The 15th Asian Conference on Chemical Sensors 2024 Program

November 17 (Sun), 2024

15:00 – 19:00 Registration open @ 1F Entrance Lounge (KICC)

17:00 – 19:00 Welcome Reception @ 1F Event Hall (KICC)

November 18 (Mon), 2024

	Main Hall (1F)
08:30	**Opening Ceremony**
08:45 09:25	**Keynote Lecture 1** (Chair: Tomoyuki Yasukawa) Title: SPR Imaging Using a Shorter Wavelength Light Source and Its Application to Biosensing Masayasu Suzuki (University of Toyama, Japan)
09:25 10:05	**Keynote Lecture 2** (Chair: Takeo Hyodo) Title: Modifying Electrode Surfaces with Nanoparticle-Polymer Nanocomposites for the Sensitive Electrochemical Detection of Target Molecules Allan Christopher C. Yago (University of the Philippines, Philippines)
10:05	**Photo Shoot**

10:15 Coffee Break

	Room A (Conference Room : 2F)	**Room B (Room 21 : 2F)**	**Room C (Room 22 : 2F)**	**Room D (Room 32 : 3F)**	**Room E (Room 33 : 3F)**
10:40	**Gas Sensors (1)**	**Gas Sensors (2)**	**Gas Sensors (3)**	**Biosensors (1)**	**Biosensors (2)**

11:45 Lunch **@ Event Hall (1F)**

	Room A (Conference Room : 2F)	**Room B (Room 21 : 2F)**	**Room C (Room 22 : 2F)**	**Room D (Room 32 : 3F)**	**Room E (Room 33 : 3F)**
13:00	**Gas Sensors (4)**	**Gas Sensors (5)**	**Gas Sensors (6)**	**Biosensors (3)**	**Biosensors (4)**

15:05 Coffee Break

	Event Hall (1F)
15:20	**Poster Session** (End: 16:50)

	Main Hall (1F)
17:00 17:40	**Keynote Lecture 3** (Chair: Fortunato B. Sevilla III) Title: Bioelectronic Nose and Bioelectronic Tongue for Odor and Taste Perception Ping Wang (Zhejiang University, China)

18:30	**Gala Dinner** @ JR Kyushu Station Hotel Kokura (10 min. walk from Convention Center)

November 19 (Tue), 2024

	Main Hall (1F)
08:30 09:10	**Keynote Lecture 4** (Chair: Kengo Shimanoe) Title: Semiconductor Gas Sensors: Where We Go Ho-Won Jang (Seoul National University, Republic of Korea)
09:10 09:50	**Keynote Lecture 5** (Chair: Tatsuo Yoshinobu) Title: Advanced Nano-brush Biosensing Platforms for Direct Disease Diagnosis in Human Blood Shu-Ping Lin (National Chung Hsing University, Taiwan)

09:50 Coffee Break

	Room A (Conference Room : 2F)	Room B (Room 21 : 2F)	Room C (Room 22 : 2F)	Room D (Room 32 : 3F)	Room E (Room 33 : 3F)
10:15	**Gas Sensors (7)**	**Gas Sensors (8)**	**Gas Sensors (9)**	**Biosensors (5)**	**Biosensors (6)**

12:00 Lunch **@ Event Hall (1F)**

	Room A (Conference Room : 2F)	Room B (Room 21 : 2F)	Room C (Room 22 : 2F)	Room D (Room 32 : 3F)	Room E (Room 33 : 3F)
13:15	**Gas Sensors (10)**	**Gas Sensors (11)**	**Gas Sensors (12)**	**Biosensors (7)**	**Materials for Chemical Sensor**

15:20 Coffee Break

	Room A (Conference Room : 2F)	Room B (Room 21 : 2F)	Room C (Room 22 : 2F)	Room D (Room 32 : 3F)	Room E (Room 33 : 3F)
15:40	**Gas Sensors (13)**	**Other Sensors**	**Biosensors (8)**	**Biosensors (9)**	**Biosensors (10)**

17:00 Coffee Break **@ Event Hall (1F) only**

	Main Hall (1F)
17:30	**Award Session** **Closing Ceremony**

November 20 (Wed), 2024

10:00 Excursion

- Field trip at Shimonoseki and Moji Straits area (using eco-ship & bus)
- Seminar on environment, H_2 utilization, detailed analytical and fluid-tribology technologies for chemical sensors (Lecturers; Y. Konishi, MicrotracBEL Corp; K. Ida, RIX Corp., on eco-ship)
- Cultural heritage sites study visit (Lunch included)

17:00 Return to Kokura

Parallel Session (5 rooms)

*** Invited Talk: 25 minutes, Oral Presentation: 20 minutes (including discussion time)**

November 18, Morning

Room A (Conference Room : 2F)

Gas Sensors (1)

Chair: Masayoshi Yuasa, Wan-Young Chung

10:40 – 11:05	1A01	**(Invited**) Cold Crystallization, Morphology Control and Facet Control of Metal Oxide Nano-materials in Aqueous Solutions for Gas Sensors and Chemical Sensors Yoshitake Masuda (National Institute of Advanced Industrial Science and Technology, Japan)
11:05 – 11:25	1A02	Application of Bimetallic Catalysts in Gas Sensors Fengmin Liu (Jilin University, China)
11:25 – 11:45	1A03	Crystal Facet and Polarity Effects on ZnO Gas Sensors Noriko Saito (National Institute for Materials Science, Japan)

Room B (Room 21 : 2F)

Gas Sensors (2)

Chair: Shinji Tamura, Fangmeng Liu

10:40 – 11:05	1B01	**(Invited)** Limiting Current Type Oxygen Sensor Using Non-porous Mixed Conductor, $La_{0.7}Sr_{0.3}Ga_{0.6}Fe_{0.4}O_3$ Plate for Gas Diffusion Layer Tatsumi Ishihara (Kyusyu University, Japan)
11:05 – 11:25	1B02	Pattern Recognition with Temperature Regulation: Single YSZ-based Mixed Potential Sensor Classifies Multiple Gas Mixtures Siyuan Lv (Jilin University, China)
11:25 – 11:45	1B03	Ag Modified Metal Oxides (MOx) as Sensing Electrodes for CeO_2 Based Mixed Potential Hydrogen Sensors: A Comparative Study and Mechanistic Investigation of Ag - MOx Interactions Tong Wang (Jilin University, China)

Room C (Room 22 : 2F)

Gas Sensors (3)

