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Nanostructured Materials for Perovskite Solar Cells and Light-Emitting Diodes

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Message from the Guest Editors

Dear Colleagues,

Halide perovskites have been studied intensively and have performed excellently in various optoelectronic applications, including in solar cells and light-emitting diodes (LEDs). The solution processability of halide semiconductors means that these materials are particularly attractive when aiming to ensure the low-cost and scalable fabrication of superior optoelectronic devices. This Special Issue is a platform through which to discuss various perovskite semiconductors, including lead-based perovskites, low-dimensional halide semiconductors, and non-toxic heavy-metal-free perovskite semiconductors, in order to explore the fundamental nature of these perovskite nanomaterials in the application of optoelectronic devices, including theoretical calculation, crystal/defect chemistry, carrier dynamics, and ion migration.

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Editor-in-Chief

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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.

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