

iSOCS Workshop

1–4 September 2025, Hakodate, Japan



CHEMICAL SENSING: FROM THE LAB TO THE FIELD

Day 1 (Monday, September 1)

9:45 –	Venue opens (Multipurpose Meeting Room A(多目的会議室A), Hakodate Arena)
10:15 – 10:30	Opening Remarks
10:30 – 12:00	Rethinking the E-nose: 40+ years, few successes, many lessons, and the way from promise to practice. Genki Yoshikawa, National Institute for Materials Science (NIMS)
12:00– 13:00	Lunch at the Venue
13:00 – 14:30	Methods for successful applications, situations in Europe. Yanxia Hou-BROUTIN, Centre National de la Recherche Scientifique (CNRS)
14:30– 14:45	Coffee Break
14:45 – 16:15	Contemporary industrial view on fundamental, applied, and commercialization aspects of chemical sensing innovations. Radislav A. Potyrailo, GE Vernova Advanced Research Center
Hotel Room Key Pickup at the Venue	
18:00 – 20:00	Dinner at “CONVENTIONHALL FUYOU (芙蓉の間)”, 2nd Floor, Hanabishi Hotel *We will have a toast at 18:00. Please come to the dinner venue before the start time.

Day 2 (Tuesday, September 2)

7:00 – 9:00	Breakfast at Restaurant “Nanakamado (ななかまど)”, 4th Floor, the Hotel *Buffet style. Please help yourself and enjoy your meal at any time within the designated hours.
8:50 –	Venue opens
9:00 – 10:30	Statistical and technical aspects of sampling - focus on odour collection. Anne-Claude Romain, Université de Liège
10:30– 10:45	Coffee Break
10:45 – 12:15	Signal preprocessing for chemical sensing arrays. Antonio Pardo, Universitat de Barcelona
12:15– 13:15	Lunch at the Venue
13:15 – 14:45	E-nose applications in the biomedical field: state of the art, challenges, and future perspectives. Raffaele Dellaca, Politecnico di Milano
14:45– 15:00	Coffee Break
15:00 – 16:00	Flash presentation from participants (optional)
16:00 – 17:00	Poster presentation from participants (optional)
18:00 – 20:00	Dinner at “CONVENTIONHALL FUYOU (芙蓉の間)”, 2nd Floor, Hanabishi Hotel *We will have a toast at 18:00. Please come to the dinner venue before the start time.

iSOCS

International Society for
Olfaction and Chemical Sensing

<https://www.olfactionsociety.org>

iSOCS Workshop

1–4 September 2025, Hakodate, Japan



CHEMICAL SENSING: FROM THE LAB TO THE FIELD

Day 3 (Wednesday, September 3)

7:00 – 9:00	Breakfast at Restaurant “Nanakamado (ななかまど)”, 4th Floor, the Hotel *Buffet style. Please help yourself and enjoy your meal at any time within the designated hours
8:50 –	Venue opens
9:00 – 10:30	Odour pollution and instrumental odour monitoring systems: Regulatory framework in Europe, technological and methodological issues, and future perspectives. Laura Capelli, Politecnico di Milano
10:30– 10:45	Coffee Break
10:45 – 12:15	(Online) Miniature electronic nose system and applications. Kea-Tiong Tang, National Tsing Hua University
12:15– 13:15	Lunch at the Venue
13:15 – 14:45	Electronic nose standardization and beyond. Hyung-Gi Byun, Kangwon National University
14:30– 14:45	Coffee Break
15:00 – 16:30	Robotic applications of chemical sensors and utilization of AI in olfactory display technology. Haruka Matsukura, The University of Electro-Communications Hiroshi Ishida, Tokyo University of Agriculture and Technology
18:00 – 22:00	Social Event (Dinner at Hakodate Beerhall & Night View Tour to Mt. Hakodate) *The charter bus will depart from in front of the hotel at 18:00. Please board the bus before the departure time.

Day 4 (Thursday, September 4)

7:00 – 9:00	Breakfast at Restaurant “Nanakamado (ななかまど)”, 4th Floor, the Hotel *Buffet style. Please help yourself and enjoy your meal at any time within the designated hours
8:50 –	Venue opens
9:00 – 10:30	Olfactory interface and its application: Odor biosensors, olfactory displays, odor reproduction and scent creation. Takamichi Nakamoto, Institute of Science Tokyo
10:30– 10:45	Coffee Break
10:45 – 11:45	Challenges and future prospects in business development of olfactive technologies: Medical, industrial, and entertainment cases. Keisuke Kimura, Sony Corporation *Demonstration of the olfactory display developed by Sony is also included.
11:45 – 12:00	Closing Remarks
12:00– 13:00	Lunch at the Venue

iSOCS

International Society for
Olfaction and Chemical Sensing

<https://www.olfactionsociety.org>



CHEMICAL SENSING: FROM THE LAB TO THE FIELD

Flash/Poster Presentation Entries

1. Low-Power Pulsed-Heating System for Integrated Metal-Oxide Gas Sensors

Yohsuke Shiiki^{1,2}, Tsunaki Takahashi³, Takeshi Yanagida³, Hiroki Ishikuro²

¹ National Institute for Materials Science (NIMS)

