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FOUR
인간 중심 융합기술루선 미래인재양성 교육연구단



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SUPERGREEN 2024
- Yeosu, Korea -

2024 SUPERGREEN

13th International Conference on Supercritical Fluids

P Nov 29 - Dec 01, 2024
R Yeosu, Republic of Korea

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<https://www.supergreen2024.com>

SUPERGREEN 2024: 13th International Conference on Supercritical Fluids

Symposium Chairs

Prof. Jaehoon Kim
Sungkyunkwan University

Prof. Gimyeong Seong
University of Suwon

Dr. Hong-Shik Lee
Korea Institute of Industrial
Technology

Prof. Tae Jun Yoon
Seoul National University

Prof. Akira Yoko
Tohoku University

Honorary Chairs

Prof. Youn-Woo Lee
Seoul National University

Prof. Tadafumi Adschiri
Tohoku University

Prof. Yan-Ping Chen
National Taiwan University

Prof. Motonobu Goto
Nagoya University

Prof. Buxing Han
Chinese Academy of Sciences

Organized by

Sungkyunkwan University
Seoul National University
The University of Suwon

Korea Institute of Industrial Technology

Sungkyunkwan University, Human-centered fusion machine solution future talent training
education research group 인간 중심 융합기계솔루션 미래인재양성 교육연구단

Sungkyunkwan University, Korea Research Institute of Chemical Technology- Sungkyunkwan
University Next Generation Convergence Research Center KRICT-SKKU 차세대융합연구센터



Supergreen 2024 website



Abstract download

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GENERAL INFORMATION

Name Tags	A name tag distributed must be worn by each registered participant and accompanying person in order to gain admittance to the meeting and social gatherings.			
Program	Friday, Nov. 29	Registration	3:00 – 5:00 PM	Yeosu Belle Mer conference room
	Friday, Nov. 29	Welcome Reception	5:00 – 9:00 PM	ALLEY PUB
	Saturday, Nov. 30	Opening Ceremony	8:20 – 8:30 AM	Yeosu Belle Mer conference room
	Saturday, Nov. 30	Presentations	8:30 – 12:00 PM	Yeosu Belle Mer conference room
	Saturday, Nov. 30	Technical Luncheon	12:00 – 1:30 PM	Yeosu Belle Mer restaurant
	Saturday, Nov. 30	Presentations	1:30 – 16:20 PM	Yeosu Belle Mer conference room
	Saturday, Nov. 30	Field trip	4:30 – 6:00 PM	Marine Cable Car
	Saturday, Nov. 30	Gala Dinner	6:00 – 8:00 PM	Dongbaek Hall
	Sunday, Dec. 01	Presentations	9:00 – 12:00 AM	Yeosu Belle Mer conference room
	Sunday, Dec. 01	Technical Luncheon	12:00 – 1:30 PM	Yeosu Belle Mer restaurant
	Sunday, Dec. 01	Presentations	1:30 – 4:50 PM	Yeosu Belle Mer conference room
	Sunday, Dec. 01	Closing Ceremony	4:50 – 5:30 PM	Yeosu Belle Mer conference room

- Tickets for Gala dinner will be distributed at the registration desk.
- Misplaced or lost tickets cannot be replaced.

