



sensors



an Open Access Journal by MDPI

2D Materials-Based Electronic and Optoelectronic Biochemical Sensing Applications

Guest Editors:

Dr. Shivananju Bannur Nanjunda

Assistant Professor, Department of Electrical Engineering, Indian Institute of Technology Madras, Chennai-600036, India

Prof. Han Zhang

Key Laboratory of Optoelectronic Devices and Systems of Ministry of Education and Guangdong Province, College of Electronic Science and Technology and College of Optoelectronics Engineering, Shenzhen University, Shenzhen, China.

Deadline for manuscript submissions:

closed (30 June 2022)

Message from the Guest Editors

The richness of the electronic and optical properties of graphene and related two-dimensional (2D) materials have encouraged the development of many electronic and optical sensors, especially for biochemical sensing applications. 2D materials are one atomic-thin layered structure with exceptional biochemical sensing properties due to high surface-to-volume ratio, excellent biocompatibility, surface charge, outstanding fluorescence-quenching ability, supreme electrical and thermal conductivity, broadband light absorption, ultrafast carrier mobility, strong mechanical strength, high packing density, and flexibility. The most striking features of electronic and optical sensors based on 2D materials are lowering the limit of detection, ultrafast response time, and increasing the specificity of label-free biochemical sensing.

In this special issue, we focus on the state-of-the-art biochemical applications of 2D materials based electronic and optical sensors.

Dr. Shivananju Bannur Nanjunda

Prof. Han Zhang

Guest Editors



mdpi.com/si/52368

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](#)