

Special Issue

Advanced BioMEMS and Their Applications

Message from the Guest Editor

Biomedical or Biological Micro-Electro-Mechanical Systems (BioMEMS) have increasingly pervaded various fields, prominently in diagnostics, analytics, therapeutics, and tissue engineering. Originally adapted from the integrated circuit industry, the fabrication techniques for MEMS have evolved significantly for bioMEMS applications. This evolution reflects a deepening understanding of microfluidic dynamics and the surface properties of materials. While bioMEMS might lack traditional electrical and mechanical components, they encompass a broader scope of integrating diverse functionalities on a single micro- or nano-scale chip. BioMEMS are often synonymous with Lab-on-a-Chip (LoC) and micro total analysis systems (μ TAS). This Special Issue, titled “Advanced BioMEMS and Their Applications”, aims to provide a timely and extensive overview of cutting-edge techniques currently under development in global research labs, with a focus on—but not limited to—diagnostics, analytics, therapeutics, and tissue engineering. We welcome submissions of research papers, short communications, and review articles.

Guest Editor

Prof. Dr. Seokheun Choi

Department of Electrical & Computer Engineering, State University of New York at Binghamton, Binghamton, NY 13902, USA

Deadline for manuscript submissions

20 December 2025



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/204290

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)