Poster I (Monday, 11 May, 2026)

	Session	Abstract No.	Title	Presenting author
	MKC	MKC0129	The caveats of computational modelling of proton-coupled electron transfer in CO2ER	Prof. Matej Hus
		MKC0205	Molecular Origin of Optimal Operando Conditions in Bosch-Meiser Urea Synthesis via Machine Learning Force Field	Mr. Minwoo Kim
		MKC0208	Computational Study of Various Organotin Complex Structures in Different Solvents	Ms. Je-Yeon Jung
		MKC0211	Computational Insights into Substrate-Governed Wetting Transparency and Moisture Stability in Monolayer MoSe2	Mr. Seho Kim
		MKC0212	Ionic Liquid–Driven Ion Exchange for High-Performance PEDOT:PSS Films	Ms. Yeone Kim
		MKC0214	Accurate Martini Simulation of Zwitterionic SBMA/DMAAPS Random Copolymers: Focusing on Electrostatic Interactions and Chain Conformations	Mr. Daehong Kim
		MKC0241	Automaic Discovery of Interpretable Kinetic Rate Laws via Kolmogorov-Arnold Networks	Ms. Eunbyeol Cho
		MKC0332	Cracking complexity: multi scale kinetic modeling of mixed plastic pyrolysis for real world recycling	Dr. Laura Pires Costa
		MKC0339	Physics-Informed Machine Learning for Kinetic Modeling: Hydrodeoxygenation of Stearic Acid	Mr. Kian Hajireza
		MKC0382	Incremental Identification of Reaction Network Structure and Kinetics from Concentration Time-Series Data	Ms. Keertana Chamarti
		MKC0404	Surface Oxidation-Driven Ethane CO2-ODH Activity-Selectivity Trade-Offs on β-Mo2C Catalysts	Ms. Parvathy S Chandran
		MKC0436	Development of a Kinetic Model for Methane Total Oxidation on Iron Beta Zeolite Catalysts	Mr. Suleyman Gafarli
		MKC0459	Fundamental Understanding of NiO Reactivity as an Oxygen Carrier in Chemical Looping Combustion	Ms. Chaerin Son
		MKC0465	Adaptive Neural Potentials through Environmental Conditioning	Yeonwoo Oh
		MKC0466	Reaction Pathways for CO_2 Hydrogenation to Methanol on Cu(111): Combined DFT and Microkinetic Study	Ms. Song Yuna
		MKC0506	Experimental and theoretical studies of furfural hydrogenation to furfuryl alcohol	Ms. Nikol Atanasova
		MKC0531	Zn-Promoted Ni/$MgAl_2O_4$ Catalyst for Dry Reforming of Methane	Gayeong Kim
		MKC0538	Tree Based Kinetic Monte Carlo Modeling of Polypropylene Pyrolysis Under Intrinsic Conditions	Mr. Daniël Withoeck
		MKC0564	Selective Oxidation of Ethane to Value-Added Products on RhO2(110)	Mr. Dohyeon Kim
		MKC0605	The H2O-assisted Oxidation Half-Cycle of Low Temperature NH3-SCR over Cu-CHA	Mr. Gabriele Contaldo
		MKC0695	DFT Study on Metal Dopant Effects in Methanol-to-BTX Conversion over ZSM-5 Catalyst	Ms. Yunhee Jang
		MKC0728	Hydrogen Sulfide Splitting via the Iodine Thermochemical Cycle for Hydrogen Production: Mechanism Insights and Catalytic Enhancement with Deep Eutectic Solvents	Ms. Carolina Arias Gallego
		MKC5685	DEVELOPMENT OF A SURFACE-REACTION CHEMICAL REACTOR NETWORK (CRN) METHOD AS A TOOL FOR SIMULATING DRY REFORMING OF METHANE IN FLUIDIZED BEDS	Mr. Ahmad Abiso
	MKF	MKF0101	Sorption-Enhanced Methanol Synthesis: Reaction and Adsorption Modeling	Ms. Mary Wojan
		MKF0147	Temperature effect on oxidation and coking kinetics of aviation oils using thermal analyses	Ms. Loren NIZARD
		MKF0222	Kinetic Analysis of Polyethylene Terephthalate (PET) Upcycling to Xylene via Catalytic Hydrogenation and Hydrogenolysis	Mr. SeokBeen Cho
		MKF0226	Separate storage of electrons and protons at Ru and BaO through low-work-function carbons for ammonia synthesis under mild conditions	Ms. Yaejun Baik
		MKF0243	Hydrodynamics meets kinetics: Copper sorption kinetics onto zeolite NaX in straight blade turbine stirred tanks	Dr. Anita Bašić
		MKF0252	Mechanisms of charge transport dynamics in barium cerate-zirconate proton-conducting electrolytes	Dr. Vittoria Novelli
		MKF0285	Mechanism study of NH3 decomposition reaction with an electric field	Mr. Cheol Ung Lee
		MKF0296	Trickle bed reactor studies of alkaline-aqueous phase glycerol oxidation over Pd-based catalyst	Dr. Jainesh H. Jhaveri
		MKF0305	The Kinetics and Synergistic Mechanism of Co-Mn-Br Catalyzed Liquid-Phase Oxidation of 2,6-Dimethylnaphthalene to 2,6-Naphthalenedicarboxylic Acid	Mr. Shuangfu Wang
		MKF0353	Operando DRIFTS Insight into Methanol Activation and Hydrocarbon Pool Initiation on Zeolites	Ms. Giulia Torretti
		MKF0495	Towards kinetic modelling of hydrodechlorination of model chlorinated compounds in diesel under hydroprocessing conditions	Ms. Marta Del Giudcie
		MKF0512	Kinetics of Hydrochloric Acid Recovery from HCl-Saturated Potassium Chloride Solutions Using Tris(2 ethylhexyl)amine	Dr. Mingming Pan
		MKF0520	CO2 Methanation over a Ni–Mg–Al2O3 Dual-Functional Material: Reaction Mechanism and Kinetics	Dr. Reza Monjezi
		MKF0544	On the contribution of bio-components to the global kinetics and speciation of lignocellulosic biomass pyrolysis: the case study of rice husk	Dr. Eleonora Benedetto
		MKF0549	Supercritical Catalytic Cracking of n-dodecane for Cooling in Scramjet Engines.	Ms. Mira Faour
		MKF0662	Complex Network Approaches for Flow Regime Recognition in Gas-Solid Fluidized Beds	Dr. Yupeng Du

	MKF0678	Reaction Mechanism and Kinetics of Ethane Oxychlorination on Cu-Ce/HZSM-5 Catalyst Through Inhibiting Gas-Phase Reactions and Promoting C2H5Cl Conversion	Mr. Kunhao Bi
	MKF0768	Deciphering Consecutive Protonation Steps in Photocatalytic CO2 Reduction with Plasmonic Au Nanorods Embedded in a Metal-Organic Framework	Tianyi Huang
MKF	MKP0178	Biopolymer production from wood derived sugars based on genetically modified Haloferax mediterranei	Dr. Xiangrui Zheng
	MKP0479	Development of end-user property correlations based on polypropylene process modelling results	Ms. Anna Konopka
CDC			
	CDC0160	Characterization of Side Reactions in Onboard Aqueous Amine CO_2 Absorbents	Ms. JISU YU
	CDC0207	Unveiling the Molecular Origins of Cation-Specific Effects on CO2 Capture in Alkali Glycinate Solutions	Mr. Seungtae Kim
	CDC0223	Sub-ambient Temperature Direct Air Capture using CALF-20	Ms. Jaeseo Lee
	CDC0362	Discovery of Membrane Materials for CO2 Capture via Material-Process Integrated Framework	Mr. Se-Jung Kim
	CDC0363	Comparative Energy Analysis of Thermally and Electrochemically Regenerated Direct Air Capture Systems	Mr. Hyungjun Kim
	CDC0416	CFD and experimental studies of CO2 solubility using novel deep eutectic solvents	Mr. Antonis Prokopiou
	CDC0592	Epoxy-Functionalized Tetraethylenepentamine for Direct Air Capture	Ms. Ja Yun Heo
	CDC0620	CFD and experimental studies for CO2 capture using amine and deep eutectic systems	Mr. Konstantinos Achillides
	CDC0663	Development of a Kinetic Model for a Scalable CO2 Capture Unit Using a Sustainable Na2CO3/Al2O3 Solid Sorbent	Mr. Chawalkul Chotmunkhongsin
	CDC0711	Synthesis and functionalization of 2D Imine based COF for CO2 Capture	Mr. Abhishek Anand
	CDC0741	Hydrophobic Amine System for Ru-Catalyzed CO_2 Hydrogenation to Formate and Amide Derivatives	Mr. Hussain .
