

Korea-EU Horizon Europe Researchers Networking Forum on Energy- Korean Participants

<2025.09.08. Korea-EU Research Centre>

#	Name	Position / Organization
Forum Chair	Jongin Hong	NCP for Cluster 5 / Professor Chung-Ang University
Forum Chair	Sangwon Kim	Principal Researcher KIST Europe
0	Suk Won Cha	Professor Seoul National University (SNU)
1	Dong Hyup Jeon	Professor Dongguk University-WISE
2	Dong Kyu Kim	Professor Chung-Ang University
3	Dong Woo Joh	Principal Research Engineer Korea Institute of Energy Research (KIER)
4	Ho Seok Park	Professor Sungkyunkwan University (SKKU)
5	Jaebeom Lee	Professor Chungnam National University (CNU)
6	June-Seok Choi	Research Fellow/Representative Professor Korea Institute of Civil Engineering & Building Technology (KICT)
7	Moon Son	Senior Researcher / Associate Professor Korea Institute of Science and Technology (KIST)
8	Soo Young Kim	Professor Korea University
9	Tae Jin Kang	Principal Researcher Institute for Advanced Engineering (IAE)
10	Taehyo Kim	Principal Researcher Korea Institute of Industrial Technology (KITECH)

*Alphabetical Order

0. Suk Won Cha

Name	Suk Won Cha
Position	Professor
Organization	Seoul National University
Biography	Since 2005, Prof. Suk Won Cha has been an assistant, associate and full professor in the Department of Mechanical Engineering at Seoul National University. He served as the Associate Dean at the College of Engineering from 2013 to 2015 and the Associate Dean of Office of International Affairs at Seoul National University from 2019 to 2021. Moreover, he served as the President of Advanced Institute of Convergence Technology, a university-government joint institute founded by Seoul National University and Gyeonggi Province of Korea from 2023 to 2025. Currently, Prof. Cha serves as the Director of Institute of Engineering Research at Seoul National University. Prof. Cha studied engineering at Seoul National University for B.S. degree and at Stanford University for M.S. and Ph.D. degree. For the past decades, Prof. Cha investigated advanced electrochemical cells from materials to system level. He pioneered innovative vacuum fabrication process for electrolyte/electrode materials, optimal energy management strategy of such systems, publishing more than 200 papers – including covers and frontispiece - in relevant journals such as Journal of Materials Chemistry, Advanced Energy Materials, Applied Energy, Journal of Power Sources, CIRP Annals-Manufacturing Technology, IEEE Transactions on Control Systems Technology and so on. Also, Prof. Cha is well-recognized as a co-author of “Fuel Cell Fundamentals (Wiley and Sons)” - a world-wide bestseller in fuel cells research (>5000 citations according to google scholar). As a recognition of his contribution to academic society, Prof. Cha is the recipient of several awards including Fuel Cells Research Award from The Korean Electrochemical Society, Academic Excellence Award from The Korean Society of Automotive Engineers, Highly Commended Paper of the Year from International Journal of Precision Engineering and Manufacturing – Green Technology and Springer Award for Most Cited Author of the Year from International Journal of Automotive Technology. Due to his profound knowledge and rich experience, Prof. Cha’s academic activities includes the following: - Editor-In-Chief, International Journal of Precision Engineering and Manufacturing–Green Technology (Q1, 2022-) - General Member, National Academy of Engineering of Korea (2024-) - World Top 2% Researcher in Career by Elsevier (2022-) - Editor, International Journal of Automotive Technology (2018 -)
Research Area	• Fuel Cells • Electrolyses • Thin film processes of catalyst, electrolytes and bipolar plates • Optimal energy management strategy for EV, HEV and FCEV • Data-Driven modeling and predictive diagnosis of batteries, hybrid and fuel cell systems.
Personal link	https://recl.snu.ac.kr https://scholar.google.com/citations?user=IZmrE08AAAAJ&hl=en
Call topic	• HORIZON-CL5-2026-04-Two-Stage-D3-02: Next generation of renewable energy technologies

