



# 9th GOSPEL Workshop. Gas sensors based on semiconducting metal oxides: novel materials & mechanism analyses & application fields

## Tuesday, 6 August 2024

**Day II, Session I: Chair: Prof. Han Jin (Shanghai Jiao Tong University, China), Prof. Hua-Yao Li (Huazhong University of Science and Technology, China) (08:30 - 11:55)**

time	[id] title	presenter
08:30	[160] Colloidal quantum dots-based gas sensors	LIU, Huan
08:55	[161] Chemical sensor array using 2D materials	KIM, Soo Young
09:10	[190] Halide perovskites Cs <sub>2</sub> SnX <sub>6</sub> (X = Cl, Br, I) for robust formaldehyde and humidity sensing at room temperature	ZHANG, Le-Xi
09:25	[162] Operando Infrared Spectroscopy Investigations of Light-Excited Metal Oxide-Based Gas Sensors	WANG, Xiao-Xue
09:40	[163] Room temperature metal oxides-based gas sensors: Strengthen strategies and application	WU, Kaidi
09:55	[164] A multisite strategy to improve roomtemperature DMMP sensing performances on reduced graphene oxide modulated by Ndoped carbon nanoparticles and copper ions	XING, Yunpen
10:10	Coffee Break	
10:30	[165] Electronic Nose System Applications for EHS (Environment, Healthcare, Safety) and Standardization	BYUN, Hyung-Gi
10:55	[166] Hydrogen sniffer based on CNT-FET	HUA, Zhongqiu
11:10	[197] Amperometric biosensor for H <sub>2</sub> S high-specificity based on SOD1 enzyme modified PbS colloidal quantum dots	ZHANG, Wenjian
11:25	[169] Pattern Recognition with Temperature Regulation: Single YSZ-based Mixed Potential Sensor Classifies Multiple Mixtures of Isoprene, N-propanol and Acetone	LU, Siyuan
11:40	[141] Single Pt atom functionalized ZnO nanowires for high sensitivity and rapid hydrazine gas sensor	BU, Weiyi

**Day II, Session I: Prof. Zhongqiu Hua (Peking University, China) (13:00 - 15:15)**

time	[id] title	presenter
13:00	[180] Exploring Oxygen Adsorption Mechanisms on SnO <sub>2</sub> based Gas Sensors using In Operando Infrared Spectroscopy: Insights, Dependencies, and Comparisons	KÖNINGER, Tobias
13:15	[181] Semiconductor Gas Sensors with Potential for Early Warning of Thermal Runaway in Lithium-ion Battery	IZAWA, Kuniyuki
13:30	[182] The clinical diagnosis/monitoring of asthma, lung cancer and uremia using metal oxides semiconductor-based gas sensors	QIANG, Jing

13:45	[183] Portable precursor chemicals detection instrument based on metal oxide gas sensor array	LI, Haocheng
14:00	[184] A Room-Temperature Dual-Mode Humidity/Ammonia Sensor Based on Gallium Oxide for Breath Analysis	DAI, Jianxun
14:15	[185] Multilayer Fluorine-Free MoBTx MBene with Hydrophilic Structural-Modulating for the Fabrication of a Low-Resistance and High-Resolution Humidity Sensor	LIU, Yong
14:30	[186] Pt-modified hollow tube-like polyaniline-based NH <sub>3</sub> sensor	YUAN, Qu
14:45	[187] Wearable multimodal chemical sensor with deep learning and neural networks based on the same material for monitoring human health and outdoor UV recognition	JIA, Qisong
15:00	[200] Olivine-type cadmium germanate for gas sensor	LI, Jiayu