Registration Hours Friday, Nov 30 3:00 – 5:00 PM Yeosu Belle Mer conference room

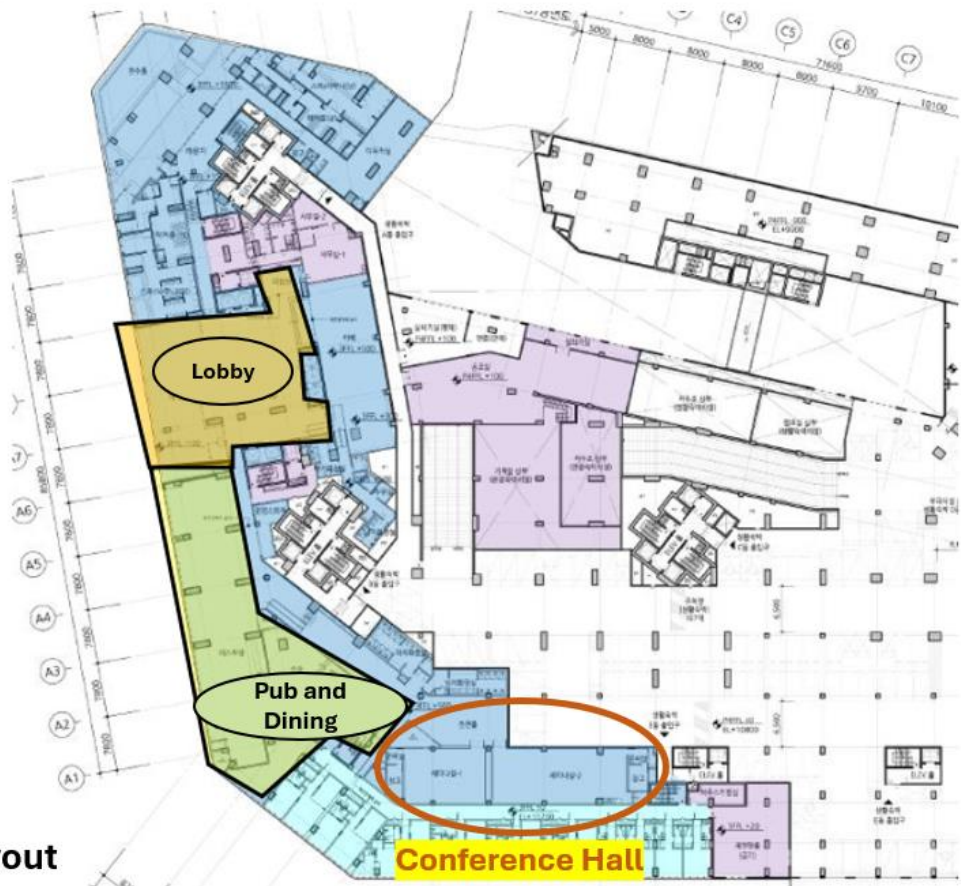
Locations Oral presentations will take place in Room I and Room II in the Yeosu Belle Mer conference room. Sunday Poster Sessions will take place in the corridor near the conference room (3F).

Venue Yeosu Belle Mer (여수 벨메르)
 17, Ungcheonnam-4ro
 12345, Yeosu, Republic of Korea
 Phone: 061-924-1500
<http://www.hanwharesort.co.kr>

GENERAL INFORMATION

- Poster Session** Posters will be located in the corridor near the conference room (3F). Poster boards will be labeled with the classification number corresponding to the paper number in the Final Program.
- Setup & Teardown Instructions** All posters will be on display during designated times. All posters must be affixed to the poster boards in the morning of the day of your poster session. Do not remove posters before Sunday, Dec. 01 3:00 PM. Any posters remaining after 3:00 PM will be discarded.
- Special Issue** Authors from all the oral presentations (plenaries, keynotes, invited lectures and contributed presentations) at the conference can submit manuscripts based on their presentations for consideration for the special issue of The Journal of Supercritical Fluids. We will also consider selected poster presentations for this issue (e.g., the winner of the student poster award). Submissions must satisfy the standards and author guidelines of The Journal of Supercritical Fluids. They must successfully pass the guest editors and overseeing editorial review process. Submitted manuscripts must be original research contributions that will be presented at this conference. In the case of plenary and keynote lectures, they can be review articles based on the presentations. Please submit manuscripts directly to the journal website (www.journals.elsevier.com/the-journal-of-supercritical-fluids/) and indicate that your submission is for the ISSF2015 symposium issue. The submission deadline for papers to be considered for this special issue is December 30, 2015. If you have any queries concerning the Special Issue, contact professor Gimyeong Seong.
E-mail: soppua4@suwon.ac.kr

Conference Layout



3F Hotel Layout

Program**Saturday, November 30**

Time	Session I	Session II
08:20 - 08:30 AM	Opening Remark	
08:30 - 09:20 AM	Plenary Lecture I	
09:20 - 10:10 AM	Plenary Lecture II	
10:10 - 10:30 AM	Coffee Break	
10:30 AM - 12:00 PM	CO ₂ Conversion I	Extraction and Separation I
12:00 - 01:30 PM	Lunch	
01:30 - 02:40 PM	CO ₂ Conversion II	Extraction and Separation II
02:40 - 03:10 PM	Coffee break	
03:10 - 04:20 PM	Poster Session Presentation	
04:20 - 06:00 PM	Cable Car Visit	
06:00 PM - Fin	Gala Dinner	

