Special Issue

Advanced Low-Dimensional Materials for Sensing Applications

Message from the Guest Editor

Low-dimensional materials typically refer to materials constrained to specific dimensions, such as two-dimensional materials (like graphene), quantum dots, nanowires, and others. These materials possess unique physical and chemical properties and surface effects, endowing them with extensive potential applications in the field of sensors. High-performance sensors based on low-dimensional materials aim to achieve high sensitivity and selectivity in detecting chemical substances, biomolecules, environmental factors, and more. Researchers explore the characteristics of low-dimensional materials and integrate advanced fabrication techniques to design and construct novel sensors, thereby addressing various monitoring and detection needs in real-life applications. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- Low-dimensional material preparation;
- Gas sensor;
- Sensitivity mechanism analysis;
- Selectivity.

Guest Editor

Dr. Can Liu

Key Laboratory of Quantum State Construction and Manipulation (Ministry of Education), Department of Physics, Renmin University of China, Beijing 100872, China

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

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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.

Editor-in-Chief

Prof. Dr. Eugenia Valsami-Jones
School of Geography, Earth and Environmental Science, University of Birmingham, Birmingham B15 2TT, UK

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