

Bismuth Based Absorbers for Fully-printable Mesoscopic Perovskite Solar Cells

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ABSTRACT

Fully-printable mesoscopic perovskite solar cells have attracted considerable attention during the last few years. Although recent progress has led to devices able to address ~~were managed to conquer the~~ stability problems and that can achieved relatively high efficiency, ~~a~~ replacement of lead in the absorber layer of the device is highly desirable to open up a full range of application possibilities. ~~demand quick solution.~~ Two bismuth-based materials were applied as the absorber material in such solar cells~~this structure~~ in this study. BiSI was applied ~~in this study~~ by using a low-temperature device fabrication method. However, due to improper ~~the~~ band alignment, no photoresponse was observed. Ag_3BiI_6 showed photovoltaic function in the standard triple mesoporous device structure, however ~~had~~ poor performance because of poor permeability and diffusivity, leading to severe S-shape I-V curves, such that further process optimization is still required.