Special Issue

Advanced Nanomaterials for Perovskite Solar Cells and Optoelectronic Devices

Message from the Guest Editor

This Special Issue highlights advances in nanomaterials for improving perovskite solar cells and related optoelectronic devices. As perovskite technologies evolve, integrating nanomaterials addresses durability, charge transport, and environmental sensitivity. We invite original research, reviews, and short communications on topics including: Design/synthesis of nanomaterials for perovskite applications, interface/defect engineering with nanostructured components, strategies to enhance long-term stability via nanomaterials, nanomaterial-based electron/hole transport layers and electrode modifications, nanomaterial–perovskite hybrids and new fabrication approaches, advanced characterization of perovskite–nanomaterial interactions, computational/theoretical guidance for nanomaterial integration, and applications beyond photovoltaics (LEDs, lasers, photodetectors). The issue aims to be a platform for interdisciplinary dialogue at the nexus of materials science, nanotechnology, and energy/optoelectronic device engineering.

Guest Editor

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Deadline for manuscript submissions

closed (30 April 2026)

Nanomaterials

an Open Access Journal by MDPI

Impact Factor 4.3
CiteScore 9.2
Indexed in PubMed

mdpi.com/si/259337

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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.

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