Special Issue

Synthesis and Applications of Nanostructured Gas Sensors

Message from the Guest Editor

Gas sensors are used in a wide variety of applications for a diverse range of industries including agriculture, health, safety, security, and environmental monitoring. However, the performance of such sensors is significantly influenced by the morphology and structure of the sensing materials, resulting in a great obstacle for gas sensors based on the ability of bulk materials or dense films to have highly sensitive properties. A wide variety of nanostructured devices have been developed to improve gas sensing properties, such as sensitivity, selectivity, stability, and response speed. This Special Issue will attempt to cover the recent advances in the design and fabrication of nanostructured gas sensors, focusing on the nanodimensional design of current state-of-the-art gas sensors, which have achieved new records in selectivity, specificity, and sensitivity. The different types of nanostructured gas sensors, including catalytic, electrochemical, thermally conductive, and optical gas sensors, will be discussed, together with their gas sensing mechanisms and potential applications.

Guest Editor

Dr. Noushin Nasiri

School of Engineering, Faculty of Science and Engineering, Macquarie University, Sydney, NSW 2109, Australia

Deadline for manuscript submissions

closed (20 November 2023)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/121782

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

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

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, CAPlus / SciFinder, Inspec, and other databases.

Journal Rank:

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

MDPI