Chair: Masanobu Matsuguchi, Syed Muhammad Mamduh Syed Zakaria

10:40 – 11:05	1C01	**(Invited)** AI-driven Graphene Array Sensor System for Indoor Workspace Monitoring Ammar Zakaria (Universiti Malaysia Perlis, Malaysia)
11:05 – 11:25	1C02	Rapid Discrimination Method for Odors Using Semiconductor Gas Sensor Array on Linear Discriminant Analysis Toshio Itoh (National Institute of Advanced Industrial Science and Technology, Japan)
11:25 – 11:45	1C03	The Study on the Classification and Detection of Hazardous Gas Mixtures by MOS Gas Sensor Arrays Liwen Mao (Shanghai University, China)

Room D (Room 32 : 3F)

Biosensors (1)

Chair: Kumi Y. Inoue, Hao Wan

10:40 – 11:05	1D01	**(Invited)** Discrimination and Selective Retrieval of Target Cells in a Cell Array based on Dielectrophoresis Tomoyuki Yasukawa (University of Hyogo, Japan)
11:05 – 11:25	1D02	Development of Dielectrophoretic Detection System for Biomolecules Satoshi Arimoto (Panasonic Holdings Corporation, Japan)
11:25 – 11:45	1D03	Real-time Measurement Micro-bubbles Production in Microfluidics via Non-contact Complex Dielectric Constant Sensor System Ya-Fu Liou (National Taiwan University, Taiwan)

Room E (Room 33 : 3F)

Biosensors (2)

Chair: Ryoji Kurita, Jin Wang

10:40 – 11:05	1E01	**(Invited)** MXene-Embedded Bamboo Cellulose Nanopaper for Sustainable Electronics in Precision Human Motion Detection for Exoskeleton Control Tzu-En Lin (National Taiwan University, Taiwan)
11:05 – 11:25	1E02	Fast and Direct Immobilization of Antibodies for Rapid and Simple Microfluidic Paper-based ELISA Ahmed A. Shalaby (Hokkaido University, Japan)
11:25 – 11:45	1E03	Innovative Microneedle Patch-based SenBox for Enhanced Detection of Protein Biomarkers in Complex Biological Fluids Ying-Pei Hsu (National Sun Yat-sen University, Taiwan)

November 18, Afternoon

Room A (Conference Room : 2F)

Gas Sensors (4)

Chair: Yoshiteru Itagaki, Hiroyuki Yamaura

13:00 – 13:20	1A04	Effect of Aggregate Particle Size on SnO_2-based Semiconductor Gas Sensors Felipe Hiroshi Mashiba (Kyusyu University, Japan)
13:20 – 13:40	1A05	MOSs/TiO_2/$Ti_3C_2T_x$ Nanocomposites Based Gas Sensors for Highly Sensitive and Selective Gas Detection at Low Temperature Zhigang Zhu (University of Shanghai for Science and Technology, China)
13:40 – 14:00	1A06	Highly Selective Gas Sensor for Rapid Detection of Triethylamine Using PdRu Alloy Nanoparticles Functionalized SnO_2 Yilin Wang (Jilin University, China)
14:00 – 14:20	1A07	Engineering BiOCl/ZnO Based Gas Sensor for Trace Level Triethylamine Detection at Ambient Conditions Neeraj Dhariwal (Netaji Subhas University of Technology, India)
14:20 – 14:40	1A08	Amorphous In-Sn-Zn Oxide Nanoparticles for Acetone Gas Detection and Elucidation of Sensing Mechanisms Yu Jono (Kumamoto University, Japan)
14:40 – 15:00	1A09	Enhancement of Sensor Response of WS_2 Gas Sensor to Acetone by UV Ozone Treatment Yusuke Tanizaki (Keio University, Japan)

Room B (Room 21 : 2F)

Gas Sensors (5)

Chair: Koichi Suematsu, Taro Ueda

13:00 – 13:25	1B04	**(Invited)** YSZ-based Mixed Potential Type Sensors for Discriminative Detection of VOCs Fangmeng Liu (Jilin University, China)
13:25 – 13:45	1B05	High Accuracy Gas Detection with a Chemiresistive-Potentiometric Multivariable Sensor Jianxin Yi (University of Science and Technology of China, China)
13:45 – 14:05	1B06	Pt Loading of Phosphorus-doped Carbon Nanotube Aerogels in Fuel Cell-type Gas Sensors for Ultrasensitive H_2 Detection Lingchu Huang (Jilin University, China)
14:05 – 14:25	1B07	ppb-level Fuel Cell Type NO_2 Sensor Based on Nafion Proton Membrane and Au-Ni/CF Sensitive Electrode Sitong Feng (Jilin University, China)
14:25 – 14:45	1B08	All-Inorganic Double Perovskite Cs_2SnI_6 modified by Pt for Trace Nitrogen Oxide Detection at Room Temperature Hanlin Wu (Jilin University, China)
14:45 – 15:05	1B09	Waterproof Breathable Multifunctional Flexible Sensor for Underwater Tactile Sensing and Ammonia Gas Monitoring Yue Zhou (Jilin University, China)

Room C (Room 22 : 2F)

Gas Sensors (6)

Chair: Yusuke Inomata, Ammar Zakaria

13:00 – 13:25	1C04	**(Invited)** Improved Kernel DM+V with adaptive Distribution Model for Gas Distribution Mapping Syed Muhammad Mamduh Syed Zakaria (Universiti Malaysia Perlis, Malaysia)
13:25 – 13:45	1C05	Dual-band Ambient Wi-Fi Energy Harvesting for Powering a Batteryless VOC Sensor Wan-Young Chung (Pukyong National University, Korea)
13:45 – 14:05	1C06	Imaging of Ethanol Vapor Emitted from Pear Fruits for Evaluation of Post-harvest Maturation Kenta Iitani (Institute of Science Tokyo, Japan)
14:05 – 14:25	1C07	Sensing of Volatile Organic Molecules at the Surface of Single Aerosol and Sessile Droplets using the Quasi-elastic Laser Scattering Technique Derrick Michael Mott (Tohoku University, Japan)

Room D (Room 32 : 3F)

Biosensors (3)

