

## Special Issue

# Advanced Microfluidic Devices and MEMS in Biosensing Applications

### Message from the Guest Editors

Microfluidic devices and micro-electro-mechanical systems (MEMS) have revolutionized biosensing technologies, offering unprecedented precision, miniaturization, and automation for biomedical diagnostics, environmental monitoring, and point-of-care testing. This Special Issue explores the latest advancements in microfluidics and MEMS-based biosensors, highlighting innovative designs, fabrication techniques, and applications in detecting biomolecules, cells, and pathogens. Topics of interest include, but are not limited to: Novel Microfluidic Platforms; MEMS-Based Sensors; Biomarker Detection; Smart Materials; Wearable and Implantable Devices; AI and Automation, etc. This Special Issue invites original research, reviews, and perspectives addressing challenges and opportunities in this rapidly evolving field. Contributions from interdisciplinary researchers in engineering, biology, and clinical sciences are encouraged to foster collaboration and accelerate the translation of these technologies into practical solutions.

### Guest Editors

Dr. Zhixian Zhu

School of Mechanical Engineering, and Jiangsu Key Laboratory for Design and Manufacturing of Precision Medicine Equipment, Southeast University, Nanjing 211189, China

Dr. Xinjie Zhang

College of Mechanical and Electrical Engineering, Hohai University, Changzhou 213200, China

### Deadline for manuscript submissions

31 March 2026



## Biosensors

an Open Access Journal  
by MDPI

Impact Factor 5.6  
CiteScore 9.8  
Indexed in PubMed



[mdpi.com/si/242268](https://mdpi.com/si/242268)

*Biosensors*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[biosensors@mdpi.com](mailto:biosensors@mdpi.com)

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





# Biosensors

---

an Open Access Journal  
by MDPI

---

Impact Factor 5.6  
CiteScore 9.8  
Indexed in PubMed



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



## About the Journal

### Message from the Editor-in-Chief

*Biosensors* is a leading journal, devoted to fast publication of the latest achievements, technological developments and scientific research in the exciting multidisciplinary area of biosensors. Both experimental and theoretical papers are published, including all aspects of biosensor design, technology, proof of concept and application. Special issues are devoted to specific technologies and applications, and a selection of the most outstanding papers each year is recognized. Pushing the boundaries of the discipline, we invite original papers, as well as timely reviews on cutting edge fields within the subject area.

---

### Editor-in-Chief

Prof. Dr. Giovanna Marrazza

Department of Chemistry "Ugo Schiff", University of Florence, Via della  
Lastruccia 3, 50019 Sesto Fiorentino, Italy

---

### Author Benefits

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Ei Compendex, Embase, CAPlus / SciFinder, Inspec, and other databases.

#### Journal Rank:

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

#### Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 21.8 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the first half of 2025).