Special Issue

Advanced Nanomaterials in Bio- and Chemical Sensing

Message from the Guest Editor

Nanomaterials have revolutionized the field of bio- and chemical sensing, offering exceptional sensitivity, selectivity, and multifunctionality. This Special Issue focuses on the latest advancements in nanomaterial-based sensing technologies, highlighting their applications in medical diagnostics, environmental monitoring, and food safety. A wide range of nanomaterials, including carbon-based materials, metal and metal oxide nanostructures, semiconductor nanomaterials, and their hybrids, have been extensively explored for sensor development. Among them, carbon nanomaterials, such as carbon nanotubes, graphene and its derivatives, carbon and graphene quantum dots, and fullerenes, have demonstrated remarkable potential. Their high surface area facilitates enhanced biomolecule immobilization and analyte adsorption, leading to improved sensor performance. Additionally, their surfaces can be functionalized with biomolecules or hybridized with other nanostructures to enable highly selective and sensitive detection.

Guest Editor

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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