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Perovskites in Opto-Electronic Application: Recent Advances and Prospects

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Deadline for manuscript submissions:
closed (20 December 2021)

Message from the Guest Editors

Dear Colleagues,

In the past decade, a new paradigm in perovskite optoelectronic applications has emerged by employing the unique physical and chemical properties of metal halide perovskites. Particularly, the photovoltaic and light-emitting diode field are growing in unprecedented ways. The performances are governed by various key factors, such as light absorption strength and bandgap of metal halide perovskites, charge carrier lifetime, radiative efficiency and charge carrier mobility, as well as interfacial charge transfer. Understanding the materials' properties and the performance of device applications is crucial to commercialize stable devices and to develop both highly efficient light absorbers and light-emitting materials.

In this Special Issue, we aim to present research articles, prospections, and reviews reporting recent advances in a broad range of optoelectronic devices with metal halide perovskites. This issue is especially interested in works related to insights into photovoltaic and light-emitting diodes to open up a new stage of metal halide perovskite material, but also various optoelectronic devices (phototransistors, photodetectors, DFB lasers).

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Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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