2. Technical Sessions

Poster Session

Poster Session	
Date / Time	November 09 (Mon.), 2026 / 16:30-18:00
Place:	Multi-Purpose Room (B1F)

[MP-1]

Thickness-Tunable cMOF Thin Films for Photoactivated Gas Sensing Using an Ultra-Low-Power Micro-LED Platform

Seo-Hyeon Lee[1], Kichul Lee[2], Myung Sung Sohn[3], Yun Chan Kang[3], Inkyu Park[2], and Young-Moo Jo[1]

[1]Kyungpook National University, Korea, [2]Korea Advanced Institute of Science and Technology, Korea, [3]Korea University, Korea

[MP-2]

Conductive MOF Functionalization Enables Sensitive, Selective Oxide Chemiresistors through Charge Redistribution and Tunable Gas Affinity

Minyeop Kim, Seyoung Lee, and Young-Moo Jo

Kyungpook National University, Korea

[MP-3]

Hollow and Hierarchical $Co_3(HHTP)_2$ Films with Enhanced Gas Accessibility for Room-Temperature NH_3 Sensing

Seyoung Lee and Young-Moo Jo

Kyungpook National University, Korea

[MP-4]

Dopant-Controlled Selectivity Toward H_2S and NH_3 in Ni- and W-Doped Cu_2O Heterostructures at Room Temperature

Seohyeon Kim, Yeonji Yuk, and Sanghan Lee

Gwangju Institute of Science and Technology, Korea

[MP-5]

Highly Sensitive Hydrogen Sensing of $Cs_{0.33}WO_3$ Synthesized via a Water-Controlled Release Solvothermal Process

Qiuyu Jin[1], Lei Miao[1,2], and Shu Yin[1]

[1]Tohoku University, Japan, [2]Nagoya Institute of Technology, Japan

[MP-6]

Intelligent Light Source Recognition Enabled by NIL-Defined Broadband ZnS@ZnO Nanorod Photodetectors

Jyun-Jie Chen[1], Yi-Sheng Chen[1], Ming-Hsien Li[2], Chun-Hung Lin[1], and Hsiang Chen[3]

[1]National Cheng Kung University, Taiwan, [2]National Sun Yat-sen University, Taiwan, [3]National Chi Nan University, Taiwan

[MP-7]

Response-Behavior Selectivity and Methods for Its Modulation

LEI MIAO[1,2] and SHU YIN[1]

[1]Tohoku University, Japan, [2]Nagoya Institute of Technology, Japan

[MP-8]

Block Copolymer-Templated Porous Metal Oxide Hollow Frameworks for High-Performance Chemical Sensing

Sungyoon Woo[1], Mingyu Sagong[1], Sang-Joon Kim[2], and Il-Doo Kim[1]

[1]Korea Advanced Institute of Science and Technology, Korea, [2]Chungnam National University, Korea

[MP-9]

Humidity-Corrected Visible-Light-Activated NO_2 Detection via Conformal Polymeric Bilayer Coating

Minhyun Kim, Booseok Jeong, Sung Gap Im, and Il-Doo Kim

Korea Advanced Institute of Science and Technology, Korea

[MP-10]

Stabilizing Single Atom Catalysts on Metal Oxides with Tunable Lewis Acidity

Sungyoon Woo and Il-Doo Kim

Korea Advanced Institute of Science and Technology, Korea

[MP-11]

Flash Thermal Alloying of MoS_2/WS_2 Nanoflakes for Room-Temperature NO_2 Gas Sensing via Intense Pulsed Light

Minsu Kim, Euichul Shin, and Il-Doo Kim

Korea Advanced Institute of Science and Technology, Korea

[MP-12]

Integration of Ga-Doped In_2O_3/ZnO with a MEMS Platform for Low-Power NO_2 Sensing

Se Jeong Park[1], Joon-Shik Park[1], and Hyung Mo Jeong[2]

[1]Korea Electronics Technology Institute, Korea, [2]Sungkyunkwan University, Korea

[MP-13]

Ni-Assisted Fe Exsolution from La-Sr Ferrite via Intense Pulsed Light for Stable Gas Sensing

Hyeongmin Joo, Sungyoon Woo, and Il-doo Kim

Korea Advanced Institute of Science and Technology, Korea

[MP-14]

Systematic Modulation of Dimethyl Sulfide Gas Selectivity in LnFeO3 through Lanthanide Contraction

Seon Woo Ji, Dong Hyuk Kwak, and Il-Doo Kim

Korea Advanced Institute of Science and Technology, Korea

[MP-15]

