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Advances in Perovskites: Growth, Characterization and Optoelectronic Devices

Guest Editor:

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Message from the Guest Editor

During the past few years, perovskites have emerged as “star materials” in optoelectronic devices with great potential in practical applications. The symmetric/asymmetric nature of the crystal lattice not only affects the energy band structure, phonon frequency, and defect states of perovskites, but also plays a key role in device performance. Therefore, the study of the symmetric/asymmetric nature and the crystal quality is important. In this Special Issue on “Advances in perovskites: growth, characterization, and optoelectronic devices”, we will mainly focus on the recent advances in the area of perovskites including: 1. new methods for growing the inorganic and hybrid perovskites; 2. the optical characteristic, morphology, and crystal structure of the as-synthesized perovskites; 3. anion/cation exchange/arrangement and crystal symmetric/asymmetric; 4. the stability of perovskites in different environments; 5. fabrication of optoelectronic devices including photodetector, solar cells, laser diodes, and light-emitting diodes.



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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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