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Low-Dimensional Perovskites: From Materials Design to Optoelectronic Devices

Guest Editor:

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Message from the Guest Editor

Hybrid organic–inorganic metal halide perovskites are at the forefront of research trends in optoelectronics thanks to their outstanding photophysical properties. These semiconductors have triggered advances in photovoltaics and offer opportunities in other applications.

Low-dimensional perovskites are characterized by their great versatility because their structural and optical properties can be tailored by controlling their size and the nature of organic ligands. Moreover, their electronic confinement results in stable excitons at room temperature with exceptionally large exciton binding energy.

This Special Issue will publish original research papers and review articles focusing on the synthesis and application of optoelectronic devices of low-dimensional perovskites in the form of polycrystalline films, single crystals, or nanocrystals. Recent advances in synthetic approaches for the preparation of perovskites with different stoichiometries, composition, or shapes will be covered, as well as innovative or improved applications in devices, including photovoltaics, LEDs, lasers, and detectors.

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

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