

Special Issue

Diverse Nanomaterials Applied in Bio- and Electrochemical Sensing

Message from the Guest Editor

The field of nanotechnology has witnessed significant advancements in recent years, leading to the development of diverse nanomaterials with promising applications in bio- and electrochemical sensing. These nanomaterials possess unique properties such as a high surface-area-to-volume ratio, excellent conductivity, and exceptional catalytic activity, making them suitable candidates for sensing applications. One of the extensively studied nanomaterials is carbon nanotubes (CNTs), which have shown remarkable potential in biosensing. CNTs can be utilized as nanoelectrodes for detecting a range of biomolecules, including DNA, proteins, and enzymes. Their large surface area allows for increased analyte adsorption, resulting in enhanced sensitivity. Moreover, CNTs can be functionalized with various biomolecules, such as antibodies and aptamers, enabling selective detection of target analytes. In summary, diverse nanomaterials, including carbon nanotubes, metal nanoparticles, and semiconductor nanomaterials, have been extensively studied and applied in bio- and electrochemical sensing.

Guest Editor

Dr. Parvaneh Rahimi

TU Bergakademie Freiberg, Institute of Electronic and Sensor Materials, Freiberg, Germany

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

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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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1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Prof. Dr. Yuguang Ma

State Key Laboratory of Luminescent Materials and Devices, South China University of Technology, Guangzhou 510640, China

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