

[MCARE 2024] Final Program (Poster)

ver.24.08.07

Symposium 1. Materials for Hydrogen Fuel Production and CO₂ Conversion in Carbon Neutrality

August 20 (TUE) 13:30-15:30

SP1-1	Boosting the catalytic degradation efficiency of ofloxacin via C ₃ N ₄ /Bi ₂ S ₃ composite photocatalyst	Manasi Murmu	Chonnam National University
SP1-2	Local operando analysis of CO ₂ reduction reaction on polycrystalline gold surface	Yunwoo Nam	Yonsei University
SP1-3	Harnessing Photosynthetic Currents from Marine Phytoplankton for Hydrogen Mass Production	Geonwoo Park	Yonsei University
SP1-4	Effects of electrolyte modification with Nitrogen-included additives on CO ₂ reduction reaction	Sung-Eun Cho	Yonsei University
SP1-5	Solar Light-Driven Photocatalytic Generation of H ₂ O ₂ Using Anthraquinone-TiO ₂ Complex via Ligand-to-Metal Charge Transfer Process	Bada Lee	Sungshin Women's University
SP1-6	Unassisted photoelectrochemical H ₂ O ₂ production with in situ glycerol valorization using α -Fe ₂ O ₃	Sarang Kim	Ulsan National Institute of Science and Technology (UNIST)
SP1-7	Advantage of N Doping ZnO Electrocatalyst Towards Electrochemical CO ₂ Reduction	Rohini Kanase	Chonnam National University
SP1-8	Highly Selective Electrochemical Conversion of CO ₂ to CO (> 88%) by Adjustable Electrodeposition: Ex-situ vs. In-situ Mode in Zn/ZnO Electrocatalyst	Rohini Subhash Kanase	Chonnam National University
SP1-9	Integrating a catalyst effectively increases photoanode efficiency and stability	Maheswari Arunachalam	Chonnam National University
SP1-10	Boosting Electrochemical CO ₂ Conversion and Local CO Concentration by Au-Cu ₂ O Tandem Catalyst with Precise Control of Au Nanoparticles	Suneon Wang	Korea Advanced Institute of Science and Technology (KAIST)
SP1-11	Impact of Nitrogen/Carbon Ratio in Ligands on Nickel Single-Atom Catalysts for CO ₂ Electroreduction	Hyeonuk Choi	Korea Advanced Institute of Science and Technology (KAIST)
SP1-12	Preparation of N-doping controlled carbon derived from crab shell for CO ₂ adsorption.	Jiyull Kim	Konkuk University
SP1-13	Enhanced hydrogen evolution performance through atomically dispersed rhodium within layered double hydroxides under acidic conditions	Youngeun Kim	Sungkyunkwan University
SP1-14	Cadmium Sulfide/Selenide (CdS/CdSe) Quantum Dots Prepared by Successive Ionic Layer Adsorption and Reaction (SILAR) for Efficient CdS/CdSe-Sensitized Photoelectrochemical Cells	Jinsu Kim	Jeonbuk National University
SP1-15	Highly efficient Ni-N-C catalyst derived from MOF@MOF structure for CO ₂ electroreduction	Chul Hyun Jun	Sungkyunkwan University
SP1-16	Design of Potassium-Doped Upconversion Microrod/P-doped g-C ₃ N ₄ Photoelectrodes for Enhanced Photoelectrochemical Water Splitting Across the Extended Solar Spectrum from UV to Near-Infrared	Hyeon Jung Yu	Chonnam National university
SP1-17	Electrochemically Intercalated MoS ₂ Electrocatalyst for Improved Hydrogen Evolution Reaction.	Jyoti Badiger	Chonnam National University
SP1-18	Titanium Nitride-Supported Iridium-Nickel Alloys as Highly Active Electrocatalysts for Hydrogen Evolution Reaction	Toan Minh Pham	Kyung Hee University
SP1-19	Hydrogen Production from Co-gasification of Biomass Palm Oil By-products and Coal	Ha-Na Jang	Yonsei University
SP1-20	The Development of a p-type Photocathode for Solar Fuel Conversion	Suzan Abdelfattah Sayed	Chonnam National University
SP1-21	Influence of micro-structural and operational parameters on the long-term durability of La _{0.6} Sr _{0.4} CoO _{3-δ} cathode	Amjad Hussain	Korea Institute of Energy Research (KIER)
SP1-22	10% Solar-to-Hydrogen Conversion via Organic Light Absorbers with Ni-Heazlewoodite Electrocatalysts	Jaemin Park	Sungkyunkwan University

SP1-23	Investigation of Surface Engineering for Nickel-based Catalysts in Alkaline Hydrogen Evolution Reaction	Dahee Park	Korea Institute of Materials Science (KIMS)
SP1-24	Enhanced local CO ₂ concentration boosts highly selective photocatalytic CO ₂ conversion	Woo Jin Byun	Ulsan National Institute of Science and Technology (UNIST)
SP1-25	Enhanced Stability and Performance in Hydrogen Production via Water Electrolysis Using Hydrogel-Coated Electrodes	MinJae Kim	Sungkyunkwan University
SP1-26	Developing a bipolar membrane-embedded carbon-gradient reverse electrodialysis (CG-RED)	Donghyeon Lee	Kangwon National University
SP1-27	Electrochemical compressor for hydrogen separation and compression from exhausted gas mixture	Hyemin Jung	Kangwon National University
SP1-28	CoxRe _{1-x} S ₂ nanosheets grown on MXene as an efficient bifunctional electrocatalysts for overall water splitting	Dong Jin Lee	Dongguk University
SP1-29	Designing Quinone Molecules for Oxygen-Stable Electrochemical Atmospheric CO ₂ Capture	Haein Cho	Sungkyunkwan University
SP1-30	Sustainable Hydrogen Production from Lignin without CO ₂ Emission	Jieun Park	Ewha Womans University
SP1-31	Ni-Co LDH@ BiPO ₄ foam as a superior photocatalyst for hydrogen evolution	Mahboobeh Zargazi	University of Ulsan
SP1-32	Enhancing the catalytic activity of a perovskite-based electrode via Metal catalytic additives for high-temperature CO ₂ electrolysis	Sang Won Lee	Korea Institute of Ceramic Engineering and Technology (KICET)
SP1-33	High-performance photoelectrochemical cells with MoS ₂ nanoflakes photoanode on 3D porous carbon spun fabric	Dong Ick Son	Korea Institute of Science and Technology (KIST)
SP1-34	Synthesis of single atom and atomic cluster catalysts by chemical vapor deposition technique	Heeyeon Kim	Korea Institute of Energy Research (KIER)
SP1-35	Graphitic Carbon Nitride-Anchored MoS ₂ Nanosheets for Enhanced Bifunctional Water Splitting	Sankar Sekar	Dongguk University
SP1-36	Enhanced Bifunctional Water Electrolysis Activities of Activated Carbon-Decorated Trimetallic Alloys	Anshika Gupta	Dongguk University
SP1-37	Enhanced Bifunctional Water Splitting Performance of NiFe LDH Microspheres	Atsaya Shanmugam	Dongguk University
SP1-38	The effect of organic additive on electrochemical fabrication of micro-structured electrode for reverse electrodialysis	Eunji Kwon	Kangwon National University

