Special Issue

Integration and Application of Microfluidic Sensors

Message from the Guest Editors

Microfluidics has emerged as a powerful tool that makes substantial contributions in modern chemistry or biology research. Conceptually, the idea of microfluidics precisely manipulates minute amounts of fluids (pL-nL) in microscale chips fabricated with standard semiconductor industry or other microfabrication approaches. These microfluidic devices, or so-called micro total analysis systems (µTAS), show great potentials in broad applications including sensing, separation, analysis, detection, synthesis and diagnosis, with the advantages of sample economy, rapid analysis time, cost effectiveness, compactness and portability, high throughput, and the ability to multiplex and automate. The aim of this Special Issue is to collect new ideas in the integration and application of microfluidic devices. We invite innovative and original researches to contribute to the Special Issue with their prestigious work in the related topics, including but not limited to:

- advanced micro/nanofabrication
- electrokinetics, electrowetting and dielectrophoresis
- acoustofluidics and optofluidics
- sensor technology
- diagnostics and therapy
- other microfluidic applications

Guest Editors

Dr. Zhen Cao

Prof. Dr. Weipeng Xuan

Prof. Dr. Shurong Dong

Deadline for manuscript submissions

20 January 2026



Sensors

an Open Access Journal by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/179602

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

mdpi.com/journal/ sensors





Sensors

an Open Access Journal by MDPI

Impact Factor 3.5 CiteScore 8.2 Indexed in PubMed



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)

