

## Special Issue

# Electrochemical Sensors and Biosensors Based on Graphene

### Message from the Guest Editors

Graphene films have proven remarkably useful for biosensing applications, typically but not exclusively employing an electrochemical approach, where electrolyte displacement from the film during a binding event induces an easily measured change in its properties. However, while the literature on this topic is quite exhaustive, the commercial application of graphene film sensors has been slow. This Special Issue aims to explore the factors that hinder their development. We seek papers exploring the following:

- Film selection (exfoliated, epitaxial, or CVD);
- Functionalization (linker molecules or direct attachment);
- Methods of use (field-induced conductivity modulation, capacitance, optical spectroscopy, etc.);
- Performance (sensitivity, specificity, or specific responses);
- Stability (shelf life, working life, corrosion resistance, and methods of improvement).

Of additional interest is the comparison of these sensors to alternative or more traditional transducers, as well as business models for their commercialization.

---

### Guest Editors

Dr. Perkins F. Keith

U.S. Naval Research Laboratory, 4555 Overlook Ave. SW, Washington, DC 20375, USA

Dr. Myers-Ward Rachael

U.S. Naval Research Laboratory, 4555 Overlook Avenue SW, Washington, DC 20375, USA

---

### Deadline for manuscript submissions

closed (15 October 2024)



## Sensors

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.5  
CiteScore 8.2  
Indexed in PubMed



[mdpi.com/si/202497](https://mdpi.com/si/202497)

*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 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)