Special Issue

Functional Nanomaterials for Sensing and Detection

Message from the Guest Editor

Dear Colleague, Functional nanomaterials involve various nanostructured objects: zero-dimensional (OD), 1D, and 2D nano-objects (nanoparticles, nanowires, nanotubes, nanosheets, and so on), as well as materials with nanostructured surfaces including metals. semiconductors and organic materials. These nanomaterials possess high surface/volume ratio and nanotip- and nanogap-induced physical effects, which lead to significantly different functional properties from those presented by the bulk materials, and hence have great potential applications in sensing and detection. These functional nanomaterials for sensing and detection are mostly used as transducers in tools such as spectral devices and chemiresistive sensors. They are also employed in some nanosensor designs as capture agents (magnetic nanoparticles), signal amplifiers (plasmonic metals with nanopatterned surfaces for surface-enhanced Raman spectroscopic chips), identification elements (polymers for molecular imprinting), and more. For detailed information please see the link.

Guest Editor

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Deadline for manuscript submissions

closed (31 May 2023)



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nanomaterials



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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 nanometerscale 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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