Special Issue

Novel 2D Material-Based Sensors for Optoelectronic Devices

Message from the Guest Editor

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.

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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.

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