Special Issue

Advances in Two-Dimensional Materials for Electrochemical Biosensors

Message from the Guest Editors

Two-dimensional (2D) materials have attracted much attention in the past decade. They offer a high specific surface area as well as electronic structure and properties that differ from their bulk counterparts due to the low dimensionality. Graphene is the best-known and most-studied 2D material, but metal oxides and hydroxides (including clays), transition metal carbides and nitrides (MXenes), dichalcogenides, boron nitrides (BN), carbon nitrides, monoelemental Xenes (including phosphorene and bismuthene), and other materials that are one or several atoms thick are receiving increasing attention. The specific chemical, physical, and optical properties of 2D materials can influence the performance of bio/sensing, improve drug delivery and photo/thermal therapy and affect their toxicity. Two-dimensional materials have been used in numerous applications and in different fields of research such as biomedicine, biosensing, and chemical sensing as well as energy storage and generation, electronics, etc.

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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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