Symposium 2. Advanced Materials for Energy Storage

August 22 (THU) 13:30-15:30

SP2-1	Nanoengineering of RGO/Bi ₂ S ₃ negatrodde through atomic layer deposition of TiO ₂ for high performance supercapattery applications	Amarnath Thangavel Sivagurunathan	Chonnam National University
SP2-2	Trilayer polybenzimidazole membrane assembly for highly efficient vanadium redox flow batteries	Trung Tuyen Bui	Korea Institute of Science and Technology (KIST)
SP2-3	Redox-active polycaprolactone for an electrode in an aqueous organic battery	Sangho Cho	Korea Institute of Science and Technology (KIST)
SP2-4	Layered crystal structure Li _{1-x} Ni _{1-x} Mn _x Co _y O ₂ (0.1 ≤ x+y ≤ 0.5) manufactured from various disused lithium secondary batteries using an automated and integrated recycling system as well as its battery performances	YoungWoon KIM	Chungnam National University
SP2-5	Exploration of New Ir-Ni based Catalysts for Promoting Reactivity of Oxygen Evolution Reaction in PEM Water Electrolysis	Seongjun Kim	Seoul National University of Science and Technology
SP2-6	Electrochemical and electrochromic properties of all-solid-state thin film battery	Kwanyoung Oh	Korea Institute of Science and Technology (KIST)
SP2-7	Enhancement of Lithium-Air Battery Performance through LiOH Formation and SECM Analysis.	Haesung OH	Yonsei University
SP2-8	Electrochemical performance evaluation according to changes in activation conditions of carboxyl-doped graphene nanoplatelets	Ji-Yeoung Choi	Wonkwang University
SP2-9	Ultra-thin Sputtered RuO ₂ Recombination Layers for High-Efficiency All-Perovskite Tandem Solar Cells	Pil Ju Youn	Seoul National University of Science and Technology
SP2-10	Enhancing the Performance of Sodium-Ion Battery Anode Through the Integration of Graphene Oxide Quantum Dots	Shahd Boud	Jeonbuk National University
SP2-11	Electrochemical Properties of Core-shell Fe-Ni-Co-S Derived from Prussian Blue Analogue as Electrode for Supercapacitors	Meiying Cui	Pusan National University
SP2-12	Enhanced Electrochemical Characteristics of NiMn-Layered Double Hydroxide Modified NiCo Metal-Organic Frameworks Composite for Supercapacitor Electrodes	Meiying Pei	Pusan National University
SP2-13	Entrapment of biomolecules in MOF-based xerogel monoliths for electrochemical hydrogen evolution	Quoc Hao Nguyen	Kyung Hee University
SP2-14	Shape-controlled binary phase of manganese oxide for high-capacity with durable anode for lithium-ion batteries	Hyemin Kim	Korea Maritime and Ocean University
SP2-15	Investigating the Degradation Mechanism of Thick Graphite Electrodes via Electrochemical Impedance Spectroscopy	Jinsoo Yoon	Sungkyunkwan University
SP2-16	Sustainable Utilization of Cellulose-Rich Cornhusk for Activated Carbon for High-Performance Sodium-Ion Capacitor	Jeong Geun Kim	Chonnam National University
SP2-17	Microstructure and mechanical properties of the Al-B Alloy with Rare Earth and Fe Addition	HyoSang Yoo	Korea Institute of Industrial Technology (KITECH)
SP2-18	A Novel Separator Coated with Non-Conductive Polar Mesoporous Carbonaceous Materials for Extended Cycle Life and Superior Performance of Lithium-Sulfur Batteries	Je Yeon Kim	Korea University of Technology and Education (KOREATECH)
SP2-19	Shape and Property Effects of Si-Based Anode Materials on the Electrochemical Performance of Li-ion Batteries	Yeon-Jin Cha	Korea Electronics Technology Institute (KETI)
SP2-20	Clarifying the Correlation between Cu Surface Properties and Li Deposition	Hae-Ri Yang	Korea Electronics Technology Institute (KETI)
SP2-21	An Innovative Dual-Layer Sulfur Cathode with Sulfur-Infused Nonconductive Mesoporous Carbonaceous Material and Free-Standing Carbon Nanotube Layers for Advanced Li-S Batteries	Ji Yang Lim	Korea University of Technology and Education (KOREATECH)
SP2-22	Argyrodite Solid Electrolyte with Enhanced Air-stability for All-Solid-State Batteries	You-Jin Lee	Korea Electrotechnology Research Institute (KERI)
SP2-23	A Survey on Utilizing Second-Life EV Batteries: Economic Effects and Applications	Jeongeon Lee	Seoul National University of Science and Technology

