

Advances and Fusion of Organic and Perovskite Photovoltaics

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Abstract— Organic solar cells (OSCs) and perovskite solar cells (PSCs) are two of the most promising candidates for next generation printable photovoltaics primarily due to their high efficiency, printability, low cost etc. Perovskite solar cell has just reached 27% power conversion efficiency (PCE) within only 16 years of development. While organic semiconductors, due to the tightly bounded excitonic feature, tend to have drawbacks in achieving high efficiency, have also achieved close to 21% OSC efficiency, with encouraging progress in transparent, flexible, stretchable OSCs too. The fusion of these two technologies has recently achieved tandem solar cells with promising efficiency and stability. In this talk I will give a concise presentation on the recent progress in these two solar technologies.

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