Special Issue

Nanoscale Material-Based Gas Sensors

Message from the Guest Editor

This Special Issue aims to cover the recent advances in the design and fabrication of nanomaterial-based gas sensors, focusing on the nanomaterials' design of current state-of-the-art gas sensors, which have achieved new records in sensitivity, stability, and selectivity. We will highlight the methods of fabrication for these devices and relate their nanomaterials 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, thermally conductive, and optical gas sensors, will be discussed, together with their gas sensing mechanisms and potential applications. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but not limited to) the following:

- Nanomaterials' design of current state-of-the-art gas sensors;
- The methods of fabrication for gas devices;
- Gas sensing mechanisms and potential applications.

We look forward to receiving your contributions.

Guest Editor

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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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