

## Special Issue

# Trends and Prospects in Gas-Sensitive Nanomaterials

### Message from the Guest Editor

The Special Issue aims to provide a comprehensive overview of the latest developments in gas-sensitive nanomaterials, focusing on their synthesis, characterization, and applications. Suggested research areas include, but are not limited to, the following:

- Synthesis and functionalization/doping of traditional gas-sensitive nanomaterials (e.g., metal-oxide semiconductors, carbon nanotubes, graphene) for detecting specific gases (e.g., NO<sub>x</sub>, NH<sub>3</sub>, GHGs, VOCs);
- Nanocomposites and hybrid materials for enhanced gas sensing performance;
- Advanced MXene and metal-organic framework-based gas sensors: Design, synthesis, and applications;
- Sensing mechanisms and optimization strategies for high-performance gas sensors;
- Theoretical and computational modelling of gas sensing behaviour in nanomaterials;
- Enhancing accuracy and efficiency by optimizing gas sensor performance using machine learning.

### Guest Editor

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### Deadline for manuscript submissions

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## 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.

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### Editor-in-Chief

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