	CDC0744	Direct Knitting of Ru-MACHO into Hierarchical Porous Organometallic Polymers: Linker Engineering for Enhanced CO2 Hydrogenation	Mr. Tai Huynh Duc Tran
	CDC0745	Visible-Light-Driven Photoanode Design for Photoelectrochemical Regeneration of Amine-captured CO2	Nhi Yen Tran
CDU			
	CDU0015	Application of RSM and Machine Learning for Predicting the Interaction of Key Parameters Governing Calcium Leaching for Indirect Mineralization of Cement Kiln Dust	Ms. Sheikha Wahdain
	CDU0092	Energy-efficient CO_2-to-formate conversion coupled with glycerol oxidation using electrodeposited $BiVO_4$ photoanodes under concentrated light	Prof. Jonathan Albo
	CDU0093	From Nb2O5 to Oxynitrides: Impact of ammonolysis on the photoelectrochemical properties of thin films	Prof. Jonathan Albo
	CDU0135	Carbon capture and conversion to value-added products using a novel biphasic absorbent system	Mr. SWAGAT SABYASACHI SAHOO
	CDU0167	Redox cycling of CH4 reforming and CO2 splitting over SrFeO3 with Ce doping effects on carbonation and stability	Ms. Seolhwa Yun
	CDU0179	Integrated CO2 capture and Utilization for CO production from ambient level CO2 using K/Al2O3	Ms. Kyeongeun Kim
	CDU0187	Design and Optimization of an Integrated Thermochemical CO2/H2O Co-splitting and Methanation for Green Methane Production	Mr. Beomjun Kim
	CDU0229	Highly efficient direct air CO2 capture and methane production over Rhodium-Modified LDH Dual-Functional Materials.	Ms. Daye Lee
	CDU0249	Scaling up CO_2 Electroreduction to Formate for Industrial Pilot Plant demonstration	Prof. Jonathan Albo
	CDU0308	Rational design of Cu-MWW catalyst for enhanced CO2 conversion	Dr. Jingyu Chen
	CDU0318	CO2 Methanation for Energy Transition: A Study on Flow Rate Variability, and on the role of Steam in Transient Operation	Dr. Roberto Ruggiero
	CDU0338	Synthesis of sustainable polyurethanes using CO2 as a feedstock	Mr. Jiwhan Choi
	CDU0341	Zinc-gallate-catalyzed terpolymerization using CO2	Ms. Ekaterina Sokolova
	CDU0342	Effect of ZrO2 Phase on Ethanol Synthesis over Rh–Fe Catalysts from Syngas	Ms. Soyun Lee
	CDU0357	Impact of Reaction Conditions on the Synthesis of Methanol from a Combined CO and CO2 Feedstock	Dr. Hyun Dong Kim
	CDU0364	Reverse Water–Gas Shift over Reduced Spinel-Derived Cu-Al Oxide Catalysts	Dr. Myung-gi Seo
	CDU0372	Inducing Structural and Electronic Alterations of Ceria for Activating Low-Temperature Reverse Water-Gas Shift Reaction	Mr. Nomer Jr Arriola
	CDU0376	Catalyst and Process Design Driven Facilitation of Commercial Single-Amine CO_2-to-Formic Acid Conversion	Mr. Jaehyeong Choi
	CDU0380	Mn-Promoted Cu–Fe/MgAl2O4 Catalysts for Low-Temperature RWGS Reaction: Role of Metal–Oxide Interfaces	Mr. Taeksu KIM
	CDU0388	Sorption-Enhanced Methanation with 3D printed Ni-Ce/zeolite 13X catalyst	Mr. Salvatore Capasso
	CDU0406	Bi-Reforming of Methane over Ni/CeSiOx Catalyst: A Synergistic Effect of Oxygen Vacancy and Metal-Support Interaction	Ms. Aeri Kim
	CDU0408	CO2-derived Carbon Coated Si anode via Tandem process for Li-ion Battery	Mr. Jaewon Jang
	CDU0420	Economic Feasibility of Power-to-Liquid e-Kerosene: Process and Policy Perspectives	Mr. Alessio Tauro
	CDU0421	Effect of unconverted CO recirculation on CO2-modified Fischer-Tropsch Synthesis	Mr. Fabrizio Celoria
	CDU0423	Effect of pre-treatment conditions on Fe-based catalyst for e-fuel production via modified Fischer-Tropsch synthesis	Mr. Alessio Tauro

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		CDU0471	Modulation of CO2 activation pathway by Ca promoter in PtSn/Al2O3 catalyst for CO2-assisted oxidative dehydrogenation of propane	Mr. Jaeseok An
		CDU0475	Spatial optimization of catalyst configuration for selective reverse water-gas shift in an electrified Joule-heated reactor	Ms. Thuy Le
		CDU0477	An Integrated Electrochemical Power-to-Liquid Process for Sustainable Aviation Fuel Production from Captured CO_2	Mr. Kang Janghoon
		CDU0491	Integrated CO2-Derived Sustainable Aviation Fuel Production via CO2 Electrolysis, Syngas Fermentation, and Alcohol-to-Jet Conversion	Ms. Juwon Lee
		CDU0588	Optimization of Ni Loading in Egg-shell-type Ni/Al_2O_3 Pellet Catalysts for Enhanced Performance and Coke Resistance in DRM	Ms. Ye-Eun Jeon
		CDU0606	Tandem Fe/Zeolite system for CO2 hydrogenation to e-SAF	Mr. Beda Rolandi
		CDU0607	Effect of activation on phase evolution and performance of Fe-based catalysts in CO2 hydrogenation to hydrocarbons	Dr. Carlo Giorgio Visconti
		CDU0615	Mechanistic Modelling of the Local Electrode Environment in MEA CO2 Reduction: The Role of Cation Size and Steric Effects	Mr. Hyeonggeon Lee
		CDU0673	CO2 Conversion into Lower Hydrocarbons using Catalytic Structures: Structure-Resolved CFD Simulations	Mr. Kuldeep Singh
		CDU0688	Role of reverse Water-Gas Shift Reaction for CO_2 Utilization in Molten Carbonate Electrolysis Cells	Mr. Simone Mataloni
		CDU0699	Dynamic operation of reverse water-gas shift via rapid pulsed Joule heating	Ms. Won Seok Lee
		CDU0715	Gas-Velocity-based operating window for thermal runaway prevention in a CO2 Fischer-Tropsch fluidized-bed reactor	Park SeoYoung
		CDU0725	Sustainable Integrated Process for Methyl Formate via CO_2 hydrogenation over Ru-Based Heterogeneous Catalysts with Reactive Distillation	Ms. Baejeong Kim
		CDU0731	Catalytic CO2 Hydrogenation for Sustainable Fuel Production	Prof. Kwangjin An
		CDU0742	Enhanced Performance of Cu-Zn-Mg-Al Catalysts for Methanol Synthesis via CO_2 Hydrogenation: Impact of Sequential Precipitation on Active Phase Dispersion	Mr. Min Seok Kwon
		CDU0743	Investigating the Role of Mg in Ni-Mg/Al_2O_3 Catalysts for Syngas Production via Dry Reforming of Methane: Experimental Validation of DFT-Proposed Mechanisms	Mr. Jung Gyu Jang
		CDU0763	Development of Sn-Partially Substituted SrFeO3-δ Oxygen Carriers for Chemical Looping Oxidative Dehydrogenation of Ethane with CO2 Splitting	Mr. Seung Hun Baek
	SCB	SCB0067	Can Reductive Catalytic Fractionation Biorefinery Be a Pathway for Paper-Making Pulp?	Mr. Khaled Alshwafy
