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Preparation and evaluation of different layer sequences of perovskite solar cells

Perovskite solar cells based on organometal halide light absorbers have attracted a massive increase in research effort, which is due to their potentially very high power conversion efficiencies along with low material costs. In this work we prepare and characterize different device concepts for implementing the solution-cast methylammonium lead iodide absorber into solar cells. The characterization of the device performance has been done by employing current-voltage and EQE measurements. Although some challenges remain, we were able to improve the cell performance through variation of the fabrication process and addition of interfacial layers.

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