SP2-24	Guiding Electrodeposition for Pre-passivation of Li-Metal Anodes: Enabling Extended Stability in Practical Li-Metal Batteries	Jiyeon Seo	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
SP2-25	Enhancing methane adsorption performance through carbonized AC-MOF core-shell structure	Yeonbhin Kim	Korea Institute of Materials Science (KIMS)
SP2-26	Innovative Bi-Layer Coatings for Zn Anodes: A Path to Dendrite Suppression and Anti-Corrosion	Jaewoong Han	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
SP2-27	Enhanced Ionic Transport in Colloidal Electrolytes via Nanospinbar for Dendrite-Free Electrodeposition	Minhong Lim	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
SP2-28	Fabrication of Highly Conductive Single-Walled Carbon Nanotube Materials for Electrode Application	Joowon Lee	Ewha Womans University
SP2-29	One-Pot Formation of Nanostructured MnO ₂ -Carbon Composite for High Capacity and Durable Aqueous Zn-ion Batteries	Jin-young Choi	Korea Institute of Industrial Technology (KITECH)
SP2-30	Formation of Ultra-thin Self-assembled Monolayer on the Zinc Metal Anode for Durable Aqueous Zinc-ion Batteries	Byung-chul Cha	Korea Institute of Industrial Technology (KITECH)
SP2-31	Enhancing Lithium-Sulfur Battery Performance through a Novel Microwave-Assisted Synthesis of Sulfur-MWCNT Composites	Haeyoung Choi	Korea Electrotechnology Research Institute (KERI)
SP2-32	High rate performance of Carbon Ion Implanted Surface Modification for High-voltage LiNi _{0.5} Mn _{1.5} O ₄ Cathodes	Yu-sung Kim	Korea Institute of Industrial Technology (KITECH)
SP2-33	Impact of Mixed-nitrogen Anions Arrangement on the Lithium Ions Transport in the High-voltage Spinel Cathodes	Dae-wook Kim	Korea Institute of Industrial Technology (KITECH)
SP2-34	Fabrication of MOF Decorated Fabric for Gas Adsorption	SeonYeong Kang	Korea Institute of Materials Science (KIMS)
SP2-35	Valorization of Waste Tire via Microwave Heating: Carbon Anodes Derived from Waste Tire for Sodium-Ion Battery	Yongjoon Yang	Myongji University
SP2-36	Facile Preparation of Sulfur-Doped Carbon Anodes from Rubber Scraps for Lithium-ion Batteries	Heewon Jin	Myongji University
SP2-37	Effects of Residual Solvent in Solid-Electrolyte Membrane on All-Solid-State Batteries	Hyeonjin Cho	University of Science and Technology (UST), Korea Electrotechnology Research Institute (KERI)
SP2-38	Ex-situ solid-state ⁷ Li NMR analysis of lithium metal electrodes in lithium metal batteries	Sunha Kim	Korea Basic Science Institute
SP2-39	Sulfur-Doped Carbon Anodes for Lithium Ion Batteries from Polyacrylonitrile via Sulfonation Induced Stabilization	Hyeonji Jang	Kyung Hee University
SP2-40	Removal of residual silica and generation of nanopores on industrial waste silicon using ammonium fluoride, and its application to lithium-ion battery anodes	Min Ji Kim	Korea Institute of Ceramic Engineering and Technology (KICET)
SP2-41	Facile microwave synthesis of P-doped carbon as catalyst electrodes for vanadium redox flow batteries	Sieun Jeon	Korea National University of Transportation
SP2-42	Utilizing urea and citric acid to functionalize the surface of carbon nanotubes with imide groups for vanadium redox flow battery application	Heeyeon An	Korea National University of Transportation
SP2-43	New Electrodeposited Thin Film of NiAl-LDH@ZIF-67(Co) Heterostructure with Significantly Enhanced OER Electrocatalysis	MOHAMMAD CHAHKANDI	University of Ulsan
SP2-44	Regulating the Uniform Deposition of Lithium-Ions on Lithium Metal Anode using MWCNT Fabrics	YoungWook Cho	Korea Electronics Technology Institute (KETI)
SP2-45	Revitalizing Lithium Metal Anodes via Mechanochemical-Milling: Stripping Native Passivation Layers	Sanghyeon Park	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
SP2-46	Modified interlayer as a polysulfide inhibitor for Li-S batteries	Doohun Kim	Korea Electrotechnology Research Institute (KERI)
SP2-47	Improving Cycling Performance of Si Microparticles anode with Metal Fluoride Coating	Woosuk Kang	Pohang University of Science and Technology (POSTECH)

SP2-48	Alternative chelating agent of co-precipitation for NCM precursor : A study on ammonia free co-precipitation.	SHIN PARK	Pohang University of Science and Technology (POSTECH)
SP2-49	Electrochemical Quantification of Li ₂ O in Li ₂ S Compound Utilizing Lithium-Sulfur Battery Operation Principle	Yun Ho Jeong	Pohang University of Science and Technology (POSTECH)
SP2-50	Synthesis of Nickel Nanotube Composites by Electrospinning and Electroless Deposition	Areum Kim	CALTECH
SP2-51	Improving the performance of 1-D Electrospinning nanofibers used in anodes, cathodes, and separators in lithium-ion batteries.	JinUk Yoo	Chung-Ang University
SP2-52	Optimized Performance in All-Solid-State Lithium-Sulfur Batteries Achieved via the Mechano-fusion Process	Jun young Heo	Korea Electrotechnology Research Institute (KERI)
SP2-53	A Study on Enhancing the Performance of Aqueous Zinc Ion Batteries Via Protective Layers on Separator	Shin jeong LEE	Korea Electrotechnology Research Institute (KERI)
SP2-54	Interface Enhancement for SiO _x Anodes in All-Solid-State Battery Using Mechano-fusion Process	Junghwan Sung	Korea Electrotechnology Research Institute (KERI)
SP2-55	Infiltration-driven performance enhancement of poly-crystalline cathodes in all-solid-state batteries	Jun-Woo Park	Korea Electrotechnology Research Institute (KERI)
SP2-56	Facile Synthesis of ZnS@CNT interconnected with carbon frameworks derived from ZIF-8 as high-performance anode for lithium-ion batteries	Hosung Hwang	Korea Institute of Science and Technology (KIST)
SP2-57	Studies on Redox Polymer as Cathode Active Material for Seawater Batteries	Hyebin Jeong	Pohang University of Science and Technology (POSTECH)
SP2-58	Enhanced N/P ratio and dendrite suppression of Zn powder-based anode for high-performance aqueous zinc-ion battery	Jinhyeong Yoon	Hanyang University
SP2-59	Mitigating side reaction of Zn anode by a coating of N-doped porous graphene layer for aqueous zinc-ion battery application	Kangmin Lee	Hanyang University
SP2-60	Enhancing performance All-Solid-State Batteries (ASSBs) Through Advanced Cathode Electrode Design	Dongjin SIM	Korea Electrotechnology Research Institute (KERI)
SP2-61	Activated Carbon-Decorated FeTiO ₃ Nanosheets as an Anodic Material for High-Performance Sodium-Ion Battery	Youngmin Lee	Dongguk University
SP2-62	Synthesis of soft carbon from non-graphitizable binder pitches by catalytic graphitization for an anode in lithium-ion battery	Sungho Lee	Korea Institute of Science and Technology (KIST)
SP2-63	Spherical superstructure of iron oxide/carbon nanorods as high-performance anode materials for lithium ion batteries	Jongyoon Park	Ajou University
SP2-64	Highly active-material-concentrated cathodes of nickel and cobalt-free cation-disordered rock-salts for Li-ion batteries	Dong-Hwa Seo	Korea Advanced Institute of Science and Technology (KAIST)
SP2-65	Physisorption-based MOF containing Tank with Enhanced Dormancy Compared to LH ₂ Tank	Hyunchul Oh	Ulsan National Institute of Science and Technology (UNIST)
SP2-66	Facile synthesis of 2D MXene and Ni-Co phosphide heterostructures toward high performance asymmetric supercapacitor applications	Erdenebayar Baasanjav	Chungbuk National University
SP2-67	Laser induced Nb ₂ C MXene/rGO hybrid for high performance all-solid-state microsupercapacitors	Shridhar Hegde	Chungbuk National University
SP2-68	High-performance lithium-ion battery anode material based on graphene nanosheet-titanium dioxide nanocomposite	Hiesang Sohn	Kwangwoon University

