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1D Nanostructures for Catalysis and Sensing

Guest Editor:

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Message from the Guest Editor

Among all the shapes 1D nanostructures (1DNS), nanowires (NW), nanotubes (NT) and nanorods (NR) stand out with unique properties that arise from their specific structural anisotropy. Depending on the nature of the material, organic, inorganic, oxide, semiconductor, or metal, the applications of 1D NS span a wide range from bio-sensing to field effect emitters. Single walled carbon nanotubes and Si-NWs were widely reported in the literature as field effect transistors for label-free sensing of biomolecules, and 1D ZnO NS are potential candidates for a variety of sensing applications and as field emitters for microscopy.

This special issue of “Nanomaterials” will specifically address new developments and emerging applications of 1DNS. We invite research papers and reviews on the following topics: Noble metal 1DNS for electrocatalysis and biomedical applications; Oxide and semiconductor 1DNS for photocatalysis and sensing applications; Polymeric 1DNS materials for wettability control and other applications.



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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

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