

Poster Presentation July 20 (WED)

P1-A		15:00-16:30
P1-A-001	Solvent Polarity Tuning to Enhance the Crystallinity of 2D Covalent Organic Frameworks for Visible-Light-Driven Hydrogen Generation <i>Ahmed Elewa, Ho-Hsiu Chou*</i> (National Tsing Hua University, Taiwan)	
P1-A-002	Sulfide Oxidation Tuning in 4,8-bis(5-(2-ethylhexyl)thiophen-2-yl)benzo[1,2-b:4,5-b']dithiophene Based Dual Acceptor Copolymers for Highly Efficient Photocatalytic Hydrogen Evolution <i>Wei-Cheng Lin, Ho-Hsiu Chou*</i> (National Tsing Hua University, Taiwan)	
P1-A-003	Facile Hydrothermal Synthesis of Cu-Cu₂O Octahedrons Loaded GO for Removal of Antibiotic Pollutants <i>Atul Verma*</i> (National Dong Hwa University, Taiwan)	
P1-A-004	Enhanced Visible Light Photocatalytic Inactivation Mechanisms of Staphylococcus Aureus and Escherichia Coli using ZnO-Chitosan Nanocomposite <i>Kamonchanok Huangmee</i> (National Chung Hsing University, Taiwan); <i>Chih-Huang Weng</i> (I-shou University, Taiwan); <i>Jing-Hua Tzeng</i> (National Chung Hsing University, Taiwan & University of Delaware, United States of America); <i>Nhu Anh Than Thi, Yao-Tung Lin*</i> (National Chung Hsing University, Taiwan)	
P1-A-005	Photocatalytic Activity of Graphitic Carbon Nitride Modified with Waste Lignocellulose <i>Wei-Shin Wang, Yi-Ru Zhao, I-Hsiang Tseng*</i> (Feng Chia University Taiwan)	
P1-A-006	Structural Engineering for Graphitic Carbon Nitride for Photocatalytic Tetracycline Dgradation <i>Chun-Yao Wang, Che-Chia Hu*</i> (National Taiwan University of Science and Technology, Taiwan)	
P1-A-007	Fabrication of ZnTiO₃/3D-gC₃N₄/Cu Composites as a Photocatalyst for CO₂ Photoreduction Reaction Application <i>Po-Han Wu*</i> (National Chin-Yi University of Technology, Taiwan); <i>Jih-Mirn Jehng</i> (National Chung Hsing University, Taiwan); <i>Yong-Ming Dai</i> (National Chin-Yi University of Technology, Taiwan)	
P1-A-008	The Investigation of Bridging Hydrophilic Oligo (ethylene glycol) Side Chains in Polymer Photocatalyst for Visible-Light-Driven Hydrogen Evolution <i>Jia-Jen Liu, Chih-Li Chang, Wei-Cheng Lin, Li-Yu Ting, Chia-Yeh Lu, Yu-Tung Lin, Ho-Hsiu Chou*</i> (National Tsing Hua University, Taiwan)	
P1-A-009	Choosing the Carbon Support in Nanocomposites for Sensing Ractopamine under Visible Light Illumination <i>Shih-Wei Chan*</i> , Yuan Chen, Chia-Liang Sun (Chang Gung University, Taiwan)	
P1-A-010	Mechanistic Understanding of Visible-Light-Driven Hydrogen Evolution on Pt Sites in Organic Nanohybrids Enhanced with Hydroxyl Additives <i>Li-Yu Ting, Yves I. A. Reyes, Bing-Heng Li, Mohamed Hammad Elsayed</i> (National Tsing Hua University, Taiwan); <i>J. Ching-Wen Chan</i> (Academia Sinica, Taiwan); <i>Jayachandran Jayakumar, Chih-Li Chang, Wei-Cheng Lin</i> (National Tsing Hua University, Taiwan); <i>Yu-Jung Lu</i> (Academia Sinica, Taiwan); <i>Carmine Coluccini</i> (China Medical University, Taiwan); <i>Hsin-Yi Tiffany Chen, Ho-Hsiu Chou*</i> (National Tsing Hua University, Taiwan)	

Poster Presentation July 20 (WED)

P1-A	15:00-16:30
P1-A-011	Boosting Visible-Light-Driven Hydrogen Evolution of Polymer Photocatalysts by a Universal Main-Chain-Engineering Strategy of Hydrophilic Non-Conjugated Building Blocks <u>Chih-Li Chang</u> (National Tsing Hua University & Academia Sinica, Taiwan); Wei-Cheng Lin, Li-Yu Ting (National Tsing Hua University, Taiwan); Chin-Hsuan Shih (National Cheng Kung University, Taiwan); Tse-Fu Huang (National Tsing Hua University, Taiwan); Che-Yi Chu (National Chung Hsing University, Taiwan); Chin-Wen Chen (National Taipei University of Technology, Taiwan); Chi-Hua Yu (National Cheng Kung University, Taiwan); Yu-Jung Lu (Academia Sinica, Taiwan); Ho-Hsiu Chou* (National Tsing Hua University, Taiwan)
P1-A-012	Visible-Light-Responsive N/C-Doped and Chitosan-C-Codoped TiO₂ for Photocatalytic inactivation of Staphylococcus Aureus, Escherichia Coli, and Aspergillus Niger <u>Nhu Anh Thi Than</u> (National Chung Hsing University, Taiwan); Chih-Huang Weng (I-shou University, Taiwan); Jing-Hua Tzeng (National Chung Hsing University, Taiwan & University of Delaware, United States of America); Yao-Tung Lin* (National Chung Hsing University, Taiwan)
P1-A-013	Conjugated Microporous Polymers Incorporating Thiazolo[5,4-d]thiazole Moieties for Sunlight-Driven Hydrogen Production From Water <u>Islam Mekhemer</u> , Ho Chou* (National Tsing Hua University, Taiwan)
P1-A-014	Photocatalytic Degradation of (Micro) Plastics under Low pH and Temperature Using Ruthenium-Incorporated g-C₃N₄ as a Catalyst <u>Lely Ayu Ningsih</u> (National Taiwan University of Science and Technology, Taiwan); Che-Chia Hu* (National Taiwan University of Science and Technology & Chung Yuan Christian University, Taiwan); Yu-Cheng Chiu (National Taiwan University of Science and Technology, Taiwan)
P1-A-015	CoV₂O₆/Co/TiO₂-Nanowires Ternary Nanocomposite Photocatalyst with Enhanced CO₂ Reduction Activity <u>Cheng-Wei He</u> * (National Chung Hsing University, Taiwan); Yong-Ming Dai (National Chin-Yi University of Technology, Taiwan); Jih-Mirn Jehng (National Chung Hsing University, Taiwan)
P1-A-016	Metal-Free Organic Small Molecules as Photocatalysts for Highly Efficiency CO₂ Photo-Reduction <u>Jiawei Chen</u> * (National Taipei University of Technology & National Taiwan University, Taiwan); Leeyih Wang (National Taiwan University, Taiwan); Syangpeng Rweia (National Taipei University of Technology, Taiwan)
P1-A-017	Flower-Like MoS₂@Ag₂S/Ag Based Z-Scheme Photocatalysts For Efficient Photocatalytic Hydrogen Generation Chi-Jung Chang*, Zheng-Ting Tsai, <u>Yu-Hsuan Nian</u> (Feng Chia University, Taiwan)
P1-A-018	Sulfide-Doped Mesoporous GO-CdSe Nanosheets for Photocatalytic Hydrogen Evolution <u>Xuan-Hao Wei</u> , Wei-Chen Lee, Tzung-En Hsieh, Yi-Hsin Liu* (National Taiwan Normal University, Taiwan)
P1-B-019	Conversion of Ethanol to 1,3-Butadiene Using Catalyst <u>Adama Bojang</u> *, Ho Shing Wu (Yuan Ze University, Taiwan)
P1-B-020	Selective Catalytic Oxidation of Ammonia over Ag/MnO₂ Catalysts <u>Te-An Chiu</u> , Ming-Pei Lin, Guan-Bo Syu, Wen-Yueh Yu* (National Taiwan University, Taiwan)

