EnergyChem

3rd International Conference on Energy Chemistry

Towards a Carbon-Neutral Future : Innovations in Energy Chemistry

POSTERS

2025 | June 26-29, 2025
Shenzhen, China

NO.	Topic	Title	Author	Organization
PA-001	Hydrogen energy	Plasma-catalytic ammonia synthesis using Fe/CeO_2 mechanically mixed with dielectric Al_2O_3 for renewable hydrogen storage: Insights into plasma discharge enhancement and morphological effect of catalysts	Guangzhao Zhou	Shanghai Jiao Tong University
PA-002	Hydrogen energy	Calcination-Tuned $CuFe_2O_4$-MgO Dual-Functional Catalysts for Sorption-Enhanced Water Gas Shift: Synergistic Hydrogen Production and CO_2 Capture via Spinel-Mediated Active Sites	Jinpeng Zhang	Taiyuan University of Technology
PA-003	Hydrogen energy	Tunable Metal-Hydrogen Bonding in Cu-Ru Catalysts Enables Selective Hydrogen Storage Reactions in Mg-based Composite	Xianzheng Zhao	Chongqing University
PA-004	Hydrogen energy	Electrically driven gaseous ammonia decomposition for hydrogen production without external heating	Xiaochao Wang	Shanghai Jiao Tong University
PA-005	Hydrogen energy	Effects of CH_2O+NH_2=HCO+HCO on the CH_2O profiles and IDTs in the low-temperature oxidation of NH_3/dimethyl ether (DME) mixtures	Lingfeng Dai	Huazhong University of Technology
PA-006	Hydrogen energy	Experimental and modeling study on the ignition delay times and laminar flame speeds of ammonia/natural gas mixtures	Jiacheng Liu	Huazhong University of Technology
PA-007	Hydrogen energy	The Site Distance Effect in Reaction of Reduction of CO_2 and Oxidation of Methanol controlled by Interfacial Distance	Li Zhou	ShanghaiTech University
PA-008	Hydrogen energy	High Efficient Intermetallic Catalyst for Cathodic Oxygen Reduction Proton Exchange Membrane Fuel Cell	Duo Chen	Nanjing Tech University
PA-009	Hydrogen energy	Si Decoration Tuning the Electrocatalytic Activity of Ru via Turing Pattern Design	Chuanlong Liu	Southern University of Science and Technology
PA-010	Hydrogen energy	Weakly Anisotropic Surface States of BaAlSi Electride Boost Ru Dispersion and Ammonia Synthesis	Yijia Liu	Southern University of Science and Technology
PA-011	Hydrogen energy	Metal Cation-Doped Single-Atom Alloy Catalysts for Hydrogen Evolution Reaction	Xiangyun Xiao	Shenzhen Institutes of Advanced Technology, CAS
PA-012	Hydrogen energy	Low-loading and Ultrasmall Ir Nanoparticles with Ni/Nitrogen-doped Nanofibers for Hydrogen Evolution	Xiaojie Chen	Shenzhen Institutes of Advanced Technology, CAS
PA-013	Solar cell technologies	Ce-based complex hole dopant for efficient perovskite solar cells	Fei Han	Institute of Applied Chemistry, Jiangxi Academy of Sciences
PA-014	Next generation batteries	Electrolyte-Catalyst Matching for Dynamic Control of Polysulfides in Li-S Batteries	Yu Li	Peking University

NO.	Topic	Title	Author	Organization
PA-015	Next generation batteries	Inducing Spherical Lithium Deposition via Simultaneously Optimized Electric Field and Ionic Flux for Fast-Charging Lithium Metal Batteries	Xuri Wang	Dalian University of Technology
PA-016	Next generation batteries	Carbon-supported Single-atom Catalysts for Enhancing Sulfur Reduction Reaction Kinetics in Lithium-sulfur Battery	Cuncun Xin	Peking University
PA-017	Next generation batteries	Co-Mn Bimetallic Catalysis Synergized with Dynamic Charge Compensation Mechanism Enhances Long-Cycling Performance of Lithium-Oxygen Batteries	Jingshen Xu	Beijing Normal University
PA-018	Next generation batteries	Regulating Metal Ratios of Bimetallic MOF Promotes PEO-Based Electrolytes for High-Performance All-Solid-State Li-O_2 Batteries	Rui Zhang	Beijing Normal University
PA-019	Next generation batteries	In-situ constructing the enhanced Li-O2 batteries with the coupling effect of self-synthesis electrocatalyst and redox mediator.	Wei Xiong	Beijing Normal University
PA-020	Next generation batteries	Amorphous Nitride-Halide Dual-Anion Electrolytes: Enabling Ultralow-Temperature Operation of All-Solid-State Batteries	Bolong Hong	Southern University of Science and Technology
PA-021	Next generation batteries	Fast Interfacial Defluorination Kinetics Enables Stable Cycling of Low-Temperature Lithium Metal Batteries	Xinpeng Li	Peking University ShenZhen Graduate School
PA-022	Next generation batteries	Synergistic ion transport facilitated by one-dimension wollastonite in solid polymer electrolytes for stable lithium metal batteries	Shuofeng Jian	Peking University Shenzhen Graduate School
PA-023	Next generation batteries	Fluorinated Weak-Solvation Electrolytes for High-Voltage Lithium-Ion Batteries	Yumeng Lan	Peking University
PA-024	Electrocatalysis and electrochemical synthesis	Tandem catalytic mechanism of MXene-based heterostructures and electrochemical performance in ammonia synthesis	Zhijie Cui	Hebei University of Technology
PA-025	Electrocatalysis and electrochemical synthesis	Nitrogen-Doped Porous Carbon Supported Cu-Ni Single-Atom Catalysts for Green Ammonia Synthesis via Renewable-Powered Nitrogen Reduction Reaction	Jiayin Yang	Shanghai DianJi University
PA-026	Electrocatalysis and electrochemical synthesis	Unveiling F-coordination tuning of dense Fe-N_4 active sites via nitrogen fixation over advanced electrocatalysts	Na He	Shanghai DianJi University
PA-027	Electrocatalysis and electrochemical synthesis	Defect-Engineered Carbon Catalysts for Sustainable H_2O_2 Synthesis	Zhe Wang	The University of Iowa