Chair: Yusuke Fuchiwaki, Wangyang Fu

13:00 – 13:25	1D04	**(Invited)** Fabrication of Infectious Electrochemical Biosensors Based on Modified Metal Organic Framework Brian Yuliarto (Institut Teknologi Bandung, Indonesia)
13:25 – 13:50	1D05	**(Invited)** Metal-Organic Framework (MOF)-based Transducer for Electrochemical (EC) and Surface Plasmon Resonance (SPR) Biosensor Muhammad Iqbal (Institut Teknologi Bandung, Indonesia)
13:50 – 14:10	1D06	Detection of Surface Plasmon Resonance Induced Hot-electrons by - Au/N-doped Si/Al Schottky Barrier Device Chii-Wann Lin (National Taiwan University, Taiwan)
14:10 – 14:30	1D07	Decision Tree Regression algorithm for Enhancing the Dip Shift Detection of Surface Plasmon Resonance Biosensor Kuan-Ju Lin (National Taiwan University, Taiwan)
14:30 – 14:50	1D08	DNA Origami-empowered Surface Plasmon Resonance Biosensor for Ultrasensitive Detection of miRNA Liubing Kong (Zhejiang University, China)
14:50 – 15:10	1D09	Nucleic Acid Amplification-free Colorimetric Assay for MicroRNA Detection Using Single-strand DNA Binding Protein Guangqing Ren (Zhejiang University, China)

Room E (Room 33 : 3F)

Biosensors (4)

Chair: Yuko Ueno, Genxi Li

13:00 – 13:20	1E04	Electrochemical Impedance Sensor for Label-free Detection of Endometrial Cancer Based on Nanocomposites UiO-66@Au NPs@FA Min Li (Jiaotong University, China)

13:20 – 13:40	1E05	SAW Biosensor Based on DMSN@AuNPs for Highly Sensitive Detection of Pneumonia Biomarker Procalcitonin (PCT) Xiaojing Zhang (Zhejiang University, China)
13:40 – 14:00	1E06	Rapid Detection of Rhinitis Biomarkers in Serum Samples and Nasal Secretion Using Quantum Dots-based Immunosensors Jingqiu Chen (Huazhong University of Science and Technology, China)
14:00 – 14:20	1E07	Colorimetric Detection of Biomolecules Using Poly-Adenine DNA and Enzyme-Based Thermal-Induced AuNPs Aggregation Yi-Shan Wang (Chang Gung University, Taiwan)
14:20 – 14:40	1E08	Nanomaterial-based Highly Sensitive Biosensors for Point-of-Care Biomarker Detection in Body Fluids Hao Wan (Zhejiang University, China)
14:40 – 15:00	1E09	Electrooxidative Demethylation Based Wogonin Sensing using Hafnium Oxide Hybridized Butein Bionanoparticles Vinoth Krishnan (CSIR-Central Electrochemical Research Institute, India)

November 19, Morning

Room A (Conference Room : 2F)

Gas Sensors (7)

Chair: Tetsuya Kida, Ho-Won Jang

10:15 – 10:40	2A01	**(Invited)** Hybridization of Two-Dimensional (2D) Materials and Metal-Organic Frameworks (MOFs) for Room-Temperature Tunable Chemoresistive Sensors Tung T Tran (The University of Adelaide, Australia)
10:40 – 11:05	2A02	**(Invited)** Advances in Metal Oxide Based Chemical Sensors to Improve the 3S: Sensitivity, Selectivity and Stability Dario Zappa (University of Brescia, Italy)
11:05 – 11:25	2A03	Designed ppb-level H_2S Detection by $(Cu_{0.2}Co_{0.8})Co_2O_4$ Frameworks Derived from Cu-ZIF-67 Tongwei Yuan (Shanghai University, China)
11:25 – 11:45	2A04	Construction of NiCoFe-HO@NiCo-LDH Yolk-Shelled Microrods for Methanol Gas Sensing Wenshuang Zhang (Shanghai University, China)
11:45 – 12:05	2A05	The Synergistic effect of Different center metal species and Mono/Bi-metallic MOF through Experimental and Theoretical calculations for H_2S gas sensing Kun-Hao Luo (Chung Yuan Christian University, Taiwan)

Room B (Room 21 : 2F)

Gas Sensors (8)

Chair: Taro Ueda, Seong-Yong Jeong

10:15 – 10:40	2B01	**(Invited)** Flame Spray Pyrolysis: A Hybrid Strategy of Functionalized-metal Oxide Nanoparticulate Design for Selective Gas Sensors Chaikarn Liewhiran (Chiang Mai University, Thailand)
10:40 – 11:00	2B02	Construction of Asymmetric Sites in InO_2/InN for Enhancing NO_2 Sensing Performance Tiange Gao (Shanghai University, China)
11:00 – 11:20	2B03	Porous Yttrium Doped ZnO Nanosheets for Room Temperature NO_2 Detection Tianrun Zheng (Jilin University, China)
11:20 – 11:40	2B04	Single-atom Pt Functionalized Metal Oxide Semiconductor for High Sensitivity Gas Sensor Weiyi Bu (Jilin University, China)
11:40 – 12:00	2B05	Phase Structure Dependence of H_2S Gas Sensing Behavior in Cobalt Oxide Shin Joon Kang (Sungkyunkwan University, Korea)

Room C (Room 22 :2F)

Gas Sensors (9)

Chair: Koichi Suematsu, Ji-Wook Yoon

10:15 – 10:40	2C01	**(Invited)** Development of Breath Acetone Monitoring Device Using High Performance Acetone Sensing Materials In-Sung Hwang (SENTECH GMI Co. Ltd, Korea)

10:40 – 11:00	2C02	Room Temperature Hydrogen Sensing with Polyaniline Graft Film Masanobu Matsuguchi (Ehime University, Japan)
11:00 – 11:20	2C03	Synergistic Effects of rGO/Bi_2MoO_6 Interface for Room Temperature Fast Responsive Ethanol Gas Sensor Sagarika Panda (Netaji Subhas University of Technology, India)
11:20 – 11:40	2C04	High-performance Humidity Sensor Based on BiOCl/PANI Composite for Real-time Breath Monitoring and Contact-less Sensing Savita Mehlawat (Netaji Subhas University of Technology, India)
11:40 – 12:00	2C05	Enhanced Trace Level Ammonia Detection Through $MoSe_2$/PANI/MXene Composite: Synergistic Effects and Industrial Application Preety Yadav (Netaji Subhas University of Technology, India)

Room D (Room 32 :3F)

Biosensors (5)

