Special Issue

One-Dimensional Nanostructures: Synthesis, Characterization and Applications

Message from the Guest Editor

This Special Issue of *Nanomaterials* will focus on "One-Dimensional Nanostructures". Both fundamental research in modeling the growth and physical properties of one-dimensional nanostructures and new advances in their synthesis, diagnostics and device functionalization will be covered. We invite submissions on, but not limited to, the following topics:

- Growth modeling of one-dimensional nanostructures;
- Semiconductor nanowires grown by the vapor-liquid-solid (VLS) method;
- Selective area epitaxy of nanowires, quantum wires and other one-dimensional nanostructures;
- Tuning the crystal phase of III-V semiconductor nanowires;
- Planar one-dimensional nanostructures;
- New synthesis techniques for fabrication of one-dimensional nanostructures;
- Nanowire heterostructures;
- Integration of semiconductor nanowires with Si electronic platform;
- In situ growth monitoring of semiconductor nanowires and other one-dimensional nanostructures;
- Applications of one-dimensional nanostructures in nanoelectronics, nanophotonics, energy harvesting and life sciences;
- Structural, optical and electrical characterization of nanowires.

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

Prof. Dr. Eugenia Valsami-Jones
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