Poster Presentation July 20 (WED)

P1-B

15:00-16:30

P1-B-021 Calibrated Atomic Uncertainty Quantifications for Deep Learning-Based Molecular Property Prediction

Chu-I Yang, Yi-Pei Li* (National Taiwan University, Taiwan)

P1-B-022 Novel Functionalized TiO₂/Carbonized Electrospun Fiber for Efficient Electrocatalytic Water Decontamination

Jhen-Cih Wu (National Taiwan University, Taiwan); Yi-Hsueh Chuang (National Yang Ming Chiao Tung University, Taiwan); Sofia Ya Hsuan Liou, Chia-Hung Hou* (National Taiwan University, Taiwan)

P1-B-023 NO Catalytic Oxidation with Ozone over Mn-CeOx Supported Graphene-Based Materials

Szu-Han Wu, Hsing-Cheng Hsi* (National Taiwan University, Taiwan)

P1-B-024 DFT Investigation of Photocatalysis in Fe-Grafted TiO₂ for Methanol Adsorption and Conversion

Yan-Kai Chen, Bor-Kae Chang* (National Central University, Taiwan)

P1-B-025 Fe-Cu-Mo-Schiff base Complexes as Trifunctional Electrocatalyst for Alkaline Water Splitting and Zn-Air Battery

Yu-Si Chen, Tzu-Hsuan Chiang* (National United University, Taiwan)

P1-B-026 Kinetic Study of Iodide/Triiodide Redox Reaction at CMC-Coated Pt-Black Thin-Film Rotating Disk Electrode

Rong-Hua Lai, Ren-Bin Lin*, Bing-Hung Tsai (Chinese Culture University, Taiwan)

P1-B-027 Selective Electrochemical Oxidation of Glycerol to Value-Added Three Carbon Products over Cu₂O Microcubes

Matthew Christian Haryanto, Truong-Giang Vo, Chia-Ying Chiang* (National Taiwan University of Science and Technology, Taiwan)

P1-B-028 Electrodeposited Nickel Selenide/ Carbon Nanotube Nanocomposites as Efficient Electrocatalysts for Urea Oxidation Reaction

Shu-Lin Tu (Tatung University, Taiwan); Krishnan Shanmugam Anuratha, Jeng-Yu Lin* (Tunghai University, Taiwan)

P1-B-029 Modulation of Coordination Environment Enhances Electrocatalytic Efficiency of Mo Single Atoms toward Hydrogen Evolution Reaction

Chih-Chieh Cheng, Yong-Xian Yeh, Yu-Chieh Ting, Shin-Hong Lin (National Tsing Hua University, Taiwan); Kotaro Sasaki (Brookhaven National Laboratory, United States of America); Yongman Choi (National Tsing Hua University, Taiwan); Shih-Yuan Lu* (National Yang Ming Chiao Tung University, Taiwan)

P1-B-030 Catalytic Study on Ammonia Synthesis over Mesoporous Carbon Supported Ruthenium Catalysts

Wei-Chih Hsiao (National Synchrotron Radiation Research Center, Taiwan); Shih-Yuan Chen* (National Institute of Advanced Industrial Science and Technology, Japan); Chia-Min Yang (National Tsing Hua University, Taiwan)

Poster Presentation July 20 (WED)