1. Dong Hyup Jeon

Name	Dong Hyup Jeon
Position	Professor
Organization	Dongguk University-WISE
Biography	Dong Hyup Jeon is a Professor at Dongguk University-WISE. He specializes in multi-scale modeling of electrochemical power sources, especially batteries and fuel cells, and now advancing into AI-assisted lifetime prediction for energy storage devices used in electronic devices and electric vehicles. He has published more than 100 papers, patents and chapter books. He earned his Ph.D in Mechanical and Aerospace Engineering from the Seoul National University and conducted postdoctoral research in U. South Carolina and NRC Canada. He has served as Dean of Industry-Academy Cooperation Foundation in Dongguk University-WISE, Principal Research Engineer in Samsung SDI, Research Engineer in LG Chem, and Advisory Commity Member in Gyeongju City. Since 2015, he has been a member of the IEA AFC TPC Annex 37. He was honored with the Best Research Award at Dongguk University-WISE in 2021. He has led numerous funded projects including high-performance lithium-ion batteries, battery recycling, and multi-scale modeling of PEM fuel cells and SOFCs. He has a working experience over 30 years in fuel cells and 25 years in batteries.
Research Area	• Lithium-ion batteries: LBM simulation of electrolyte wettability and physics-based electrochemical modeling • Battery recycling and reuse: AI-assisted lifetime prediction and prognostics of spent battery • PEM fuel cells: Multiscale modeling and flow-field design • Solid Oxide Fuel Cells: Multiscale modeling and development of an open-source CFD platform for SOFC modeling (http://openfuelcell.sourceforge.net/) • Electrolysis: Oxygen bubble simulation using LBM • Chemical Reactor: Optimum design using CFD Representative Publications - D. H. Jeon, J.-H. Song, J. Yun, J.-W. Lee, "Mechanistic Insight into Wettability Enhancement of Lithium-Ion Batteries Using a Ceramic-Coated Layer," ACS Nano, 17, 2023, 1305-1314. (IF: 17.1) - J. Kim, A. Seong, Y. Yang, S. Joo, C. Kim, D.H. Jeon, L. Dai, G. Kim, "Indirect surpassing CO2 utilization in membrane-free CO2 battery," Nano Energy, 82, 2021, pp. 105741. (IF: 17.1) - D.H. Jeon, "Wettability in electrodes and its impact on the performance of lithium-ion batteries," Energy Storage Materials, 18, 2019, pp. 139-147. (IF: 20.2) - D.H. Jeon, S.M. Baek, "Thermal modeling of cylindrical lithium ion battery during discharge cycle," Energy Conversion and Management, 52(8-9), 2011, pp. 2973-2981. (cited 441 times) - J.H. Nam, D.H. Jeon, "A Comprehensive Micro-scale Model for Transport and Reaction in Solid Oxide Fuel Cells," Electrochimica Acta, 51(17), 2006, pp 3446-3460 (cited 351 times)
Personal link	https://scholar.google.com/citations?user=p1iA4fIAAAAJ&hl=en
Call topic	• HORIZON-CL5-2026-D2-01-02 • HORIZON-CL5-2026-D2-01-03 • HORIZON-CL5-2027-03-D2-05

	• HORIZON-CL5-2027-03-D2-06 • HORIZON-CL5-2026-10-D5-11
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2. Dong Kyu Kim

Name	Dong Kyu Kim
Position	Professor
Organization	Chung-Ang University
Biography	I am a professor in the Department of Mechanical Engineering at Chung-Ang University, Republic of Korea, specializing in battery safety and thermal-fluid analysis. My current research focuses on the mechanisms and propagation of thermal runaway in lithium-ion batteries, combining physics-based modeling with experimental validation. I have developed predictive models that analyze the sequential stages of thermal runaway, incorporating both chemical reaction heat generation and combustion-induced heat release. A unique feature of my work is the capability to predict the composition and quantity of gases released during thermal runaway events, which is critical for explosion risk assessment and ventilation design. In addition to single-cell experiments that capture thermal, pressure, and gas emission data, my modeling framework extends to module and rack levels, enabling accurate CFD simulations of thermal propagation in large-format battery systems. This multi-scale approach bridges laboratory-scale data with real-world battery applications, providing actionable insights for the design of safer electric vehicle (EV) and stationary energy storage system (ESS) batteries. Through participation in the Horizon Europe Cluster 5 networking forum, I aim to establish collaborations that advance battery safety technologies, integrate predictive modeling into EU safety certification frameworks, and contribute to the development of high-energy, thermally resilient battery systems for e-mobility and stationary applications.
Research Area	Battery safety, thermal runaway mechanisms, physics-based modeling, gas emission prediction, CFD simulation of module/rack propagation, experimental validation, safety design for EV and stationary battery systems.
Personal link	http://aeecs.dssso.kr/
Call topic	

