

## Special Issue

# Advances, Challenges and Opportunities in the Use of 2D Materials for Biosensing and Biomedical Applications

### Message from the Guest Editors

Biosensing platforms that draw inspiration from the molecular identification function of living organisms have witnessed significant advances in sensing capability. Recent innovative developments in diagnostic devices have allowed for enhanced analytical performance, miniaturized sensors, multiplex analysis, and readout signal enhancement. Of particular interest are biosensors based on two-dimensional (2D) materials, which are characterized by their thin-layered structure and unique properties, making them highly useful in biosensing applications. Since the isolation of graphene in 2004, there has been an exponentially growing number of reports exploring the use of 2D materials in biosensing and other emerging healthcare applications. For this Special Issue, we welcome the submission of original research papers and review articles that harness the inherent properties of 2D materials for biosensing applications. This Special Issue aims to explore the challenges and opportunities of the use of 2D materials in biosensing platforms.

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### Guest Editors

Prof. Dr. Cheng-Te Lin

Dr. Chen Ye

Dr. Kunyan Zhang

Dr. Jeewan Ranasinghe

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### Deadline for manuscript submissions

closed (31 May 2026)



## Biosensors

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*Biosensors*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[biosensors@mdpi.com](mailto:biosensors@mdpi.com)

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## About the Journal

### Message from the Editor-in-Chief

*Biosensors* is a leading journal, devoted to fast publication of the latest achievements, technological developments and scientific research in the exciting multidisciplinary area of biosensors. Both experimental and theoretical papers are published, including all aspects of biosensor design, technology, proof of concept and application. Special issues are devoted to specific technologies and applications, and a selection of the most outstanding papers each year is recognized. Pushing the boundaries of the discipline, we invite original papers, as well as timely reviews on cutting edge fields within the subject area.

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### Editor-in-Chief

Prof. Dr. Giovanna Marrazza

Department of Chemistry "Ugo Schiff", University of Florence, Via della  
Laustruccia 3, 50019 Sesto Fiorentino, Italy

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