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Perovskite Nanostructures in Solar Cells: Opportunities and Challenges

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Message from the Guest Editor

Dear Colleagues,

Perovskite solar cells as the third generation of thin film solar cells have outstanding advantages such as high photoelectric conversion efficiency, flexible preparation and low cost, which is expected to cross the threshold of commercialization, and then share and even overturn the photovoltaic market dominated by silicon solar cells, and reduce environmental pollution and global greenhouse effect more effectively.

The research direction of perovskite solar cells focuses on the optimization of perovskite materials, interface regulation, improvement of the preparation process of perovskite solar cells, new materials and device structures. The main research direction is to improve the efficiency and stability of the perovskite solar cells, find low-cost and efficient light absorption layer, further simplify the structure of the perovskite solar cells, improve the encapsulation process, and realize the preparation of large-area modules. In addition, lead-free materials and flexible perovskite batteries are also hot research directions.

For more detailed information please see the Special Issue webpage.

Dr. Xiaoyang Guo
Guest Editor



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Special Issue



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Message from the Editor-in-Chief

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