P1-B		15:00-16:30
P1-B-031	Electrochemical Hydrogenation of Furfural to Furfuryl Alcohol under Mild pH Environment over Nanoporous Copper Catalyst <i>Yu-Shuo Lee, I-Chung Cheng, Wen-Yueh Yu*</i> (National Taiwan University, Taiwan)	
P1-B-032	Bifunctional Oxygen Electrocatalytic Activity of $\text{La}_{0.5}\text{Sr}_{0.5}\text{Co}_{0.8}\text{M}_{0.2}\text{O}_3$ (M= Mn, Fe, Ni, Cu) Perovskite Oxides <i>Pandiyarajan Anand, Ming-show Wong, Yen-Pei Fu*</i> (National Dong Hwa University, Taiwan)	
P1-B-033	An Analytical Approach for Deriving Rate Expressions of Complex Reaction Networks <i>Tsai-Ho Li, Yi-Pei Li*</i> (National Taiwan University, Taiwan)	
P1-B-034	Effect of Copper and Iron Clusters on TiO_2 Photocatalysts for Methanol Dissociation: A DFT Investigation <i>Yu-Hui Wang*</i> (National Central University, Taiwan)	
P1-B-035	Deep Learning Based Microstructure Characterization of Cerium Oxide Catalysts <i>Hsin-Yu Yu, Shih-Cheng Li, Yi-Pei Li*</i> (National Taiwan University, Taiwan)	
P1-B-036	Perovskite Co-Ti and Ni-Ti Mixed Oxides Supported PtRu Catalysts: Preparation and CO Tolerance for PEMFC Fuel Cells <i>Yu-Chen Lin*</i> , Shawn D. Lin (National Taiwan University of Science and Technology, Taiwan)	
P1-B-037	Earth-Abundant Manganese Oxide Nanorod as Highly Efficient Electrocatalyst for Selective Glycerol Electrooxidation to Dihydroxyacetone <i>Giang-Son Tran, Truong-Giang Vo, Chia-Ying Chiang*</i> (National Taiwan University of Science and Technology, Taiwan)	
P1-C		15:00-16:30
P1-C-038	Waste Batteries-Derived Multifunctional Zinc Catalysts for Polyethylene Terephthalate (PET) Glycolysis and Decolorization <i>Yu-Wen Chiao, Weisheng Liao</i> (National Taiwan University, Taiwan); <i>Chia-Wen Wu*</i> (National Taiwan University & Academia Sinica, Taiwan)	
P1-C-039	Novel Process Design of the Production of Green Diesel from Dairy Waste Scum Oil <i>Muhammad Ikhsan Taipabu, Karthickeyan Viswanathan, Wei Wu*</i> (National Cheng Kung University, Taiwan)	
P1-C-040	Highly Efficient Ce-Fe catalysts for the Selective Catalytic Oxidation of H_2S at Room Temperature <i>Yu-Hua Chen, Yu-Xuan Ke, Bo-Tau Liu*</i> (National Yunlin University of Science and Technology, Taiwan)	
P1-C-041	Bio-Oil Production from the Lignocellulosic Feedstocks by the Liquid Phase Reforming <i>Alex Chang*</i> , Yu-Hsuan Lin, Sheng-Wen Lu (Feng Chia University, Taiwan)	
P1-C-042	Preparation of Alkali Catalyst MIL-101(Cr)-NH_2 and Application in Transesterification <i>Kou-Tong Lee, Wei-Kang Chuang, Ying-Feng Lin*</i> (Ming Chi University of Technology, Taiwan)	

Poster Presentation July 20 (WED)

P1-C	15:00-16:30
P1-C-043	Valorization of Plastic Wastes into SWCNTs by Three-staged Process and Highly Dispersed Catalyst <u>Cheng-Kuan Hsieh</u> , Kevin C.-W. Wu* (National Taiwan University, Taiwan)
P1-C-044	Study on Oxidation of 1,4-Butanediol to Succinic Acid with Using Microchannel Reactor. <u>Chun-Yi Wu*</u> , Yen-Jun Lin (National Taiwan University of Science and Technology, Taiwan); Wei-Tsan Wong (E-Shine Advanced Chemicals Ltd, Taiwan); Yao-Hsuan Tseng (National Taiwan University of Science and Technology, Taiwan)
P1-C-045	Biomass-Derived Materials for Electrochromic Application <u>De-Chian Chen</u> , Eduardo C. Atayde Jr., and Kevin C.-W. Wu* (National Taiwan University, Taiwan)
P1-C-046	Facile Preparation of Carbonaceous Iron Oxide Nanaocatalyst from Iron Perchlorate Salts and Hydrogen Peroxide in Benzene and Acetonitrile for Selective Oxidation of Benzene <u>Tigist Abay*</u> (Academia Sinica & National Taiwan University of Science and Technology, Taiwan); Sheng-Fa Yu Steve (Academia Sinica, Taiwan); Jyh-Chaing Jiang (National Taiwan University of Science and Technology, Taiwan)
P1-C-047	Study on Synthesis of 2-Hydroxypropyl Methacrylate with Using Microchannel Reactor Pei-Zhen Lin, Chun-Yi Wu (National Taiwan University of Science and Technology, Taiwan); Wei-Tsan Wong (E-Shine Advanced Chemicals Ltd, Taiwan); <u>Yao-Hsuan Tsenga*</u> (National Taiwan University of Science and Technology, Taiwan)
P1-C-048	Transition State Control of Single-Site Metal-Organic Framework Catalysts on Pore Size and Shape Selective Hydrogen-Involved Reactions <u>Jyun-Yi Yeh</u> (National Taiwan University & Academia Sinica, Taiwan); Yi-Pei Li (National Taiwan University, Taiwan); Kevin C.-W. Wu* (National Taiwan University & Academia Sinica, Taiwan)
P1-C-049	Recoverable Low Fluorine Content Palladium Complex-Catalyzed Suzuki-Miyaura and Sonogashira Coupling Reactions: Under Thermomorphic Mode <u>Gurumallappa</u> , Eskedar Tessema, Norman Lu* (National Taipei University of Technology, Taiwan)
P1-C-050	Heterogeneous Pd Single-Site Metal-Organic Framework Catalyst for Hydroformylation of Styrene with Formic Acid <u>Ming-Rou Wu*</u> , Kevin C.-W. Wu (National Taiwan University, Taiwan)
P1-C-051	Evaluating the Efficiency of ZnO Nanorods/g-C₃N₄ Heterostructure Photocatalyst under Visible Light Irradiation <u>Wun-Jhang Chen*</u> , Yong-Ming Dai (National Chin-yi University of Technology, Taiwan)
P1-C-052	Preparation of MIL-101(Cr)-SO₃H in Neutral or Alkaline Environment and Application in Esterification to Produce Methyl Oleate Kuo-Tong Lee, <u>Hsien-Ya Lo*</u> (Ming Chi University of Technology, Taiwan)
P1-C-053	Study on the Selective Growth of SOD and LTA Zeolites <u>Shang-Tien Tsai</u> , Kevin C.-W. Wu* (National Taiwan University, Taiwan)

Poster Presentation July 20 (WED)

P1-C

15:00-16:30

P1-C-054 Fabrication of Formaldehyde Degradable Photocatalysts with Humidity Buffering Coatings Derived from Inorganic Wastes