Ultrafast Active-Site Engineering of MoS_2 with Single Atoms by Flash Thermal Synthesis for High-Performance Gas Sensing

Euichul Shin[1], Dong-Ha Kim[2], and Il-Doo Kim[1]

[1]Korea Advanced Institute of Science and Technology, Korea, [2]Hanyang University-ERICA, Korea

[MP-16]

Light-Gated NO_2 Sensing in Dye-Sensitized Bi-Doped In_2O_3 Nanofibers

Jieun Heo, Minhyun Kim, and Il-Doo Kim

Korea Advanced Institute of Science and Technology, Korea

[MP-17]

SnO_2 / High-Entropy Oxide Composites for Improved Ethanol Gas Sensing

Donghyuk Kwak and Il-Doo Kim

Korea Advanced Institute of Science and Technology, Korea

[MP-18]

ZIF-L-Functionalized In_2O_3 Nanowire Arrays for Photoactivated Gas Sensing with Enhanced Gas Response

Jaehyeon Park, Minhyun Kim, and Il-Doo Kim

Korea Advanced Institute of Science and Technology, Korea

[MP-20]

Enhanced NO_2 Sensing of SnO_2 Nanowires by Ion Beam Irradiation

Taek Heon Kim, Yongseong You, and Hyoun Woo Kim

Hanyang University, Korea

[MP-21]

Paper-Based Carbon Nanotube Sensor for Detection of Toxic Chemicals

Young jin Koh, Seongwoo Lee, Jihwan Lee, Heesoo Jung, Dong Ha Kah, and Jae Hwan Lee
Agency for Defense Development, Korea

[MP-22]

Precision-Engineered Chemistry-Specific Catalytic Materials for Highly Selective and Sensitive Gas Sensing

Byung-Dong Hahn, Jong-Jing Choi, Chul-Woo Ahn, Hyun-Ae Cha, and Young Kook Moon
Korea Institute of Materials Science, Korea

[MP-23]

Investigation of Sputtered Cuprous Oxide for Electrolyte-Insulator-Semiconductor Structures in pH Sensing

Li-Hsiang Chou, Leung Sze Tsui, and Chia-Ming Yang
Chang Gung University, Taiwan

[MP-24]

A High-Entropy Strategy for Rapid and Selective Chemoresistive Ethanol Sensing

Hyun Seong Kim, Gi Baek Nam, and Ho Won Jang
Seoul National University, Korea

[MP-25]

Humidity-Independent Gas Sensing Using Bilayer Oxide Chemiresistors with Hydrophobic Tb_4O_7 Overlayer

Sang-Myeong Lee[1,2], Seong-Young Yoon[2], Jung-Hoo Seo[2], and Seong-Yong Jeong[1,2]
[1]Jeonbuk National University, Korea, [2]Kongju National University, Korea

[MP-26]

Highly Selective Xylene Sensing with Low-Resistance Sb-Doped SnO_2 Hollow Spheres

Jung-Hoo Seo[1], Seong-Young Yoon[1], Sang-Myeong Lee[1,2], and Seong-Yong Jeong[1,2]
[1]Kongju National University, Korea, [2]Jeonbuk National University, Korea

[MP-27]

Quantitative Colorimetric Analysis of D-Amino Acid Compositions Using a Chiral Poly(Phenylacetylene) Chemosensor

Ryosuke Sakai[1], Hokuto Ishimaru[1], Satoshi Umeda[1], Katsuyuki Tsuda[1], and Toshifumi Satoh[2]
[1]National Institute of Technology, Asahikawa College, Japan, [2]Hokkaido University, Japan

[MP-28]

Exploring Bis-Amide Functionalization of CNTs for Selective DMMP Detection

Jungho Lee, Minkyung Lee, Jongseon Kim, Young jin Koh, and Jae Hwan Lee

Agency for Defense Development, Korea

[MP-29]

Electrochemically Modulated Phase, Defect, and Surface Chemistry in Metal Oxides for Sensitive and Humidity-Tolerant Hydrogen Sulfide Gas Sensing

Shin Joon Kang[1], Hyung Mo Jeong[2], and Joon-Shik Park[1]

[1]Korea Electronics Technology Institute, Korea, [2]Sungkyunkwan University, Korea

[MP-30]

Ultraselective Detection of Ethylene Using Bilayer Films Comprising a Catalytic CuO Overlayer and a Pd-In_2O_3 Sensing Layer

Cheyeon Kim[1], Chan Woong Na[2], and Ji-Wook Yoon[1]

[1]Jeonbuk National University, Korea, [2]Korea Institute of Industrial Technology, Korea

[MP-31]