3. Dong Woo Joh

Name	Dong Woo Joh
Position	Principal Research Engineer
Organization	Korea Institute of Energy Research (KIER)
Biography	Academic Background and Professional Experience The Graduate School of DGIST, Daegu, Korea Ph.D. in Energy Science & Engineering Thesis: Advanced Engineering Toward High-Performance Intermediate-Temperature Solid Oxide Fuel Cells Conducted comprehensive research on material development, cell design optimization, and fabrication processes to enhance the performance and durability of intermediate-temperature SOFCs. Acquired extensive expertise in electrochemical performance evaluation, thermal management strategies, and stack integration for real-world applications. Ongoing and Leading Projects Development of Highly Durable SOFC Stack Technology Under Simultaneous Thermal and Load Cycling Designing and validating SOFC stacks capable of maintaining performance stability under combined thermal fluctuation and load variation conditions, with a focus on extending operational lifetime. Development of 600 °C-Range SOEC System Utilizing Low-Quality Industrial Waste Heat Engineering a high-efficiency SOEC system optimized for low-grade heat sources to enable cost-effective and sustainable hydrogen production. Core Technology Development for Ammonia-Fueled, CO₂-Free SOFC Advancing direct-ammonia fuel utilization in SOFC systems through optimized cell materials, system design, and mitigation of nitridation-induced degradation. Core Research Expertise and Representative Achievements Completion of High-Performance, Large-Area Planar Cell Manufacturing Process Successfully established fabrication protocols for large-area planar cells with superior electrochemical performance and durability. Completion of Scalable Stack Design and Development Designed modular, scalable SOFC stack configurations to facilitate commercial-scale deployment. Completion of 1 kW SOFC Stack Development Delivered a fully operational 1 kW-class SOFC stack demonstrating stable performance under long-term testing. Ongoing Development of Stack Scale-Up Technology

	Developing engineering solutions and manufacturing techniques for scaling SOFC stacks to higher power outputs while maintaining reliability. Ongoing Development of Direct-Ammonia-Fueled SOFC Stack Designing and testing next-generation SOFC stacks optimized for direct ammonia feeding, addressing challenges such as fuel conversion efficiency and material degradation.
Research Area	Advanced Solid Oxide Cell (SOC) Technologies Materials for SOC Stack Components High-Performance Cell and Stack Design Electrochemical Analysis and Optimization Publications Durability improvement of large-area anode supported solid oxide fuel cell fabricated by 4-layer sequential co-lamination and co-firing process, Journal of Power Sources, 573, 233160 (2023) Ultra-Fast Route to Fabricate Large-Area Anode-Supported Solid Oxide Fuel Cell via Microwave-Assisted Sintering, Ceramics International, 49(18), 30452 (2023) Microstructure tailoring of solid oxide electrolysis cell air electrode to boost performance and long-term durability, Chemical Engineering Journal, 410, (2021). Highly active and durable double-doped bismuth oxide-based oxygen electrodes for reversible solid oxide cells at reduced temperatures, Journal of Materials Chemistry A, 7, 20558, (2019). Temperature-dependent long-term stability of Sr_{0.6}Na_{0.4}SiO_{2.8} fast ion conductors, Journal of Industrial and Engineering Chemistry, 71, 387 (2019). Patents Development of high-performing and exceedingly robust four-layered thin film anode supported planar SOFC with large area by co-firing process", registration No.: 11,616,239 (registration date: 23. 03. 28)
Personal link	https://www.kier.re.kr/board?menuId=MENU00840&siteId=null
Call topic	HORIZON-CL5-2026-10-D5-11