Meng Wei Zheng, Wan-Yu Wen, Shou-Heng Liu* (National Cheng Kung University, Taiwan)

P1-C-055 Stable Radicals Mesoporous Graphene-Oxide for Fenton-Like Reaction

Yu Shan Chien, Hsing-Yu Wang, Yi-Hsin Liu* (National Taiwan Normal University, Taiwan)

P1-C-056 Separation of Silver Nanoparticle from Liquid with Using Cross-Flow Membrane

Siang Kai Huang, Yan-Quan Zhang, Yao-Hsuan Tseng* (National Taiwan University of Science and Technology, Taiwan)

P1-D

15:00-16:30

P1-D-057 Fabrication of a Coking-Resistant, UiO-66(Ce)-derived NiO/CeO₂ Catalyst for Enhanced Hydrogen Production from Post-Consumer Plastic Wastes

Chang-Yen Hsu, Wei-Ting Chung (National Taiwan University, Taiwan); Ren-Xuan Yang (National Taipei University of Technology, Taiwan); Kevin C.-W. Wu* (National Taiwan University, Taiwan)

P1-D-058 AgCN-Catalyzed Selective Epoxidation with its Surface Activation by H₂O₂(aq) and Assisted by CH₃CN as a Non-Innocent Solvent

Yu-Jhang Lu (Academia Sinica & National Chung Hsing University, Taiwan); Zhi-Han Lin (Academia Sinica, Taiwan); Steve S.-F. Yu* (Academia Sinica & National Chung Hsing University, Taiwan)

P1-D-059 Abatement of Carbon Monoxide over Cobalt Oxide: Influence of Washing and Drying Pretreatment

Chiu-Hung Liu*, Chia-Chang Hsu (National Defense University, Taiwan); Chih-Wei Tang (Army Academy R.O.C., Taiwan); Chih-Chia Wang, Chen-Bin Wang (National Defense University & National Yang Ming Chiao Tung University, Taiwan)

P1-D-060 Impact of the Molecular Weight of Donor-Acceptor Conjugated Polymers on the Performance of Photocatalytic Hydrogen Evolution

Yu-Tung Lin, Wei-Cheng Lin, Chih-Li Chang, Li-Yu Ting, Chia-Yeh Lu, Jia-Jen Liu, Ho-Hsiu Chou* (National Tsing Hua University, Taiwan)

P1-D-061 Carbon-Modified g-C₃N₄ films for Photocatalytic CO₂ Reduction: Effects of Sacrificial Reagents on Product Selectivity and Yield

Yu-Hsuan Liu, You-Yu Syue, Pin-Yi Wu, I-Hsiang Tseng* (Feng Chia University, Taiwan)

P1-D-062 Metal-Organic Frameworks Applied on the Cordierite Monolith, Cordierite@MOFs, as Heterogeneous and Reusable Catalysts for Cycloaddition of CO₂

Chin-Hung Liao, Chia-Her Lin* (National Taiwan Normal University, Taiwan); Chen-Yen Tsai (Chinese Culture University, Taiwan)

P1-D-063 Investigate CO₂ Hydrogenation to Methanol in Single Reactor and Double Reactor under Low Pressure

Jun-Yi Wu*, Chi-Sheng Wu (National Taiwan University, Taiwan)

Poster Presentation July 20 (WED)

P1-D	15:00-16:30
P1-D-065	Study on Application of Tray-Tower Design Interconnected Fluidized Bed in Chemical Looping Combustion Process Wei-Ze Jian, Yan-Quan Zhang, Min-Chih Ho, Yi-Xuan Guo, <u>Yao-Hsuan Tseng*</u> (National Taiwan University of Science and Technology, Taiwan)
P1-D-066	La-Ce-Zr Mixed Oxide Supported Ni Catalysts for Ethanol Steam Reforming <u>Fong-Hsu Hsueh</u> , Shawn D. Lin* (National Taiwan University of Science and Technology, Taiwan)
P1-D-067	Corrosion Prevention for 304 Stainless Steel by Using TiO₂/Ni(OH)₂ Composite Photocatalysts Yung-Fu Wu*, <u>Wei-Teng Wang</u> , Mei-Wei Chen, Yu-Min Fan (Ming Chi University of Technology, Taiwan)
P1-D-069	Preparation and Characterization of Sulfated Zirconia/CuO-ZnO-ZrO₂ Catalyst for CO₂ Hydrogenation to Dimethyl Ether <u>Abrar Hussain</u> , Kuen-Song Lin*, Ndumiso Vukile Mdlovu, Yun Ko, Yung-Chen Hsieh (Yuan Ze University, Taiwan)
P1-D-070	The Effect of Gas Permeability of Gas Diffusion Electrode on The Selectivity of Electrocatalytic CO₂ Reduction <u>Nien-Chun Hsu</u> , Ping-Huan Chen, Tsu-Chin Chou* (National Tsing Hua University, Taiwan)
P1-D-071	Effect of Support on the Performance of PtRu-Based Catalyst in Oxidative Steam Reforming of Ethanol <u>Chih-Wei Tang*</u> (Army Academy R.O.C., Taiwan); Chiu-Hung Liu, Shen-Wei Yu (National Defense University, Taiwan); Chen-Bin Wang (National Defense University & National Yang Ming Chiao Tung University, Taiwan)
P1-D-072	Preparation of Perovskite-/like Bi₂₅GaO₄₀ /g-C₃N₄ Composites Photocatalyst and Their Application in CO₂ Photoreduction <u>Zhao-Jun Zheng*</u> (National Chin-Yi University of Technology, Taiwan), Jih-Mirn Jehng (National Chung Hsing University, Taiwan), Yong-Ming Dai (National Chin-Yi University of Technology, Taiwan)
P1-D-073	Characteristics and Reactivities of Mixed-Amine/Silica Fume Solid Sorbents for Low-Temperature CO₂ Capture Jhih-Siang Yang, <u>Ren-Bin Lin*</u> (Chinese Culture University, Taiwan)
P1-D-074	Carbonization of SiO₂@ZIF-67 and Applications on CO₂ Cycloadditions <u>Chu-Han Chang*</u> (National Taiwan Normal University, Taiwan); Chen-Yen Tsai (Chinese Culture University, Taiwan); Chia-Her Lin (National Taiwan Normal University, Taiwan)
P1-D-075	Study on Cycloaddition of Propylene Oxide and Carbon Dioxide to Propylene Carbonate with Using Microchannel Reactor Kuang-Hsuan He, Chun-Yi Wu (National Taiwan University of Science and Technology, Taiwan); Wei-Tsan Wong (E-Shine Advanced Chemicals Ltd, Taiwan); <u>Yao-Hsuan Tseng*</u> (National Taiwan University of Science and Technology, Taiwan)
P1-D-076	Preparation of Cerium-Iron Mixed Oxide for Oxygen Stripping of CO₂ <u>Ruo-Yun Lin</u> , Shawn D. Lin* (National Taiwan University of Science and Technology, Taiwan)