		SCB0132	Catalytic Transformation of Lignin into Low Molecular Weight Oil Rich in Active Groups Using a Vanadium-Based Catalyst	Dr. Dayu Sun
		SCB0228	Hydrotreating of Used Cooking Oil over γ-Al_2O_3: Impact of Heavy Impurities on Mass Transfer and Catalyst Deactivation	Ms. Kyeongjin Lee
		SCB0245	Sustainable Biomass-Derived Liquid Crystal Films with Intelligent Magnetic Reconfiguration for Programmable Microwave Absorption	Ms. Zhonghui Li
		SCB0261	Enhancing Pyrolysis with Ultrasound Treatment at High Temperatures as a Novel Process	Mr. Raymond Chen
		SCB0272	Electronic-structure control of source-dependent hydrogen utilization in selective C–O bond cleavage in furfural conversion	Mr. Rizky Gilang Kurniawan
		SCB0274	Pyrolysis and in-line catalytic cracking of olive stone-derived volatiles	Dr. Biagio Ciccone
		SCB0286	Selective Production of C4-C12 Alcohols from Bio-derived Aldehydes	Ms. Hua Li
		SCB0303	Techno-economic Analysis, Sustainability Assessment and Mechanistic Kinetic Modeling of Furfural Transfer Hydrogenation to 2-Methylfuran	Mr. Debarun Banerjee
		SCB0304	Comparative Techno-Economic and Life Cycle Assessment of Bioplastic Precursor Production Routes	Mr. Debarun Banerjee
		SCB0344	Controlling the hydrogenation of furfuryl alcohol by modulating the local environment of Ru species in Ru/Zeolite catalysts	Ms. Vanny Natasya
		SCB0379	A Calibration-Free Approach for Online Estimation of Metabolite Concentrations in Hyaluronic Acid Production using NIR-Spectroscopy	Ms. Kanakalakshmi K
		SCB0394	Navigating the complexity in the valorization of microalgae HTC wastewater via aqueous phase reforming	Ms. Marina Andriolo
		SCB0480	The collaborative mechanism between adhered and planktonic microorganisms in anaerobic digestion of corn stalk and the performance enhancement of pretreatment	Mr. Xiaoliang Luo
		SCB0499	Improving hydrothermal liquefaction of OFMSW through low-temperature pretreatment	Dr. Edoardo Tito
		SCB0777	Electronic Signatures of Size-Dependent Catalytic Activity in Lignin Depolymerization	Junjung Rohmat Sugiarto
		SCB0642	Acrylamide-Tuned Tobacco Biochar–Hydrogel Controlled Release Fertilizer for Alkaline Red Mud: Swelling, Water-Holding Capacity, and Medium-Dependent N–P Release	Dr. Siti Zullaikah
		SCB0691	SiO_2 modified Al_2O_3 supports with tunable acidity for efficient Bio-Oil hydrodeoxygenation	Ms. Negar ataei
		SCB0718	NMR-Guided Surrogate Mixtures for Fast Pyrolysis Bio-Oil and Pyrolignin: Composition and Property Estimation Using Synthetic Lignin Oligomers	Dr. Myriam Rojas
		SCB0765	Designing NIR AIEgens for lysosomes targeting and efficient photodynamic therapy of tumors	Dr. Yuanhang Li
		SCB0773	Mechanistic Insights into the Deoxygenation of Biomass-derived 6-amyl-α-pyrone: Experimental and DFT Insights	Ms. Aishwarya Narayanan
		SCB9703	Online NIR-calibration Model Maintenance using Delayed Measurements for Sustainable Bioprocess Monitoring and Control	Ms. Keerthana C

SCM	SCM0054	PFAS-Free Microporous Ionomer Enabling High-Performance CO_2 Electrolysis for New Era Energy Technologies	Mr. Eugenio De Nardo
	SCM0126	Asymmetric Gradient Porous Fabric with Dynamically Tunable Thermal Management and Electromagnetic Interference Shielding via Delayed Phase Separation	Dr. Mingxin Feng
	SCM0221	Impact of Short-Range Order on Lattice Thermal Conductivity in High-Entropy Thermoelectric Chalcogenides	Mr. Wooseok Lee
	SCM0370	Selective Recovery of Cesium Ions Using Zeolite-Modified Nafion Membranes for Sustainable FDCA Production	Ms. Khilola Kholmirzaeva
	SCM0472	Silanol-assisted pathway over alkali-modified ZSM-5 for selective dehydration of lactic acid to acrylic acid	Dr. Jichan Kim
	SCM0572	Hierarchically Porous MFI Zeolite Nanosponge Catalyst for Efficient Glucose-to-HMF Conversion	Ms. S. B. Son
	SCM0650	Mapping the CVD Growth-Rate Window of (101)-Oriented Bismuth Perovskite Thin Films	Mr. Ziguang Yang
	SCM0690	Selective ring hydrogenation of aromatic amines over Ru-Loaded A520 aluminum MOF	Prof. Young-Kwon Park
SCW	SCW0064	Understanding the Speciation Equilibria and Reaction Mechanism Between Bauxite Residue and Black Aluminum Dross for Co-valorization	Mr. Diego Guerrero
	SCW0098	Aluminum in metallized plastic packaging waste enhances polymer pre-cracking and steam-cracker precursor formation over zeolite catalysts	Dr. Soheil Valizadeh
	SCW0162	Characterization of Carbon captured by High-Temperature Plastic Pyrolysis	Ms. Vanessa Maria Pohl
	SCW0230	Enhancing Long-Term Stability of Lewis Acidic Alumina Support in Hydrodechlorination Reaction for Plastic Chemical Recycling through Two-Step Processes	Mr. Jin Seok
	SCW0276	From Formation Pathways to Pretreatment: Mitigating Chlorine Contamination in Complex Plastic Waste Pyrolysis	Mr. Mohammadhossein Havaei
	SCW0284	Catalytic Conversion of Waste Plastic Pyrolysis Oil to Light Olefins in a Micro-Activity Test Unit and a Circulating Fluidized Bed Reactor	Dr. Xuan Tin Tran
	SCW0301	Pretreatment strategies for valorization of crude glycerol in synthesis of acetins via acetylation of glycerol	Prof. Suttichai Assabumrungrat
	SCW0359	Thermally treated polyvinyl chloride (PVC)-derived highly microporous carbon support	Ju Young Kim
	SCW0390	Maximizing light olefin production through catalytic cracking of crude waste plastic pyrolysis wax into light olefins	Ms. Ngan Ngo Thi Thanh
	SCW0395	Removal of inorganics in HTL/HTC-derived wastewater: a study on the competitive adsorption challenge	Prof. Giuseppe Pipitone
	SCW0437	Design Of Experiment optimization of Hazelnut Press Cake Protein extraction with Deep Eutectic Solvents: characterization and application in cell agriculture.	Ms. Bruna Anza
	SCW0481	Sustainable Upcycling of Polyolefin Plastic Waste Using Spent FCC Catalysts	Mr. Taeeun Kwon
	SCW0533	Alcohol-Mediated Recycling of PLA/PGA via Oligomer Molecular Weight Control and Spontaneous Monomer Separation	Mr. Xiaofeng Xu
	SCW0539	From Post-Consumer Textiles to Biobased Polymers: Step-Wise Conversion and Life Cycle Impact	Ms. Francesca Stella