4. Ho Seok Park

Name	Ho Seok Park
Position	Professor
Organization	Sungkyunkwan University
Biography	Ho Seok Park is the director of Research Center for 2D Elementary Redox Energy Storage (2DRES), a full professor of Chemical Engineering at the Sungkyunkwan University (SKKU), an adjunct professor at the Samsung Advanced Institute for Health Science & Technology (SAIHST), and SKKU Fellow. His current research interests focus on electrochemical energy storage and conversion devices based on 2D and carbon nanomaterials and polymer electrolytes. He has published more than 350 papers in the top journals, including Nature Materials, Joule, Chem. Soc. Rev., Energy & Environ. Sci., Nature Commun., Adv. Mater., JACS, Angew Chem, etc, and been taking associate and guest editor and editorial board member in the SCI(E) journals of Adv. Energy Mater., InfoMat, InfoScience, Adv. Funct. Mater., NEXT Energy, Energy Materials, Batteries & Supercaps, J. Phys. Energy, Materials Today Energy, and so on. He has been recognized by several awards including the Korean Academy of Science and Technology (KAST) Member, Commendation from Ministry of Science and ICT Minister, EnSM Young Scientist Award, S-OIL Young Scientist Award, National R&D Excellence 100 in 2019, the Scientist of the Month, the LG Yeonam Fellowship, and so on.
Research Area	Lithium ion battery, Sodium ion battery, Li-S battery, Aqueous battery 1. 2D energy storage materials. Nature Materials, 2019, 18, 156; Joule, 2019, 3, 1; Energy Environ. Sci., 2020, 13, 10491. 2. Bioinspired electrolytes and functional additives for aqueous batteries. Nat. Commun., 2025, 16, 6117; Energy Environ. Sci., 2024, 17, 7870; Adv. Mater., 2024, 2411686; Energy Environ. Sci., 2022, 15, 4572. 3. High entropy P-based alloys for LIB anodes. Energy Environ. Sci., 2024, 17, 5387; J. Am. Chem. Soc., 2024, 146, 21320. 4. Carbon architecturing for Li and Na metal batteries. Angew. Chem. Int. Ed., 2024, e202417930; Adv. Energy Mater., 2023, 2204353; Adv. Mater., 2019, 31, 1803444.
Personal link	https://www.esem.skku.edu/ https://scholar.google.com/citations?user=LcUF72MAAAAJ&hl=en
Call topic	• HORIZON-CL5-2026-03-D2-01 • HORIZON-CL5-2026-05-D2-03 • HORIZON-CL5-2027-03-D2-06 • HORIZON-CL5-2027-06-Two-Stage-D2-07 • HORIZON-CL5-2027-07-D2-08

5. Jaebeom Lee

Name	Jaebeom Lee
Position	Professor
Organization	Chungnam National University
Biography	Education PhD, The Robert Gordon University, Aberdeen, United Kingdom (1999-2003) Thesis topic at "Laser induced TiO₂-SiO₂ coating" (Adviser: Professor P. Robertson) BS, Department of Chemistry, Chungnam National University, Daejeon, South Korea (1991-1998) Affiliation 09/2018 - Present Professor, Department of Chemistry, Chungnam National Univ. 03/2007 – 08/2018 Professor, Department of Opto-Mechatronics Engineering, Pusan National University 09/2003 – 02/2007 Post-Doc, Department of Chemical Engineering, University of Michigan, Ann Arbor, MI. USA (Adviser: Prof. N.A. Kotov) Awards • Top 1% Research Faculty Award, CNU, 2023 • KCS Yongin Science Inc. Analytical Chemistry Research Award, 2023 • Research Excellence Award, NRF, Ministry of Science, ICT and Planning, South Korea, 2017 • 40 Inventions of the Year, Nano Korea, 2014 • Premier Research Faculty Award, PNU, 2011 • Best Research Faculty Award, College of Nanosci. and Nanoeng., PNU, 2009, 2011 Editorial Board Member • Surface Science and Technology Research Publication list : https://scholar.google.com/citations?user=vTHzFWAAAAAJ International research projects with Austria, Belarus, England, Poland and recently Germany have been done and doing in the field of development of energy catalysts
Research Area	Main research field (energy catalyst and harvesting, CO₂ transition, solid state battery and supercap, single domain catalyst, quantum mechanical mechanism study) Technical uniqueness (magnetic field/chirality-induced catalyst, nanoparticle mass production/commercialization)(8 tech transfer and commercialization) (over 280 papers related with nanoparticle catalyst for energy) A review paper in Nano-Micro Letters for All Solid State Batteries is selected to be a prominent paper.
Personal link	https://www.facebook.com/groups/nanoleelab https://www.researchgate.net/profile/Jaebeom-Lee-3 https://scholar.google.com/citations?hl=ko&user=vTHzFWAAAAAJ&view_op=list_works&sortby=pubdate
Call topic	