Poster Presentation July 21 (THU)

P2-A

17:00-18:30

P2-A-077 Precipitation Treatment of Electroless Nickel Plating Solution for Producing TiO₂/Ni(OH)₂ Photoelectrocatalyst

Tzu-Hsuan Tsai* (National Taipei University of Technology, Taiwan); Yung-Fu Wu (Ming Chi University of Technology, Taiwan); Yi-Ting Lo, Yu-Chen Cheng (National Taipei University of Technology, Taiwan)

P2-A-078 Photoreduction of Carbon Dioxide and Photodegradation of Organic Pollutants Using ZnGa₂Te₄/g-C₃N₄ composites

Wen-Jin Liu*, Fu-Yu Liu, Yu-Yun Lin (National Taichung University of Education, Taiwan); Chung-Shin Lu (National Taichung University of Science and Technology, Taiwan); Chiing-Chang Chen (National Taichung University of Education, Taiwan)

P2-A-079 Defect-Engineered Zr-Based Metal-Organic Frameworks Used to Load on g-C₃N₄ Photocatalyst to Enhance the Photocatalytic Ability

Jun-Han Lin, To-Yu Wang, Li-Heng Kao (National Kaohsiung University of Science and Technology, Taiwan); Chao-Wei Huang* (National Cheng Kung University, Taiwan)

P2-A-080 Study on the Photocatalyst Degradation of VOCs Emitted by the SVE System of the Contaminated Site

Chien-I Wu*, Chiu-Ping Li (CPC, Taiwan)

P2-A-081 Synthesis, Characterization, and Photocatalytic Activity of Antimony Seleniodide (SbSeI)

Yun-Rou Tseng*, Wu-Tsan Wu, Chiing-Chang Chen (National Taichung University of Education, Taiwan)

P2-A-082 Plasmon-Induced Charged Separation for Photocatalytic Hydrogen Peroxide Production

Ssu-Ju Huang, Kun-Che Kao* (National Changhua University of Education, Taiwan)

P2-A-083 Bismuth Vanadate/Tungsten Oxide Heterojunction for Photoelectrochemical Water Splitting

I-Hsin Chen, Ying-Chih Pu* (National University of Tainan, Taiwan)

P2-A-084 Metal-Organic Framework MIL-100(Fe)/ Titanium Dioxide Composites to Degrade Organic Dyes through Photo-Fenton Method under Solar Light Irradiation

Yun Chou, Shih-Jung Chou* (National Kaohsiung University of Science and Technology, Taiwan); Chao-Wei Huang (National Cheng Kung University, Taiwan)

P2-A-085 Digital Light Processing (DLP) 3D-Printed TiO₂ Photocatalytic Reactor for Dyes Decomposition in Water

Jeffery C.H. Chen*, Shi-Cheng Wang, Ting-Yi Chou, Hua-Wei Chen (National Ilan University, Taiwan)

P2-A-086 Fabrication of conformal TiO₂ Protection Layers on Photoelectrodes for Water Splitting through biomimetic layer-by-layer mineralization

Ping-Chang Chuang, Hao-Wei Ho, Yi-Hsuan Lai* (National Cheng Kung University, Taiwan)

Poster Presentation July 21 (THU)

P2-A

17:00-18:30

P2-A-087 **Fe₂O₃/C₃N₄ loading on NH₂-MIL-125 Composite Materials for The Photocatalytic Degradation of Organic Pollutants under Visible Light Irradiation**

Jun-Jie Liu, Hui-Shan Chang* (National Kaohsiung University of Science and Technology, Taiwan); Chao-Wei Huang (National Cheng Kung University, Taiwan)

P2-A-088 **Bi₂O₂S and Bi₂O₂S/g-C₃N₄: Synthesis, Characterization, and Photocatalytic Reduction of Carbon Dioxide and Degradation of Dye**

Tin-Wei Chang*, Yu-Yun Lin, Fu-Yu Liu, Wu-Tsan Wu, Yong-Ming Dai, Chiing-Chang Chen (National Taichung University of Education, Taiwan)

P2-A-089 **Zinc Digallium Selenide/Graphitic Carbon Nitride Composites: Synthesis, Characterization, and Their Application in CO₂ Photocatalytic Reduction**

Ling-Guang Wang*, Fu-Yu Liu, Yu-Yun Lin (National Taichung University of Education, Taiwan); Chung-Shin Lu (National Taichung University of Science and Technology, Taiwan); Chiing-Chang Chen (National Taichung University of Education, Taiwan)

P2-A-090 **A Photocatalytic Reduction of Nitrate in Water over Metal Doped TiO₂**

Fang Yu Liang*, Yu Jie Chen, Po Jung Huang (National Sun Yat-sen University, Taiwan)

P2-A-091 **Carbon Quantum Dots on P25/NH₂-MIL-125 Composite Materials for Enhancing Photocatalytic Degradation of Organic Pollutants under Visible Light Irradiation**

Hui-Shan Chang, Wen-Chieh Hsiao, Li-Heng Kao (National Kaohsiung University of Science and Technology, Taiwan); Chao-Wei Huang* (National Cheng Kung University, Taiwan)

P2-A-092 **Plasmonic Molybdenum Oxide for Light-Assisted CO₂ Hydrogenation**

Chang-Ru Guo, Yu-Rui Wang, Kun-Che Kao* (National Changhua University of Education, Taiwan)

P2-A-093 **Construction of g-C₃N₄/Ag/FeVO₄ Ternary Nanocomposite with Enhanced for Photocatalytic Reduction of CO₂ Reduction**