	SCW0547	Hydro Upgrading Strategies for Converting Plastic Waste Pyrolysis Oils into Steam Cracker Ready Feedstocks	Mr. Anas Jamil Abdulrahman
	SCW0569	Highly active Mn-substituted MgAl2O4 spinel catalysts with oxygen defects for glycolysis of waste PET	Dr. Jong In Choi
	SCW0655	Selective Olefin Production from Waste wet wipes via Catalytic Pyrolysis	Ms. Jihyeon Seo
	SCW0656	Catalytic pyrolysis of waste toner powder over hierarchical ZSM-5 for selective aromatic hydrocarbon production	Ms. Sumin Pyo
	SCW0700	TiO2-supported Ru-Fe catalysts for the hydrodeoxygenation of PET-derived BHET	Ms. Yerin Lee
	SCW0714	Production of Valuable Petrochemicals from Plastic-Derived Oil Fractions via Catalytic Cracking over ZSM-5 based catalysts	Mr. Munthir Alshammari
	CET0150	Facile and efficient microwave strategy for upcycling of plastic wastes into high-yield hydrogen and carbon nanotubes	Ms. Thi-Thuy Luu
	CET0021	Rethinking Green Hydrogen: A Smarter Route to Decarbonization for Energy-Abundant Nations	Dr. Mohd Shariq Khan
	CET0038	Understanding into the Microstructure and Diffusion behaviors of Water Removal in Nanopores of Wafer by Supercritical Carbon Dioxide	Dr. Xinyu Zhuo
	CET0198	Synchronizing Spectrum-Modulated Radiative Cooling and Integrated Heating in Hierarchical Film for All-Season Thermal Management	Dr. Haoran Cai
	CET0204	Alkali fusion with NaOH-KOH hydroxide to convert waste dehydrated clay cake into zeolitic materials	Prof. Takaaki Wajima
	CET0242	Reversible Photochromic Films Constructed based on Meticulous Defect and Interfacial Engineering strategies for Energy-saving Smart Window	Dr. Xu He
	CET0256	Accelerated Design of Wide-Temperature-Range Molten Salts via Transfer Learning with Small Sample Sizes of data	Hongbo Yu
	CET0266	Effects of Acid Sites in Nanosheet MCM-22 on Plasma-Assisted Depolymerization of Poly(methyl methacrylate)	Ms. Shaoyan Jin
	CET0288	Revealing the active Cu species in Cu/ZSM-5 catalysts for the selective catalytic oxidation of ammonia	Ms. Sein Hwang
	CET0312	Mechanistic Insights into the Trace BCl3/PCl3 Removal from SiHCl3 through Nitrogen-Containing Functional Groups and Pore Size Tuning: GCMC and DFT Simulation Study	Ms. Kexin Yan
	CET0340	Separation of intentionally-added substances from plastic waste, including legacy substances	Dr. Rita Kol

	CET	CET0367	Enhanced sulfur resistance of the zeolite-mixed bulk vanadium oxide catalyst for NH3-SCR	Mr. Hongbeom Park
		CET0369	Depolymerization of Poly(Methyl Methacrylate) over Heteropoly Acid Catalysts in a Dielectric Barrier Discharge Plasma Reactor	Ms. Myeong Sung Kang
		CET0397	Effect of zeolite framework on NOx operating cycle in Pd/zeolite Passive NOx adsorbers	Prof. Divesh Bhatia
		CET0403	DFT Mechanistic Insights into Selectivity in Alkaline Glucose Electrooxidation on Au(111)/Au(OH) and CuO(111): Branching Between Aldehyde Oxidation and C–C Scission Governed by OH Coverage	Ms. Gaeun Jo
		CET0410	Performance Evaluation of Cation-Exchanged Zeolites for CO2/CH4 Separation	Mr. HeaJi Jin
		CET0429	Electro-Mechanical Piston Reactor to Drive Propane Chemistry	Ms. Aya Abousrafa
		CET0438	Preliminary techno-economic Analysis (TEA) of cultivated meat using hazelnut press cake proteins	Ms. Bruna Anza
		CET0447	Anaerobic digestion of raccoon dog (Nyctereutes procyonoides) manure and co-digestion with rice straw	Ms. Yi Ding
		CET0455	Co-pyrolysis Characteristics of Plastics and Biomass in a Bubbling Fluidized Bed	Mr. Taehwi An
		CET0462	Low-temperature NOx Reduction over Pd/ZSM-5 by H2: Effect of Catalyst Composition and Preparation Method	Mr. Yoon Ku Kwon
		CET0463	NOx-N2O simultaneous reduction over desilicated Fe/Beta prepared by solid-state ion exchange	Mr. Sung Min Kim
		CET0464	Elucidation of Phase-Dependent Structure-Activity Relationships: Cu-Ag/ZrO2 Catalysts for Simultaneous NH3/CO Oxidation	Mr. In Seok Seo
		CET0513	Low-Carbon Portland Cement Produced from Industrial Carbide Slag with Reduced CO2 Emissions	Dr. Zhangxiang Zhao
		CET0522	Bimetallic Pd-Ag Sorbents for High Temperature Mercury Removal from Syngas	Mr. Vishal Kumar Yogi
		CET0535	Design of Waste-Derived Supports for Ni–CeO_x Catalysts toward Enhanced CO_2 Utilization	Dr. Nikita Dewangan
		CET0561	Optimization of VPSA Process for H2 and CO2 Separation from Biomass-Derived Syngas Using CFD Simulation	Mr. Myung Kyu Choi
		CET0608	Role of Ionomer Overlayers and Membrane–Ionomer Matching on PEMFC Performance under Variable Humidity	Dr. Giovanni Marco Carrabba
		CET0619	Elucidating the mechanism of NOx adsorption and reduction on dual-functional Ag/MgO/Al2O3	Mr. Syed Ali
		CET0675	Development of Zeolite Membranes and Cu-ZnO-Al2O3 Catalyst for an Integrated Membrane Reactor for CO2 Hydrogenation to Methanol	Mr. Abhishek Anand
		CET0734	Recovery of Electrolyte Solvents from Spent Commercial EV Lithium-Ion Batteries Using Mild Vacuum Distillation	Dr. Muhammad Waqas Khalid
		CET0761	NH3 production from integrated capture and hydrogenation of waste NOx emissions	Dr. Alessandro Porta
		CET0774	KOH-modified Iron-impregnated Bamboo Biochar for the Adsorptive Removal of Doxycycline Hyclate	Ms. Jeraldine Calangi

Poster II (Tuesday, 12 May, 2026)

	Session	Abstract No.	Title	Presenting author
	DER	DER0263	Pressure-driven enhancement of CO2 to C2+ conversion on copper electrocatalyst	Jaehyuk Lim
		DER0265	Reactor Design for Ammonia Cracking Using Induction Heating	Ms. Juyeon Cho
		DER0562	Degradation analysis of electrode materials for durability test of anion exchange membrane-unitized regenerative fuel cells	Ms. Jiyeon Kim
		DER0563	Mass Transfer Analysis in the Catalyst Layer for Electrochemical Reduction of CO2	Ms. Vedha Vaishnavi
		DER0747	Anode vs Cathode water feed operation in PEMWE: Simulation-based analysis of performance gains and operational limits	Dr. Alessio Centineo
		DER0756	Mass-Transfer Coefficient Correction for Improved CO Prediction in a Low-Temperature AEM CO2 Electrolyzer Implemented in Aspen Custom Modeler (ACM)	Ms. Yunjeong Do
