

Session Program

Aug 4 - 6, 2024

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

Day II, Session I

Tue, August 6

8:30 AM

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

Session

8:30 - 8:55 AM **Colloidal quantum dots-based gas sensors**

Speaker

Huan Liu

8:55 - 9:10 AM **Chemical sensor array using 2D materials**

Speaker

Soo Young Kim

9:10 - 9:25 AM

Halide perovskites Cs₂SnX₆ (X = Cl, Br, I) for robust formaldehyde and humidity sensing at room temperature

Speaker

Le-Xi Zhang

9:25 - 9:40 AM

Operando Infrared Spectroscopy Investigations of Light-Excited Metal Oxide-Based Gas Sensors

Speaker

Xiao-Xue Wang

9:40 - 9:55 AM

Room temperature metal oxides-based gas sensors: Strengthen strategies and application

Speaker

Kaidi Wu

9:55 - 10:10 AM

A multisite strategy to improve roomtemperature DMMP sensing performances on reduced graphene oxide modulated by Ndoped carbon nanoparticles and copper ions

Speaker

Yunpen Xing

10:10 - 10:30 AM **Coffee Break**

10:30 - 10:55 AM

Electronic Nose System Applications for EHS (Environment, Healthcare, Safety) and Standardization

Speaker

Hyung-Gi Byun

10:55 - 11:10 AM **Hydrogen snifter based on CNT-FET**

Speaker

Zhongqiu Hua

11:10 - 11:25 AM

Amperometric biosensor for H₂S high-specificity based on SOD1 enzyme modified PbS colloidal quantum dots**Speaker**

Wenjian Zhang

11:25 - 11:40 AM

Pattern Recognition with Temperature Regulation: Single YSZ-based Mixed Potential Sensor Classifies Multiple Mixtures of Isoprene, N-propanol and Acetone**Speaker**

Siyuan Lu

11:40 - 11:55 AM

Single Pt atom functionalized ZnO nanowires for high sensitivity and rapid hydrazine gas sensor**Speaker**

Weiyi Bu

11:55 AM

1:00 PM

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

1:00 - 1:15 PM

Exploring Oxygen Adsorption Mechanisms on SnO₂ based Gas Sensors using In Operando Infrared Spectroscopy: Insights, Dependencies, and Comparisons**Speaker**

Tobias Köninger

1:15 - 1:30 PM

Semiconductor Gas Sensors with Potential for Early Warning of Thermal Runaway in Lithium-ion Battery**Speaker**

Kuniyuki Izawa

1:30 - 1:45 PM

The clinical diagnosis/monitoring of asthma, lung cancer and uremia using metal oxides semiconductor-based gas sensors**Speaker**

Jing Qiang

1:45 - 2:00 PM

Portable precursor chemicals detection instrument based on metal oxide gas sensor array**Speaker**

Haocheng Li

2:00 - 2:15 PM

A Room-Temperature Dual-Mode Humidity/Ammonia Sensor Based on Gallium Oxide for Breath Analysis**Speaker**

Jianxun Dai

2:15 - 2:30 PM

Multilayer Fluorine-Free MoBTx MBene with Hydrophilic Structural-Modulating for the Fabrication of a Low-Resistance and High-Resolution Humidity Sensor

Speaker

Yong Liu

2:30 - 2:45 PM

Pt-modified hollow tube-like polyaniline-based NH₃ sensor

Speaker

Qu Yuan

2:45 - 3:00 PM

Wearable multimodal chemical sensor with deep learning and neural networks based on the same material for monitoring human health and outdoor UV recognition

Speaker

Qisong Jia

3:00 - 3:15 PM

Olivine-type cadmium germanate for gas sensor

Speaker

Jiayu Li

3:15 PM