Sunday, December 01

Time	Session I	Session II
08:50 - 09:00 AM	Opening Remark	
09:00 - 09:50 AM	Plenary Lecture III	
09:50 - 10:40 AM	Plenary Lecture IV	
10:40 - 11:00 AM	Coffee Break	
11:00 AM - 12:00 PM	Hydrothermal Process I	Novel Materials I
12:00 - 01:30 PM	Lunch	
01:30 - 02:35 PM	Hydrothermal Process II	Novel Materials II
02:35 - 02:50 PM	Coffee break	
02:50 - 03:55 PM	Catalysis	Waste and Biomass Valorization
04:00 - 04:50 PM	Plenary Lecture V	
04:50 - 05:30 PM	Closing	
05:30 PM - Fin	Dinner	

13th International Conference on Supercritical Fluids

Final Scientific Program

Friday, November 29, 2024

3:00 - 5:00 PM Registration Open
5:00 - 9:00 PM Welcome Reception

Saturday, November 30, 2024

8:20 - 8:30 AM Opening remarks

1A. Plenary Lecture - I

Chair: Professor Motonobu Goto, Nagoya University, Japan

8:30 - 9:20 AM Development of CO₂ + ethanol and dimethyl ether extraction technologies for extraction of natural products – A NZ perspective
Owen Catchpole, Jolin Morel, Stephen Tallon, Teresa Moreno, Andrew MacKenzie, Kirill Lagutin, Stephen Bloor – Callaghan Innovation, New Zealand

1B. Plenary Lecture - II

Chair: Professor Motonobu Goto, Nagoya University, Japan

9:20 - 10:10 AM New technology and product application of supercritical CO₂ foaming polymer
Ling Zhao – East China University of Science and Technology, China

Coffee Break

10:10 – 10:30 AM

2A. CO₂ Conversion I

Chair: Professor Wooyul Kim, Korea Institute of Energy Technology, Republic of Korea
Location: Room A

10:30 - 11:00 AM (L-101) CO₂ transformation into valuable chemicals
(KEYNOTE LECTURE)
Zhimin Liu – Chinese Academy of Sciences, People's Republic of China

11:00 - 11:30 AM (L-102) Developing Efficient and Stable Membrane Electrode Assembly (MEA) for CO₂ Electrolysis
(KEYNOTE LECTURE)
Hyung-Suk Oh – Korea Institute of Science and Technology, Republic of Korea

11:30 - 11:45 AM (L-103) Selective production of ethanol over Co-based catalyst by electrocatalytic reduction of CO₂ at supercritical conditions
Sheraz Ahmed, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

11:45 AM - 12:00 PM (L-104) Electrochemical Reduction of CO₂ to CO in Zero Gap Electrolyzer at High Pressure
Muhammad Shakir Hussain, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

2B. Extraction and Separation I

Chair: Dr. Hong-Shik Lee, Korea Institute of Industrial Technology, Republic of Korea
Location: Room B

10:30 - 11:00 AM (L-105) Effect of cannabis supercritical CO₂ extract of smart-farmed hemp on the suppression of geriatric diseases
(KEYNOTE LECTURE)
Youn-Woo Lee, Ki Won Lee – Seoul National University, Korea Advanced Institutes of Convergence Technology, Republic of Korea

11:00 - 11:15 AM (L-106) Application of Simulated Moving Bed to the Separation of Enantiomers: A Comparison of Liquid Solvent and Supercritical Fluid Eluents
Xiaoqing Bao, Ming-Tsai Liang – JOPE Technology Co., Ltd., Taiwan

11:15 - 11:30 AM (L-107) Comparative Study of the Chemical Properties and Bioactive Potential of Subcritical Water Extracts from Different Parts of *Undaria pinnatifida*
Jin-Seok Park, Ji-Min Han, Sang-Min Lee, Sin-Won Park, Jang-Woo Kim, Min-Seok Choi, Byung-Soo – Pukyong National University, Republic of Korea

11:30 - 11:45 AM (L-108) Recovery of Valuable Bioactive Compounds from Wet Mandarin Pomace using Liquid Dimethyl Ether
Aye Aye Myint, Sabrina Wulandari, Ruqian Cao, Jongho Choi, Jeong Jaeryeong, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

Lunch

12:00 – 01:30 PM

2C. CO₂ Conversion II

Chair: Professor Hyung-Suk Oh, Korea Institute of Science and Technology, Republic of Korea
Location: Room A