Chin-Ling Liu, Wei-Chi Chen (National Chung Hsing University, Taiwan); Yong-Ming Dai (National Chin-yi University of Technology, Taiwan); Jih-Mirn Jehng* (National Chung Hsing University, Taiwan)

P2-A-094 **CsPbBr₃ Perovskite/Zinc Oxide Nanoheterostructures for Photocatalytic CO₂ Reduction**

Ding-Jun Hong*, Ying-Chih Pu (National University of Tainan, Taiwan)

P2-A-095 **Photocatalytic Oxidation Efficiency of Elemental Mercury (Hg⁰) Using Reduced Graphene Oxide (rGO) Modified CeO₂/TiO₂**

Ji-Ren Zheng, Chung-Shin Yuan*, Iau-Ren Ie (National Sun Yat-sen University, Taiwan)

Poster Presentation July 21 (THU)

P2-B	17:00-18:30
P2-B-096	An Industrial Approach for Regeneration of Spent Honeycomb SCR Catalyst <u>Li-Yi Chen</u> , Chi-Lang Chen*, Wen-Chang Chen, Chin-Chu Huang, Ming-Feng Chang, Song-Hui Su (China Steel Corporation, Taiwan)
P2-B-097	Selective Formation of Poly(3,4-ethylenedioxythiophene) Confined in the Nanopores of a Porphyrinic Metal–Organic Framework for Electrocatalytic Nitrite Oxidation <u>Meng-Dian Tsai</u> , Yi-Ching Wang, You-Liang Chen, Yu-Hsiu Chen, Cheng-Hui Shen, Chung-Wei Kung* (National Cheng Kung University, Taiwan)
P2-B-098	Multi-Function Integrated Removal of Particulates and Gas emission over the V₂O₅/TiO₂ Catalyst Supported on a Ceramic Fiber Filter <u>Jia Yin Lin*</u> , Yan-Fu Chen, Chin-Liang Wang (CLEAN AIR TECHNOLOGY LIMITED, Taiwan)
P2-B-099	Platinum Thin Film Electrodes Prepared by Chemical Bath Deposition for Non-Enzymatic Biosensors <u>Shih-Chin Pan*</u> , Po-Chun Chen (National Taipei University of Technology, Taiwan)
P2-B-100	The Diffusion of Atomic Defects on MoS₂ Surface: Ab Initio Calculations and Kinetic Monte-Carlo Simulations <u>Po-Yuan Wang</u> , Cheng-Chau Chiu* (National Sun Yat-sen University, Taiwan)
P2-B-101	Density Functional Theory Study of Hydrogen Storage Materials: A Case Study of Pt₄ Subcluster Supported on Defective Graphene <u>Ying-Cheng Chen</u> (National Tsing Hua University, Taiwan); Amita Sihag (National Tsing Hua University, Taiwan & University of Liverpool, United Kingdom); Matthew Stephen Dyer (University of Liverpool, United Kingdom); Hsin-Yi Tiffany Chen* (National Tsing Hua University, Taiwan)
P2-B-102	Pt₆Mn₂Mo₂ Electrocatalyst for Determination of Vitamin C and Dopamine <u>Jia-Yi Su-Chen</u> , Yu-Ching Weng* (Feng Chia University, Taiwan)
P2-B-103	Examination of the Brønsted–Evans–Polanyi Relationship for the Hydrogen Evolution Reaction on Transition Metals Based on Constant Electrode Potential Density Functional Theory <u>Chi-Tien Hsieh*</u> , Yao-Liin Cheng, Yeu-Shiuan Ho, Min-Hsiu Shen, Tzu-Hsuan Chao, Mu-Jeng Cheng (National Cheng Kung University, Taiwan)
P2-B-104	Reconstruction of Platinum Surfaces Simulated with First-Principles Method <u>Cheng-Chau Chiu*</u> , <u>Zhe-An Li</u> (National Sun Yat-sen University, Taiwan)
P2-B-105	Enhancement of Carbon-Felt Electrochemical Activity for V(IV)/V(V) redox Reaction Tzu-Hsuan Tsai, <u>Jih-Sian Luo*</u> (National Taipei University of Technology, Taiwan)
P2-B-106	Atomic Ir-Cluster Decorated CoCore@PdShell Nanocatalyst for Oxygen Reduction Reaction in Alkaline Electrolyte <u>Han-Po Wu*</u> , Po-Chun Chen (National Taipei University of Technology, Taiwan)
P2-B-107	Study on De-NO_x Efficiency of Vanadium-Titanium SCR Catalyst Loaded on Different Carriers <u>Zih-Hao You</u> (National Kaohsiung University of Science and Technology, Taiwan); Chao-Wei Huang* (National Cheng Kung University, Taiwan)

Poster Presentation July 21 (THU)

