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Applications of Metal Halide Perovskites in Optoelectronic Devices

Guest Editor:

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Deadline for manuscript submissions:
closed (31 March 2022)

Message from the Guest Editor

Dear Colleagues,

Metal halide perovskites (MHPs) have arisen as emergent semiconductors with outstanding prospects to construct a new generation of optoelectronic devices. From the earliest publications, MHPs have always demonstrated sharp band edges, a quantum yield of emission at room temperature close to 90%, high electronic mobilities, or strong nonlinear coefficients among other properties. In this way, MHPs have demonstrated extraordinary conversion efficiencies, ultralow thresholds of stimulated emission, and efficient light-emitting diodes or photodetectors. This Special Issue o f *Nanomaterials* will include new research about the development of new MHP-based optoelectronic devices, comprising new fabrication technologies, device characterization, or the implementation of novel functionalities. The format of welcomed articles includes full papers, communications, and reviews. Potential topics include, but are not limited to:

- New fabrication technologies
- Waveguides based on MHPs
- Laser and amplifiers
- Photodetectors and solar cells
- Nonlinear photonic devices

Dr. Isaac Suárez
Guest Editor

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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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