6. June-Seok Choi

Name	June-Seok Choi
Position	Research Fellow/Representative Professor
Organization	Korea Institute of Civil Engineering & Building Technology (KICT)
Biography	June-Seok Choi obtained his Bachelor of Engineering in 1993, Master of Engineering in 1996, and Doctor of Engineering in 2015, all from Korea University. He joined the Korea Institute of Civil Engineering and Building Technology (KICT) in 1996, where he serves as a Research Fellow in the Environmental Research Division and as a representative professor at KICT School, overseeing student education. Dr. Choi has participated in numerous international collaborative projects with Spain, Australia, and Middle Eastern countries, and is currently engaged in large-scale national R&D programs in Korea. From 2021 to 2023, he conducted research at EURECAT in Spain under the Tecniospring Industry program, supported by the EU HORIZON 2020 and the Marie Skłodowska-Curie Fellowship(MSCA). During this period, he collaborated with various European institutions on advanced water treatment and resource recovery technologies. He is also actively preparing a proposal for the upcoming Horizon Europe 2025 call, aiming to strengthen international research cooperation. Dr. Choi's expertise spans advanced treatment processes, membrane-based technologies, and seawater desalination, where he has made notable contributions to both academia and industry. He currently serves on the Editorial Board of the international journal Desalination and holds leadership positions in several professional societies in Korea, including Vice President of the Korean Society on Water Environment, Vice President and Editor-in-Chief of the Korea Appropriate Technology Society, and Director of both the Korean Society of Environmental Engineers and the Korean Society of Water and Wastewater.
Research Area	Research Areas: Seawater desalination, resource recovery, membrane-based water treatment technology development, renewable energy and waste heat recycling technology, water–energy nexus technology development Publications: Over 50 SCI(E) papers Patents: More than 25 patents
Personal link	https://www.linkedin.com/in/june-seok-choi-04523614/
Call topic	• HORIZON-CL5-2027-07-D3-29: Community of practice - Data-Driven Decision-Making in Energy, Carbon Capture, Utilisation and Storage (CCUS) • HORIZON-CL5-2027-07-D3-33: Delivery of industrial CCUS clusters – Societal Readiness pilot

7. Moon Son

Name	Moon Son
Position	Senior Researcher / Associate Professor
Organization	Korea Institute of Science and Technology
Biography	As an environmental engineer, I conduct research on electrochemical water-energy-resource recovery and process optimization using artificial intelligence. I received my Ph.D. from the Gwangju Institute of Science and Technology (GIST) in 2017 and subsequently completed ~three years of postdoc experience at Penn State (Supervisor: Prof. Bruce E. Logan). I currently work as a Senior Researcher at Korea Institute of Science and Technology (KIST) and an Associate Professor at University of Science and Technology, Korea (UST). Published ~80 papers in environmental engineering journals (including Energy & Environ. Sci.; Environ. Sci. Technol.; Water Res.; etc.) and holds >10 patents. Recently, I have also served as the principal investigator for an international collaboration project that facilitates research collaboration between Korea (KIST) and the U.S. (Johns Hopkins and SUNY Albany). The consortium I'm part of was recently selected for the Horizon Europe program (serving as the Korean principal investigator; partner role), which is currently in the funding process. In this project, I'm working on utilizing artificial intelligence to optimize systems and track the behavior of specific materials.
Research Area	Battery recycling, Artificial intelligence for energy and environmental engineering, Water-Energy-Resource nexus, Electrochemical cells
Personal link	https://sites.google.com/view/moonson
Call topic	HORIZON-CL5-2026-03-D2-02: Development of direct recycling processes (BATT4EU Partnership)