Room-Temperature Solution Oxidation for the Fabrication of Porous CuBr Films

Min-Jeong Goo and Ji-Wook Yoon

Jeonbuk National University, Korea

[MP-32]

Ferroelectric Ti-doped WO_3 Nanospheres for Selective Breath Acetone Sensing

Byeong-Hun Yu and Ji-Wook Yoon

Jeonbuk National University, Korea

[MP-33]

NASICON-Based Electrochemical CO Sensors Using Bi_2O_3-Added Noble-Metal Electrodes for Room Temperature Operation

Koki Akiba, Taro Ueda, Tatsuki Tsugawa, Kentaro Kawashima, Hirotoshi Yamada, and Takeo Hyodo

Nagasaki University, Japan

[MP-34]

Microneedle Electrochemical Biosensor Enhanced with Graphite Ink and Multi-Walled Carbon Nanotube for Sensitive Glucose Detection

Huizi Zhang, Ling Ding, Toru Nohgi, and Jun Kameoka

Waseda University, Japan

[MP-35]

Visible-Light-Activated Zn-Doped WO_3 Nanoparticles for Humidity-Assisted Breath NO_2 Detection

Nguyen Thao Trinh Do, Byeong-Hun Yu, Sang-Won Lee, and Ji-Wook Yoon
Jeonbuk National University, Korea

[MP-36]

V-Doping-Enabled Reversible Pt–MoO_3 Colorimetric Sensor for Hydrogen Detection

Seungwoo Park, Jiho Park, and Ji-Wook Yoon
Jeonbuk National University, Korea

[MP-37]

Thickness-Controlled $Ti_{0.87}O_2$ Nanosheet Stack for Highly Sensitive NO_2 Detection

Sang-Won Lee and Ji-Wook Yoon
Jeonbuk National University, Korea

[MP-38]

Rh-Doped In_2O_3 Gas Sensors for Portable α-Pinene Monitoring Toward Forest Therapy Applications

Junha Hwang, Byeong-Hun Yu, and Ji-Wook Yoon
Jeonbuk National University, Korea

[MP-39]

Room-Temperature Potentiometric Ethanol Sensing Using Conductive MOF Electrodes on a Proton-Conducting Graphene Oxide Membrane

Toma Kiyozawa, Mana Yamaguchi, Muhammad Sohail Ahmad, Yusuke Inomata, and Tetsuya Kida
Kumamoto University, Japan

[MP-40]

Label-Free Detection of Small Molecule Using Electrorotation of Aptamer-Functionalized Microrods

Kiku Agario, Yushi Isozaki, Masato Suzuki, and Tomoyuki Yasukawa
University of Hyogo, Japan

[MP-41]

VOC Sensing Properties of Cu_2O Nanoparticles Synthesized by Thermal Decomposition of Cu-Based MOF

Shumpei Goto, Soki Yoneda, Muhammad Sohail Ahmad, Yusuke Inomata, and Tetsuya Kida
Kumamoto University, Japan

[MP-42]

Hierarchical $NbS_2/Cu_3(HHTP)_2$ Hybrids for Chemiresistive H_2S Sensing: Unraveling Sensing Mechanisms by In-Situ Raman Spectroscopy

Jae-Woo Seo, Joon-Seok Lee, Dong-Hee Lee, and Seon-Jin Choi

Hanyang University, Korea

[MP-43]

A Colorimetric Hydrogen Sensor Using Pt-Based Combustion Catalysis and Thermochromic Dye

Thi Dung Nguyen and Yong Shin Kim

Hanyang University, Korea

[MP-44]

Enhanced NO_2 Gas Sensing Performance of ZnO–Ti_3C_2Tx MXene Nanocomposites via Microwave Assistance

Hyoun Woo Kim, You Yongseong, Eun Bi Kim, Sungjoon Moon, and Taek Heon Kim

Hanyang University, Korea

[MP-45]

Development of Highly Sensitive Solid-Electrolyte Type Gas Sensors Using Porous Pr-Doped CeO_2 Sensing Electrode

Ryoga Tsukahara, Taro Ueda, Kentaro Kawashima, Tatsuki Tsugawa, and Takeo Hyodo

Nagasaki University, Japan

[MP-46]

Evaluation of the Adsorption Properties of the Sol–Gel Molecularly Imprinted Silica Prepared Using Nonanal as a Template

Haruga Isayama, Aoi Minami, and Takeshi Onodera

Kyushu University, Japan

[MP-47]

Chemiresistive Trimethylamine (TMA) Sensor Using Pd-Doped $Cu_3(HHTP)_2$

Suwan Yamada[1], Soki Yoneda[1], Kanna Shibata[1], Yuto Ohata[1], Shotaro Kubo[1], Yusuke Inomata[1], Tetsuya Kida[1], and Ho Won Jang[2]