	DFL	DFL0055	Electrifying Fluidization: Particle-Resolved Modeling of Direct Resistive Heating in Electrothermal Fluidized Beds	Mr. Hamed Hoorijani
		DFL0346	Modeling and Optimization of Gas Flow Distribution in Blast Furnace Charging under Hydrogen-Rich Conditions for Carbon-Neutral Steelmaking	Ms. Meng Li
		DFL0371	Markov chain assisted Monte Carlo model for direct air capture in fluidized bed system	Ms. Seo Yeon Ahn
		DFL0428	A User-Defined Electrothermal Fluidized Bed Reactor Model for Direct Joule Heating with Application to Non-Oxidative Coupling of Methane	Mr. Mohammad Lahafdoozian
		DFL0474	Modeling Mass Transfer-Reaction in a Single Diesel Hydrotreating Particle via CFD-VOF-PMM	Ms. Xuerong Wang
		DFL0484	Fluidization of Bed Material and Catalyst Mixture for Optimizing Methane Pyrolysis	Mr. Gyu Ryeol Baek
		DFL0525	Mixing Characteristics of Binary Particles in a Fluidized Bed of Carbon Nanotubes	Ms. Suyoung Kim
		DFL0555	A dynamic FBR framework for CH4 pyrolysis over Fe/Al2O3	Mr. Nicolò Lisena
		DFL0583	Modified two-phase theory (MTPT)-based reactor network model for a bubbling fluidized bed co-gasifier coupled with particle population balances	Mr. Kareemulla Dudekula

	DFL0596	A hybrid Eulerian-Lagrangian multiphase CFD approach for gasification of high-ash coal under oxygen-enriched conditions in a pilot-scale bubbling fluidized bed	Mr. Vishal Chauhan
	DFL0648	Fluidized bed thermocatalytic processing of liquid feedstocks: the case of steam reforming of biomass-generated pyrolytic bioliquids	Ms. Elshaday Mulu Fetene
	DFL0674	Particle Breakage and Aggregation in Fluidized Bed Gasification: An Integrated Experimental and Population Balance Modelling Approach	Mr. Shubham Goel
	DFL0677	Solid Flow-Pattern in a Sidewall Injected High Temperature Gas-Solid Fluidized Bed Using Radioactive Particle Tracking Technique	Mr. Abhishek Anand
	DFL0751	Hydrodynamic Analysis and Correlation of Solids Circulation in Pressurized High-Temperature CFB	Ms. Hye-Jin Park
	DFL0778	A Cyclic Molten Metal Process for F-gas Decomposition and Metal Fluoride Regeneration Enabling Fluorine Recovery	Nguyen Van Quynh
DFN	DFN0203	Deactivation Kinetic Modelling and Industrial Multi-Stage Adiabatic Reactor Design for Deacon Process Using Cu-K-La Catalyst	Mr. Baosen Tang
	DFN0273	Enhancing Hydrodynamic Uniformity in Stirred Tanks Using an H-Like Fractal Impeller	Mr. Hui Li
	DFN0321	Bayesian Optimization of Integrated Intercooling Systems in Rotating Packed Beds for Enhanced Carbon Capture Scale-up	Mr. Dongkyu Kim
	DFN0557	On the importance of hard physical constraints in neural networks for kinetic mechanism discovery and accelerated reactor simulations	Dr. Felix Döppel
	DFN0753	Multidimensional Modeling of Fixed-Bed Reactors for CO_2-Assisted Propane Oxidative Dehydrogenation	Ms. Jimin Jeong
	DFN5689	Modeling and Simulation of a Fixed Bed Reactor for Fischer-Tropsch Reaction Using Hierarchically Porous MFI Zeolites Supported by Metal Nanoparticles	Ms. injung jang
DMB	DMB0183	Virtual Prototyping and Experimental Validation of a Membrane Reactor for Enhanced Once-Through Yield in Methanol Synthesis.	Ms. Theresa Hauth
	DMB0417	Novel e-Membrane Reactor for NH3 Decomposition	Dr. Matteo Ambrosetti
	DMB0532	Computational Study of CO2 capture with Deep Eutectic Solvents in a Tube-in-Tube Teflon AF2400 Membrane Reactor	Ms. Anastasia Spanou
DNR	DNR0432	EMERALD: A novel eReactor with Radial Current and Centrifugal Gas Flow for the Intensification of Endothermic Catalytic Processes	Ms. Federica Romanelli
	DNR0444	CFD modeling of a bench-scale reactor for mixed reforming of methane	Mr. Hoyoon Park
	DNR0530	Microwave-Assisted Acetylation of Glycerol to Triacetin over Tungstophosphoric Acid Supported on Activated Carbon	Ms. Chutikan Aiemvasan
DPL	DPL0199	Ozone production from electrolysis by-product oxygen on Wastewater Treatment Plants – An operating model-based feasibility study	Ms. Vincenta Franßen
	DPL0746	CFD-Based Evaluation of Nozzles for plasma based H_2O_2 Production in Microgravity	Mr. Jia-Wei Lin
DPR	DPR0733	CFD modeling of 300 mL multi-zone LDPE reactor for the prediction of molecular weight distribution	Mr. Jonghyeon Cha
PTL	PTL0061	Zeolite-Assisted Sorption-Enhanced CO2-to-Methanol on Cu/ZnO/Al2O3	Ms. Farah Mirzayeva
	PTL0251	CFD Validation of n-Butane Oxidation Kinetics to Maleic Anhydride and Optimization of Milli-Fluidic Mixers	Mr. Varun Medak
	PTL0259	Numerical Study of a Modified Splitting Distributor for Uniform Flow in Parallel Microchannels	Dr. Rajesh Vevilium Manickam
	PTL0323	Sustainable bio-oil production: Experimental and process modelling studies	Ms. Panayiota Adamou
	PTL0354	Techno-economic and Environmental Assessment of Bio-hydrogenated Diesel Production from Palm Fatty Acid Distillate using Alternative Hydrogen Donors	Dr. Chaiwat Prapainainar
	PTL0396	Transport-Permeation Coupling in Plate-Type Membrane Reactors for Hydrogen Production via Methanol Steam Reforming	Dr. Devendra Yadav
	PTL0412	CO2 capture and utilization via physical absorption and catalytic hydrogenation	Prof. Chundong Zhang
	PTL0427	Pathways to Low-Carbon Hydrogen Economy: A Life Cycle Assessment of Centralized and Distributed Systems	Mr. Rimon Dawidowicz
	PTL0460	Drawdown and suspension of corn straw in the non-Newtonian fluid in stirred tank	Mr. Da Chen
	PTL0493	Hybrid GA-RL Optimization Framework for Natural Gas Liquefaction Under Compositional Variability	Ms. Jieun Lee
	PTL0496	Multi-Objective Optimization of CO_2-LT-MED Integrated System for Carbon Capture and Desalination	Ms. JIMIN SEO
	PTL0501	Techno-economic evaluation of hydrothermal liquefaction for chemical recycling of synthetic textile waste	Dr. Edoardo Tito
	PTL0566	CFD simulations of an electrically heated steam methane reforming reactor	Ms. Teressa Bhumana
	PTL0603	Investigating Ni-Co/Al2O3-based structured foam catalyst for both exothermic and endothermic reactions	Ms. SAUMYA TIWARI
	PTL0610	Effect of nonlinear fluid rheology on gas-liquid flows in milli/microchannel distributors	Dr. Karan Gupta