P2-B		17:00-18:30
P2-B-108	Redox-Active and Chemically Stable Metal–Organic Framework–Carbon Nanotube Nanocomposites for Electrocatalytic Water Oxidation <i>Tzu-En Chang, Cheng-Hsun Chuang, Yu-Hsiu Chen, Yi-Ching Wang, Yu-Juan Gu, Chung-Wei Kung*</i> (National Cheng Kung University, Taiwan)	
P2-B-109	Performance Evaluations of the Used SCR Catalysts in Dalin Refinery Plant of CPC <i>Huan-Ting Kuo*</i> , Ying-Chieh Yang, Ching-Fa Chi, Chyi-Liuh Ho, Jann-Chen Lin (CPC Corporation, Taiwan)	
P2-B-110	Immobilizing Molecular Electrocatalyst Strategy: Supporting Graphene Quantum Dots (GQDs) substrate for Enhanced Oxygen Evolution Reaction <i>Mia Rinawati, Yao-Sheng Cheng</i> (National Taiwan University of Science and Technology, Taiwan); <i>Jyh-Fu Lee</i> (National Synchrotron Radiation Research Center, Taiwan); <i>Min-Hsin Yeh*</i> (National Taiwan University of Science and Technology, Taiwan)	
P2-B-112	Understanding of Cs Promotion Effect on Ru-Based Catalysts in Ammonia Production <i>Cheng-Hsi Yeh, Yves Ira Reyes</i> (National Tsing Hua University, Taiwan); <i>Shih-Yuan Chen</i> (National Institute of Advanced Industrial Science and Technology, Japan); <i>Hsin-Yi Tiffany Chen*</i> (National Tsing Hua University, Taiwan)	
P2-B-113	Electrocatalytic Activity of A Surface-Modified Nickel Foam Electrode in An Electrolysis Cell For Urea Oxidation <i>Nancy Y Xu*</i> , Bill G Hsu, Andrew C. Chien (Feng Chia University, Taiwan)	
P2-C		17:00-18:30
P2-C-114	Hydrotreatment of Soybean Oil over Bimetallic Ni-Mo/Zeolite Y Catalysts for Green Fuel Production <i>You-Lin Lin, Bing-Hung Chen*</i> (National Cheng Kung University, Taiwan)	
P2-C-115	Development of Liquid Organic Chemical Hydride for Hydrogen Storage via Toluene Catalytic Hydrogenation <i>Ching-Fa Chi*</i> , Huan-Ting Kuo, Ying-Chieh Yang, Chyi-Liuh Ho, Jann-Chen Lin (Refining & Manufacturing Research Institute, Taiwan)	
P2-C-116	Catalytic Performance of Lithium Aluminate for the Synthesis of Glycerol Carbonate from Glycerol and Dimethyl Carbonate <i>Chao-Hsuan Yang*</i> , Jia-Hao Lin, Yong-Ming Dai, Chiing-Chang Chen (National Taichung University of Education, Taiwan)	
P2-C-117	Preparation and Characterization Analysis of Carbon Material Catalyst <i>Ying-Chieh Yang*</i> , Ching-Fa Chi, Huan-Ting Kuo, Mei-Jin Li (CPC Corporation, Taiwan)	
P2-C-118	Development of Flexible Carbon-Based Supports for High-Performance Catalysts in Dye-Sensitized Solar Cells <i>Wen-Yi Tsao, Hung-Hsi Chen, Chih-Liang Wang*</i> (National Chung Hsing University, Taiwan)	

Poster Presentation July 21 (THU)

P2-C

17:00-18:30

P2-C-119 Synchrotron Radiation Photosynthesis of Pd/MWCNTs for Formic Acid Electrooxidation and Study of the Kinetics

Sheng-Jung Tsou, Yuh-Jing Chiou*, Hong-Ming Lin (Tatung University, Taiwan); Andrzej Borodzinski (Polish Academy of Sciences, Poland)

P2-C-120 Bifunctional Carbocatalyst for Catalytic Hydrolysis of Cellulose

Gemechu Dadi Bedasso (National Yang Ming Chiao Tung University & Academia Sinica, Taiwan); Chan-Yi Lin, Chia-Hui Wu (National Yang Ming Chiao Tung University, Taiwan); Po-Wen Chung* (National Yang Ming Chiao Tung University & National Sun Yat-sen University, Taiwan)

P2-C-121 The Polyphenols Extracted from Taiwan's Unique Brown Algae as Materials for Biotechnology Industry

Chen-Yu Chien (Chung Yuan Christian University, Taiwan); Pi-Tao Kuo (Chin Yee Chemical Industries Co., Ltd., Taiwan); Ting-Cih Huang, Yu-Tzu Huang* (Chung Yuan Christian University, Taiwan)

P2-C-122 Preparation of Monolithic Adsorbents with DLP 3D Printing Skeleton

Chi-Ho Wu, Shawn D. Lin* (National Taiwan University of Science and Technology, Taiwan)

P2-C-123 Coordination Tunes the Activity and Selectivity of the Nitrogen Reduction Reaction on Single-Atom Catalysts Anchored on Thiophene Linked Porphyrin (TM-N₄/TP)

Nadaraj Sathishkumar, Hsin-Tsung Chen* (Chung Yuan Christian University, Taiwan)

P2-C-124 Evaluation of CRYSTALLINE STRUCTURE and SO₂ Removal Capacity of Commercial Sulfur Transfer Catalysts

Hsien-Chang Yang*, Hsiang-Yao Sun, Che-Yuan Chang, Hung-Tzu Chiu (CPC Corporation, Taiwan)

P2-C-125 Aerosol-Assisted Synthesis of Metal-Organic Framework-Derived Hybrid Nanomaterials for Reverse Water-Gas Shift Reaction

Yu-An Hsueh, De-Hao Tsai* (National Tsing Hua University, Taiwan); Chia-Her Lin (National Taiwan Normal University, Taiwan)

P2-C-126 Study on Optimization of Degradation of Safranin O Dye via Heterogeneous Fenton-like Reaction Using Fe-MOR Catalysts

Bo-Zhang Chen, Bing-Hung Chen* (National Cheng Kung University, Taiwan)

P2-C-128 Effect of Mesoporosity and Extra-framework Aluminum Species on the Cracking Activity of Zeolite Y

Shih-Cheng Li, Yen-Chun Lin, Yi-Pei Li* (National Taiwan University, Taiwan)

P2-C-129 Production of Glycerol Triacetate through Esterification of Glycerol Using Tungstophosphoric Acid and Silicotungstic Acid

Jia-Hao Lin, Cheng-Jhe Tsai, Wen-Ying Chen (National Taichung University of Education, Taiwan); Yong-Ming Dai (National Chin-yi University of Technology, Taiwan); Chiing-Chang Chen* (National Taichung University of Education, Taiwan)

P2-C-130 Effective Removing of Mixed Anionic Methyl Orange and Cationic Methylene Blue Dyes with CuZnAl-Layered Double Hydroxide

Sheng-Chi Hsu, Chia-Hsiang Yang Yang, Cheng-Hung Lin*, Nian-You Wu, Chih-Chia Wang, Chen-Bin Wang (National Defense University, Taiwan)

Poster Presentation July 21 (THU)

P2-C

17:00-18:30

P2-C-131 One-Step Bio-Synthesis of Supramolecular Carbon Nitride in the Presence of Chitosan for Photoreforming of Biomass into H₂

Hieu Thao Vo, Van-Can Nguyena, Dao Nguyen Ngoc Hana, Hsisheng Teng* (National Cheng Kung University, Taiwan)

P2-C-132 Importance of Eggshell Membrane in Material Engineering: Recent Perspectives in Physical, Chemical, Biological Applications and Separation Techniques

Sivarasan Ganesan, Huang-Mu Luo* (Chaoyang University of Technology, Taiwan)

