



Fabrication and Molecular Mechanisms of Perovskite and Perovskite-Based Tandem Solar Cells

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Message from the Guest Editor

Perovskite solar cells are quite cheap, relatively easy to fabricate and have already achieved a power conversion efficiency of over 25%, which is comparable to the current industry standard with silicon solar cells. This high efficiency means that perovskite solar cells can generate more electricity from the same amount of sunlight. On the other hand, perovskite-based tandem solar cells currently produce a power conversion efficiency of over 33% and have tremendous potential to be further improved. By combining two different types of solar cells with different absorption properties, tandem solar cells can capture a wider range of the solar spectrum, which can lead to higher efficiencies.

This Special Issue focuses on the material design, methodology, fabrication, and investigating mechanisms of perovskite and perovskite-based tandem devices. Therefore, IJMS welcomes both original research and review articles that deal with the molecular mechanisms underlying the role of perovskite solar cells in material design, fabrication approaches, and mechanism research.





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Message from the Editor-in-Chief

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