

## Special Issue

# Preparation of Functionalized Nano-Oxides and Its Application in Sensing

### Message from the Guest Editor

Metal oxide (MOX) gas sensors are important components in a wide range of applications such as environmental monitoring, the control of industrial processes in general and of chemical processes in particular, or personal safety at home and at the workplace. With the emergence of nanotechnologies, metal oxide nanomaterials have become suitable candidates for gas sensing applications. They possess unique physical and chemical properties that promote high sensor performance. However, they also suffer from some drawbacks that influence their usability, such as a lack of selectivity and high working temperature. These shortcomings can be overcome by the functionalization of those nanomaterials with a wide range of additives such as metal/metal oxide nanoparticles, polymers, transition metal dichalcogenides, or carbon nanomaterials. This Special Issue will highlight the recent developments in the preparation of gas sensors based on functionalized metal oxide nanomaterials that show promising results in terms of sensitivity, selectivity, humidity, cross-sensitivity, and low-temperature detection.

---

### Guest Editor

Dr. Annanouch Fatima Ezahra

Department of Electronic, Electric and Automatic Engineering (DEEEA),  
Electrical, Engineering and Computer Science Faculty (ETSE),  
Universitat Rovira i Virgili, 43003 Tarragona, Spain

---

### Deadline for manuscript submissions

closed (28 July 2024)



## Nanomaterials

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.3  
CiteScore 9.2  
Indexed in PubMed



[mdpi.com/si/194945](https://mdpi.com/si/194945)

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

[mdpi.com/journal/  
nanomaterials](https://mdpi.com/journal/nanomaterials)





# Nanomaterials

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.3  
CiteScore 9.2  
Indexed in PubMed



[mdpi.com/journal/  
nanomaterials](https://mdpi.com/journal/nanomaterials)



## About the Journal

### 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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

---

### Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones

School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

---

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

#### Journal Rank:

JCR - Q2 (Physics, Applied) / CiteScore - Q1 (General Chemical Engineering)