

Additive Engineering for Enhancing Photostability of MAPbI₃

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Abstract: Methylammonium lead iodide (MAPbI₃) based perovskite solar cells represent now one of the most rapidly developing fields of scientific research. Unique electronic properties such as high absorption coefficient, easy processing and high power conversion efficiencies reached in solar cells make perovskite solar cells a highly promising future generation photovoltaic technology. Unfortunately, it is still far away from commercial application due to intrinsic photochemical and thermal instability of the active absorber materials.

One of the ways to enhance intrinsic photo and thermal instability is by using additive engineering. Since additives may assist to perform reduction of molecular iodine; it can slow down overall decomposition process, ultimately enhancing photostability of absorber layer.

Here in, investigation of an additive regarding its impact onto photo stability of Methyl ammonium lead iodide (MAPbI₃) based perovskite layer is presented.