

Special Issue

Optoelectronic and Functional Materials for Advanced Sensor Applications

Message from the Guest Editor

The rapid advancement in optoelectronic materials (semiconductors, alloys, composites, engineered heterostructures) and the development of novel heterostructures have significantly expanded the landscape of modern sensing technologies, enhanced sensitivity, selectivity, stability, and multifunctionality. These advancements are pivotal for diverse applications such as environmental monitoring, biomedical diagnostics, chemical detection, energy harvesting, and industrial automation. This Special Issue aims to highlight state-of-the-art research in optoelectronic materials and heterostructures designed for cutting-edge sensor technologies. We invite original studies, reviews, and perspectives on novel heterojunction designs, composite-based sensing platforms, fabrication techniques, mechanism modeling, and application-specific developments. Topics include but not limited to:

- Optoelectronic semiconductors and alloys for sensors;
- Design and synthesis of novel heterostructures and heterojunctions;
- Performance optimization and stability enhancement of optoelectronic sensors, etc.

Guest Editor

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Message from the Editor-in-Chief

Sensors is a leading journal devoted to fast publication of the latest achievements of technological developments and scientific research in the huge area of physical, chemical and biochemical sensors, including remote sensing and sensor networks. Both experimental and theoretical papers are published, including all aspects of sensor design, technology, proof of concept and application. Sensors organizes Special Issues devoted to specific sensing areas and applications each year.

Editor-in-Chief

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