



## Zinc Oxide Nanostructures: Synthesis and Characterization

Guest Editor:

**Prof. Dr. Sotirios Baskoutas**  
Department of Materials Science,  
University of Patras, 265 04  
Patras, Greece

Deadline for manuscript  
submissions:

**closed (30 November 2017)**

### Message from the Guest Editor

Due to its excellent properties, ZnO is widely used for various potential applications such as catalysis, solar cells, ultraviolet (UV) lasers, light emitting diodes, photo-detectors, sensors (chemical, bio- and gas), optical and electrical devices and so on. Among various applications, the use of ZnO nanomaterials as a photocatalyst has particular interest due to their large surface area; wide band gap; ease of fabrication and cost effective synthesis; biocompatible and environmentally benign nature.

More specifically, the nanostructured ZnO semiconductor used as photocatalytic degradation material against environmental pollutants has also been extensively studied, because of its advantages of non-toxic nature, low cost and high reactivity. Furthermore, the synthesis of large-scale arrayed 1D ZnO nanostructures, including nanowires, nanorods, nanobelts and whiskers, is an important step for the fabrication of functional nano/microdevices. Finally, Magnetic ion-doped ZnO quantum dots (QDs) have been targeted as promising candidates for the implementation of novel technologies, such as in spintronic and quantum computation.





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

## Message from the Editor-in-Chief

*Materials* (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), PubMed, PMC, Ei Compendex, CaPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.

**Journal Rank:** JCR - Q1 (Metallurgy and Metallurgical Engineering) / CiteScore - Q2 (*Condensed Matter Physics*)

## Contact Us

Materials Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/materials](http://mdpi.com/journal/materials)  
[materials@mdpi.com](mailto:materials@mdpi.com)  
[X@Materials\\_Mdpi](https://twitter.com/Materials_Mdpi)