

Special Issue

Nanostructured Gas Sensors Synthesis and Applications

Message from the Guest Editor

Gas sensors are used in a wide variety of applications for a diverse range of industries from agriculture to health, safety, security, and environmental monitoring. A wide variety of nanostructured devices have been developed to improve the 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 nano-dimensional design of current state-of-the-art gas sensors, which have achieved records in selectivity, specificity, and sensitivity. We will highlight the methods of fabrication for these devices and relate their nano-dimensional materials to their record performance to provide a pathway for the gas sensors that will follow. The different types of nanostructured gas sensors, including catalytic, electrochemical, thermal conductivity, and optical gas sensors will be discussed together with their gas sensing mechanisms and potential applications.

Guest Editor

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Deadline for manuscript submissions

closed (30 September 2021)



Nanomaterials

an Open Access Journal
by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed



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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.

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