

Special Issue

Nature Inspired Engineering: Biomimetic Sensors (2nd Edition)

Message from the Guest Editors

Nature provides a huge source of inspiration for sensor design. Among them, electronic tongue and electronic nose are analytical devices based on a series of partially selective chemical sensors or biosensors and multivariate data processing tools. These sensors have been employed in a wide range of applications, including the classification of samples by purpose, taste quantification, and flavor assessment. Biomimetic sensors simulate the human perception system, detect various external stimuli, and surpass the level of human senses in terms of sensitivity, selectivity, and accuracy, helping people to understand the unknown world and facilitating daily life. In this Special Issue, we will focus on the latest research on biomimetic sensors, from basic theory to application. We welcome both review articles and original research papers on, though not limited to, the following areas:

- Biomimetic sensing;
- Bioinspired sensors;
- Electronic/Bioelectronic tongue;
- Electronic nose;
- Taste sensor;
- Odor-sensing arrays;
- Cell sensors;
- Food Sensors;

Guest Editors

Dr. Xiao Wu

Department of Information Electronics, Faculty of Engineering, Fukuoka Institute of Technology, 3-30-1 Wajiro-higashi, Higashi-ku, Fukuoka, Japan

Prof. Dr. Kiyoshi Toko

Division of Taste Sensor, Research and Development Center for Five-Sense Devices, Kyushu University, Fukuoka, Japan

Deadline for manuscript submissions

28 February 2026



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/241855

Sensors
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
sensors@mdpi.com

[mdpi.com/journal/
sensors](https://mdpi.com/journal/sensors)





Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



[mdpi.com/journal/
sensors](https://mdpi.com/journal/sensors)



About the Journal

Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

Editor-in-Chief

Prof. Dr. Vittorio M. N. Passaro

Dipartimento di Ingegneria Elettrica e dell'Informazione (Department of Electrical and Information Engineering), Politecnico di Bari, Via Edoardo Orabona n. 4, 70125 Bari, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Ei Compendex, Inspec, Astrophysics Data System, and other databases.

Journal Rank:

JCR - Q2 (Instruments and Instrumentation) / CiteScore - Q1 (Instrumentation)