01:30 - 01:50 PM (L-109) Boosting CO₂ electrolysis in green solvents
(INVITED LECTURE)
Xiaofu Sun – Chinese Academy of Sciences, People's Republic of China

01:50 - 02:10 PM (L-110) Operando Spectroscopic Analysis in Photo/Electro-Catalysis
(INVITED LECTURE)
Wooyul Kim – Korea Institute of Energy Technology, Republic of Korea

02:10 - 02:25 PM (L-111) Electrochemical Property of Nanoporous Au Electrode in Hydrothermal CO₂ Reduction Reaction (CO₂RR) System
Takaaki Tomai, Kazuyuki Iwase, Ryusei Takayanagi – Tohoku University, Japan

02:25 - 02:40 PM (L-112) Effect of Reduction Temperature on the Interaction of Cobalt-Manganese Bimetal and Its Impact on CO₂ Conversion for long-chain hydrocarbon
Heuntae Jo, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

2D. Extraction and Separation II

Chair: Dr. Owen Catchpole, Callaghan Innovation, New Zealand

Location: Room B

- | | |
|------------------|---|
| 01:30 - 01:50 PM | (L-113) Multi-phasic nature of supercritical fluids
(INVITED LECTURE)
<u>Tae Jun Yoon</u> – Seoul National University, Republic of Korea |
| 01:50 - 02:10 PM | (L-114) Development of Extended Supercritical Extraction Processes for Waste Valorization
(INVITED LECTURE)
<u>Hong-shik Lee</u> , Ji Sun Lim, Seung Eun Lee, Bonggeun Shong, Young-Kwon Park – Korea Institute of Industrial Technology, Republic of Korea |
| 02:10 - 02:25 PM | (L-115) Co-production of Bio-crude, Bioactive Extract and Bio-solid Fuel from Wet Spent Coffee Grounds using Liquefied Dimethyl Ether
<u>Ruqian Cao</u> , Aye Aye Myint, Jaehoon Kim – Sungkyunkwan University, Republic of Korea |
| 02:25 - 02:40 PM | (L-116) Elimination of impurities from cotton textiles using compressed liquid CO ₂ combined with co-solvents
<u>Jaeryeong Jeong</u> , Aye Aye Myint, Jaehoon Kim – Sungkyunkwan University, Republic of Korea |

Coffee Break

02:40 – 03:10 PM

3. Poster Presentation Session

03:10 – 04:20 PM

4. Cable Car Visit

- | | |
|------------------|------------------------------------|
| 04:20 - 04:30 PM | Hop into bus |
| 04:30 - 05:00 PM | Move to Dolsan Station (Cable Car) |
| 05:00 - 06:00 PM | Dolsan Station to Jasan Station |

Gala Dinner

06:00 PM – Fin

Sunday, December 1, 2024

08:50 - 09:00 AM Opening remarks

4A. Plenary Lecture - III

Chair: Professor Tadafumi Adschiri, Tohoku University, Japan

09:00 - 09:50 AM Particle design of active pharmaceutical ingredient using the supercritical CO₂ process
Chie-Shaan Su – National Taipei University of Technology, Taiwan

4B. Plenary Lecture - IV

Chair: Professor Tadafumi Adschiri, Tohoku University, Japan

09:50 - 10:40 AM Continuous flow hydrothermal synthesis of ultra-small metal oxide nanoparticles
Akira Yoko – Tohoku University, Japan

Coffee Break

10:40 – 11:00 AM

5A . Hydrothermal Process I

Chair: Masaru Watanabe, Tohoku University, Japan
Location: Room A

11:00 - 11:30 AM (L-201) How supercritical hydrothermal reactions contribute to innovation?
(KEYNOTE LECTURE)
Tadafumi Adschiri – Tohoku University, Japan

11:30 - 11:45 AM (L-202) Simultaneous Material and Chemical Recycling of Waste PET/PE Multi-Layer Films under Hydrothermal Conditions
Qingxing Zheng, Yoshiki Suga, Masaru Watanabe – Tohoku University, Japan

11:45 AM - 12:00 PM (L-203) Revolutionizing Alkali-Ion Batteries with 2D Ultrathin A₂FeSiO₄ Nanosheets
Lalit Kumar Singh, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

5B . Novel Materials I

Chair: Tae Jun Yoon, Seoul National University, Republic of Korea
Location: Room B