[1]Kumamoto University, Japan, [2]Seoul National University, Korea

[MP-48]

Highly Sensitive and Selective Detection of Nerve Agent Simulants Using Phosphorus-Doped SnO_2 Nanoparticle Gas Sensors

Shibata Kanna, Soki Yoneda, Yusuke Inomata, and Tetsuya Kida

Kumamoto University, Japan

[MP-49]

Sensing Characteristics of ZrN Thin Films Deposited by DC Magnetron Sputtering for EGFET pH Sensors

Cheng-Hua Liu and Chia-Ming Yang

Chang Gung University, Taiwan

[MP-50]

A Colorimetric Silicone Tape Incorporating BCG and PEG for Visual Ammonia Detection

Thuy-Ngan Thi Dang and Yong Shin Kim

Hanyang University, Korea

[MP-51]

Hydrogen Sensing with α-Phase Ga_2O_3 Based Schottky Diode for Harsh Environments

Minsang Yu[1], Jaeeun Shin[1], Soohwan Jang[1], and Kwang Hyeon Baik[2]

[1]Dankook University, Korea, [2]Hongik University, Korea

[MP-52]

Ag-Modified Cr_2O_3 Nanoarchitectures for Mechanism-Driven H_2S Sensing

Seungbeom Jeong, Jae Han Chung, Do Yeong An, Doyeon Kim, and Young-Seok Shim

Korea University of Technology and Education, Korea

[MP-53]

Nanoarchitectural Design of ALD-Derived ZnO Hollow Nanofiber–Thin Film Hybrids for NO_2 Sensing

Nguyen Viet Chien, Nguyen Viet Huong, Nguyen Ngoc Viet, and Nguyen Van Hieu

Phenikaa University, Vietnam

[MP-54]

Selective Detection of Dopamine Using Boronic Acid-Modified Screen-Printed Carbon Electrodes

Rikuto Sato, Satomi Onuki, and Yuko Ueno

Chuo University, Japan

[MP-55]

Squaramide-Linked Porphyrin-Based Covalent Organic Framework@NbS_2 for Chemiresistive NO_2 Detection

Dong-Hee Lee, Jae-Woo Seo, and Seon-Jin Choi

Hanyang University, Korea

[MP-56]

Engineering Mn^{3+}/Mn^{4+} Redox-Coupled Oxygen Vacancies in Mn_2O_3-Decorated SnO_2 Nanoarchitectures for Highly Sensitive Acetone Detection

Doyeon Kim, Baek Song, Woo-Hyeok jang, and Young-Seok Shim

Korea University of Technology and Education, Korea

[MP-57]

Enhancement of Oxygen Reduction Reaction Reactivity by Incorporating Pyridinic Nitrogen Molecules into the Ink for Screen-Printed Graphene Electrode

Kosuke Ohashi, Niwa Osamu, and Yuko Ueno

Chuo University, Japan

[MP-58]

Development and Field Evaluation of a Wide-Range MEMS Thermal-Conductivity Hydrogen Sensor Module for Safety and Process Monitoring

Tae-un Kim, Chanho Park, Yurim Park, Kyungdeog Nam, Hun Woo Kim, Sang-Do Han, and Inho Kim

Innoteco Inc, Korea

[MP-59]

Detection of Oral Cancer-Related miRNAs by Amplification and Diffusion Analysis Using Multi-Key RCA

Airi Yanagihara[1], Neo Kinoshita[1], Thi Thanh Huong Pham[2], Han-Sheng Chuang[2], and Hiroaki Sakamoto[1]

[1]University of Fukui, Japan, [2]National Cheng Kung University, Taiwan

[MP-60]

Electrochemical Monitoring Cortisol Using Photocrosslinkable Signal Probe-Aptamer Complexes

Aoi Morita, Rina Uchida, Eiichiro Takamura, and Hiroaki Sakamoto

University of Fukui, Japan

[MP-61]

Mechanically Scratched SnO_2 Thin Films Decorated with CuS-Ag_2S Heterostructures for Enhanced Acetone Sensing

Jiyeon Shin[1,2], Jeong-O Lee[1], and Donghwi Cho[1]

[1]Korea Research Institute of Chemical Technology, Korea, [2]Sungkyunkwan University, Korea

[MP-62]

Chemoresistive and Catalytic Dual-Signal Pd-WO_3 MEMS Sensor for Reliable H_2 Monitoring

