

Special Issue

Wide Band Gap Oxide Based Nanomaterials and Thin Films

Message from the Guest Editors

The development of wide band gap oxide nanomaterials and thin films with excellent transport properties has become a major key for harnessing solar energy and advancing optoelectronic and high-power devices. Wide band gap oxides also play crucial roles as nanoparticles for drug delivery and diagnostic imaging agents in biomedical applications, as well in advanced radiation detection and nuclear energy research. The wide band gap provides a unique wide transparency for the electromagnetic spectrum and can sustain extremely high fields and radiation. This Special Issue aims to cover the recent experimental and theoretical research advances in physics, chemistry, and material science, especially pertaining to synthesis and characterization of wide band gap oxide nanomaterials and thin films as well as their broad applications in energy, electronics, and radiation detection. Research related but not limited to functional oxides such as Ga₂O₃, ZnO, SnO₂, InO₂, and TiO₂, as well as oxides with relevant applications in medical research, nuclear energy, and radiation detection such as iron oxides, pyrochlores, and perovskites are highly encouraged.

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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. We are proud of our increasing impact factor and ability to provide rapid decisions to authors.

Editor-in-Chief

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