Chair: Shinobu Sato, Yen-Ling Sung

10:15 – 10:35	2D01	Optimized Dissolved-oxygen Electrode Array Chip for Quantifying the Oxygen Consumption Rate of Single Mouse Blastocyst Ping-Feng Yang (National Chung Hsing University, Taiwan)
10:35 – 10:55	2D02	A Multi-parameter Microphysiological System Sensing Platform for Multi-organ Model Construction and Real-time Drug Evaluation Yuxuan Zhu (Zhejiang University, China)
10:55 – 11:15	2D03	Biomimetic Organoids Sensing Chip Based on Real-time Imaging and Impedance Detection for Modeling Olfactory Dysfunction in AD Mengxue Liu (Zhejiang University, China)
11:15 – 11:35	2D04	Taste Sensor Using Surface-modified Lipid/Polymer Membranes for Umami Substance Detection Wenhao Yuan (Kyushu University, Japan)
11:35 – 11:55	2D05	Development of an on-site Freshness Testing Kit Using Sequential Enzyme Reactions Involving ATP-related Compounds Yusuke Fuchiwaki (National Institute of Advanced Industrial Science and Technology, Japan)

Room E (Room 33 : 3F)

Biosensors (6)

Chair: Tsuyoshi Minami, Zhang Zhengjun

10:15 – 10:40	2E01	**(Invited)** New Biomedical Sensing Technology: Biomedical Eddy Current Sensors (BECS) Ting-Wei Wang (National Tsing Hua University, Taiwan)
10:40 – 11:00	2E02	Development of a High-sensitivity Wearable Electrochemical Biosensor for Serotonin Detection in Interstitial Fluid Toru Nohgi (Waseda University, Japan)
11:00 – 11:20	2E03	Process Optimization of Flexible Transistor Sensor for Real-time Cortisol Sensing Kyeong Jun Park (Daegu Gyeongbuk Institute of Science and Technology, Korea)

11:20 – 11:40	2E04	Organic Field-Effect Transistor-based Enzymatic Sensors for Real-sample Analysis Yui Sasaki (The University of Tokyo, Japan)
11:40 – 12:00	2E05	Thermally-drawn-fiber-based Probe for Multiplexed Ion Monitoring Jingxuan Wu (Tohoku University, Japan)

November 19, Afternoon

Room A (Conference Room : 2F)

Gas Sensors (10)

Chair: Noriko Saito, Dario Zappa

13:15 – 13:35	2A06	Catalytic Combustion-type Methane Gas Sensor Incorporating Apatite-type Gadolinium Silicate Wonjoon Lee (Osaka University, Japan)
13:35 – 13:55	2A07	Effects of Noble-metal Addition to Porous In_2O_3-SnO_2 Particles on Catalytic Activities and VOC-sensing Properties Genki Inao (Nagasaki University, Japan)
13:55 – 14:15	2A08	Robustness Improvement of Catalytic Combustible Gas Sensor Morio Watanabe (Figaro Engineering Incorporated, Japan)
14:15 – 14:35	2A09	Tunable Hydrogen Sensor with Sonication-Induced Palladium Nanogaps in a Capacitive Structure Sang-kil Lee (Yonsei University, Korea)
14:35 – 14:55	2A10	Activating the S Surfaces via Reversing the Electron Supply Direction for Fast Hydrogen Sensing Xin Jia (Shanghai University, China)
14:55 – 15:15	2A11	Improvement of the Photochemical Stability and Gas Sensing Performance of Fluorescent films through Assembly Strategies Jing Liu (Shaanxi Normal University, China)

Gas Sensors (13)

Chair: Toshio Itoh, Tung T Tran

15:40 – 16:00	2A12	Carbon Dots-modified Hollow Mesoporous Photonic Crystal Materials for Sensitivity and Selectivity Enhanced Sensing of Chloroform Vapor Junchen Liu (Jilin University, China)
16:00 – 16:20	2A13	Quantum Confinement Effect-driven Thin-film Transistor Gas Sensor Yanting Tang (Huazhong University of Science and Technology, China)
16:20 – 16:40	2A14	Development of Nanofiber Coated Quartz Crystal Microbalance Sensor for High-performance Detection of Volatile Organic Compounds (VOCs) Riris Sukowati (Institut Teknologi Bandung, Indonesia)
16:40 – 17:00	2A15	Single Pd Atoms Confined into a Metal-Organic Framework for Light-enhanced Ultrasensitive QCM Sensor Zhiheng Ma (Shanghai University, China)

Room B (Room 21 : 2F)

Gas Sensors (11)

Chair: Yoshitake Masuda, Chaikarn Liewhiran

13:15 – 13:40	2B06	**(Invited)** Innovative Detection of Ethylene Using Oxide Semiconductor Gas Sensors with a Nanoscale Cr_2O_3 Catalytic Overlayer Seong-Yong Jeong (Kongju National University, Korea)
13:40 – 14:00	2B07	Anomalous Response Behavior on Sensing Materials Lei Miao (Tohoku University, Japan)

14:00 – 14:20	2B08	Mercury Vapor and Carbon Monoxide Detection of Metal Oxide-doped Tin Oxide Hiroyuki Yamaura (Ehime University, Japan)
14:20 – 14:40	2B09	n-to-p-type Switching in ZnO/Carbon-Black Nano Heterostructures Sensing Ethanol at Room Temperature Paramesh Gadige (Sri Sathya Sai Institute of Higher Learning, India)
14:40 – 15:00	2B10	Precise Control of ZnO/SnO_2 Multilayer Heterostructures for Enhanced Gas Sensing Performance Zhenliang Dong (Shanghai University, China)
15:00 – 15:20	2B11	Ethanol Selective Detection Using $SmFe_{1-x}Co_xO_3$ p-type Semiconductors Yoshiteru Itagaki (Ehime University, Japan)

Other Sensors

Chair: Masato Tominaga, Satoko Takase

15:40 – 16:00	2B12	Anion Recognition and Binding Mechanism by Receptors in Solution Investigated by Ultrafast Vibrational Spectroscopy Hongtao Bian (Shaanxi Normal University, China)
16:00 – 16:20	2B13	Intraoral Salivary Turbidity Measurement Using a Wireless Mouthguard-type Optical Sensor Kenta Ichikawa (Institute of Science Tokyo, Japan)
16:20 – 16:40	2B14	Humidity Sensing and Touchless Sensing Based on Organic-Inorganic Hybrid Single Crystals Karan Grover (Netaji Subhas University of Technology, India)
16:40 – 17:00	2B15	$Ti_3C_2T_x$ Composite Aerogels Enable Pressure Sensors for Dialect Speech Recognition Assisted by Deep-learning Yanan Xiao (Jilin University, China)

Room C (Room 22 : 2F)

Gas Sensors (12)

