Special Issue

Metal Halide Perovskite Nanocrystals and Thin Films

Message from the Guest Editors

Metal halide perovskite nanocrystals and thin films, promising new photoelectric materials, have attracted widespread attention in the last few years. Their excellent optical, electronic, and optoelectronic characteristics endow them with a potential application prospects in many fields, such as photovoltaics, lighting, displays, lasers, photodetectors, and high-energy radiation imaging. The nature of nanomaterials not only depend on their crystal and electronic structures, but also on their morphology, dimensions, sizes, ligands, and microenvironment, which will inspire broader fundamental research and optoelectronic applications. Revealing the relevant dynamic mechanisms and constructing structure–activity relationships are both matters of great significance, something will help the design, development and utilization of novel metal halide perovskite nanocrystals and thin films. The scope of this Special Issue includes, but is not limited to, synthesis, characterizations, modifications, optical properties, exciton dynamics and applications of metal halide perovskite nanocrystals and thin films.

Guest Editors

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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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