

Special Issue

Innovative Schemes for Bio/Chemical Sensors Based on Specialty Optical Fibers, Metasurfaces and Optofluidics

Message from the Guest Editors

This Special Issue will focus on intriguing sensing approaches for developing probes used in bio/chemical sensing. These methods include the utilization of plastic optical fibers (POFs), specialty optical fibers, metasurfaces, and optofluidics. For instance, there is a significant interest in using innovative POF-based extrinsic or intrinsic schemes. Moreover, using different receptor layers combined with optical probes to detect specific substances in different application fields is equally intriguing.

The topics of this Special Issue include, but are not limited to, the following:

- POF probes for bio/chemical sensing
- metasurfaces
- optofluidics
- specialty optical fibers for sensing
- POF-based optical chemical sensors
- POF-based sensor systems
- HW and SW for POF sensor systems
- machine and deep learning strategies for POF chips
- MathMaterial interfaces and POFs

Guest Editors

Prof. Dr. Nunzio Cennamo

Department of Engineering, University of Campania Luigi Vanvitelli, Via Roma 29, 81031 Aversa, Italy

Dr. Francesco Arcadio

Department of Engineering, University of Campania Luigi Vanvitelli, Via Roma 29, 81031 Aversa, Italy

Deadline for manuscript submissions

25 September 2026



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/200971

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
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)