Seon Ju Park[1], Soo Min Lee[1], Sung Hwan Cho[1], Hee Ryeong Kwon[1], Youngmin Kim[1], Do Joon Yoo[2], In-Sung Hwang[2,3], and Ho Won Jang[1]

[1]Seoul National University, Korea, [2]Sentech Korea Co., Ltd., Korea, [3]SENTECH GMI Co., Ltd., Korea

[MP-63]

Battery-Free, Wireless Pressure Injury Monitoring System Using a CuS Foam-Based Room-Temperature NH_3 Sensing Platform

Hyeonbin Park[1,2], Sunwoo Lee[1], Jeong-O Lee[1], and Dongwhi Cho[1]

[1]Korea Research Institute of Chemical Technology, Korea, [2]Sungkyunkwan University, Korea

[MP-64]

Artificial Olfactory Intelligence Sensor Array for Detecting Chemical and Biological Agents

Minhyeok An[1,2], Hyunsu Ra[1], Seong-Young Yoon[3], Juhyun Kang[4], Sungman Lee[4], Seong-Yong Jeong[2], Young-Seok Shim[5], Yejin Jang[1], Donghwi Cho[1], and Jeong-O Lee[1]

[1]Korea Research Institute of Chemical Technology, Korea, [2]Jeonbuk National University, Korea, [3]Kongju National University, Korea, [4]Sensor Tech Co., Ltd., Korea, [5]Korea University of Technology and Education, Korea

[MP-65]

Physisorption-Engineered 3D Sb_2Se_3 Nanoarchitectures for Activation-Free Room-Temperature NO_2 Sensing

Sunwoo Lee[1,2], Hwanseok Chang[2], Jeong-O Lee[1], Myungwoo Choi[3,4], and Donghwi Cho[1,4]

[1]Korea Research Institute of Chemical Technology, Korea, [2]Korea University, Korea, [3]Korea Electrotechnology Research Institute, Korea, [4]University of Science and Technology, Korea

[MP-66]

Low-Power Artificial Olfaction with Vertical Two-Dimensional MOF Heterostructures

Seowoo Yun, Youngmin Kim, and Ho Won Jang

Seoul National University, Korea

[MP-67]

Olfactory Intelligence via In-Sensor Computing for Edge Systems Using Metal–Organic Framework Thin Films

Youngmin Kim, Seowoo Yun, and Ho Won Jang

Seoul National University, Korea

[MP-68]

SERS Imaging of Glycosylated Au@2ATP@PGlyco–Ce_6 Nanoparticles for Spatially Resolved Photodynamic and Macrophage–Cancer Cell Responses

Chih-Chia Huang[1], Mei-Yi Liao[2], Ting-Yu Cheng[1], and Sz-Syuan Wu[1]

[1]National Cheng Kung University, Taiwan, [2]National Pingtung University, Taiwan

[MP-69]

Real-Time Detection of Small Aliphatic Compounds in Alcohol by Surface Plasmon Resonance Using N Doped Graphene

Seungwon Choi and Ho Won Jang

Seoul National University, Korea

[MP-70]

CMOS-Compatible Gas Source Distance Estimation

Wooseong Roh, Hunhee Shin, Jonghyun Ko, Kangwook Choi, Donghee Kim, Minsun Kim, Jeseung Jeong, Jongho Lee, and Gyuweon Jung

Seoul National University, Korea

[MP-72]

Electrochemically Functionalized Graphene for Ultrafast NO_2 Detection at Room Temperature

Jaeyeon Oh[1,2], Hyeon Kim[2], Dongwha Lee[3], and Yeonhoo Kim[1]

[1]Korea Research Institute of Standards and Science, Korea, [2]Seoul National University, Korea, [3]Pohang University of Science and Technology, Korea

[MP-73]

Transducer-Architecture Diversification as a Design Axis for Electronic Noses

Cheoljin Park, Jaehyeon Kim, Yujeong Jeong, Donghee Kim, Kangwook Choi, Hunhee Shin, Jong-Ho Lee, and Gyuweon Jung

Seoul National University, Korea

[MP-74]

Bias-Independent Threshold-Voltage Readout for FET-Type Gas Sensors Based on a Source-Follower Configuration

Kangwook Choi, Hunhee Shin, and Jong-Ho Lee

Seoul National University, Korea

[MP-75]

Compact Micro-Gas Chromatography–Metal Oxide Chemiresistor Platform for Selective Detection of Volatile Organic Compounds

Seong-Young Yoon[1], Jung-Hoo Seo[1], Sang-Myeong Lee[1,2], and Seong-Yong Jeong[1,2]

