

Special Issue

Recent Innovations in Microfluidics Devices, Biosensors, and Associated Data Analysis

Message from the Guest Editors

The goal of the present Special Issue is to bring together insights from engineering, biology, and material and data science to support the transition of microfluidic technology and biosensors from the lab bench to clinical and industrial applications. This collection of work integrates recent advancements in microfluidics and biosensors, with a focus on organ-on-chip systems, microphysiological systems, bioprinting, electrochemical biosensors, and impedance and deformability cytometry. We are particularly interested in studies involving biosensors, whether introducing novel designs or integrating them into microfluidic platforms and organ-on-chip devices. We also invite work that tackles data analysis challenges in this field, especially those leveraging modern machine learning or deep learning approaches, as well as contributions in material science to develop novel biosensing devices. Both original research and review articles are welcome for submission.

Guest Editors

Dr. Michele D'Orazio

Department of Electronic Engineering, University of Rome Tor Vergata, 00133 Rome, Italy

Dr. Filippo Bonafè

Department of Physics and Astronomy, University of Bologna, 40127 Bologna, Italy

Deadline for manuscript submissions

15 February 2027



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 9.4
Indexed in PubMed



mdpi.com/si/244854

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 9.4
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
Department of Electrical and Information Engineering, Politecnico di
Bari, Via Orabona 4, 70126 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)