

Special Issue

Gas Sensors and Semiconductor Nanotechnology

Message from the Guest Editor

Solid-state semiconductor gas sensors have attracted a great deal of attention over the past two decades or more due to their importance in gas analysis and safety applications. The chemical sensitivity of a semiconductor surface serves as a way to transduce the chemical information around the surfaces into an electrical signal for gas-sensing applications.

Sensor technology development has a long history. It includes thick film and thin film technology, and, recently, semiconductor nanotechnology. Size-dependent physical properties are very important in the theory and construction of semiconductor devices, metal and semiconductor nanoparticles are basic components of recently used gas-sensitive materials.

This Special Issue of *Nanomaterials* will attempt to cover the recent advancements in semiconductor gas sensor technology, its theory of operations, and the role of nanoparticles and nano-sized structures for sensor applications.

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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