

Flexible Perovskite Solar Cells

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Light-weight and flexible electronic devices are key technologies for the 5G mobile technology and Internet of Things (IoT). If they can be compatible with reliable flexible power sources, that would be very attractive to manufacturers and consumers. Perovskite solar cell (PSC) is the latest thin film photovoltaic technology that has demonstrated extraordinarily high conversion efficiency and it has potential to be a high efficiency, low cost alternative photovoltaic technology. Materials used in making perovskite solar cells are solution based, which is attractive for processing of devices using a variety of techniques, such as printing, and can be readily processed into flexible solar cells on plastic substrates. However, there are a number of challenges before the technology's commercialization, for example, difficulties in forming good quality large area thin films, internal ion movements, device stability and lead poisoning etc. Progress has been made, but more efforts are needed to promote this attractive PV technology into commercialisation.