	PTL0671	Process-Level Assessment of Sustainable Aviation Fuel Production via RWGS Packed-Bed Membrane Reactor Integration	Mr. Zhaofeng Li
	PTL0752	Modeling of a rotating packed bed absorber for acrylic acid recovery	Ms. Minkyung Jung
	PTL9700	3D-printed structured adsorbents for CO2 capture - experiments and mathematical modeling	Ms. Durga Ramadas Nayanar
	HMC0197	Molecular Dynamics Simulation of Peptide-Based Cryoprotectant for Enhanced Ice Recrystallization Inhibition Activity	Ms. Nayeon Jung

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		HMC0375	Catalytic co-upcycling of polylactic acid and polyoxymethylene: Synthesis of 1,3-dioxolan-4-ones	Ms. Lee Hyeongyeong
		HMC0468	Esterification of Ammonium formate with Ethanol: Effects of Homogeneous Acid Catalyst and Water Removal	Ms. Min-Young Kim
	HTE	HTE0037	Boosting screening of non-equiatomic high-entropy electrocatalysts by inverse design via active graph learning	Dr. Jun Zhang
		HTE0066	Black titania-supported Ir-based high-entropy alloy as a stable electrocatalyst for oxygen evolution reaction in acidic media	Mr. Toan Minh Pham
		HTE0206	Accelerated Discovery of Optimal NiCoFe Compositions for Oxygen Evolution through Surface-Informed Machine Learning	Ms. Minhee Park
		HTE0216	A DFT-Based Active Learning Framework for the Identification of High-Performance Multimetallic Alloys for HER	Mr. HIDO WOO
		HTE0282	Role of Sr Vacancy in Highly Active and Selective Electrocatalytic Urea Synthesis on Fluorine-Doped SrFeO3-δ	Prof. Kyeounghak Kim
		HTE0307	Controlling carbon properties of carbon-supported platinum catalysts prepared from ion-exchange resins as precursors for electrocatalyst applications	Ms. Shuka Murakami
		HTE0609	Synthesis and Electrochemical Characterization of Nitrogen-Doped Carbon-Supported Pt Catalysts for Enhanced ORR Performance in PEMFCs	Dr. Maria Chiara Massaro
		HTE0737	Unveiling the Synergistic Effects in a Bridged CuFe Dual-Atom Catalyst for Electrochemical Nitrate Reduction to Ammonia	Mr. Yong Hyun Moon
		HTE0738	Architected catalyst layer geometry for decoupling mass transport limitations in electrochemical CO2 reduction	Ms. Eunsol Kang
		HTE0748	Intermetallic PtBi for Improved Selective Dihydroxyacetone Production via Electrocatalytic Glycerol Oxidation	Ms. Nayun Kim
		HTE0754	Synthesis and Performance Comparison Analysis of PtNi/C with Metal Oxides electrocatalyst for HOR/HER in AEM-URFCs	Mr. Md.Rakibul Islam
		HTE0755	In situ electrochemical regeneration of cathode platinum catalysts for performance recovery in degraded PEM fuel cells	Mr. Subashis Kumar Roy
		HTE0757	Developing Selective Chlorine Evolution Electrocatalysts via Oxidation-State Engineering of Rutile-Type Anodes: A DFT Study	Mr. Myeongbum Ko
		HTE0776	ergy in Fe-SAC/Ni-NP@NC for Electrochemical NH3Production via Nitrate Reduc	Gaojun Jiang
	HTP	HTP0130	Computational screening of photocatalysts for ammonia synthesis with included excited states	Prof. Matej Hus
		HTP0319	Photocatalytic decomposition of hydrous hydrazine: Experimental and CFD studies	Ms. Panayiota Adamou
		HTP0723	Toward Efficient Photocatalytic Hydrogen Evolution over Pt/g-C3N4: Pt Cocatalyst Evolution, Metal–Support Interactions, and Deactivation Mechanisms	Dr. Chao Song
		HTP5690	Photothermal-Enhanced Bimetallic Ni-CdS Photocatalyst for Dry Reforming of Methane Toward Solar-Driven Hydrogen Production with Reactor Heating Design	Ms. Aira Amin
		HTT0035	Enhancing Higher Alcohols Selectivity in CO2 Hydrogenation over FeCu Catalysts via Mg Modification	Dr. BAOJIAN CHEN
		HTT0036	Highly Efficient Hydrogenation of CO2 to Heavy Hydrocarbons via NaFeGa Catalysts	Ms. Chufeng Liu
		HTT0057	Investigation of additive-manufactured catalysts in the decomposition of hydrogen peroxide	Mr. Sebastian Wilmes
		HTT0060	Synthesis and Characterization of Additively Manufactured Iron Beta Zeolites for Methane Oxidation	Ms. Merle Blum
		HTT0106	Design and Evaluation of a Molten Metal-Assisted Methane Pyrolysis System with Transition Metal-Based High-Entropy Alloy (HEA) Nanoparticles Dispersed in a Molten Media	Dr. Ajaysing S Nimbalkar
		HTT0141	Overcoming Concentration Limits in Continuous HMF Hydrogenation with Long-term Stable THFDM Production in an Aprotic Ether Solvent	Dr. Hye Jin Lee
		HTT0143	Limiting Dispersion of Pt Supported on Alumina with Different Crystal Phases during Oxychlorination Treatment	Ms. Liting Zhou
		HTT0152	DME conversion to gasoline-range hydrocarbon fuels on hybridized FER@ZSM-5 zeolite	GeunWoo Park
		HTT0154	Hydroxyalkylation of Phenol with Formaldehyde over 2D MWW-Type Zeolite Catalysts: The Effect on Performance and Isomer Distribution of Bisphenol F Synthesis	Ms. Thuan Khiet Trinh Nguyen
		HTT0196	Flash Joule Heating Enabled α-MoC Synthesis Route and Phase Fraction Dependent Performance in H2 Free Acetylene Hydrogenation	Ms. Hye Jeong Joe
		HTT0219	Inverse design of ORR catalyst active sites using an HPC-based topological deep generative model	Ms. Bomin Kim
		HTT0244	Enhanced Oxidative Performance of Pt–Transition Metal Catalysts Supported on Activated Carbon for the Selective Oxidation of Glucose to Glucaric Acid	r. MACCHINDRA GULAB CHANDGUDI
		HTT0246	Effects of Sr-substituted La0.8-xSrxMnNiO3 perovskite structures for dry reforming of methane with CO2	Mr. JuHyeok Park
		HTT0254	CO2 hydrogenation to dimethyl ether on Cu nanoparticles-supported mesoporous SiO2-incorporated Al2O3	Hyuk Jeong
		HTT0322	Effect of alumina supports on non-oxidative direct conversion of methane over Fe catalysts	Jin-Ju Lee
		HTT0325	Ag nanoparticles synthesis: Population balance investigation	Dr. Eleana Harkou
		HTT0333	Ga-modified $ZnZrO_2$ metal oxides for chemical looping-based oxidative dehydrogenation of propane	Mr. WonJae Lee
		HTT0335	Carbon-coated zeolite tandem catalysts for SAF-range product distribution control in CO2-derived Fischer–Tropsch synthesis	Mr. Hyun Wook Hwang

HTT	HTT0373	Effect of Transition Metal Oxide Structures on Selective Ammonia Oxidation to NO	Ms. Su Jeong Moon
