

Special Issue

Recent Advances in Nanomaterial-Based Electrochemical Sensors

Message from the Guest Editor

As one of the most important sensing technologies, the electrochemical sensor has the advantages of fast detection speed, high sensitivity, and low detection limit. Because of their large active surface area and good electron transfer performance, nanomaterials provide a new method for the development of high-performance electrochemical sensors. Nanomaterials, including metal nanoparticles, nanowires, graphene, nanotubes, metal-organic frames, molecularly imprinted polymers, and others, have been used to modify electrodes. The combination of nanotechnology and chemical sensors improves the sensitivity and sensing capability of existing sensors, which are widely used in medical diagnosis, food evaluation, pollutant detection, and other fields. The purpose of this Special Issue is to introduce the research progress in the field of nanomaterials in electrochemical sensors and the application of advanced electrochemical sensors.

Guest Editor

Dr. Kuoyuan Hwa

Department of Molecular Science and Engineering, Institute of Polymeric Science and Engineering, National Taipei University of Technology, Taipei 10608, Taiwan

Deadline for manuscript submissions

15 October 2025



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/177669

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)