

## Special Issue

# Next-Generation Semiconductor-Based Nanophotonic Sensors for Applied Technologies

### Message from the Guest Editor

Cutting-edge developments in semiconductor and nanophotonic technologies are transforming the landscape of next-generation sensors. These advances are driving innovation in compact, high-speed, and energy-efficient sensors tailored for a wide range of applied technologies. This Special Issue focuses on the development and implementation of semiconductor-based nanophotonic sensors, highlighting the role of emerging materials, device architectures, and fabrication strategies in advancing sensor performance. Emphasis is placed on semiconductor platforms that enable enhanced light-matter interaction at the nanoscale, supporting ultra-sensitive, fast, and spectrally tunable detection. We welcome contributions that explore experimental breakthroughs, fabrication techniques, modelling strategies, and the real-world deployment of these technologies. The aim is to highlight progress that bridges the gap between fundamental science and practical optoelectronic solutions, setting the stage for the next generation of photonic sensor innovation.

---

### Guest Editor

Dr. Evripidis Michail

Advanced Research Science Center, City University of New York, New York, NY 10031, USA

---

### Deadline for manuscript submissions

30 September 2026



## Sensors

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.5  
CiteScore 9.4  
Indexed in PubMed



[mdpi.com/si/241328](https://mdpi.com/si/241328)

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