8. Soo Young Kim

Name	Soo Young Kim
Position	Professor
Organization	Korea University
Biography	Summary of academic background and professional experience Soo Young Kim is a professor in the department of Materials Science and Engineering in Korea University. He received the B.S., M.S., and Ph. D. degrees in materials science and engineering from Pohang University of Science and Technology (POSTECH), Pohang, South Korea, in 2001, 2003, and 2007, respectively. During his post-doctoral period in Georgia Institute of Technology, USA, he focused on converting graphene oxide to graphene using thermo-chemical nanolithography technique. After starting assistant professor in 2009, he has been interested in the modulation of the properties of two-dimensional materials such as graphene, graphene oxide, transition metal dichalcogenides, and their applications. He combined his experience about optoelectronic devices with two-dimensional materials so that his research is focused on the optimization of two-dimensional materials' properties and their application to energy devices. During the sabbatical year as a visiting professor at University of Chicago in 2015, he learned the synthesis of nano particles based on metal sulfides, organic perovskite materials, and inorganic perovskite materials. Nowadays, his laboratory is composed of two groups. One group is focusing on organic based semiconductors such as organic light emitting diodes, perovskite light emitting diodes, perovskite solar cells, and perovskite memories. The other group is focusing on the synthesis of two-dimensional materials and its application to hydrogen evolution reaction and CO₂ reduction. He has produced more than 400 publications and H-index is 81 (google scholar). Core research expertise and representation achievements [1] Recent advances in electrochemical, photochemical, and photoelectrochemical reduction of CO₂ to C₂+ products, Small, 19(16), 2205765 (2023). [2] Transition metal ions doping on ZIF-8 for enhancing the electrochemical CO₂ reduction reaction, Advanced Materials, 2208224 (2022). [3] Multifunctional nano-heterogeneous Ni(OH)₂/NiFe catalysts on silicon photoanode toward efficient water and urea oxidation, Applied Catalysis B: Environmental, 317, 121765 (2022). [4] Low-crystalline AuCuIn catalyst for gaseous CO₂ electrolyzer, Advanced Science, 9, 2104908 (2022). [5] 2-Dimensional metal organic frameworks and covalent organic frameworks for electrocatalysis: Distinct merits by the reduced dimension, Advanced Energy Materials, 12, 2003990 (2022). Participation experience in EU collaborative research projects: Euro star project
Research Area	Main research fields: Synthesis of new kinds of catalysts for CO₂ reduction Technological uniqueness: Single atom catalysts. I am also working on next-generation light-emitting devices, solar cells, hydrogen production,

	CO₂ reduction, and electrochromic cells using organic semiconductors, perovskites, and two-dimensional materials Any patents, publication, or products that reflect research excellence [1] “Leveraging the inter-metal distance in dual-atom catalysts: Revealing optimized synergistic interactions for CO₂ electroreduction”, ACS Nano, vol. 19, p.18698-18707 (2025) [2] “Elucidating the role of alkali metal carbonates in impact on oxygen vacancies for efficient and stable perovskite solar cells”, Advanced Science, vol. 11, p.2406657 (2024) [3] “Transition metal ions doping on ZIF-8 for enhancing the electrochemical CO₂ reduction reaction”, Advanced Materials, vol. 35, p.2208224 (1-9) (2023) [4] Multifunctional nano-heterogeneous Ni(OH)₂/NiFe catalysts on silicon photoanode toward efficient water and urea oxidation, Applied Catalysis B: Environmental, 317, 121765 (2022). [5] Low-crystalline AuCuIn catalyst for gaseous CO₂ electrolyzer, Advanced Science, 9, 2104908 (2022). [6] 2-Dimensional metal organic frameworks and covalent organic frameworks for electrocatalysis: Distinct merits by the reduced dimension, Advanced Energy Materials, 12, 2003990 (2022).s
Personal link	https://sites.google.com/view/ospl https://scholar.google.com/citations?user=7kWEjDAAAAAJ&hl=ko&oi=ao
Call topic	HORIZON-CL5-2026-04-Two-Stage-D3-02