11:00 - 11:30 AM ~~(L-204) Supercritical CO₂-assisted scalable exfoliation of graphite into graphene via ball milling~~
(KEYNOTE LECTURE)
~~Yaping Zhao – Shanghai Jiao Tong University, People's Republic of China (canceled)~~

11:30 - 11:45 AM (L-205) Enhancing Dispersibility and Stability in ZrO₂ Colloidal with Yttria Doping and Crystalline Phase
Hee-Seon Lee, Kyuyoung Heo – Korea Research Institute of Chemical Technology, Republic of Korea

11:45 AM - 12:00 PM (L-206) Bismuth/zinc oxide composite as a new anode material for Li storage
Anith Dzhaxinah Mohd Sarofil, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

Lunch
12:00 – 01:30 PM

5C. Hydrothermal Process II

Chair: Gimyeong Seong, The University of Suwon, Republic of Korea
Location: Room A

01:30 - 02:00 PM (L-207) Research Advances in the Application of Hydrothermal Leaching Technology for Lithium-Ion Battery Recycling
(KEYNOTE LECTURE)
Masaru Watanabe, Qingxin Zheng – Tohoku University, Japan

02:00 - 02:20 PM (L-208) Production of Silk Fibroin Self-sustaining Hydrogels by Hydrothermal Gelation
(INVITED LECTURE)
Mitsumasa Osada, Hayata Matsushita, Kenta Mizushima – Shinsu University, Japan

02:20 - 02:35 PM (L-209) Conversion of soybean oil to bio-oils with hydrothermal reaction
Jongho Choi, Aye Aye Myint, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

5D . Novel Materials II

Chair: Takaaki Tomai, Tohoku University, Japan
Location: Room B

01:30 - 01:45 PM (L-210) Green Preparation of Biodegradable Polyester Foams with Supercritical Fluid
Dongdong Hu, Ling Zhao – East China University of Science and Technology, People's Republic of China

01:45 - 02:00 PM (L-211) High-power Organic Redox Supercapacitors with Reduced Interfacial Resistance Effect by Supercritical CO₂ Impregnation
Yuta Nakayasu, Shu Sokabe, Chie Ooka, Tomoya Yamada, Naoka Nagamura, Masaru Watanabe – Tohoku University, National Institute for Materials Sciences, Japan

02:00 - 02:15 PM (L-212) The high carbon silicon oxycarbide (HC-SiOC) encapsulated porous silicon (PSi) particles for lithium-ion batteries (LiBs) anode materials
Dongho Nam, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

02:15 - 2:30 PM (L-213) Preparation and structure regulation of microcellular foams and devices with low dielectric properties
Yichong Chen, Jiabao Yu, Wenyu Zhong, Dongdong Hu, Ling Zhao – East China University of Science and Technology, People's Republic of China

Coffee Break
02:35 – 02:50 PM

5E . Catalysis

Chair: Mitsumasa Osada, Shinsu University, Japan
Location: Room A

02:50 - 03:10 PM (L-214) Chemical Looping Steam Methane Reforming Process using Nano CeO₂
(INVITED LECTURE)
Gimyeong Seong, Akira Yoko, Takaaki Tomai, Tadafumi Adschiri – The University of Suwon, Tohoku University, Republic of Korea, Japan

03:10 - 03:25 PM (L-215) Superior Oxygen Storage Capacity of Mn-CeO₂ Nanoparticles in a Non-Equilibrium State
Chunli Han, Akira Yoko, Tadafumi Adschiri – Tohoku University, Japan

03:25 - 03:40 PM (L-216) Direct Conversion of Biomass to Sustainable Aviation Fuel components over ZrO₂ doped Cu-Pd alloy catalyst in sub- and supercritical methanol
Deepak Verma, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

03:40 - 03:55 PM (L-217) Direct Conversion of Succinic Acid to 1,4-butanediol over Rhenium-Promoter-free Ruthenium–Zirconia Catalyst in Water
Neha Karanwal, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

5F . Waste and Biomass Valorization

Chair: Jaehoon Kim, Sungkyunkwan University, Republic of Korea
Location: Room B

02:50 - 03:10 PM (L-218) Ionic Liquid-Mediated Valorization of CO₂ and spent polyesters into value-added chemicals
(INVITED LECTURE)
Yanfei Zhao, Zhimin Liu – Chinese Academy of Sciences, People's Republic of China

