Special Issue

Halide Perovskite-Inspired Optoelectronics

Message from the Guest Editors

Dear Colleagues Perovskite-inspired materials (PIMs), both three-dimensional perovskite derivatives, namely, Sn(II) halide perovskites and halide elpasolites, and electronic analogs (i.e., zero-, one-, and two-dimensional metal halides comprising cations such as Ag+, Na+, Bi3+, Sb3+, In3+, Sn4+, and Ti4+) have emerged as low-toxic alternatives to LHPs. Yet, the performance of PIMs in photovoltaics, light-emitting diodes, and other optoelectronics is far inferior to that of LHPs, which has been attributed to their low photoluminescence quantum yields, high defect concentration, suboptimal thin film morphology, and poor selection of charge transport layers in the corresponding devices. This Special Issue will focus on the synthesis, photophysics, and material and device engineering of lead-free PIMs for an improved understanding of the fundamental aspects, enhanced device performance, and the discovery of unexplored applications. You can submit your paper at the following link:
https://www.mdpi.com/si/181599

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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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