Special Issue

Nanomaterials and Nanostructures for Biosensors

Message from the Guest Editors

The field of biosensing has been significantly enhanced by the development of nanomaterials and nanostructures with optical, electric, magnetic, and electrochemical properties. With their nanometer size in one dimension, nanomaterials and nanostructures present an environment that can facilitate interaction among biological objects including protein, nuclear acids, and cells. The enhanced interaction allows targeted biological objects to be captured with high sensitivity and specificity within a short time. The nanomaterials and nanostructures have been used for in vitro and in vivo detection of molecular biomarkers of diseases released in body fluids of patients, and as imaging contrasts to map out the spatial distribution of biomarkers in patients. The last Special Issue on nanomaterials-enhanced biosensing was published several years ago, and there has been impressive new progress in the field since. Thus, it is the time to highlight these new results. This Special Issue is focused on the synthesis, properties, and prospective biosensing applications of nanomaterials and nanostructures in chemistry, physics, biology, and medicine.

Guest Editors

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Deadline for manuscript submissions

closed (31 August 2022)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.4
CiteScore 8.5
Indexed in PubMed

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Message from the Editor-in-Chief

Nanoscience and nanotechnology are exciting fields of research and development, with wide applications to electronic, optical, and magnetic devices, biology, medicine, energy, and defense. At the heart of these fields are the synthesis, characterization, modeling, and applications of new materials with lower nanometer-scale dimensions, which we call “nanomaterials”. These materials can exhibit unusual mesoscopic properties and include nanoparticles, coatings and thin films, metal–organic frameworks, membranes, nano-alloys, quantum dots, self-assemblies, 2D materials such as graphene, and nanotubes. Our journal, *Nanomaterials*, has the goal of publishing the highest quality papers on all aspects of nanomaterial science to an interdisciplinary scientific audience. All of our articles are published with rigorous refereeing and open access.

Editor-in-Chief

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