

Special Issue

Fluorescence Sensors for Biological and Medical Applications

Message from the Guest Editor

Nature has used biosensing since time immemorial, using sensory neurons in the nose to detect odors and those in the tongue to taste dissolved substances. Our understanding of how biological organisms detect trace amounts of biochemicals in complex systems has evolved over time. Recently, fluorescence sensors have been extensively used in various fields such as life science, medical diagnosis and the development of new drugs because of their high sensitivity, better selectivity, rapid and easy response, and less reliance on instruments. This Special Issue therefore aims to put together original research and review articles on recent advances, technologies, solutions, applications, and new challenges in the field of fluorescence sensors. Potential topics include but are not limited to:

- Construction of new fluorescence sensors
- Fluorescence sensors for high-throughput screening
- Fluorescence sensors in the detection of disease markers
- Fluorescence sensors in the detection of disease progression
- New application of fluorescence sensors in the biomedicine field
- Fluorescent sensors combined with biological big data and artificial intelligence

Guest Editor

Dr. Jiangwei Tian

State Key Laboratory of Natural Medicines, Jiangsu Key Laboratory of TCM Evaluation and Translational Research, School of Traditional Chinese Pharmacy, China Pharmaceutical University, Nanjing 211198, China

Deadline for manuscript submissions

25 October 2025



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/155082

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)