Chair: Naoki Matsunaga, Kenji Obata

13:15 – 13:40	2C06	**(Invited)** Nanomechanical Sensors for Biological Gas Measurements Towards Practical Applications Genki Yoshikawa (National Institute for Materials Science, Japan)
13:40 – 14:05	2C07	**(Invited)** Fabrication of 1D Oxide Nanofiber Nanopatterns for Gas Sensor Applications Ji-Wook Yoon (Jeonbuk National University, Korea)
14:05 – 14:25	2C08	High-performance NO_2 Gas Sensor Enabled by Fe, N co-doped GQDs Modification and Pulse-driven Temperature Modulation Jiayin Han (Jilin University, China)
14:25 – 14:45	2C09	Ultrasensitive, Fully Transparent, and Flexible NO_x Sensors Based on Conductive Carbon Materials Wi Hyoung Lee (Konkuk University, Korea)
14:45 – 15:05	2C10	Laser-induced Graphene-based Sensor with PEDOT:PSS/Gold-Platinum Nanocomposites for Highly Sensitive Detection of Methane Jiaying Sun (Zhejiang University, China)

Biosensors (8)

Chair: Brian Yuliarto, Wu Chunsheng

15:40 – 16:05	2C12	**(Invited)** Amperometric Sensor for Iodate in Food Grade Salt Based on Screen-printed Carbon Electrode Fortunato B. Sevilla III (University of Santo Tomas, Philippines)
16:05 – 16:25	2C13	ZIF-8@ZIF-8-Ab Biocomposites Biomineralization Preparation for Separate Aβ42 and tTau Electrochemical Detection on Screen-printed Carbon Electrodes Hung-Ju Wang (National Yang Ming Chiao Tung University, Taiwan)
16:25 – 16:45	2C14	Amyloid Beta Detection: Innovating Alzheimer's Diagnosis with MoO_3-coated Quartz Crystal Microbalance (QCM) Jatinder Pal Singh (University of Delhi, India)
16:45 – 17:05	2C15	Phage-modified Screen-printed Carbon Electrodes for the Detection of *Listeria Monocytogenes* in RTE Meat Buffer Extracts Beatrice Marie Reyes Carreon (University of Santo Tomas, Philippines)

Room D (Room 32 : 3F)

Biosensors (7)

Chair: Yusuke Fuchiwaki, Tzu-En Lin

13:15 – 13:40	2D06	**(Invited)** Biosensor-based Methods for Exosome Analysis with Application to Precise Diagnosis of Cancer Genxi Li (Nanjing University, China)
13:40 – 14:05	2D07	**(Invited)** Integrative Microfluidic Platforms for Optical Mapping in Cardiac Safety Yen-Ling Sung (Taipei Medical University, Taiwan)
14:05 – 14:25	2D08	Realization of Tear Exosome Detection with a Janus Particle-based Sensing Platform Dhrubajyoti Das (National Cheng Kung University, Taiwan)
14:25 – 14:45	2D09	Non-spectroscopic Bacterial Sensor Utilizing Janus-Microparticle-induced Aggregation Phenomenon for Signal Registration Kyung Won Lee (Ajou University, Korea)
14:45 – 15:05	2D10	Upconversion-based Chiral Nanoprobe for Highly Selective Dual-mode Sensing and Bioimaging of Hydrogen Sulfide in vitro and in vivo Yang Lu (Jilin University, China)

Biosensors (9)

Chair: Chii-Wann Lin, Muhammad Iqbal

15:40 – 16:05	2D12	**(Invited)** Edge-enhanced Graphene Quantum Capacitor Biosensor by Reversible Covalent Functionalization Wangyang Fu (Tsinghua University, China)
16:05 – 16:25	2D13	High-Sensitivity 8-hydroxy-2′-deoxyguanosine Micro-electrochemical Sensor Based on Polyvinylpyrrolidone Functionalized Laser-induced Graphene Yunhan Ling (Tsinghua University, China)
16:25 – 16:45	2D14	Molecularly Imprinted Polydopamine/ZIF-67/Laser-induced Graphene for Point-of-care Determination of 3-nitrotyrosine Yunhan Ling (Tsinghua University, China)

16:45 – 17:05	2D15	Ultrasensitive Graphene Field-effect Transistor Biosensor for Rapidly Detecting Disease Markers Jiahao Hu (Zhejiang University, China)

Room E (Room 33 : 3F)

Sensor Materials for Chemical Sensor

Chair: Yasuo Yoshimi, Ting-Wei Wang

13:15 – 13:40	2E06	**(Invited)** Re-describing SERS for Quantification Zhang Zhengjun (Tsinghua University, China)
13:40 – 14:00	2E07	Portable Copper-based Electrochemical SERS Sensor for Point-of-care Testing of Paraquat and Diquat by on-site Electrostatic Preconcentration Shilin Li (Tsinghua University, China)
14:00 – 14:20	2E08	Au Paste for Material of Electrode to Enhance Electrochemiluminescence and Microrod Fabrication Kumi Y. Inoue (University of Yamanashi, Japan)
14:20 – 14:40	2E09	Lab on Pipette: High-Stability Biochemical Sensing with Nanogold Dendrite-Enhanced Curved Electrodes for on-site Urine Analysis Xianyou Sun (Zhejiang University, China)
14:40 – 15:00	2E10	Redox and pH-gated Optical Modulation of the TPIPP-based Organic Fluorophores and Their Sensing Applications Chih-Chien Chu (Chung Shan Medical University, Taiwan)
15:00 – 15:20	2E11	Tailoring the 3D Design of Molecularly Imprinted Polymers via Two-photon Stereolithography and Photoiniferter Polymerization Ernesto III Edejer Paruli (Université de Technologie de Compiègne, France)

Biosensors (10)

Chair: Tsuyoshi Tanaka, Min Li

15:40 – 16:05	2E12	**(Invited)** Aptamer-based Biosensors for the Detection of Marine Toxins Wu Chunsheng (Xi'an Jiaotong University, China)
16:05 – 16:25	2E13	Target-induced DNAzyme Recycle Amplification Strategy for Colorimetric Detection of Cystatin C Pin-Yu Lin (Chang Gung University, Taiwan)
16:25 – 16:45	2E14	Terahertz Waves for Chemical Sensing Jin Wang (Okayama University, Japan)
16:45 – 17:05	2E15	Lab-in-a-Vial Rapid Test for Internet of Things-embedded Point-of-healthcare Protein Biomarker Detection in Bodily Fluids Nan-Si Li (National Cheng Kung University, Taiwan)

Poster Presentation (Event Hall :1F)