	HTT0374	Hydrogenation and rearrangement of furfural towards the production of furfuryl alcohol and cyclopentanone over Ni-doped Cu/SiO2 catalysts in batch and continuous systems	Mr. Errol Saluta
	HTT0377	PdM bimetallic catalyst for propylene acetoxylation: Insight into the alloy effect and support effect	Dr. Cheng-Wei Liu
	HTT0383	Effect of CeO2 Precipitation Digestion Temperature on the Pt/CeO2 Catalyst for Sulfur Tolerant Water-Gas Shift Reaction	Mr. Gue-Seung Han
	HTT0386	Effect of Catalyst Synthesis Method on the Sulfur Tolerance of Pt/CeO2 Catalyst for Water-Gas Shift Reaction	Mr. Dong-Seong Kim
	HTT0389	Achieving Industrial-Scale Longevity in CO2-to-C5+ Conversion using Na-Modified FeAlOx Catalysts	Mr. Wonjoong Yoon
	HTT0402	Effect of citric acid treatment with adjusted acidic sites of Ferrierite zeolite for gas-phase DME carbonylation activity	Mr. Jimin Kim
	HTT0405	Exsolved nickel nanoparticle-based Ce/Ni@SiO2 catalysts for dry reforming of methane	Mr. Jae Hyeon Kwon
	HTT0411	Synergistic Ir-Co Bimetallic Effects in Fischer-Tropsch Catalysts Modulate Catalytic Performance under CO-Dominant Surface Coverage	Dr. Ji Won Lee
	HTT0422	Improving metals recovery in catalysts: Advanced modelling of leaching in porous structures	Dr. Jan Verstraete
	HTT0424	Enhancing zeolite stability in DME conversion: the role of passivation, hierarchization and etching	Dr. Fabio Salomone
	HTT0425	Low-Temperature Oxidation of Indoor VOCs with Pt Catalysts: The Role of Zeolite Architecture	Ms. Alessia Cometto
	HTT0434	Tailoring MgO–Al_2O_3 Interactions in Ni-Based Catalysts for Enhanced Reverse Water–Gas Shift Performance	Mr. ADITYA KUMAR
	HTT0442	Enhancing Light Olefin Selectivity in CO2-Modified Fischer-Tropsch Synthesis Using Mesoporous MFI Zeolites in a Tandem Dual-Bed System	Mr. Tae Jeong Lee
	HTT0453	Microwave Synthesis for Enhancing the Selectivity of HEA Catalysts in Acetylene Hydrogenation	Ms. Lee Haneul
	HTT0469	Effect of Precipitation Route on the Physicochemical properties of Multi-Component Ni-Co-Mg-Al-Ce Catalysts for Dry Reforming of Methane	Dr. Sangyoung Han
	HTT0483	Aromatic hydrogenation under CO-contaminated hydrogen over Pd: mechanistic insights and structure sensitivity	Mr. Adrian Seitz
	HTT0488	Porous Organic Polymer Catalyst for the Efficient Glycolysis of Post-Consumer PET	Ms. Yujin Kang
	HTT0494	Simultaneous Achievement of High Activity and Reproducibility in Large-Scale Synthesis of Zn-P-ZSM-5 for Methanol-to-Aromatics	Dr. Hanyoung Park
	HTT0503	Carbon Suppression Mechanisms in Ethanol Steam Reforming over Silicalite-1-Encapsulated Ni Nanoparticle Catalysts	Ms. Mana Takano
	HTT0514	Accelerating catalyst discovery through machine learning–based screening and deactivation analysis	Prof. SAXENA NIKITA
	HTT0515	Dynamic nature of catalyst surface during CO oxidation on Cu(111) surface	Mr. E V Charan Reddy
	HTT0573	Mesoporous Beta Zeolite Nanosponge Supporting Ni Nanocatalysts for Oligomerization of Light Olefins to SAF-Range Hydrocarbons	Su Bin Son
	HTT0574	Production of Monolaurin from Glycerol via Esterification of Lauric Acid over a ZnO/γ-Al2O3 Catalyst	Ms. Puttiporn Thiamsinsangwon
	HTT0576	Catalytic depolymerization of waste PET into BHET using Mn-supported g-C3N4	Mr. Forukh Rashidov
	HTT0582	Mechanistic insights into deactivation of commercial and lab-scale three-way catalysts for natural gas vehicles	Mr. Ilyas Yousuf Mir
	HTT0586	Pt supported on Sn incorporated CoAl2O4 spinel as a heterogeneous catalyst for the hydrogenolysis of post-consumer PET to BTX	Ms. Saira Kanwal
	HTT0590	Syngas Production by Mixed Reforming of n-Hexadecane over Exsolution-Derived Nanosized LaNiO3 Catalysts: A Strategy for Plastic Pyrolysis Oil Utilization	Mr. Donggyu Lee
	HTT0591	Templated synthesis of nitrogen-doped carbon as a platform for highly active cobalt single-atom catalysts	Ms. Kotori Matsuo
	HTT0597	Engineering Electron-enriched Sites for Alkane Dehydrogenation	Dr. Shaojia Song
	HTT0631	Effect of Kneading Conditions on the Textural Properties of Heterogeneous Catalyst Supports	Dr. Jan Verstraete
	HTT0658	Nanosponge MFI Zeolites Zeolite Catalysts for Methanol Conversion to Valuable Hydrocarbons	Ms. Haneul Shim
	HTT0665	Scalable Co-production of MWCNTs and H2 from HDPE: Process Optimization and Reaction Mechanism Analysis	Mr. Warodom Thepmongkorn
	HTT0672	Ni NPs decorated ZrO2 Phase-dependent activity for Furfural hydrogenation to yield THFA and CPO selectively	Mr. Vijay Garule
	HTT0689	Effect of Acid Treatments on Zirconia in Ni/Zirconia using Palmitic Acid at Different Operating Conditions for BioJet Fuel Production Yield	Prof. Paweena Prapainainar
	HTT0696	Effect of Zeolite Hydrophilicity on Water-Assisted Polyethylene Hydrocracking	Mr. Jaewoo Kim
	HTT0697	Engineering Oxygen Vacancies with Atomically Dispersed WOx: A Strategy for Superior CO2 Hydrogenation Performance and Stability on Pd/CeO2	Mireu Kim
	HTT0701	Boron nitride-modified SiO2 supports for enantioselective hydrogenation over Pt catalysts	Ms. Minji Yun
	HTT0712	Metal Promoter Effects on Pd/CNT Catalysts for Selective Hydrogenation of High-Concentration Acetylene	Ms. Jiyoung Lee
	HTT0716	Engineering High Surface Area CeO2 with Abundant Oxygen Vacancies to Boost Low-Temperature CO2 Methanation over CeO2-Supported Ni Catalysts	Dr. Kwang Young Kim
	HTT0721	Engineering Oxygen-Vacancy-Derived Strong Basic Sites through Macropore Design for Coke-Resistant Ni/γ-Al_2O_3 Catalysts in Methane Bi-Reforming	Mr. Phuong Anh Nguyen

	HTT0722	Active-Site Structural Evolution in Ni–W/Al_2O_3 during Methane Dry Reforming: Tungsten Phase Transformations and Long-Term Stability	Dr. Azam Jamsaz
	HTT0724	Role of Phosphorus Doping in Tuning Surface Properties, Ni–Support Interaction, and Coke Resistance of Macroporous Ni/Al2O3 Catalysts for Dry Reforming of Methane	Mr. Ngoc Nhiem Pham
	HTT0732	Polystyrene Hydrocracking over Ni/Zeolite Catalysts: The Role of Brønsted Acidity and Polymer Accessibility	Mr. Jonghyun Park
	HTT0736	In situ ATR-IR study of product poisoning phenomena in heterogeneous C=C enantioselective hydrogenation	Mr. Dongmin Lee