Symposium 3. Advanced Materials for Next Generation Photovoltaics

August 22 (THU) 13:30-15:30

SP3-1	Multi-Functional Passivation for High-Performance Hybrid phototransistor utilizing ZnON/Perovskite Heterostructure	Kwang-Ro Yun	Korea University
SP3-2	Energy yield comparison of commercialized TOPCON cells	Sungho Hwang	Korea University
SP3-3	Reliability study on no-gap module with encapsulation material research	Dongchul Suh	Hoseo University
SP3-4	Enhancing performance of two-step fabricated perovskite solar cells with sulfonium triflate-based additive	HyunJun Lee	Korea Advanced Institute of Science and Technology (KAIST)
SP3-5	Effects of primary and secondary mixed fluors on dye-sensitized solar cells	Hayun Jeong	Jeju National University
SP3-6	Study on the growth behavior of Sb ₂ Se ₃ thin films on Mo-foils by co-evaporation and their application to flexible solar cells	Shi-Joon Sung	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
SP3-7	Sb ₂ Se ₃ thin films prepared by vapor transport deposition process and their application to thin film solar cells	Jaebaek Lee	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
SP3-8	Tailoring Cation Disorder in Cu ₃ BiS ₃ Films: Insights from Dithiocarbamate Solution Processing	Jisu Jung	Sungkyunkwan University
SP3-9	Eco-friendly Perovskite Solar Cells with a Wide Processing Window through Vacuum-assisted Method	Seongjun Park	Korea Advanced Institute of Science and Technology (KAIST)
SP3-10	Development of Solution Process for Synthesizing BaZrS ₃ Thin Film at Moderate Temperature	Jaewook Lee	Sungkyunkwan University
SP3-11	Functionalized Polymer-Capped SnO ₂ Nanoparticle Electron Transport Layer for Efficient Perovskite Solar Cells	Nayoon Kwon	Korea Advanced Institute of Science and Technology (KAIST)
SP3-12	Chemically Driven Cation Disorder in AgBiS ₂ Thin Film with Improving of Light Absorption Properties	Neul Ha	Sungkyunkwan University
SP3-13	Optimization of Optical Performance in AgBiS ₂ Thin Films via Cation Disorder and Morphology Control using DMSO-Based Solution Process	Dayeon Yi	Sungkyunkwan University
SP3-14	Enhancement of Solar Cell Performance through Introduction of Metal Oxides on the Electron Transport Layer	Taewoong Son	Korea Advanced Institute of Science and Technology (KAIST)
SP3-15	Understanding Charge Carrier Properties via Electric Method	Siwon YUN	Chungnam National University
SP3-16	Photo-stable Perovskite Solar Cells Enabled with Efficient Anti-Solvent Additive Method	Wonjong Lee	Chungnam National University
SP3-17	Effective Surface Passivation using Mixed Cation System for Stable Perovskite Solar Cells	Jaehee Lee	Korea Advanced Institute of Science and Technology (KAIST)
SP3-18	Robot-arm based automated system for developing wide bandgap perovskite solar cells	Sooah Kim	Korea Research Institute of Chemical Technology (KRICT)
SP3-19	Optimizing semi-transparent perovskite solar cell performance through additive control	Suji Moon	Korea Research Institute of Chemical Technology (KRICT)
SP3-20	High-quality α -phase FAPbI ₃ perovskite via eco-friendly solvent purification	Soo bin Yoo	Korea Research Institute of Chemical Technology (KRICT)
SP3-21	A holistic approach for highly efficient n-i-p perovskite solar cells	Kyungmin Lee	Korea Research Institute of Chemical Technology (KRICT)
SP3-22	Understanding the Lead Halide Perovskite Single Crystal via Photoluminescence Quantum Efficiency	HYEJI HAN	Chungnam National University

