

Special Issue

Next-Generation Fluorescent Sensing for Low-Cost Chemical Analysis

Message from the Guest Editor

Next-generation fluorescent sensing is transforming chemical analysis by offering low-cost, high-sensitivity detection for applications in analytical chemistry, environmental monitoring, healthcare, food safety, and industrial processing. These technologies combine high sensitivity and specificity with portable, affordable high platforms. Innovations in fluorescent nanomaterials, molecular probes, and integrated device engineering now enable real-time detection of diverse analytes with minimal sample preparation. By integrating nanomaterials, miniaturized devices, and intelligent data processing, these sensors provide rapid, accurate measurements of low-concentration compounds. Unlike traditional lab-based methods that are costly and time-consuming, modern fluorescent sensing platforms are designed for portability and ease of use, supporting point-of-care diagnostics and on-site testing in resource-limited settings. This shift toward accessible and scalable chemical analysis is driving more responsive, decentralized decision-making in science, healthcare, and environmental management.

Guest Editor

Dr. George Tsogkas

Laboratory of Analytical Chemistry, Department of Chemistry, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece

Deadline for manuscript submissions

31 July 2026



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 9.4
Indexed in PubMed



mdpi.com/si/259270

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)