Special Issue

Semiconductor Nanowires: From Synthesis and Characterization to Devices

Message from the Guest Editor

Nanowires – nanostructures with 1D aspect – have attracted huge attention of scientists from different fields during the last decades. Applications of nanowires in devices include nano-diodes and transistors, photonic structures such as LEDs and nano-lasers, sensors, ballistic conductors or quantum devices. This special issue is aimed at reporting research on the different aspects related to semiconductor nanowires, spanning from their synthesis and characterization with advanced techniques, to applications in devices in which they are key elements. As a guideline, the topics covered in this issue include (but are not limited to): Synthesis and growth; Complex architectures: axial and radial heterostructures, branched, patterned, etc.; Doping and defect engineering; Groups IV, II-VI, III-V, wide- and ultrawide-bandgap semiconducting oxides, perovskites, etc.; Electronics; Photonics, optoelectronics, plasmonics; Quantum devices; Piezotronics, piezo-phototronics; Energy conversion and storage; Sensors.

Guest Editor

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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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