

Strategies for Enhancing Efficiency of Hybrid Perovskites and Bulk Heterojunction Solar Cells

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ABSTRACT

The increasing energy demand and scarcity of conventional non-renewable resources, has turned to be a bottleneck for survival present and future generations. Undoubtedly the clean, inexhaustible, economically viable solar energy, can be an immediate need of the hour and a permanent alternative solution to meet the terawatt level energy demands. Various approaches and strategies are researched in the recent years for enhancing the performances of the devices. Therefore the current talk will address the most preliminary issues during fabrication of efficient configurations of solar cells. Perovskites and bulk heterojunction devices are affordable for efficient clean energy production and also a cheaper alternative that is captivating the global scenario. Hence, a focus is laid on non-conventional perovskite single crystal based solar cells and address the challenges imposed during the integration into the devices. In the BHJ devices, engineering the energy landscape, by choosing the suitable electron and hole transporting layers are paramount for highly efficient devices that would lead to viable commercialization of the flexible solar cells.

References:

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