Poster board size: (W)1,270 mm x (H)1,910 mm

*******Posters must be posted by 13:00 on November 18 and removed by 15:30 on November 19. *******

November 18 (Mon) 15:20 – 16:50

P01	Highly Sensitive Methyl Mercaptan Colorimetric Gas Sensor Using a Disulfide Compound and Paper Substrate Shuta Miura (Tohoku Institute of Technology, Japan)
P02	Preparation of QCM Coated with Nano-Colloid Layers and Its Moisture Sensitivity Yoshimi Seida (Toyo University, Japan)
P03	Development of Hydrogen Gas Sensor Using Planar Lightwave Circuit Erika Ishii (Yokohama National University, Japan)
P04	Highly Sensitive Breath Acetone Detection in Small Volumes Using a Colorimetric Reaction in a Porous Glass Chip Yuto Muramatsu (Tohoku Institute of Technology, Japan)
P05	Effects of Element Doping into Graphitic Carbon Nitride Film on the Hydrogen Gas Sensor Characteristics Kota Matsuda (Tokyo Denki University, Japan)
P06	Hydrogen Gas Sensor Characteristics of Nitrogen Defects Introduced-Graphitic Carbon Nitride Film Osuke Uemura (Tokyo Denki University, Japan)
P07	Arrhenius Plots for SnO_2-based Chemical Sensors Under Air with Ethanol and/or Water Yoshihiko Sadaoka (Ehime University, Japan)
P08	Thermal Programmed Desorption Analysis with Q-MAS for SnO_2 Based Powders Exposed to Ethanol Vapor Yoshihiko Sadaoka (Ehime University, Japan)
P09	Fast-responding Electrochemical Hydrogen Gas Sensor with Pt-Pd Based Electrode and Ionic Liquid/Polymeric Ionic Liquid Membrane Zhuoru Huang (Zhejiang University, China)
P10	Fabrication of Vertically Stacked $Ti_{0.87}O_2$ Nanosheet Film-based Sensors for Highly Sensitive and Selective Detection of NO_2 Sang-Won Lee (Jeonbuk National University, Korea)
P11	Visible-light-assisted NO_2 Sensors Based on Zn-Doped WO_3 Nanoparticles Cheyeon Kim (Jeonbuk National University, Korea)
P12	Solid Electrolyte Impedancemetric Gas Sensor Attached with Zeolite Receptor Shin Nagasako (Kyushu Institute of Technology, Japan)
P13	Perovskite Halide as a CO_2 Sensor Operative at Room Temperature Tsuyoshi Takaishi (Kyushu Institute of Technology, Japan)
P14	Effect of Zirconium Addition on Gas Sensing Properties of $CaFe_2O_4$-based CO_2 Sensor Kenji Obata (Kitakyushu College, Japan)

P15	Effect of Exposed Crystal Face of SnO_2 on the Response Characteristics of Pulse-driven Semiconductor Gas Sensors Rintaro Kobayashi (Kyushu University, Japan)
P16	Highly Sensitive Detection of Ethanol Using Pt-loaded WO_3 Nanocrystals Soki Yoneda (Kumamoto University, Japan)
P17	Elucidation of the Role of Palladium in the CO Sensing Mechanism of Pd-doped SnO_2 Using Operando Spectroscopy Yuki Shimada (Kumamoto University, Japan)
P18	Impact of Vanadium Addition on Tin Oxide Gas Sensor for Enhanced Acetone Detection Yurino Yamasaki (Kumamoto University, Japan)
P19	Thermally Conductive Hydrogen Gas Sensor Utilizing Carbon Fiber Chan Ho Seo (Tech University of Korea, Korea)
P20	CO Sensing Property of Morphology-controlled Metal-doped Tin Oxide Hidenori Yahiro (Ehime University, Japan)
P21	Development of Hydrogen Gas Sensor for Wide Detection Range with Low Operating Temperature Chanho Park (Tech University of Korea, Korea)
P22	Synthesis-in-Place of V_2O_5 Nanobelts for Ultrasensitive and Wide Range Humidity Detection Yeonhoo Kim (Korea Research Institute of Standards and Science, Korea)
P23	Boosting the Acetone Gas Sensing of WS_2-ZnO Nanosheets by Decoration of Bimetallic Pt/Pd Nanoparticles Yujin Kim (Inha University, Korea)
P24	Optical Dual Gas Sensor for Simultaneous Detection of NO and O_2 Based on Electrospun Fibers Containing $CsPbBr_3$ QDs and PtTFPP Cheng-Shane Chu (Ming Chi University of Technology, Taiwan)
P25	Exploration of Hydrogen Isotope Sensors Using Isotope Effects in Rhodium-Doped TiO_2 Shintaro Ida (Kumamoto University, Japan)
P26	Green Synthesis and Characterization of ZnO-$ZnAl_2O_4$ Nanocomposites for Enhanced H_2S Gas Sensing Applications Jongheon Kim (Inha University, Korea)
P27	Effects of UV-light Irradiation on VOC-sensing Properties of Porous SnO_2-based Gas Sensors Kaisei Komatsu (Nagasaki University, Japan)
P28	Acetone-sensing Mechanism of Pt-added Porous In_2O_3 SnO_2 Sensors by Using DRIFT Measurements Koki Fujita (Nagasaki University, Japan)
P29	Development of Nanograined Ag-Co_3O_4 Core@Shell Structure for Improved Xylene Sensing Properties Seonwoo Jang (Hanyang University, Korea)
P30	Acetone-sensing Properties of Semiconductor MEMS Sensors Using Fe_2O_3-mixed WO_3 Ryusei Tanoue (Nagasaki University, Japan)
P31	Microwave-assisted Improvement of NO_2 Gas Sensing in ZnO-$Ti_3C_2T_x$ MXene Nanocomposites Ka Yoon Shin (Hanyang University, Korea)
P32	Highly Sensitive Xylene Gas Detection Using Cauliflower-shaped Au-TiO_2 Core-Shell Nanoparticles Sungjoon Moon (Hanyang University, Korea)