² Keio University

³ The University of Tokyo

2. From Adsorption Kinetics to Sensor Response in Nanomechanical Sensors: A Modeling Perspective

Meng-Qun Feng^{1,2}, Kosuke Minami¹, Yingcheng Zhou^{1,2}, Genki Yoshikawa^{1,2}

¹ National Institute for Materials Science (NIMS)

² University of Tsukuba

3. Detection of Gas Emission from the Ground by Microdrone Using the Fountain Flow

Yohei Watanabe¹, Kyohei Yamashita¹, Takeru Kaji¹, Kasumi Yoshida¹, Takeshi Matsubara¹, Haruka Matsukura², Hiroshi Ishida¹

¹ Tokyo University of Agriculture and Technology

² The University of Electro-Communications

4. Development of Autonomous Mobile Robot for Outdoor Gas-Source Localization: Comparison of Three Exploration Algorithms

Hisayoshi Ando¹, Takumi Haratsu¹, Motoki Sakaue¹, Hikaru Kyoya¹, Haruka Matsukura², Hiroshi Ishida¹

¹ Tokyo University of Agriculture and Technology

² The University of Electro-Communications

5. Beagle Model Analysis of Fluid Dynamics in Canine Olfactory Epithelium for Enhanced Gas Sensing

Keiji Komatsu¹, Tomohiro Yonezawa², Kie Yamamoto²

¹ Nagaoka University of Technology

² University of Tokyo

6. Resonating with Scents: Acoustic-Olfaction as a Portable Gas Analyser

Tanju Yildirim, Meng-Qun Feng, Kosuke Minami, Kota Shiba, Genki Yoshikawa

National Institute for Materials Science (NIMS)

7. Intelligent Electronic Noses: From Gas Sensing to Integrated Systems

Gyuweon Jung

Seoul National University



CHEMICAL SENSING: FROM THE LAB TO THE FIELD

Flash/Poster Presentation Entries

8. Development of Breath Acetone Monitoring Device Using High Performance Acetone Sensing Materials

In-Sung Hwang¹, Do Joon Yoo¹, Myung Sung Sohn², Yun Chan Kang²

¹ SENTECH GMI Co. Ltd

² Korea University

9. An Electronic Nose for the Differential Diagnosis of Pneumonia: A Preliminary Study

Ana Maria Tischer¹, Emanuele Zanni¹, Carmen Bax¹, Stefano Robbiani¹, Simone Cuocina³, Luca Novelli³, Simone Vargiu³, Jordi Fonollosa², Raffaele Dellacà¹, Fabiano Di Marco^{3,4}, Laura Capelli¹

¹ Politecnico di Milano

² Universitat Politècnica de Catalunya

³ Azienda Ospedaliera Socio Sanitaria Territoriale Papa Giovanni XXIII

⁴ Università degli Studi di Milano

10. Integration of a Prototype Module into a Commercial E-Nose to enhance Pneumonia Diagnosis

Emanuele Zanni, Ana Maria Tischer, Laura Capelli, Raffaele Dellacà

Politecnico di Milano

11. Development of a Calibration Transfer Methodology and Experimental Setup for Urine Headspace Analysis

Michela Cassinerio, Beatrice Lotesoriere, Stefano Robbiani, Emanuele Zanni, Raffaele Dellacà, Laura Capelli

Politecnico di Milano

12. Mold Smell Detection in Mineral Water by Amplifying Odor Intensity

Yuma Okazaki¹, Koyomi Ando¹, Daisuke Taniguchi¹, Yozan Nagashima¹, Haruka Matsukura², Hiroshi Ishida¹

¹ Tokyo University of Agriculture and Technology

² The University of Electro-Communications

13. Study on Odor Reproduction System Utilizing Olfactory White: Fundamental Investigations toward Reproduction of Basic Odors in Daily Life

Yuki Yoshida¹, Riku Nomura¹, Ryusuke Chida¹, Uta Nakashima¹, Haruka Matsukura², Hiroshi Ishida¹

¹ Tokyo University of Agriculture and Technology

² The University of Electro-Communications

14. Odor Synthesis from Olfactory White: Improving Odor Synthesis Accuracy with Furfuryl Thiol

Riku Nomura¹, Ryusuke Chida¹, Yuki Yoshida¹, Uta Nakashima¹, Haruka Matsukura², Hiroshi Ishida¹

¹ Tokyo University of Agriculture and Technology

² The University of Electro-Communications