Symposium 4. Advanced Materials for Fuel Cells and Electrolysis

August 21 (WED) 15:00-17:00

SP4-1	Highly active hexagonal perovskite air-electrode materials for proton ceramic electrolysis cells	Jun-Young Park	Sejong University
SP4-2	Stability-Preserving Ir Oxide on Sb-doped Tin Oxide Support for Comparable Proton-Exchange Membrane Water Electrolysis	Hye Young Jung	Korea University
SP4-3	In situ Mechanistic Study of Acidic Oxygen Evolution Reaction on Iridium Oxides via Surface Interrogation Scanning Electrochemical Microscopy	Yeonsu Kim	Yonsei University
SP4-4	Highly Conductive Quaternary Ammonium-Free Membranes Showing Stable Performance for Water Electrolysis in 1 M KOH	Asridin Dayan	Korea Institute of Science and Technology (KIST)
SP4-5	Alloy Electrocatalysts for Alkaline Hydrogen Evolution with Enlarged Surface Area Using Nanowire Template	Kyeong-Rim Yeo	Chung-Ang University
SP4-6	Enhancing the durability of catalyst support for oxygen reduction reaction by surface modification of highly crystalline carbon	Gyumi Kang	Seoul National University of Science and Technology
SP4-7	Synergetic Interaction of Crystalline Carbon and Metal Oxide for High Durability ORR Catalyst	Seung Min Woo	Seoul National University of Science and Technology
SP4-8	Improved Alkaline and Saline Water Oxidation by "Doping–interfacing" of NiFe-Layered Double Hydroxide	Lawrence Yoon Suk Lee	The Hong Kong Polytechnic University
SP4-9	Electrochemical Synthesis of Single Crystal Transition Metal Phosphides via Electrode Surface Heating	Hyokyum Ahn	Yonsei University
SP4-10	CeO ₂ Atomic layer deposition of surface engineering of LSCF reversible solid oxide cell air electrode	Sung Eun Jo	Pohang University of Science and Technology (POSTECH)
SP4-11	Effects of Chloride Ions and PEG in the Electrodeposition of electrolytic copper foil	Jun-Seo Yoon	Jeonbuk National University
SP4-12	Study on the applicability of molten carbonate reversible cells for carbon capture	Emilio Audasso	Korea Institute of Science and Technology (KIST)
SP4-13	Au-incorporated CoFe colloidal nanoparticles for highly efficient OER catalyst.	Gyuhyeon Kim	Chung-Ang University
SP4-14	Composition-Dependent Electrocatalytic Activities of Colloidal Nickel Phosphide Nanoparticles: From Ni ₁₂ P ₅ to NiP ₂ .	Yeongbin Lee	Chung-Ang University
SP4-15	Electrodeposition of Ruthenium Cobalt as Bifunctional Electrocatalysts for Water Splitting in Acidic Media	Boeun An	Chung-Ang University
SP4-16	Synthesis and Performance Evaluation of Electrocatalysts Based on Recycled Lithium-ion Battery Powder for Water Electrolysis	Hui il Nam	Korea Institute of Industrial Technology (KITECH)
SP4-17	Development of Ruthenium-Platinum Single Crystalline Alloy Nanoparticle Catalysts via Selective Working Electrode Surface Temperature Control for Energy Conversion	Taeyeon Kang	Yonsei University
SP4-18	Coating effects of Sm _{0.2} Ce _{0.78} M _{0.02} O _{2-δ} (M=Ni, Co, Pd) layer on Ni/YSZ anode for Internal Dry Reforming in Solid Oxide Fuel Cells	Jun Ho Kim	Chonnam National University
SP4-19	Explosive Reconstruction of Active Species based on CoxN@NC for boosting Oxygen Evolution Reaction	Hyung Wook Choi	Sungkyunkwan University
SP4-20	Enhanced catalytic activity and durability for overall water splitting of Ni ₃ Fe alloy by designing N-doped carbon encapsulation	Uiyoung Lee	Sungkyunkwan University
SP4-21	Boosting water dissociation and hydrogen production via pyrrolic-N-modified Ni metal on N-doped carbon nanoplate	Jiwon Kim	Sungkyunkwan University
SP4-22	Synthesis of lignin derived porous carbon sphere and noble metal hybrid material via spray drying method as oxygen reduction reaction electrocatalysts	Hyuck Gu Choi	Sungkyunkwan University
SP4-23	A study on NiFe Nanosheets on Iron Substrates for Enhanced Oxygen Evolution Reaction	Byeongchan Choi	Korea Institute of Industrial Technology (KITECH)

SP4-24	Efficient Fabrication of Cermet Electrodes and Functional Layer for Reversible Solid Oxide Cells via Co-Sputtering	Sanghoon Lee	University of California San Diego
SP4-25	Shape-Controlled Solvothermal Reflux Synthesis of ZnCo ₂ O ₄ nanostructures for Oxygen Evolution Reaction	Deukhyeon Nam	Korea Institute of Industrial Technology (KITECH), Korea University
SP4-26	Epitaxial Growth of Oriented CoO Films by Sputtering Depositions	Joon-Ho Kang	Jeonbuk National University
SP4-27	Electrical, Optical, and Structural Phase Transitions of Ion-implanted VO ₂	Young-Woo Park	Jeonbuk National University
SP4-28	Porous Film-type Electrode Applying Polyaniline as Conductive Binder for Reducing Internal Resistance in an Alkaline Water Electrolysis Stack	Suhyun Kim	Korea Institute of Industrial Technology (KITECH)
SP4-29	Design and unveiling the role of metal imidazolium ionic liquids in MOF derived Co-NC catalysts: Boosting ORR efficiency for hydrogen fuel cell application.	Muthukumar Perumalsamy	Jeju National University
SP4-30	Interpenetrating network of sulfonated polyvinylidene fluoride and 3-amino benzene sulfonic acid as proton exchange membrane for water electrolyzer	Bee Lyong Yang	Kumoh National Institute of Technology
SP4-31	Upgraded recycling of waste heat pack towards electrocatalyst for oxygen reduction reaction	Keyru Serbara Bejigo	Jeju National University
SP4-32	Electrochemical Evaluation of Cathode Functional Layer Fabricated by Thin Film Process	Jiwoong Jeon	Dankook University
SP4-33	Fabrication and characterization of nano-porous perovskite electrodes by wet-etching and sputter technique	Hojun Yoo	Dankook University
SP4-34	Effects of deposition conditions of GDC functional layer on electrochemical characteristics of LT-RSOCs	Geon hyeop Kim	Dankook University
SP4-35	Stable SWCNT-TiO ₂ hybrid catalyst with high-density SWCNT networks for hydrogen evolution reaction	Minji Park	Korea Institute of Science and Technology (KIST)
SP4-36	Urea-Persulfate Fuel Cell Combined with Forward Osmosis for a Continuous Power and Water Production from Urine	Jiseon Kim	Pohang University of Science and Technology (POSTECH)
SP4-37	Atomic-Level Insights into Biomimetic Fe/Ni Bimetallic Catalysts on Carbon Nitrides for O ₂ Electrocatalysis	Yunseok Shin	Inha University
SP4-38	Porous Bimetallic Mesocrystals within Carbon Framework as high-performance bifunctional catalyst	Hiesang Sohn	Kwangwoon University

Symposium 5. Frontiers of Functional Nanomaterials for Eco-friendly Devices Applications