P33	SnO_2 Nanowires Coated with Titanium-based Metal-Organic Framework for Improved NO_2 Sensing in Humid Conditions Eun Bi Kim (Hanyang University, Korea)
P34	A Micro GC Sensor System for Detecting Environmental Gas Mixtures Kwangmin Shim (Hongik University, Korea)
P35	Photoactivated Gas Sensors Based on Highly Aligned 3-Dimensional TiO_2 for High-performance NO_2 Sensing Yun-Haeng Cho (Korea University of Technology and Education, Korea)
P36	Development of Light-driven Gas Sensors Using WO_3 Powders Prepared by Hydrothermal Synthesis Hirotaka Shimoji (Nagasaki University, Japan)
P37	Highly Ordered SnO_2 Nanoflakes by HT-GLAD for High-performance Gas Sensors Jae Han Chung (Korea University of Technology and Education, Korea)
P38	Improvement of Ethanol Sensing Properties Under Pulse-driven Mode Using Surface Modified SnO_2 Nanoparticles Koichi Suematsu (Kyushu University, Japan)
P39	Effect of the Operation Temperature for VOC Gas Detection Mechanism on SnO_2 Nanorods Koichi Suematsu (Kyushu University, Japan)
P40	High-intensity Ultrasonic Exfoliation-assisted Rapid Preparation of MXene for Gas Sensing Yu Yao (University of Shanghai for Science and Technology, China)
P41	The Microfluidic System Integrating EIS Detectors for Rapid Detection of Salmonella Using Aptamer-coated Magnetic Beads and pDEP Concentration Technique Avinash V Police Patil (National Chung Hsing University, Taiwan)
P42	Electrochemical Immunosensor Based on Graphene/BSA Towards Label-free and High-sensitive AREG detection Chunsheng Wu (Xi'an Jiaotong University, China)
P43	Polymer Additive Effects on Sensor Stability of Flux-type Alcohol Gas Sensor Based on Pyrroloquinoline Quinone-Alcohol Dehydrogenase Modified Cellulose Nanofiber Film Electrode Ismail Azizi (Saga University, Japan)
P44	Prediction of Glucose Electrochemical Enzymatic Biosensor Sensitivity Using Machine Learning Pauline Marie Stephanie Kiefer (University of Tsukuba, Japan)
P45	Electrode Reaction Behavior of Aldehyde Dehydrogenase Absorbed on Multi-walled Carbon Nanotubes and Its Application to Flux-type Transdermal Acetaldehyde Gas Sensor Harune Sakaguchi (Saga University, Japan)
P46	Development of an Electrochemical Immunoassay Using Rapid Capture of Antibody-modified Liposomes by Dielectrophoresis Saki Mizuta (University of Hyogo, Japan)
P47	Fabrication of Liposome Arrays Using Electro-reduced Patterned ITO Substrates and Evaluation of Their Functionality Chihiro Tsuji (University of Hyogo, Japan)
P48	Fabrication of ZnO Nanorods on Gold Electrode via Electrodeposition for Electrochemical Biosensors Panita Kasamechonchung (Hokkaido University, Japan)
P49	Electrochemiluminescence Imaging of Cell Adhesion in Gut-on-a-chip Kimiharu Oba (Tohoku University, Japan)

P50	Assessment of Respiratory Activity in 3D Cultured Cells Using Electrochemiluminescence Imaging Ryota Shikuwa (Tohoku University, Japan)
P51	Investigation of ROS Detection Using Electrochemiluminescence of Luminol Derivatives Miyu Mashiko (Tohoku University, Japan)
P52	A Portable Molecular Diagnostic Platform with Isothermal DNA Amplifying and Non-spectroscopic Optical Signaling Functions Yujin Sung (Ajou University, Korea)
P53	Bacterial Detection Kit with Chemical Antibiotics-labeled Reflective Microparticles and Microfluidic Chip Kyunghee Song (Ajou University, Korea)
P54	Enhancing Sensitivity of A FRET Aptasensor by Increasing the Number of Graphene Oxide Layers Rio Kijima (Chuo University, Japan)
P55	Creation of Liposomes Encapsulating Hydrophobic Fluorescent Dyes as a Molecular Concentrator for Highly Sensitive Detection Yusuke Katsuwata (Chuo University, Japan)
P56	Palindromic DNA Assembly-mediated Colorimetric Aptasensor for Sensitive Detection of DEHP Using in-situ Synthesized Gold Nanoparticles Im-Fong Ip (Chang Gung University, Taiwan)
P57	Investigation of Actual Measurement of Histamine in Fish Meat by Histamine Sensor Using Molecularly Imprinted Polymers Hina Sakurai (Shibaura Institute of Technology, Japan)
P58	Development of Cortisol Sensor by Measuring the Resistance of ox-CNT Immobilized Filter Paper Kenshin Kawahara (Tokyo University, Japan)
P59	Detection of Vitamins Using a Monolayer Graphene Electrode Integrated with a Bicontinuous Microemulsions-Based Gel Ayumu Shiuchi (Chuo University, Japan)
P60	Electrochemical Bacterial Detection Using Metal Nanostructures Akihiro Nakao (Osaka Metropolitan University, Japan)
P61	Development of Viable Bacterial Sensor for on-site Testing Based on Electrochemical Properties of MTT Akira Tokonami (Osaka Metropolitan University, Japan)
P62	Decoding of Depression-related Electrophysiological Signals in Mice Using Micro-Nano Implantable Electrodes Ping Wang (Zhejiang University, China)
P63	High-throughput Microbial Species Identification by Image Sensor-based Colony Fingerprinting System Hikaru Tago (Tokyo University of Agriculture and Technology, Japan)
P64	Near-field Fluorescence Imaging Based on SPR-SPEF Technology and Its Application to Cell Observation and DO Measurement Yasunori Iribe (University of Toyama, Japan)
P65	Organoid-based Biohybrid Interface with Functional Electronic Olfaction Nan Jiang (Zhejiang University, China)
P66	Design of Electrochemical Sensor for Simultaneous Detection of Multiple Bacterial Species Using Organic-Inorganic Nanohybrids Satohiro Itagaki (Osaka Metropolitan University, Japan)