P2-D

17:00-18:30

P2-D-133 Photocatalytic CO₂ Reduction to C1-C5 Hydrocarbons Using K₂Fe₂O₄/g-C₃N₄ as C-C Coupling Catalysts

Hung-Lin Chen* (Peking University, China); Fu-Yu Liu (National Taichung University of Education, Taiwan); Chung-Shin Lu (National Taichung University of Science and Technology, Taiwan); Yu-Yun Lin, Chiing-Chang Chen (National Taichung University of Education, Taiwan); Dechun Zou (Peking University, China)

P2-D-134 Aerosol-Phase Synthesis of Bimetallic NiCu Oxide-Decorated CeO₂ Nanoparticle Cluster for Catalytic Methane combustion

Ren-You Huang*, Zhi Xuan Law, Chuan-Bin Du, De-Hao Tsai (National Tsing Hua University, Taiwan)

P2-D-135 Study on Catalytic Carbonylation of Glycerol to High Value Organic Carbonates in Mild Condition over Cerium Oxide/Zinc Oxide

Soon Long Low, Bing-Hung Chen* (National Cheng Kung University, Taiwan)

P2-D-137 Sustainable Synthesis of Epoxides from Halohydrin Cyclization by Composite Solid Base Catalysts

Ching-Yuan Chang, Yu-Fan Chen (National Tsing Hua University, Taiwan); Yi-Ta Tsai, Chien-Fu Huang (Chang Chun Plastic Co., Taiwan); Yung-Tin Pan, De-Hao Tsai* (National Tsing Hua University, Taiwan)

P2-D-138 SbSI and SbSI/g-C₃N₄: Synthesis, Characterization, and Photocatalytic Activity of CO₂ reduction and CV degradation

Szu-Han Chen, Wu-Tsan Wu, Yu-Yun Lin, Fu-Yu Liu, Chiing-Chang Chen* (National Taichung University of Education, Taiwan)

P2-D-139 Ceria-Based Nanostructured Catalysts for Dialkyl Carbonates Formation from CO₂ and Alcohols

Pao-Chi Yang*, Ching-Yuan Chang, Pin-Lien She (National Tsing Hua University, Hsinchu, Taiwan); Yi-Ta Tsai, Chien-Fu Huang (Chang Chun Plastic Co., Taiwan); Yung-Tin Pan, De-Hao Tsai (National Tsing Hua University, Hsinchu, Taiwan)

P2-D-140 Improved Dehydrogenation Behavior of LiBH₄ Nanoconfined in Few-Layer Graphene Nanoconfinement with Manipulated Functionalities

Rui-Fang Guo, Ya-Chen Hsieh, Chia-Yu Hsu (National Yang Ming Chiao Tung University, Taiwan); Nikolaos Kostoglou (Montanuniversität Leoben, Austria); Cheng-Yu Wang* (National Yang Ming Chiao Tung University, Taiwan)

Poster Presentation July 21 (THU)

P2-D

17:00-18:30

P2-D-141 The Influence of Alkaline Catalyst Supports on the Carbon Dioxide Reduction Reaction Catalyzed by Copper

Ding Huei Tsai (National Tsing Hua University, Taiwan); Tung Da Wu* (National Taiwan University, Taiwan); Wei Chieh Liao (National Tsing Hua University, Taiwan); Wen Yueh Yu (National Taiwan University, Taiwan); Yung Tin Pan (National Tsing Hua University, Taiwan)

P2-D-142 Optimal Conditions of High Dispersion Copper Catalyst for Selective Oxidation of Methane

Jhao Nan Li* (National Taiwan University of Science and Technology, Taiwan)

P2-D-143 Evaluation of Metal-Exsolved Perovskites used for Chemical Looping Oxidation of Methane and Its Characterization

Mike S. Cheng*, Andrew C. Chien, Joy H. Chung, Steven Z. Hua (Feng Chia University, Taiwan)

P2-D-144 Catalytic Reduction of CO₂ to CO via Reverse Water Gas Shift Reaction

Haw-Jen Hsiao, Yu-Wen Chen* (National Central University, Taiwan)

P2-D-145 Aerosol-based Synthesis of CaO-Ni-CeO₂ Hybrid Nanoparticle for Calcium Looping-Integrated Carbon Capture and Utilization

Zhi Xuan Law, De-Hao Tsai* (National Tsing Hua University, Taiwan)

P2-D-146 Visible-Light-Driven Photocatalysis of Carbon Dioxide and Crystal Violet Dye by BiSeX and BiSeX/g-C₃N₄ (X = Cl, Br, I)

Yu-Yun Lin, Fu-Yu Liu, Chiing-Chang Chen* (National Taichung University of Education, Taiwan)

P2-D-147 Low-Temperature Methanol Synthesis via (CO₂ + CO) Combined Hydrogenation using Cu-ZnO@Al₂O₃ Hybrid Nanoparticle Cluster

Thanh Truc Nguyen Hoang, De-Hao Tsai* (National Tsing Hua University, Taiwan)

P2-D-148 Development of Multi-Functional Hybrid Nanostructured Catalyst Materials using Aerosol-based Synthesis Route: Applications in Methane Bi-reforming for CO₂ Utilization

Jia-Yun Tu, Yu-Shih Lin, De-Hao Tsai* (National Tsing Hua University, Taiwan)

P2-D-149 A Research of Different Methanation Catalysts' Operating Conditions and Characteristics

Ling Wang*, Yun-Pei Zeng, Cheng-Min Lee, Wei-Hsin Lai, Chao-Yuh Chen, Jen-Yaw Chang (CPC Corporation Refining & Manufacturing Research Institute, Taiwan)

P2-D-150 Ammonia Borane Confined in Modified Zeolitic Imidazolate Frameworks for Improved Dehydrogenation Process

Guan-Lin Li*, Hao Chan Chan, Cheng-Yu Wang (National Yang Ming Chiao Tung University, Taiwan); Tessui Nakagawa (University of the Ryukyus, Japan)

P2-D-151 Ethynylation of C₁-C₃ Aldehyde over Cu-Bi Binary Catalyst

Yao-Yuan Chuang, Yu-Ching Hsu, C.S. Su, C.F. Chang, Tseng-Chang Tsai* (National University of Kaohsiung, Taiwan)
