



SPECIAL SESSION 05

Biomimetic Sensor Systems for Analysis of Taste

Biomimetic sensor systems inspired by the human gustatory system have emerged as powerful analytical tools for characterizing complex liquid samples. By integrating chemical sensing materials, multisensor array designs, and advanced data-driven algorithms, these systems can capture multidimensional taste information that cannot be obtained by traditional single-parameter analytical techniques. Recent developments in electronic tongues, biosensors, and bio-inspired transduction strategies have significantly expanded their applications in food science, environmental monitoring and biomedical diagnostics. As multimodal and machine learning based sensing rapidly advances, biomimetic sensors are becoming essential for objective, rapid, and non-destructive characterization of chemical compositions for various applications.

This Special Session will focus on researches related to the design, modeling, and application of biomimetic sensors and systems, including but not limited to:

1. Bio-inspired chemical sensing materials and transducers
2. Electronic tongue systems and multi-sensor platforms
3. Signal processing, pattern recognition, and machine learning methods for taste interpretation
4. Novel biosensing approaches using optical, electrochemical, and mass-sensitive techniques
5. Biomedical and clinical applications, including liquid biopsy, metabolic screening, and disease markers
6. Novel microfluidic, flexible, or wearable biosensing technologies

Special Session Organizers



Dmitry Kirsanov

St. Petersburg State University,
Russia



Hao Wan

Zhejiang University, China

Submissions and Paper Specification Information

Option A

to the conference through Epapers Portal



Scan the QR code or click the following link to submit your paper to conference through Epapers Portal:

<https://epapers2.org/isoen2026>

*The accepted papers after proper registration and presentation will be included in the conference proceedings, which will be published in **IEEE Xplore**.

*Paper Submission Closes: **5 January 2026**

Option B

direct to the IEEE Sensors Letters through
ScholarOne Manuscripts



Scan the QR code or click the following link to submit your paper to conference through ScholarOne Manuscripts:

<https://www.isoen2026.org/author-instructions/>

*Paper Submission Closes: **15 December 2025**

Conference Sponsors



Organizers



生物感知与多模态智能信息处理重庆市重点实验室
Chongqing Key Laboratory of Bio-perception & Multimodal Intelligent Information Processing



Contact Us



Ms. Cassie Zhan



+86 13541382102



isoen2026@youngac.cn



<https://www.isoen2026.org/>