



sensors



an Open Access Journal by MDPI

Novel 2D Material-Based Sensors for Optoelectronic Devices

Guest Editor:

Prof. Dr. Alessandro Fantoni

Instituto Superior de Engenharia
de Lisboa (ISEL), R. Conselheiro
Emídio Navarro 1, 1959-007
Lisboa, Portugal

Deadline for manuscript
submissions:

30 September 2024

Message from the Guest Editor

Dear Colleagues,

Recent advances in the fabrication methods of two-dimensional (2D) materials and their corresponding ease of availability for research purposes have contributed to the conception of novel optoelectronic device structures, offering interesting opportunities for developing highly sensitive, efficient, and versatile sensors. By exploiting the unique electronic, optical, and mechanical properties of atomically thin materials, a new generation of sensors has been proposed to address challenges in various applications. The most frequently used materials are graphene and its allotropes, transition metal dichalcogenides (TMDs), hexagonal boron nitride (hBN) and black phosphorus. This Special Issue explores novel configurations for optoelectronic sensor architectures interfaced with these 2D materials, including their design layout, fabrication methods and applications, with particular emphasis on photodetection for chemical and biological sensing.

This Special Issue supports the dissemination of recent research in this area and invites you to submit manuscripts, research papers, or reviews, welcoming multiple perspectives related to this topic.



mdpi.com/si/199752

Special Issue



sensors



an Open Access Journal by MDPI

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

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.

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 (*Chemistry, Analytical*) / CiteScore - Q1 (Instrumentation)

Contact Us

Sensors Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/sensors
sensors@mdpi.com
[X@Sensors_MDPI](#)