



ZnO Nanowires: Growth, Properties, and Energy Applications

Guest Editor:

Dr. Vincent Consonni

Université Grenoble Alpes, CNRS,
Grenoble INP, LMGP, 38000
Grenoble, France

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Message from the Guest Editor

Dear Colleagues,

As an abundant and biocompatible compound semiconductor with a high aspect ratio at nanoscale dimensions, ZnO, in the form of nanowires, has emerged as a potential building block in a wide variety of devices. However, there is still a significant need for the exploration of the growth of ZnO nanowires, elucidating and monitoring their fundamental properties, and improving their integration into nanoscale devices, specifically in the field of energy conversion and storage.

This Special Issue will address the following topics: i) growth and nucleation mechanisms of ZnO nanowires using chemical and physical deposition techniques, ii) fundamental properties of ZnO nanowires, including doping, polarity, surfaces, and interfaces, iii) energy applications including photovoltaic cells (i.e., ETA solar cells, dye-sensitized solar cells, quantum dot solar cells, etc.), piezoelectric devices (i.e., nano-generators and pressure/strain sensors), self-powered devices, and batteries.

Dr. Vincent Consonni
Guest Editor





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Editor-in-Chief

Prof. Dr. Shirley Chiang

Department of Physics, University
of California Davis, One Shields
Avenue, Davis, CA 95616-5270,
USA

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.

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Nanomaterials Editorial Office
MDPI, St. Alban-Anlage 66
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