P67	The Symphony via Photoelectrochemical for Alzheimer's Disease Jung Chih Chen (National Yang Ming Chiao Tung University, Taiwan)
P68	Analysis of Protein Droplets Using Microelectrodes and Micropipettes Yuanjia Lin (Tohoku University, Japan)
P69	Design of Peptide-based Biosensor for Detection of KIM1 Protein Muhammad Syafiq bin Mohd Razib (Kyushu Institute of Technology, Japan)
P70	Analysis of C-Reactive Protein Using Droplet-free Digital Enzyme-linked Immunosorbent Assay Based on Electrochemiluminescence Shuri Nakamura (Tohoku University, Japan)
P71	Challenges in Surface Plasmon Resonance Detection Limits: Precision Measurements Based on Fluid Control and Light Wavelength Stability Chia-Ling Chiang (National Taiwan University, Taiwan)
P72	Rapid and Simple Electrochemical Detection of PCR Product Using Synthetic Naphthalene Diimide Derivatives Shinobu Sato (Kyushu Institute of Technology, Japan)
P73	Development of an Implantable Inosine-Molecularly Imprinted Polymer Carbon Paste Electrode for Freshness Monitoring of Fish Takumi Iwasaki (Shibaura Institute of Technology, Japan)
P74	Sequential Injection Analysis of Bisphenol A Using an Ion-selective Electrode Detector Takashi Masadome (Shibaura Institute of Technology, Japan)
P75	Amperometric Anion Sensor Using Mixed Metal Oxide Thick-film Electrode Fumiya Tsutsumi (Kyushu Institute of Technology, Japan)
P76	Quantification of pH Test Paper Colors Into pH Values Using Machine Learning Yuto Nakamura (Nagoya University, Japan)
P77	Electrochemical Sensors Using Nickel-Based Metal-Organic Framework Towards Heavy Metal Detection Chunsheng Wu (Xi'an Jiaotong University, China)
P78	Single Crystal Growth and Characterizations of Rare Earth Doped Lu_2O_3 for Ionizing Radiation Sensors Takayuki Yanagida (Nara Institute of Science and Technology, Japan)
P79	Dosimetric Properties of Tb-Doped K_2O-B_2O_3-SiO_2 Glasses Shiyu Rim (Nara Institute of Science and Technology, Japan)
P80	Near-infrared Scintillation Properties of Er-Doped CsI Single Crystals Shunta Takase (Nara Institute of Science and Technology, Japan)
P81	Optical and Scintillation Properties in Ce-doped BaO-P_2O_5 Glasses Keiichiro Miyazaki (Nara Institute of Science and Technology, Japan)
P82	Evaluation of Photoluminescence and Dosimetric Properties of Dy-doped $Sr_3Y(PO_4)_3$ Single Crystals Haruaki Ezawa (Nara Institute of Science and Technology, Japan)
P83	Deep Learning-based Complex Stimuli Detection in Multimodal Sensors Kyobin Keum (Sungkyunkwan University, Korea)
P84	Fabrication of Ternary Hybrid Composite for Passivation-free Ultra-sensitive Detection of Bisphenol A Chi-Hsien Huang (Ming Chi University of Technology, Taiwan)

P85	Use of Fluorescence Probe Molecules to Radiation Dosimetry Masanori Koshimizu (Shizuoka University, Japan)
P86	Role of Ag to CuS_x Catalysts in CO_2 Reduction to HCOOH in Sulfur-containing CO_2 Gas Jong-Lam Lee (Seoul National University, Korea)
P87	Nitrite-ion Sensing Application of Corrosion Protection Kae Amano (Kyushu University, Japan)
P88	Highly Sensitive Solution Processable Microporous Receptor Materials for Advanced Gas or VOC Sensors Subrata Maji (National Institute for Materials Science, Japan)
P89	Scintillation Properties of Tb-doped $SrTa_2O_6$ Single Crystals Yuta Tominaga (Fukuoka University, Japan)
P90	Development of a Flexible Vancomycin Sensor with Molecularly Imprinted Carbon Particle Fixed on a Wire Haruka Okamura (Shibaura Institute of Technology, Japan)
P91	Synthesis and Electrochemical Properties of Niobium Phosphates-related Solid Solutions, $Ti_{1-x}Zr_xNb(PO_4)_3$, with Multivalent Ion Conductivity Kenta Kunisawa (Kochi University, Japan)
P92	Synthesis and Characterization of NASICON-based New Solid Solutions with Magnesium Ionic Conductivity Shota Tange (Kochi University, Japan)
P93	Blueprinted From Nature: Duplicating the Surface of Xanthosoma Sagittifolium Leaf on UV-curable Electroactive Polymethacrylate Film Through Biomimicking Technique for H_2S Gas Sensing En-Ming Chang (Chung Yuan Christian University, Taiwan)
P94	Binary Metal Oxide (NiO/SnO_2) Composite with Electrochemical Bifunction: Detection of Neuro Transmitting Drug and Catalysis for Hydrogen Evolution Reaction Thang Cao Doan (Hanyang University, Korea)
P95	Water Hyacinth Structured In_2S_3 for ppb Level NO_2 Detection Megha Mishra (Birla Institute of Technology and Science, India)
P96	Redox-responsive Coumarin-Triphenyliminophosphorane Fluorophore: A Novel Probe for Reactive Oxygen Species Detection Shiao-Chen Huang (Chung Shan Medical University, Taiwan)
P97	Facile Synthesis of Bimetallic Ag-Cu Catalysts for Electrochemical H_2O_2 Sensing Geon Hyeong Park (Gangneung-Wonju National University, Korea)
P98	Visible Light-induced Photoelectrochemical Sensing of Nitrite Ions with a Bismuth Vanadate Electrode Serin Jung (Gangneung-Wonju National University, Korea)
P99	Modification of Graphitic Carbon Nitride and Its Application as an Electrochemical H_2O_2 Sensor Kyung Suh Kim (Gangneung-Wonju National University, Korea)
P100	A Sensor System for Tracking Apple Ripening and Decay Processes Joon-Boo Yu (Kangwon National University, Korea)
P101	Preparation, Characterization of Electroactive Organic-Inorganic Composite Self-healing Hydrogel for Application in Gas Sensing Devices Yun-Yen Yang (Chung Yuan Christian University, Taiwan)

P102	Synthesis, Characterization of Cu-MOF Materials with Different Surface Area and Their Comparative Studies Applied in Gas Sensing Devices Jui-Ming Yeh (Chung Yuan Christian University, Taiwan)
P103	Solution-less Photoresist Micropattern Transfer for Sensing Materials Integration on Unconventional Substrates Na Yoon Kim (Daegu Gyeongbuk Institute of Science and Technology, Korea)
P104	Real-time Monitoring of Contaminant Particles During the Plasma-based Microfabrication Using a Quartz Crystal Microbalance SeeJIn Ryoo (Daegu Gyeongbuk Institute of Science and Technology, Korea)
P105	IoT Based Electronic Noses for Regional Hazardous Gas Leakage Monitoring Shimeng Mou (Zhejiang University, China)
P106	A-site Doped Single-crystal Microcubes of Potassium Sodium Niobate Prepared via Molten-salt Processing Yuho Min (Kyungpook National University, Korea)
P107	Tunable Optical Sensing Through Galvanic Replacement Reaction of Copper Nanostructures into Other Metals Yuho Min (Kyungpook National University, Korea)
P108	Molten-salt Synthesized Potassium Sodium Niobate Single-crystal Microcuboids Featuring Dislocation-induced Nanodomains and Relaxor Ferroelectric Properties Seonhwa Park (Kyungpook National University, Korea)