August 21 (WED) 15:00-17:00

SP5-1	An Experimental and Computational Study on the CO ₂ Sorption in a 3-D Microporous Ca-based MOF	Yong Sun Won	Pukyong National University
SP5-2	Low-consumption of charges with high-efficiency room-temperature dried Prussian blue by salicylate additives	Jisu Han	Electronic and Telecommunication Research Institute
SP5-3	Oxytetracycline decomposition characteristics of terbium and copper co-doped TiO ₂ prepared by liquid phase plasma method	Chan-Seo You	Sunchon National University
SP5-4	High-performance interfacial water evaporation of black TiO ₂ -x with high-concentration bulk oxygen vacancies	Myeongjun Ji	Seoul National University of Science and Technology
SP5-5	Pore distribution and carrier dynamics in nano-porous GaN	Kwangwook Park	Jeonbuk National University
SP5-6	Van der Waals Epitaxial Grown III-N Nanorods/ZnSnN ₂ Heterojunction-Based Photodiodes	JeongHyeon Kim	Jeonbuk National University
SP5-7	Nanoporous Pt films formed by oblique angle deposition: in-plane structural and electronic anisotropy	Daeju Kim	Jeonbuk National University
SP5-8	Fluorescent Silica Nanoparticles Prepared with Copolymer Templates and Organic Chromophores	Eun-Bum Cho	Seoul National University of Science and Technology
SP5-9	Enhancing Thermoelectric Standardization: Exploring Durable and Reproducible Materials	EunA Koo	Korea Institute of Energy Research (KIER)
SP5-10	Selective removal of Bromide Ions present in a solution containing Chloride Ions using Zr-based Metal-Organic Frameworks	WooYeon Moon	Sookmyung Womens University
SP5-11	Polycaprolactone-based dielectric layers for transient electronics: Self-healing, degradable, and high performance in ZnO field-effect transistors	Sangho Cho	Korea Institute of Science and Technology (KIST)
SP5-12	Bi-Sb-Te/PEDOT:PSS hybrid thermoelectric fibers for thermoelectric textile devices	Seungwoo Han	Korea Institute of Machinery and Materials (KIMM)
SP5-13	Study on the formation of high conductivity electrodes for low-temperature sintering by spray pyrolysis process	Yuchan Kim	Korea Institute of Materials Science (KIMS)
SP5-14	Temperature dependent growth of GaN layer on α -phase retained Ga ₂ O ₃ template	Gyunseo Kim	Kumoh National Institute of Technology
SP5-15	AlGa _N nanowires on ITO-coated glass substrate as a electron transport layer	Dasom Jeong	Kumoh National Institute of Technology
SP5-16	GaN nanowires induced by thin AlN interlayer on Si (100)	Jongwoo Kim	Kumoh National Institute of Technology (KIT)
SP5-17	GaN nanowires on fused silica glass using graphene as an interlayer	Bumku LEE	Kumoh National Institute of Technology
SP5-18	Catalytic performance of a novel SCR catalyst based on MIL-125(Ti)-derived TiO ₂ @C support for low-temperature NH ₃ -SCR in ammonia-fueled ships	Hyejin Kim	Korea Institute of Industrial Technology (KITECH), Pusan National University
SP5-19	Development of cesium modified zeolite as highly regeneration adsorbent to separate unreacted ammonia in decomposition for hydrogen production	Hyeoksang Ryu	Korea Institute of Industrial Technology (KITECH)
SP5-20	Mo ₂ C-Capped Carbon Nanotube Membranes for EUV Lithography	Su Min Lee	Korea Electronics Technology Institute (KETI)
SP5-21	Selective Optical Detection of Ethylene Using Liquid Crystals	Seoyeon Park	Pohang University of Science and Technology (POSTECH)
SP5-22	The Development of Cool Paint for Increasing the Performance of Heat Insulation on Material Surfaces	Eunseok Woo	eabios
SP5-23	High aspect ratio etch profile simulation for next-generation semiconductor process	Jaehyeong Park	Jeonbuk National University

SP5-24	Study on surface functionalization for highly sensitive non-enzymatic diquat pesticide detection	Mehtab Muhammad	Jeonbuk National University
SP5-25	Synergistic Catalytic Effects of MoS ₂ and Carbon Nanomaterial Composite	Eunjin Choi	Korea Institute of Science and Technology (KIST)
SP5-26	Poly(Ethylene Glycol)/Nanocellulose Separator with High Porosity for High Performance Lithium-Ion Batteries	Han Young Jung	Kyung Hee University
SP5-27	Plasma Electron-Assisted Approach to Atomically Precise Layer-by-Layer Etching of Two-Dimensional Materials	Yunjo Jeong	Korea Institute of Science and Technology (KIST)
SP5-28	Interfacial characteristics of Cu/TiW/ITO electrode under damp heat	Jae-Seong Jeong	Korea Electronics Technology Institute (KETI)
SP5-29	Construction of mixed CuBi oxide from LDH precursor for photocatalytic degradation of TCH by activated persulfate under visible light irradiation	Alaa Magdy Saad	Yeungnam University
SP5-30	Ozone generator by water oxidation anode in a membrane electrode assembly for drinking water treatment	Jinseo Lee	Pohang University of Science and Technology (POSTECH)
SP5-31	Composite Electrocatalysts with Magnéli Ti ₄ O ₇ and Sb-doped SnO ₂ for Mineralization of Organic Pollutants in Wastewater	Doyeon Kim	Pohang University of Science and Technology (POSTECH)
SP5-32	Ag NW-graphene hybrid based flexible electrode: Enhanced mechano-electric property of the hybrid device	Hiesang Sohn	Kwangwoon University
SP5-33	MoS ₂ /PEDOT: PSS Composite-based 3D Porous Hydrogel Patches for Sweat Analysis	Suraj Balasaheb Shinde	Jeonbuk National University

Symposium 6. Electromechanical Coupling Materials for Nanogenerators and Self-powered Electronics