9. Tae Jin Kang

Name	Tae Jin Kang
Position	Principal Researcher
Organization	Institute for Advanced Engineering
Biography	Dr. Tae-Jin Kang is an expert with over 15 years of research experience in the field of energy and environment. He earned his Master's and Ph.D. degrees in Energy Engineering from Ajou University. Dr. Kang has conducted research and project planning in energy and environmental fields at institutions and companies such as Ajou University, Korea Research Institute of Chemical Technology, Wonik Materials, and Korea Nexlen. Currently, he serves as a Principal Researcher at the Clean Energy Transition Center of the Korea Institute of Advanced Technology. His primary focus is on developing energy transition and resource recovery technologies, including low-carbon fuels, biomass, CCUS, and waste plastic pyrolysis. He has achieved outstanding results in reactor and adsorbent development through industry-academia projects. Over the past 15 years, Dr. Kang has contributed to more than 30 projects in energy and environmental research at institutions such as Ajou University and the Korea Research Institute of Chemical Technology, focusing on low-carbon fuels, CCUS, and waste plastic pyrolysis. He has published over 30 research papers and holds more than 10 patents. As a Principal Researcher at the Institute for Advanced Engineering (IAE), he currently leads demonstration and commercialization research initiatives.
Research Area	Dr. Tae-Jin Kang primary research areas to date include upgrading of low-grade fuels and thermochemical conversion, CCUS (Carbon Capture, Utilization, and Storage), pyrolysis and gasification using fluidized beds, reactor design and catalytic gasification, and waste plastics to energy. Currently, His current research interests focus on Life Cycle Assessment (LCA) and Techno-Economic Analysis (TEA). Dr. Kang, along with his team, possesses exceptional expertise in process design and reactor optimization. He holds over 20 domestic and international patents related to catalyst manufacturing, system configuration, and reaction optimization, and has published more than 30 papers in the energy and environment field. With extensive experience in industry-academia-research collaborations, Dr. Kang has a strong understanding of demonstration and commercialization processes. He actively contributes to the academic community, currently serving as the Strategic Planning Director of the Korea Energy and Climate Change Society and as a committee member of the Fluidized Bed Division of the The Korean Institute of Chemical Engineers.
Personal link	https://www.researchgate.net/profile/Tae-Jin-Kang-2?ev=hdr_xprf
Call topic	• HORIZON-CL5-2026-09-D3-05 • HORIZON-CL5-2027-03-D3-31

10. Taehyo Kim

Name	Taehyo Kim
Position	Principal Researcher
Organization	Korea Institute of Industrial Technology
Biography	Taehyo Kim is a principal researcher of the Low Carbon Energy Group at the Korea Institute of Industrial Technology (KITECH). He joined the Commonwealth Scientific and Industrial Research Organization (CSIRO) in August 2019, where he worked as a postdoctoral researcher in Flexible Electronics Laboratory (FEL). He obtained his PhD from University of National Institute of Science and Technology (UNIST) in the Department of Energy and Chemical Engineering. His research interests are in the area of nano materials and devices for renewable energy source. I currently focus on developing large-area coating using slot-die for photovoltaics and ultrasonic spray systems, electrochemical materials for energy storage or production such as fuel cells and secondary batteries. Especially, I'm interested in eco-friendly solid electrolyte materials for all solid state batteries. I have not participated in EU collaborative research project. but I have various experience about collaborative project many country during Ph. D research.
Research Area	Main research field is eco-friendly solid electrolyte materials for all solid state batteries. Normally, sulfide based solid electrolyte is toxic due to H₂S generation under ambient air. I focus on eco-friendly solid electrolyte materials for all solid state batteries. I have 3 SCI papers with 3 patents.
Personal link	https://scholar.google.com/citations?user=F3QkW5cAAAAJ&hl=en
Call topic	HORIZON-CL5-2027-06-Two-Stage-D2-07