	HTT0740	Catalytic Methane Decomposition over Ni-CeO2 Catalysts for CO2-Free Hydrogen Production	Ms. Bomin Kim
	HTT0749	Investigation of mechanical stability of CuO/ZnO-based catalyst pellets	Mr. Alexander Schaefer
	HTT0759	Exploring the effect of local temperature gradients on Fe-based catalysts during inductively heated reverse water gas shift	Prof. Maricruz Sanchez-Sanchez
	HTT0764	SiO_2-Modified Pt–M/Al_2O_3 Catalysts for Coke-Resistant Propane Dehydrogenation: Machine Learning Guided Catalyst Deactivation Study	Dr. Nikita Dewangan
	HTT0772	Positive CO Conversion–Selectivity Relationship in Tandem Catalysis of Fischer–Tropsch Synthesis and Catalytic Cracking	Ms. Hyeon Song Lee
	HTT5688	Screening of Transition-Metal Catalysts for NH3 Decomposition	Ms. Seohyeon An
	HTT5691	Facile Synthesis of High Dispersed Ni Catalyst by Tannic Acid Assisted Impregnation for Low Temperature Ammonia Decomposition	Mr. Sungbeom Hwang
	HTT5692	Silica-encapsulated Cu-ZnO nanoparticles for CO2 hydrogenation to methanol	Ms. hwiyeon woo
	HTT9702	Enhanced Regenerability of Ru- and Zn-Promoted Mo/MCM-22 for Methane Dehydroaromatization	Ms. Eun Ji Choi
HYP	HYP0062	Development of a Microkinetic Model for Photocatalytic Hydrogen Evolution via Methanol Photoreforming and Water Splitting	Mr. Matthew Wigglesworth
	HYP0168	Low-Loading Platinum Surface Modification of Solid Oxide Cell Electrodes Using Plasma Enhanced Atomic Layer Deposition	Dr. Hyong June Kim
	HYP0209	Synthesis of single atom and atomic cluster catalysts by chemical vapor deposition technique	Dr. Heeyeon Kim
	HYP0239	Bench-Scale Demonstration of Thermocatalytic Methane Pyrolysis over Low-cost SUJ2 Steel Beads with Active-Site Identification	Ms. Gayatri Udaysinh Ingale
	HYP0300	Engineering Advanced BiVO4 Photoanodes for Efficient Photoelectrochemical Water and Ethylene Glycol Oxidation	Ms. Htoo Thiri Htet .
	HYP0314	Thermal depolymerization of waste polypropylene: effects of steam and CO2 on producer gas composition and tar reforming	Mr. Hyeong-jin Kim
	HYP0315	Thermal Depolymerization–Assisted Conversion of Polypropylene Pyrolysis Oil and Biomass toward Hydrogen-Rich, Low-Tar Producer Gas	Mr. Joo-Hyeong Yoon
	HYP0334	Comparative Study on Purification Processes of Carbon from Hydrocarbon Pyrolysis Using a Liquid-Metal Bubble Column Reactor	Ms. Ye Ji Chang
	HYP0336	Enhancement of Methane Pyrolysis Conversion Using Oxidized Liquid Metals	Mr. Hyuntae Kim
	HYP0352	Methane Pyrolysis over Fe-based Catalysts in a Fluidized Bed Reactor: Experimental Evaluation and Predictive Performance Modeling under Variable Operating Conditions	Mr. Piercosimo Vedele
	HYP0550	Kinetic Study and Structural Characterization of Covalent Triazine Framework-Based Catalysts for Catalytic Methane Decomposition	Mr. Piercosimo Vedele
	HYP0418	Catalyst Design and Optimization for Methane-to-Hydrogen Conversion Using FeCo/Al2O3	Mr. Lomas Rishi
	HYP0454	Mechanochemically synthesized Ni/Al2O3 catalysts with pore structure modification for catalytic methane decomposition	Mr. Gwan-Joong Park
	HYP0456	Microwave-induced Ni exsolution on MgO for carbon nanotube growth via methane pyrolysis	Ms. Hyemin Kim
	HYP0461	Synergistic Effects of Ce and Zr Incorporation in CaNiO3-Based Catalysts for Enhanced Activity and Stability in Methane Dry Reforming	Mr. Hyoseong Woo
	HYP0489	Kinetic Analysis and Catalytic Effects of Methane Pyrolysis on Sn-based Binary Molten Metal Catalysts	Mr. Song Wonseok
	HYP0628	Enhance Hydrogen Production via steam methane reforming in a Membrane Reformer: Effect of the key process parameter	Mr. Abhishek Anand
	HYP0637	Methane pyrolysis and C-valorization in steelmaking sector: a multi-scale investigation over Fe-based catalyst	Mr. Marco Orsenigo
	HYP0679	Enhanced Visible-Light-Driven Hydrogen Production over CuLi1/3Ti2/3O2 / Li4Ti5O12 / TiO2	Ms. Phattharawadee Wichai
	HYP0713	nhanced Photocatalytic Hydrogen Production via Interfacial Charge Transfer in Graphene Quantum Dot-Modified K4Nb6O17 Nanocomposites	Ms. Chonticha Hansongkram
	HYP0727	Enabling Visible-Light-Driven Overall Water Splitting through Cocatalyst-Assisted Kinetics and Optical Concentration	Ms. Ryun Na Kim
	HYP0739	Process Design of Ammonia-Natural Gas Dual-Fuel Fuel Cell Systems for DC Power Demand	Dr. Minseok Bae
	HYP0750	Cathode Ionomer Optimisation for Anion Exchange Membrane Electrolysers Operating at Low Electrolyte Concentrations.	Ms. Nireesha Kodali
	HYP0758	Elucidating the Active Sites in Iron Ores for Catalytic Methane Decomposition	Mr. Young Woo Kim
	HYS0072	Kinetic Modeling of the Reversible Formate/Bicarbonate System for Hydrogen Storage over Pd-based Catalysts	Prof. Danilo Russo
	HYS0100	Simulation-guided design of a 3D printed vapor-liquid separator with integrated heat exchange for CO2-to-Methanol synthesis	Mr. Leon Kick
	HYS0262	CO2-derived carbons for enhanced hydrogen desorption in magnesium-based hydrogen storage	Dr. suwimol wongsakulphasatch
	HYS0277	Continuous (de)hydrogenation of NEC/12H-NEC in a micro-packed bed reactor for hydrogen storage	Ms. Yiwei Fan
	HYS0368	LH2 BOG Cold Energy Recovery for Integrated N2 and CO2 Liquefaction	Mr. HYUNHEE LEE

	HYS	HYS0400	Joule-Heated Reactor for Efficient Hydrogen Production via Ammonia Decomposition	Ms. You Jin Go
		HYS0579	First-Principles Study of TiFe Surfaces for Solid-State Hydrogen Storage	Ms. Jeongeun Park
		HYS0708	Integrated design of ammonia-based solid oxide fuel cell system preventing nickel nitride degradation	Mr. Jewoo Shim
		HYS0710	Spray-reliquefaction using subcooled LH2 tanks in import hydrogen terminals	Mr. Si-Woo Park
		HYS0729	Enhanced Hydrogen Tolerance of Co-Y/CNT Composite Catalysts for Ammonia Decomposition	Ms. Sujin Kim
		HYS0730	Design of Pd catalysts for liquid organic hydrogen carriers	Prof. Kwangjin An
		HYS0760	Metal-graphitic carbon composite for efficient nitrite reduction reaction	Mr. Jinsung Yang
		HYS0762	Steam-Iron Process for Thermochemical Hydrogen Storage over Fused Fe-based materials	Dr. Yi Qiu
	HYT	HYT0735	Quantitative Risk Assessment on LH2 receiving Terminal	Mr. Kim JEONG HOON