03:10 - 03:25 PM (L-219) Facet dependent Pt adsorption on rutile TiO₂ surface for efficient photocatalytic VOCs removal
Ardiansyah Taufik, Akira Yoko, Chunli Han, Wahyudiono, Satoshi Ohara, Tadafumi Adschiri – Tohoku University, Japan

03:25 - 03:40 PM (L-220) Volatile organic compounds (VOCs) removal from polypropylene (PP) waste using supercritical CO₂
Sabrina Wulandari, Jongho Choi, DaeSung Jung, Aye Aye Myint, Jaehoon Kim – Sungkyunkwan University, Hyundai Motor Group, Republic of Korea

03:40 - 03:55 PM (L-221) Two Step Process for High Yield of Phenolic Monomers from Lignocellulosic Biomass in Water Methanol Mixture
Yasora Liyanage, Seoyeon Kim, Neha Karanwal, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

4B. Plenary Lecture - V

Chair: Youn-Woo Lee, Seoul National University, Republic of Korea

04:00 - 04:50 PM Biomass utilization using sub- and supercritical fluids
Jaehoon Kim – Sungkyunkwan University, Republic of Korea

04:50 - 05:30 PM Closing

Saturday, 30 November Poster Session Presentations

03:10 – 04:20 PM

Location: Corridor near the conference room

Posters should be displayed all day.

Supercritical Fluid Application in Battery Technology

P-101 Different SnBi alloy composites via controlling cooling rate for high-performance lithium-ion battery anode
Hyeon So Park, Winda Devina, Anith Dzhanchinah Mohd Sarofil, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

P-102 Impact of Additional Phase in SnSb Alloy Anodes for Lithium-ion Battery
Taewan Ko, Anith Dzhanchinah Mohd Sarofil, Hyeon Seo Park, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

P-103 High-Capacity, High-Rate Nanosized Bismuth-Antimony Embedded in N-doped Carbon Matrix via Facile Pyrolysis as Anodes for Advanced Li Storage
Sun Chi Rong, Anith Dzhanchinah Mohd Sarofil, Winda Devina, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

P-104 Silicon oxycarbide-encapsuled bismuth as anodes in lithium-ion batteries
Anith Dzhanchinah Mohd Sarofil, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

P-105 Effect of precursor morphology on the electrochemical performance of porous Si anodes prepared by magnesiothermic reduction
Dongho Nam, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

CO₂ and Carbon Reduction Technologies

P-106 Thermocatalytic CO₂ conversion into carboxylic acid under high pressure conditions
Jiyeon Lee, Wonjoong Yoon, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

P-107 Investigating the role of cerium oxide promoter for the hydrogenation of CO₂ to higher hydrocarbons over Fe-based catalysts
Muhammad Kashif Khan, Sheraz Ahmed, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

P-108 Revolutionizing CO₂-FTS: The Impact of Alkali promoter Introduction on Iron Catalysts

Wonjoong Yoon, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

- P-109 Influence of Alkali promoter in Cobalt-Manganese Catalysts for direct CO₂ hydrogenation to long chain hydrocarbon
Heuntae Jo, Jaehoon Kim – Sungkyunkwan University, Republic of Korea
- P-110 Revealing the New Role of ZrO_x in CO₂ Hydrogenation to High-Yield C₅₊ with Long-Term Stability over Fe-Based Catalysts
Sheraz Ahmed, Muhammad Kashif Khan, Jaehoon Kim
- P-111 Enhanced CO₂ Hydrogenation to Hydrocarbon Fuels: The Role of Metal Oxide Promoters in Cobalt-Based Catalysts
Syeda Sidra Bibi, Heuntae Jo, Sheraz Ahmed, Jaehoon Kim – Sungkyunkwan University, Republic of Korea
- P-112 Recycling of Polyamide Composite Materials: A Solvent Extraction Approach for Polymer Recovery
Jaeryeong Jeong^a, Aye Aye Myint^a, Jongho Choi^a, Sabrinna Wulandari^a, Daesung Jung^b, Jaehoon Kim^a – ^aSungkyunkwan University, ^bHyundai Motor Group, Republic of Korea

