



## Solution-Processed Metal Oxide Nanostructures for Carrier Transport

Guest Editor:

### Dr. Sheng-Hsiung Yang

Institute of Lighting and Energy Photonics, College of Photonics, National Yang Ming Chiao Tung University (NYCU), Tainan 71150, Taiwan

Deadline for manuscript submissions:

**closed (31 August 2022)**

### Message from the Guest Editor

Dear Colleagues,

Metal oxide semiconductors represent a unique class of materials that show prominent optoelectronic applications today. Nanostructured metal oxides are especially useful for carrier transport in miscellaneous devices, including organic light emitting diodes, polymer solar cells, perovskite photovoltaics, perovskite light emitting diodes, quantum-dot light emitting diodes, and organic/inorganic hybrid transistors and sensors.

This Special Issue of *Nanomaterials* is open to manuscripts concerning synthesis, characterization, and especially carrier transport abilities of metal oxide thin films and nanostructures in working devices. Potential topics include but are not limited to:

- Hole transport metal oxides such as VO<sub>x</sub>, NiO<sub>x</sub>, CoO<sub>x</sub>, etc.;
- Electron transport metal oxides such as ZnO, TiO<sub>2</sub>, SnO<sub>2</sub>, etc.;
- Preparation and characterization of metal oxide thin films and nanostructures;
- Utilization of nanostructured metal oxides as carrier transport layers in miscellaneous devices.



Dr. Sheng-Hsiung Yang  
Guest Editor



an Open Access Journal by MDPI

## 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.

## 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, CAPlus / SciFinder, Inspec, and other databases.

**Journal Rank:** JCR - Q2 (*Chemistry, Multidisciplinary*) / CiteScore - Q1 (General Chemical Engineering)

## Contact Us

*Nanomaterials* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

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

[mdpi.com/journal/nanomaterials](http://mdpi.com/journal/nanomaterials)  
[nanomaterials@mdpi.com](mailto:nanomaterials@mdpi.com)  
[X@nano\\_mdpi](https://twitter.com/nano_mdpi)