Special Issue

Synthesis and Optical Properties of ZnO Nanostructured Materials

Message from the Guest Editor

Due to its fascinating multi-functional properties, zinc oxide (ZnO) has attracted significant attention in both the academic and industrial spheres. ZnO nanostructures, in particular, have been a focus of research for various applications because these nanostructures can be easy prepared in a variety of precisely tuned morphologies and sizes, and they also offer a wide direct band gap (3.37 eV), high thermal conductivity, a high refractive index (2.0041) and a rather large excitation binding energy (60 meV). Heretofore, a wide range of chemical and physical technologies were implemented for the preparation of ZnO nanostructures, such as chemical vapor deposition, sputtering, a microwave and ultrasonic combined technique, hydrothermal synthesis, etc. The optical properties of ZnO nanostructures can be modified through annealing, plasma and/or doping processes. Therefore, combining different synthesis and post-modification approaches can lead to highly tunable opto-electrical ZnO nanostructures with well-defined physico-chemical properties. Original research papers, short communications and state-of-the-art reviews are welcome for this Special Issue.

Guest Editor

Dr. Neda Neykova

1. Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic
2. Department of Electrotechnology, Faculty of Electrical Engineering, Czech Technical University in Prague, Prague, Czech Republic

Deadline for manuscript submissions

closed (10 October 2023)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/115691

Materials
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
materials@mdpi.com

mdpi.com/journal/materials

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/journal/materials

About the Journal

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.

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

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 - Q2 (Metallurgy and Metallurgical Engineering) / CiteScore - Q1 (Condensed Matter Physics)

MDPI