced Charge Transfer at the Au/NbS ₂ Interface for Efficient Photo electrocatalytic Hydrogen Evolution Reaction	Alex Sam (#207)
10:16-10:24	Pyrene-Fused Azaacene COFs: Building Block Modification for Enhanced Photocatalytic Hydrogen Evolution	Dung Chau Kim Hoang (#185)
10:24-10:32	A Bifunctional Z-Scheme Cyano-containing COF/BiOBr Heterojunction Photocatalyst with Enhanced Photocatalytic Activity for H ₂ Evolution and Methylene Blue Degradation	Tawanwit Luangwanta (#174)
10:32-10:40	Cu-doped Co ₃ O ₄ -coated Ti ₃ C ₂ MXene nanocomposite for effective photoelectrochemical CO ₂ reduction	Yan-Yun Jhu (#068)
10:40-10:48	Enhancing the Photocatalytic Performance of g-C ₃ N ₄ via Iron Cluster Stabilized Nitrogen Vacancies: Toward Photodegradation of Plastic Film	Yi-Syuan Lin (#273)
10:48-11:00	Break	
11:00-11:08	Efficient Dye-Sensitized Photo-rechargeable Ion Capacitors Using WO ₃ Nanoflowers for Integrated Solar Energy Storage	Li-Xin Huang (#243)
11:08-11:16	Engineering of non-noble metal BiO-decorated g-C ₃ N ₄ /SrTiO ₃ sheet-liked photocatalyst for boosting hydrogen production under simulated sunlight	Yen Thi Hoang Le (#144)
11:16-11:24	Synergistic Photocatalytic LDPE Film Degradation over Ruthenium-Incorporated g-C ₃ N ₄ via Norrish Type I and II	Lely Ayu Ningsih (#231)
11:24-11:32	Impact of Phenylenediamine Carbon Quantum Dot Orientation on NH ₂ -MIL-125 Composites for Visible-Light-Driven Degradation of Organic Pollutants	Wei-Lun Huang (#114)
11:32-11:40	Z-Scheme Electron Transfer Twin-Reactor for Simultaneous Photocatalytic Water Splitting H ₂ Evolution and Phenol Degradation	Tzu-Jung Hsu (#111)

Group II, Room 210, Chemical Engineering Building

Time	Title	Speaker
10:00-10:08	Toward the Sabatier Principle-Guided Design of Low-Platinum-Group-Metal Trimetallic Nanocatalysts for Efficient Hydrogen Evolution and Oxidation Reactions	Yu Mei Huang (#148)
10:08-10:16	Facet-Engineered ZnSn(OH) ₆ Nanostructures: Tunable Morphology and Multifunctional Performance in Piezocatalysis and Electrical Conductivity	Satyanarjan Jena (#164)
10:16-10:24	Efficient UiO-66/Inverse Opal TiO ₂ Composite Photocatalyst for Methylene Blue Degradation Enhancement	Chi-Yun Lin (#126)
10:24-10:32	Femtosecond Laser-Synthesized Metal Oxide Cluster Catalyst/ZIF-8 in Chitosan Film for Enhance CO ₂ Photoreduction to Methanol	Cecilia Adena (#050)
10:32-10:40	Flexible, Non-fused Sulfone Functionalized Polymer with Enhanced Active Site Access for Boosted Photocatalytic Hydrogen Evolution	Tse-Fu Huang (#170)
10:40-10:48	Break	
10:48-11:00	Green Solvent-Assisted Methanolysis of Polycarbonate Catalyzed by Sodium Metasilicate	Caresse Tjuatja(#214)
11:00-11:08	Microfluidic Approach toward Continuous and Ultrafast Synthesis of MIL-53 and Al-BDC	Chiu Hung (#077)
11:08-11:16	Recycling of Calcium Fluoride (CaF ₂) from Fluoride Sludge and Its Adsorptive Efficiency Toward Reactive Blue 21 Dye for Contaminated Wastewaters	Jamshid Hussain (#052)
11:16-11:24	Electrochemically Synthesized Metal Phthalocyanines for Value-Added Ethylene Glycol Conversion	Wei-Sheng Liao (#230)
11:24-11:32	Plasma Universal Synthesis of Single-Atom Catalyst for Enhanced Multicatalytic and Nanoenzymatic Activities	Tammy Laysandra (#270)