[1]Kongju National University, Korea, [2]Jeonbuk National University, Korea

[MP-76]

Thermally Coupled FET-Type Gas Sensor Array with Integrated Polysilicon Micro-Heaters for Power-Efficient Operation

Hunhee Shin, Kangwook Choi, Gyuweon Jung, and Jong-Ho Lee

Seoul National University, Korea

[MP-77]

Highly Selective and Sensitive Graphene-Based Electronic Tongue Functionalized with Nafion, Au Nanoparticles, Calix[4]arene, and Aptamer

Hyuk Jin Kim, Jun Uh Hyun, and Ho Won Jang

Seoul National University, Korea

[MP-78]

MXene-Based Microfluidic Platform: Advanced pH Sensing for E-Tongue

Jun Uh Hyun, Hyuk Jin Kim, and Ho Won Jang

Seoul National University, Korea

[MP-79]

Quantitative Determination of Equilibrium Binding Affinity for Anti-Morphine Antibody Using Quartz Crystal Microbalance

Minji Jeon, Junsub Kim, Yeon Hwa Kwak, and Kunnyun Kim

Korea Electronics Technology Institute, Korea

[MP-80]

Controlled Single-Cell/Substrate Contact and Interaction Analysis Using Dielectrophoresis and Electrorotation

Yuki Imou, Yushi Isozaki, Masato Suzuki, and Tomoyuki Yasukawa

University of Hyogo, Japan

[MP-81]

Rapid Detection of Illicit Drugs in Complex Beverage Matrices Using a Surface Acoustic Wave Sensor

Junsub Kim[1], Minji Jeon[1], Sunghwan Baek[2], Hongkoo Jung[2], Kunnyun Kim[1], and Yeon Hwa Kwak[1]

[1]Korea Electronics Technology Institute, Korea, [2]Ranix Inc., Korea

[MP-82]

Self-Powered Smart Sensor Node Based on Energy Harvester and Environmental Sensor

S. E. Moon[1], J. P. Im[1], J. H. Kim[1], S. I. Cha[2], H. R. Hwang[3], I. J. Park[4], and Y. H. Cho[5]

[1]Electronics and Telecommunications Research Institute, Korea, [2]Korea Electrotechnology Research Institute, Korea, [3]Wise, Korea, [4]Corechips, Korea, [5]Yeungnam University, Korea

[MP-83]

Highly Sensitive and Stretchable Cellulose/Hybrid Fillers Hydrogels with Low Hysteresis for Strain Sensing Technologies

Carene Illahi Fauzan and Yong Hyun Kim

Pukyong National University, Korea

[MP-85]

Noninvasive Monitoring of Exercise Associated Metabolic Changes Using Breath Sensor Arrays and Blood Ketone Estimation

Byeongju Lee[1], Junyeong Lee[1], Young Ki Hahn[2], Junyeob Yeo[2], and Dae-Sik Lee[1]

[1]Electronics and Telecommunications Research Institute, Korea, [2]Kyungpook National University, Korea

[MP-86]

Squaramide-Functionalized Porphyrin Scaffold as a Multivalent PFAS Selector for Electrochemical Sensing

Dong-Hee Lee, Jae-Woo Seo, and Seon-Jin Choi

Hanyang University, Korea

[MP-87]

Acoustic Enhancement of a Flexible PMN-PT 1-3 Composite Ultrasound Array with Matching and Soft Backing Layers

Syed Turab Haider Zaidi[1,2], Jin Soo Park[3], Young Jin Lee[1], Muhammad Ali Shah[1], Byung Chul Lee[2,3], and Shin Hur[1,2]

[1]Korea Institute of Machinery and Materials, Korea, [2]University of Science and Technology, Korea, [3]Korea Institute of Science and Technology, Korea

[MP-88]

Molecular Packing Engineering of PTB7-Th for NH3 Sensing toward Real-Time Food Freshness Monitoring

Yeonji Yuk, Yejoon Kim, and Sanghan Lee

Gwangju Institute of Science and Technology, Korea

[MP-89]

MOS Gas Sensor Array-Based Non-Destructive Monitoring of Apple Quality during Storage Using PCA and KNN

Joon-Boo Yu and Hyung-Gi Byun

Kangwon National University, Korea

[MP-90]

Preliminary Design and Implementation of an Integrated Signal Processing and Monitoring System for Fiber-Optic Hydrogen Sensors

Chanho Park[1], Tae-un Kim[1], Yurim Park[1], Kyungdeog Nam[1], Inhun Cho[2,3], Seungjae Gong[2,3], Yong-Won Song[2,4], Yunseok Kim[5], and Inho Kim[1]

