

Special Issue

Challenges in Electrochemical Nucleic Acid-Based Sensing

Message from the Guest Editors

Electrochemical biosensors hold great promise in point-of-care applications due to their simplicity, low cost, portability and potential for rapid analysis. Within this field, nucleic acids occupy a central role—both as targets of detection and as versatile biorecognition elements—owing to their inherent specificity, programmability and broad biological relevance. The ability to accurately detect nucleic acids has far-reaching implications, spanning human health diagnostics, infectious disease monitoring, food safety and environmental surveillance. Despite significant progress, numerous challenges remain in integrating electrochemical nucleic acid-based sensing platforms into clinically or environmentally deployable technologies (e.g. specificity, matrix effects). This Special Issue, titled “Challenges in Electrochemical Nucleic Acid-based Sensing”, aims to highlight recent advances, identify current limitations and explore emerging strategies to overcome the barriers that hinder implementation. For detailed information, please visit [here](#).

Guest Editors

Dr. Elise Daems

Antwerp Engineering, Photoelectrochemistry and Sensing (A-PECS),
Department of Bioscience Engineering, University of Antwerp,
Groenenborgerlaan 171, 2020 Antwerp, Belgium

Dr. Giulia Moro

Department of Molecular Sciences and Nanosystems, Ca' Foscari
University of Venice, Via Torino 155, 30172 Mestre, Italy

Deadline for manuscript submissions

30 October 2026



Sensors

an Open Access Journal
by MDPI

Impact Factor 3.5
CiteScore 8.2
Indexed in PubMed



mdpi.com/si/254262

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)