Group III, Room 202, Chemical Engineering Building

Time	Title	Speaker
10:00-10:08	Metallic Hybrid Integration in 2D ZIF-L-derived Metal-Organic Frameworks for Enhanced Oxygen Evolution Reaction	Jitprabhat Ponchai (#270)
10:08-10:16	Optimizing Copper-Nitrogen-Carbon Catalysts for Enhanced Electrocatalytic Reduction of Furfural	Shan-Ni Lin (#247)
10:16-10:24	Localized Microstrain-Induced Lattice Distortion in High-Entropy Prussian Blue Analogues via Graphene Quantum Dots for Enhanced Alkaline Hydrogen Evolution Electrocatalysis	Yu-Ru Liu (#246)
10:24-10:32	The Research on the Modification of MXene Applied to Electrochemical Hydrogen Evolution	Min-Hua Huang (#192)
10:32-10:40	Spatial Confinement Enhancement and Orbital Modification of Copper-Aluminum Alloy Encapsulated within Carbon Nanofibers for Ampere-Level Carbon Dioxide Reduction Reaction	Kang-Shun Peng (#117)
10:40-10:48	Pt Nanoparticles Supported on Ru/Ir-Doped TiO ₂ for High-Efficiency Ethylene Glycol Oxidation and Enhanced Production of Value-Added Glycolic Acid	Jung Shen (#232)
10:48-11:00	Break	
11:00-11:08	Active and Durable PEM Water Electrolysis Anode with Spatially Positioned Catalytic Components	Yu-Wei Hsu (#109)
11:08-11:16	Mechanism of the Electrochemical Hydrogenation of Graphene	Yuchian Soong (#093)
11:16-11:24	Highly asymmetrically configured single atoms anchored on flame-roasting deposited carbon black as cathode catalysts for ultrahigh power density Zn-air batteries	Yu-Chien Ting (#060)
11:24-11:32	Oxygen-Incorporated Lithium-Rich Iron Sulfide Cathodes for Li-Ion Batteries with Boosted Material Stability and Electrochemical Performance	Adane Gebresilassie Hailemariam (#138)
11:32-11:40	Highly Selective Nitrate Sensing at Trace Levels in Neutral Medium Using a Synergistic Cu Nanowire/Fe Single Atom Catalyst	Jay Lee (#238)

Group IV, Room 211, Chemical Engineering Building

Time	Title	Speaker
10:00-10:08	Microplastic removal through advanced oxidation processes under hydrothermal condition with Co-based catalysts	Yu-Rong Chang (#216)
10:08-10:16	Redesign of malonyl-CoA synthesis pathway independent of acetyl-CoA carboxylase	Ji-Chan Hung (#210)
10:16-10:24	Effect of MnO ₂ Structure on Hydrogenation of Nitric Oxide over Pd/MnO ₂ Catalysts	Yi-An Wang (#186)
10:24-10:32	Hydrophobic Catalyst for CO ₂ Hydrogenation to Methanol	Shelby Huang (#151)
10:32-10:40	Sustainable Isoprene Glycol Production via Metabolic Engineering of Escherichia coli using Renewable Feedstocks	Arvin Y. Chen (#191)
10:40-10:48	Break	
10:48-11:00	Green and Sustainable Ethanol-to-Butadiene Conversion Enabled by MOF-Derived Bifunctional Beta@UiO66/Zn Catalysts	Duo-Syuan Lin (#097)
11:00-11:08	Few-Walled Carbon Nanotube Synthesis from LDPE over LDH-Derived Fe/Mg/Al Catalysts	Yu-Chia Chang(#076)
11:08-11:16	Investigation of NO _x Storage Mechanism and Desorption Behavior on Pt/BaO/Al ₂ O ₃ Catalysts	Wei-Cheng Chen (#169)
11:16-11:24	Bayesian Optimization-Guided Design of Silica-Supported Nickel Catalysts from Nickel Phyllosilicates	Tzu-Hung Wen (#043)
11:24-11:32	Green glycerol carbonate synthesis from glycerol and CO ₂ using a polymeric ionic liquid catalyst: An experimental and theoretical study	He-Xiang Xu (#095)

Group V, Room 212, Chemical Engineering Building

Time	Title	Speaker
10:00-10:08	Investigation of Structural Regulation and Material Property Differences in Cationic-Anionic Covalent Organic Frameworks	Yi-Chan Huang (#203)
10:08-10:16	Multiscale Simulation Study on the Mechanism of Photocatalytic Hydrogen Evolution in Sulfone-Functionalized Polymers	Kuei-Jhong Lin (#179)
10:16-10:24	Enhancing Fatty Alcohol Selectivity via Alkali-Doped Copper Phyllosilicate Catalysts in FAME Hydrogenation	Korawitch Boonpong (#094)
10:24-10:32	Infrared Spectroscopic Insights into Low-Temperature Methanol Synthesis via Alcohol-Assisted CO ₂ Hydrogenation over CuZnCeO _x Catalyst	Zhi Pin Law (#115)
10:32-10:40	Molecular Fe Conjugated F-doped Graphene Quantum Dots Decorated Carbon Nanotubes as a Bifunctional Electrocatalyst for High Value-added Rechargeable 2e ⁻ ORR/Zn-Air Battery	Tzu-Ting Liu (#242)
10:40-10:48	Break	
10:48-11:00	In situ electrochemical mapping of two-dimensional catalysts using scanning electrochemical microscopy	Septia Kholimatussadiah (#263)
11:00-11:08	Characterization of Reactive Oxygen Species on MnO ₂ Polymorphs via CO Pulse Analysis	Chih-Hao Chen(#168)
11:08-11:16	Heteroatom-doped ZnFe PBA as An Efficient Electrocatalyst Enabling Bifunctional Electrocatalyst for High Value-added Rechargeable 2e ⁻ ORR/Zn-Air Battery	Sofiannisa Aulia (#237)
11:16-11:24	Boosting CO ₂ Conversion: Biomass-Driven Photoreduction with Tailored Co-catalysts for High-Value C2+ Products	Novy Pralisa Putri (#187)