[1]Innoteco Inc, Korea, [2]Korea Institute of Science and Technology, Korea, [3]Korea University, Korea, [4]University of Science and Technology, Korea, [5]Lasernics Inc., Korea

[MP-91]

RGB Micro-LED Platform for Photo-Activated Gas Sensors

Sung Jin Seo and Ho Won Jang

Seoul National University, Korea

[MP-92]

Full-Scale Electric Vehicle Validation of Hydrogen as a Precursor to Battery Thermal Runaway

Min-Jae Kim, Min-Gi Kim, Hyun-Sook Lee, and Wooyoung Lee

Yonsei University, Korea

[MP-93]

Hydrogen Evolution Feature Mapping for Quantitative Crack Diagnosis across Cycling Conditions in Cylindrical Lithium-Ion Batteries

Kyung-Ho Park, Yeonhong Kim, Hyun-Sook Lee, and Wooyoung Lee

Yonsei University, Korea

[MP-94]

Development of Surface-Enhanced Raman Spectroscopy Substrate Using Melt-Blown Nonwoven Fabrics with Ag Nanoflower Particles

Koshi Nishikura and Yosuke Tahara

Shinshu University, Japan

[MP-95]

Quantitative Safety Diagnostics of Lithium-Ion Batteries via Early Hydrogen Evolution under Variable Heating Conditions

Mingi Kim, Min-Jae Kim, Hyun-Sook Lee, and Wooyoung Lee

Yonsei University, Korea

[MP-96]

Portable Dual-Sensor Electronic Nose for Rapid On-Site Assessment of Halitosis

Sicheng Fan, Shimeng Mou, Weijie Yu, and Ping Wang

Zhejiang University, China

[MP-97]

Sensitive and Affordable Method Using Hg-Free Electrodes for On-Site Heavy Metals Measurement based on Stripping Voltammetry

Nguyen Huu Diep[1], Yusuke Koizumi[1], Taketo Okumura[1], Tran Dinh Trinh[2], Kazuma Mawatari[3], and Hiromitsu Hachiya[1]

[1]DKK-TOA CORPORATION, Japan, [2] Vietnam National University, Vietnam, [3]Waseda University, Japan

[MP-98]

NiO-Functionalized Graphene Micropatterns for Highly Selective and Flexible Chemical Sensor

Seungsoo Kim and Ho Won Jang

Seoul National University, Korea

[MP-99]

Lab-on-Paper Optical Sensor for Volatile Acids in Heritage Libraries based on Smartphone Colorimetry

Joseph Ryan Reyes and Fortunato Sevilla III

University of Santo Tomas, Philippines

[MP-100]

Four Channel Multifrequency Noninvasive Glucose Measurement Platform based on Dielectric Loss and Differential Thermometry

Jinwoo Song, Jooran Yang, and Hyungpyo Kim

Kyungpook National University, Korea

[MP-101]

Open/Close Switchable Solid-Phase-Extraction Microfluidic Device with One-Drop Anodic Stripping Voltammetry for On-Site Heavy Metal Analysis in River Water

Chi Thi Kim Tran[1], Ryoichi Ohta[1], Kazuma Mawatari[1], Tra Huong Nguyen[2], Huyen Minh Nguyen[1], Trinh Dinh Tran[2], Ngoc Minh Ha[2], and Noi Van Nguyen[2]

[1]Waseda University, Japan, [2]Vietnam National University, Vietnam

[MP-102]

A Rapid Label-Free Electrochemical Aptasensor Based on NH_2-MIL-101(Fe) for Detection of Vibrio Harveyi

Rajesh Kumar Raghav, Chia-Yu Hsieh, and Ching-Chou Wu

National Chung Hsing University, Taiwan

[MP-103]

Performance Evaluation of an All-Solid-State Metal-Electrode pH Sensor in Tap Water Environments

Hinako Inao and Shinji Okazaki

Yokohama National University, Japan

[MP-104]

Laser-Engineering Approach to Oxide-Film Gas Sensor Array for Enhanced Sensing Performance

Qisong Jia, Chen Wang, Peng Sun, and Geyu Lu

Jilin University, China

[MP-105]

Noise-Aware Few-Shot Calibration of a Bio-Inspired Spiking Neural Network for Robust Gas Recognition

Yingying Xue[1,2], Shimeng Mou[1], Liujing Zhuang[1], and Ping Wang[1]

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Nanocane Array Electronic Nose for Simultaneous Identification and Quantification of Multi-Component Gases

Do Yeong An, Jae Han Chung, Eunsol Lee, Doyeon Kim, Seungbeom Jeong, and Young-Seok Shim