August 21 (WED) 15:00-17:00

SP6-1	Improved polarization of metal-ferroelectric-metal capacitors deposited by Rf sputtering of Al ₂ O ₃ -doped HfO ₂ on epitaxial ITO films on yttria-stabilized zirconia (100) substrate.	IN PYO HONG	Gachon University
SP6-2	Flexible PDMS/ZnS: Cu composite self-powered applications using mechanoluminescence and triboelectricity	Sugato Hajra	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
SP6-3	Enhanced Performance of Flexible Piezoelectric Composites for Energy Harvesting via Gamma-Ray Irradiation	Gyoung Ja Lee	Korea Atomic Energy Research Institute (KAERI)
SP6-4	Study on the Output Performance of an Energy Harvester Based on Lead-Free (Ba,Sr)TiO ₃ -BaTiO ₃ Piezoelectric Nanoparticles under Gamma-Ray Irradiation	Changyeon Baek	Korea Atomic Energy Research Institute (KAERI)
SP6-5	Temperature-Stable and High-Performance Lead-Free Piezoelectric Sensors Based on Hybrid Composite Structure with Opposite Temperature Dependence of Piezoelectric Properties	Kyuhyun Park	Korea Atomic Energy Research Institute (KAERI)
SP6-6	Impact of Phosphor-Coated Layers on Mechanoluminescence Generation in Zinc Sulfide Microparticle-Embedded Polydimethylsiloxane Films	Soon Moon Jeong	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
SP6-7	Optimizing Additive Strategies for Improved Breakdown Strength in Lead-Free Pyrochlore Ceramics	Seung Yong Lee	Korea Advanced Institute of Science and Technology (KAIST)
SP6-8	Enhanced Energy Conversion Performance of a Magneto-Mechano-Electric Generator using PVDF and CoFe ₂ O ₄ -BaTiO ₃ Core-Shell Composite	Bitna Bae	Kyungpook National University
SP6-9	Enhanced Piezoelectric Energy Harvesting based on CFRP-Integrated Screen Printing	Hyomin Jeon	Kyungpook National University
SP6-10	Mid-Temperature Thermoelectric Performance of half-Heusler TiNiSb-based Composite Film	Hyejeong Choi	Kyungpook National University
SP6-11	Low-cost and eco-friendly synthesis of tellurium nanowires and their thermoelectric properties	Ji Eun Lee	Chonnam National University
SP6-12	Bioresorbable, wireless, system for electrotherapy	Daniel Tiruneh	Chung-Ang University
SP6-13	Enhanced Hybrid Nanogenerator based on (PVDF, PANBTO) Coaxial structured Electrospun Nanofiber	Dong Hyun Kim	Chung-Ang University
SP6-14	Enhancing the performance of triboelectric nanogenerators using a KIT-6/PDMS friction layer with multi sized pores	Jianbin Mao	Gachon University
SP6-15	Enhanced Output Performance of Triboelectric Nanogenerators by Electromechanical Composition	Se Ryong Park	Kwangwoon University
SP6-16	Wireless Physio Health Monitoring System enabled Green Triboelectrification	Bincy Shaji Thanjan	Jeju National University
SP6-17	Advancements in Gas Sensing: Enhanced Response and Recovery of Nb-Doped MoS ₂ Synthesized via Physical Vapor Deposition	Jinyoung Choi	Yonsei University
SP6-18	Align-Structured with Ultrasound-Responsive Piezoelectric scaffold for Promoting Nerve Regeneration	Dabin Kim	Sungkyunkwan University
SP6-19	Force-induced conductive hydrogel Direct current generator	Hyeji Ryu	Yonsei University
SP6-20	Humidity-enhanced electromechanical Schottky-junction generating 1.4 mA cm ⁻² of direct current	Sera Jeon	Yonsei University
SP6-21	Communicator System derived using Self-Powered Hybrid Sensors	Monunith Anithkumar	Jeju National University
SP6-22	Phase engineering-induced piezoelectricity change of van der Waals heterostructure	Daejin Kim	Yonsei University

Symposium 7. Materials for Green Ammonia Cycling

August 20 (TUE) 13:30-15:30

SP7-1	Understanding the Role of Proton Transport Resistance for Electrochemical Systems	Hoang Thai Bao Ngo	Korea Institute of Energy Technology (KENTECH)
SP7-2	Metal-supported carbon hybrid composite electrocatalysts for ammonia oxidation in solid acid electrolysis systems to produce high purity carbon-free H ₂	Jungseub Ha	Pohang University of Science and Technology (POSTECH)
SP7-3	Plasma induced Oxygen Vacancies over CuOx catalysts supported by N,Se co-doped Porous Carbon for Enhanced Electrocatalytic Nitrate Reduction to Ammonia	Junbeom Maeng	Pohang University of Science and Technology (POSTECH)
SP7-4	Polymer type additive to Li-mediated nitrogen reduction reaction for green ammonia production	Chaeun Lim	Pohang University of Science and Technology (POSTECH)
SP7-5	Effect of solvent mixtures on Lithium-mediated Nitrogen Reduction Reaction	Hyeju Yun	Pohang University of Science and Technology (POSTECH)
SP7-6	Exploring single transition-metal incorporated FeTe ₂ electrocatalyst for efficient electrochemical reduction of nitrogen to ammonia	Nam Hoang Truong	Chungnam National University
SP7-7	Insights into Active Sites via Additive-Modified Interfacial Architectures in Lithium Redox-Mediated Nitrogen Reduction to Ammonia	Vy Thuy Nguyen	Chungnam National University
SP7-8	Phosphorylated nanocellulose: An eco-friendly nanomaterial for non-aqueous electrochemical systems	Do Hyeong Kwon	Korea Institute of Energy Technology (KENTECH)
SP7-9	Advancing Electrochemical Nitrogen Reduction Reactions in Non-aqueous Systems with Lithium: The Role of Interfaces	Dongwoo Shin	Seoul National University
SP7-10	Performance Enhancement of Lithium-mediated Nitrogen Reduction with the Introduction of Additives	Yeongbae Jeon	Seoul National University
SP7-11	Advancement of Active, Stable, and Selective Materials for Sustainable Ammonia Production and Utilization	SUBHASH CHANDRA SHIT	Korea Institute of Energy Technology (KENTECH)
SP7-12	Study on ether blending electrolyte in Lithium-mediated Ammonia electrosynthesis	Yebin Han	Pohang University of Science and Technology (POSTECH)
SP7-13	Enhancing Ammonia Production via Electrochemical Nitrate Reduction on CuO-CeO ₂ Catalyst with Controlling Oxygen Vacancy	Yujin Kong	Korea Advanced Institute of Science and Technology (KAIST)
SP7-14	Operando Observation of Reaction Surfaces in Lithium-Mediated Electrochemical Nitrogen Reduction	Yurim Sohn	Korea Institute of Energy Technology (KENTECH)
SP7-15	Effect of DeNO _x on ceria based materials for Direct Ammonia Converted SOFC	Dong Jae Park	Korea Institute of Ceramic Engineering and Technology
SP7-16	Synergistic Tandem Electroreduction of Nitrate to Ammonia Using a Cobalt/Copper Dual-Atom Catalyst	Jungwon Suh	Korea Advanced Institute of Science and Technology (KAIST)
SP7-17	Electrochemical Nitrate Reduction To Ammonia on Facet-Engineered Epitaxial Perovskite Oxide	Hwang Jun Beom	Gwangju Institute of Science and Technology (GIST)