Sustainable Industrial Applications

- P-113 Removal of Chemical Residue from Gelatin-based Microparticles Using Supercritical CO₂
Truc Cong Ho^a, Jang-Woo Kim^b, Jin-Seok Park^b, Byung-Soo Chun^b – ^aPL Micromed Co., Ltd., ^bPukyong National University, Republic of Korea
- P-114 Utilization of hydrolyzed rice husks as an eco-friendly polymer additive
Sung Hyun Kim^{a,b}, Seung Eun Lee^{a,c}, Gun Woo Sin^{a,d}, Chul-jin Lee^b, Young-Kwon Park^c, Hongshik Lee^a – ^aKorea Institute of Industrial Technology, ^bChung-Ang University, ^cUniversity of Seoul, ^dSun Moon University, Republic of Korea
- P-115 Enhancing Food Drying Efficiency Using Supercritical CO₂: A Study on Process Parameter Optimization
Ji Sun Lim^{a,b}, Seung Eun Lee^{a,c}, Gun Woo Shin^{a,d}, Bonggeun Shong^b, Young-Kwon Park^c, Hongshik Lee^a – ^aKorea Institute of Industrial Technology, ^bHongik University, ^cUniversity of Seoul, ^dSun Moon University, Republic of Korea
- P-116 Unraveling Characteristics of Mandarin Pomace for Its Potential Value-added Applications
Aye Aye Myint, Sabrinna Wulandari, Ruqian Cao, Jongho Choi, Jeong Jaeryeong, Jaehoon Kim – Sungkyunkwan University, Republic of Korea
- P-117 Enhanced High-yield recovery of bioactive compounds from red ginseng marc using CO₂-assisted subcritical water extraction
Ruqian Cao, Aye Aye Myint, Jaehoon Kim – Sungkyunkwan University, Republic of Korea
- P-118 Synthesis of astaxanthin/ β -cyclodextrin microparticles using supercritical antisolvent (SAS) process
Sabrinna Wulandari, Aye Aye Myint, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

Catalysis and Conversion Processes

- P-119 One-pot conversion of mucic acid to hexanedioic ester over bimetallic disperse Ru-Re, Ru-Mo, and Ru-W on activated carbon catalyst
Rizky Gilang Kurniawan, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

- P-120 Production of hydrocarbon-rich fuel via hydrothermal deoxygenation of triglycerides in a continuous flow reactor
Do Hui Kwon^{a,b}, Sung Hyun Kim^{a,c}, Bonggeun Shong^b, Chul-Jin Lee^c, Hong-shik Lee^a – ^aKorea Institute of Industrial Technology, ^bHongik University, ^cChung-ang University, Republic of Korea
- P-121 Electrocatalytic cleavage of α -O-4, β -O-4 and 4-O-5 linkages using Pd/C catalyst
Seoyeon Kim, Neha Karanwal, Jaehoon Kim – Sungkyunkwan University, Republic of Korea
- P-122 Fuel-range hydrocarbons via non-catalytic sub-/supercritical water reaction of waste oils
Jongho Choi, Aye Aye Myint, Jaehoon Kim – Sungkyunkwan University, Republic of Korea
- P-123 Electrocatalytic conversion of lignocellulose biomass into biochemicals
Neha Karanwal, Jaehoon Kim – Sungkyunkwan University, Republic of Korea

Modelling and Simulation

- P-124 Bubble pressure measurement of carbon dioxide dissolution in propylene carbonate, dimethyl carbonate, and acetonitrile
Bomin Kim^a, Dongho Yoo^b, Tae Jun Yoon^a – ^aSeoul National University, ^bChungnam National University, Republic of Korea
- P-125 Prediction of the solid solubility of anthraquinone derivatives in supercritical CO₂ by the solution model with melting temperature estimated from message-passing neural network
 Yu-Chiao Chu^a, Salal Hasan Khudaida^b, Yung-Ho Chiu^c, David Shan-Hill Wong^a, Chie-Shaan Su^b – ^aNational Tsing Hua University, ^bNational Taipei University of Technology, ^cTaiwan Supercritical Technology Co., Ltd., Taiwan
- P-126 Theoretical Study of The Depolymerization of Lignin Model Compound Over Pd and Ni with Different Sizes
Junjung Rohmat Sugiarto, Jaehoon Kim – Sungkyunkwan University, Republic of Korea
- P-127 Synthesis of Silcalite-1 by Hydrothermal Method Applied for SteamResistant Cobalt Catalyst in Propane Dehydrogenation
Shokhboz Muxamadqulov, Yong Ki Park, Dae Sung Park – Korea Research Institute of Chemical Technology, Republic of Korea