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Zeolite-Involved Triboelectric Effects for Self-Powered Metal Ions Sensors

Rayyan Ali Saukat, Yebin Lee, Taeuk Eom, and Chang Kyu Jeong

Jeonbuk National University, Korea

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Hierarchical Wall Engineering in Guar Gum Derived Carbon-based Aerogel for Strong and Broadband Electromagnetic Wave Absorption

Xuan Wang, Yamin Xu, Bo Hu, Han Ding, Xijiang Han, and Yunchen Du

Harbin Institute of Technology, China

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Low-Load MXene Nanosheet/Melamine Composite Sponges for Enhanced Electromagnetic Interference Shielding

Yuqi Yang and Zhimin Fan

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Nanoporous Silver Films Prepared by Plasma Oxidation–Reduction for Surface-Enhanced Raman Scattering-Based Sensing

Liping Fan, Chengcheng Yuan, Dan Zhang, and Yang Gan

Harbin Institute of Technology, China

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Solid-Phase Synthesis of Titanium-Oxo Clusters and Their Unprecedented Catalytic Performance in Oxidative Desulfurization of Fuel Oil

Xinchun Liu and Yinyong Sun

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The Role of Li-Rich Disordered Domain in Li-Rich Cathodes

Gui-Jing Xu[1], Jia-Ji Tang[1], Wang Ke[1], Fu-Da Yu[2], Yun-Shan Jiang[3], Nian Zhang[4], Zhong-Miao Liao[5], Liang Deng[1], Lei Zhao[1], and Zhen-Bo Wang[1]

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Gui-Jing Xu[1], Jia-Ji Tang[1], Zhong-Miao Liao[2], Wang Ke[1], Fu-Da Yu[3], Yuan-Guang Xia[4,5], Wen Yin[4,5], Xuan He[6], Xiao-Kang Ju[6], Liang Deng[1], Lei Zhao[1], Gang Sun[7], and Zhen-Bo Wang[1]

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Synergistic Electron Density and Oxygen Defect Regulation in Fluorite High-Entropy Oxides for Superior Ionizing Radiation Shielding

Xiangjie Duan[1], Zhipeng Li[1], Tian Bo[2], Xingyi He[3], and Yunchen Du[1]

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Adhesive BSA-Crosslinked Hydrogel for Bladder Strain Sensing and Electrical Stimulation

Rui Zhang and Dianpeng Qi

Harbin Institute of Technology, China

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Highly Sensitive Humidity Sensor based on NaCl-$BiFeO_3$ for Noncontact Sensing

Jifeng Pan[1], Yunsong Li[1], Tian Tian[2], Zilong Tang[3], Zichao Lian[1], and Nan Ma[2]

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Tear-Film-Inspired Interfacial Polymerization Engineering Nanofiltration Membrane Architecture for Highly Efficient Antibiotic Desalination

Liufu Zhang and Lu Shao

Harbin Institute of Technology, China

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Room-Temperature Acetone Detection Using a NU-1000 Metal–Organic Framework/MXene Composite

Anh-Duy Nguyen and Sang Sub Kim

Inha University, Korea

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Indium-Gallium-Zinc Oxide Negative Capacitance Field-Effect Transistor for NO_2 Gas Sensing

Thi Hong Nhung Nguyen, Soo Yeon Kim, Seo Yeon Kim, and Incheol Cho

Tech University of Korea, Korea

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High-Throughput and Highly-Reproducible Gas Sensor for ML Processing based on Nanoimprint Lithography and MEMS Fabrication

Yeongjae Kwon and Inkyu Park

Korea Advanced Institute of Science and Technology, Korea

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On-Liquid Nanostructure for Multimodal Sensing Applications

Byung-Ho Kang[1], Yeongjae Kwon[2], Sohee Jeon[2], Soon Hyoung Hwang[2], Junseong Ahn[3], Jun-Ho Jeong[2], and Inkyu Park[1]

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Programmable 3D Smart Systems for Dynamic Energy Management

Ho Jun Jin and Bong Hoon Kim

Daegu Gyeongbuk Institute of Science and Technology

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Laser-Mediated Assembly of High-χ Block Copolymers for Controlled Nanostructure Formation on Silicon

Jimin Lee[1], Hyeong Min Jin[2], and Bong Hoon Kim[1]

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Ultrasonically Active Piezoelectric Textiles for Antifouling and Viral Inactivation

Seung Woo Han and Bong Hoon Kim

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Multimodal Wearable Sensing Enabled by MoS_2/PLA Composite Fibers

Min Seok Choi, Jun Hyun Park, and Bong Hoon Kim

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