Symposium 8. Semiconductor Nanocrystal Quantum Dots

August 21 (WED) 15:00-17:00

SP8-1	Coke Resistant Dry Reforming of methane by the encapsulation of metal nanoparticles inside hollow sphere.	Agni Raj Koirala	Korea Advanced Institute of Science and Technology (KAIST)
SP8-2	Phase Transformation Dynamics of Quantum-Sized Semiconductor Nanocrystals Revealed by In-Situ Transmission Electron Microscopy	Hyeongseung Kim	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
SP8-3	Wearable Displays Based on Stretchable Quantum Dot Color Conversion Layers	Yeongji Lee	Daegu Gyeongbuk Institute of Science and Technology (DGIST)
SP8-4	Nickel-Cobalt Anchored MoO ₂ as an Efficient Hydrogen Production Catalyst for Alkaline Water Electrolysis	Kyeong Su Kim	Korea Advanced Institute of Science and Technology (KAIST)
SP8-5	Enhancement of the stability characteristics in electrical synaptic devices based on PVA:GO QDs nanocomposites with directional formation filaments	MING LI	Hanyang University
SP8-6	Co-promoted Mo ₂ N on γ -Al ₂ O ₃ as an Efficient Nitrogen Carrier for Chemical Lopping Ammonia Synthesis	Siwoo Bae	Korea Advanced Institute of Science and Technology (KAIST)
SP8-7	Tailoring Charge Transport Properties of Cd ₃ P ₂ Quantum Dot Films for Photodetection	Ha-Chi V. Tran	Sungkyunkwan University
SP8-8	Minimizing Structural and Crystallographic Defects in Thick Shell QDs for Improved Photoluminescence Quantum Yield	Hyoungjun Kim	Sungkyunkwan University
SP8-9	Passivation of Perovskite Quantum Dots Surface by Ethylene Glycol Side Chain Conjugated Polymer for High-Efficiency Perovskite Solar Cells	Tae Oh Yoon	Jeonbuk National University
SP8-10	Synthesis and Application of Green Emitting Cs ₃ Cu ₂ Cl ₅ Nanocrystals	Gibaek Lee	Jeonbuk National University
SP8-11	Development of thermally stable and high-brightness blue OLED materials	Ga-hyun Kim	Wonkwang University

Symposium 9. Advanced Biomaterials and Bioelectronics

August 20 (TUE) 13:30-15:30

SP9-1	New type of polyurethane biomaterial applied in different kinds of medical devices	HYUNG TAE KIM	S&G BIOTECH INC
SP9-2	Wearable, biodegradable Si MOSFET based gas sensing array	Kang Hyeon Kim	Jeonbuk National University
SP9-3	Development of a CXCR4-targeted Core/Shell Nanoplatform with Surface-modified Liposome-Coated Multifunctional Mesoporous Silica Nanoparticle for Enhanced Colon Cancer Treatment through Berberine and Paclitaxel Co-Delivery	Yeonwoo Jang	Chung-Ang University
SP9-4	MnCo ₂ S ₄ Nanozymes with Dual Enzymatic Activities for Efficient Removal of Phenolic Dyes	Moon Il Kim	Gachon University
SP9-5	Exploitation of selenium-doped carbon quantum dots for sialic acid sensing and free radical scavenging applications	Roopkumar Sangubotla	Gachon University
SP9-6	Electrochemical analysis of intracellular reactive oxygen species and nitrogen species using scanning electrochemical microscopy (SECM)	Jongwon Kim	Yonsei University
SP9-7	MOF-Mxene modified screen-printed electrode system to measure ascorbic acid, for precision medication	Jose Paul	Gachon University
SP9-8	Rapid Identification of Pathogenic Bacteria with Label-Free SERS Spectra and Artificial Intelligence Classification Algorithm	Suji Lee	Kyung Hee University
SP9-9	Antibacterial and anti-inflammatory effect of amoxicillin-conjugated hyaluronic acid nanoparticles for treatment of oral soft tissue disease	Young-IL Jeong	Chosun University
SP9-10	Anticancer effect of atezolizumab-based nanomedicine and cold atmospheric plasma against oral cancer cells	Chang Young Kim	Chonnam National University
SP9-11	Control of anti-inflammatory drug delivery of microneedles through plasma-polymerized polymer thin film	Ji-Hun Seok	Chosun University
SP9-12	Dual layer-coating of PDMS to prevent calcification and bacterial infection for the potential use of urinary tract biomaterials	Taehyeon Kim	Yonsei University
SP9-13	Toward Highly Matching the Dura Mater: A Polyurethane Integrating Biocompatible, Leak-Proof, and Self-Healing Properties	Wu Bin Ying	Korea Advanced Institute of Science and Technology (KAIST)
SP9-14	A Bio-based, Sweat-Resistant and Markedly Sensitive Iontronic Skin for Advancing Central Sleep Apnea Monitoring	Jin Zhu	Chinese Academy of Sciences
SP9-15	Synthesis of highly dispersed Mo nanocatalyst embedded in biomass-derived N-doped carbon	Jun beom Park	Sungkyunkwan University
SP9-16	Utilization of Microwave irradiation in the Fabrication of Two-dimensional Polymeric Cobalt Phthalocyanine and its Application at Glucose sensor and Continuous Glucose Monitoring	Hobin You	Korea National University of Transportation
SP9-17	Exploration of power source for wearable and implantable devices based on enzymatic biofuel cells	Joonyoung Lee	Seoul National University of Science and Technology
SP9-18	Synthesis of Plasmonic Nanostructures on the Membrane in Gram-positive Bacteria	Yonghee Shin	Sogang University
SP9-19	Enzymeless α -Fe ₂ O ₃ -ZnO Hybrid Nanostructure-Based Sensor for Sensitive Quantification of Nitrite Ions	Rafiq Ahmad	Pukyong National University
SP9-20	Growth-Induced Extinction Development for the Signal Generation in Immunoassays	Hyon Bin Na	Myongji University
SP9-21	Surface-engineered metal-organic frameworks for electrochemical biosensors	Tae-Jun Ha	Kwangwoon University
SP9-22	Biodegradable piezo-resistivity type strain sensors for sciatic nerve regeneration	Min Jae Park	Yonsei University
SP9-23	Double Gate Dielectrically-Modulated Thyristor for highly sensitive biosensing and low power consumption	Chan Heo	Jeonbuk National University

SP9-24	Biocompatible and Biodegradable Solid-state Electrolyte for Organic Transistors	Sungbin Choi	Sungkyunkwan University
SP9-25	Wearable EEG electronics for a Brain-AI Closed-Loop System to enhance autonomous machine decision-making	Keonuk June	Sungkyunkwan University
SP9-26	Polymeric Conductive Adhesive based Ultrathin Epidermal Electrodes for Long-term Monitoring of Electrophysiological Signals	Kyungmin Kim	Sungkyunkwan University
SP9-27	A wireless implant for the continuous monitoring of chronic and acute stress by electrophysiological signals from adrenal gland	Lili Guo	Sungkyunkwan University
SP9-28	Highly Stretchable and Strain-Insensitive Liquid-Metal based Elastic Kirigami Electrodes (LM-eKE)	Chaerin Kwak	Sungkyunkwan University
SP9-29	Injectable Optoelectronic Probe with Heat Dissipation Guide for Enhanced Photodynamic Therapy	Suyoun Oh	Sungkyunkwan University
SP9-30	Enhanced Vertical Thermal Conductivity in BN Composite Films for Highly Integrated Electronics	Yujin Mun	Sungkyunkwan University