# **Special Issue**

### Zinc Oxide Nanostructures: Synthesis and Characterization

#### 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, photodetectors, 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.

#### **Guest Editor**

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

#### Deadline for manuscript submissions

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#### 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

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