NO.	Topic	Title	Author	Organization
PA-028	Electrocatalysis and electrochemical synthesis	Enrooted-Type Metal-Support Interaction Boosting Oxygen Evolution Reaction in Acidic Media	Wenjuan Wang	Southern University of Science and Technology
PA-029	Electrocatalysis and electrochemical synthesis	Magnetic field oriented dual site S-Ni, FeOOH-M nanoarrays for enhanced oxygen evolution at large current densities	Jie Yu	Tianjin University
PA-030	Metal-organic frameworks and covalent organic frameworks	Microstructure control and properties of two-dimensional metal-organic framework with open active clusters	Siao Li	Beijing Normal University
PA-031	Metal-organic frameworks and covalent organic frameworks	Confinement Effect Enhanced Second Harmonic Generation in Hybrid Germanium Perovskite Ferroelectrics	Zhu Guo	Southern University of Science and Technology
PA-032	Metal-organic frameworks and covalent organic frameworks	Structural Characterization of a Benzimidazole-Based Ligand Metal-Organic Framework	Mingliang Chen	China University of Petroleum (East China)
PA-033	New energy materials	Chemical Vapor Deposition of Bismuth Sulfide Microrods for High-Performance Broadband Photodetection	Li_lawayide A	Yunnan Normal University
PA-034	New energy materials	Single-Atom and Sub-Nanocluster Thermoelectric Materials	Pengfei Xu	Nanjing University of Science and Technology
PA-035	New energy materials	Realizing zT>2 in Monoclinic Cu_2S-Tetragonal $Cu_{1.96}S$ Nano Phase Junctions	Xiaokun Li	Nanjing University of Science and Technology
PA-036	New energy materials	Dual Built-In Electric Fields Constructed in N-doped Carbon Armors to Regulate p-Band Center and Promote Reaction Kinetics in Li-S Batteries	Fangyi Chu	Dalian University of Technology
PA-037	New energy materials	Research on the Regulation Mechanism of Nickel based Catalyst Anion Exchange Membrane（AEM） for Water Electrolysis	Zeyang Peng	Hubei University of Arts and Science
PA-038	New energy materials	Break the capacity limit of $Li_4Ti_5O_{12}$ anodes through oxygen vacancy engineering	Kunchen Xie	Peking University
PA-039	Theoretical calculations, AI and characterizations	Analysis of High-Angle Scattered Electron Behaviour for High Spatial Resolution in STEM-EELS	Yoshiyuki Jo	Kyoto University

NO.	Topic	Title	Author	Organization
PA-040	Theoretical calculations, AI and characterizations	Towards rational design of confined catalysis by machine learning assisted statistical analysis	Xiaoyan Fu	ShanghaiTech University
PA-041	Theoretical calculations, AI and characterizations	Crystal Structure Prediction from Powder X-Ray Diffraction for Metal-organic Frameworks	Bin Feng	Peking University
PA-042	Young elite scientist forum	Machine Learning Computational Screening of High-Entropy Alloy Catalysts for HCOOH Decomposition	Xin Liu	Dongguan University of Technology
PA-043	Carbon materials	External and Internal Precursors Boost the Synthesis of Confined Carbyne	Yanghao Feng	Sun Yat-sen University
PA-044	Carbon materials	Confined Synthesis and Properties of One-Dimensional Germanium Selenide	Yuwei Wu	Sun Yat-sen University
PA-045	Photocatalysis	Synergistic Electronic and Coordination Engineering in PdCu Bimetallic Catalysts for Enhanced Photothermal CO_2-to-Formic Acid Conversion	Ruijie Ma	Taiyuan University of Technology
PA-046	Photocatalysis	Generation of Dynamic Oxygen Vacancies in Graphene Quantum Dots/ $NaNbO_3$ Heterojunction for Boosting Photocatalytic Hydrogen Evolution	Lingling Wang	Institute of Applied Chemistry, Jiangxi Academy of Sciences
PA-047	Photocatalysis	Synergistic Catalysis by Cu Single Atoms and Atomically Cu-doped Au Nanoparticles in a Metal-Organic Framework for Photocatalytic CO_2 Reduction to C_2H_6	Di Chen	Southern University of Science and Technology
PA-048	Photocatalysis	Ce(III)-Doped Mixed-Valence Metal-Organic Frameworks Boosting Ligand-to-Metal Charge Transfer for Photooxidation of a Mustard-Gas Simulant	Yutao Zheng	Southern University of Science and Technology
PA-049	Photocatalysis	Ultrathin BiOCl-OV/CoAl-LDH S-Scheme Heterojunction for Efficient Photocatalytic Peroxymonosulfate Activation to Boost Co(IV)=O Generation	Yi Zhong	Shenzhen Institutes of Advanced Technology, CAS