

Cation substitution enables the complete conversion of 1D to 3D perovskite for photovoltaic application

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Supporting Information

Supplementary results:

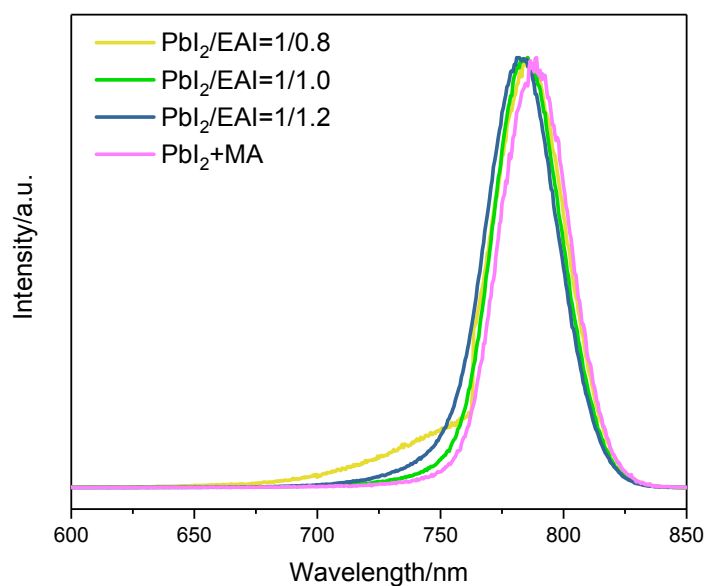


Fig. S1 The normalized PL spectra of the different perovskite films

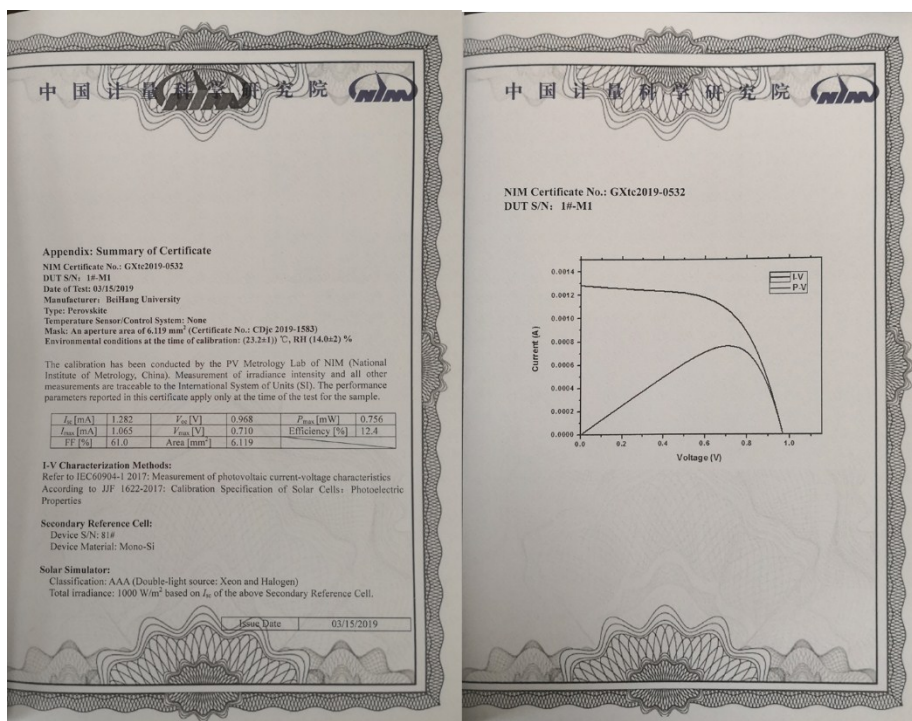


Fig. S2 The calibration results from The National Institute of Metrology (NIM)

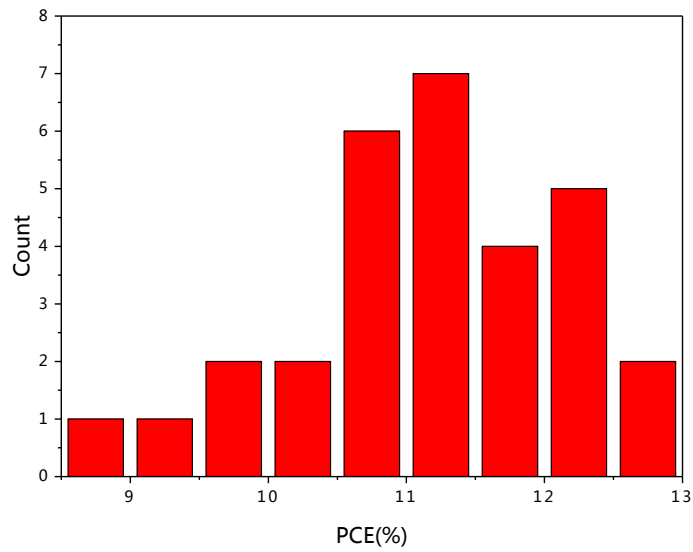


Fig. S3 The histogram of power conversion efficiencies (PCEs) of the device fabricated from $\text{PbI}_2/\text{EAI}=1/1$ precursor.

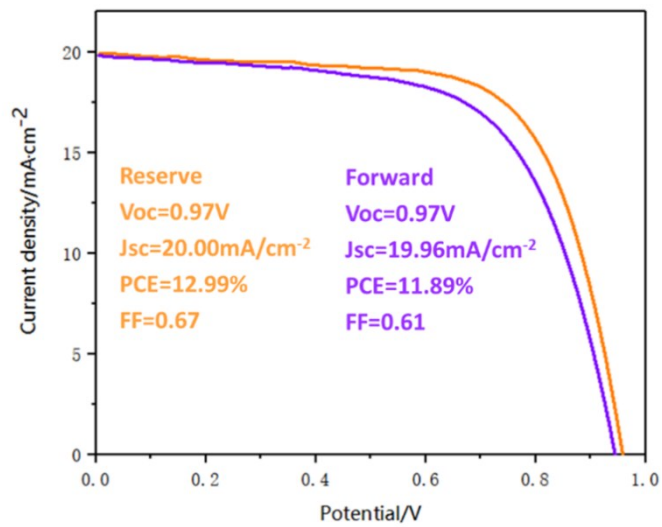


Fig. S4 J - V curves of the cell recorded in reverse and forward scanning directions

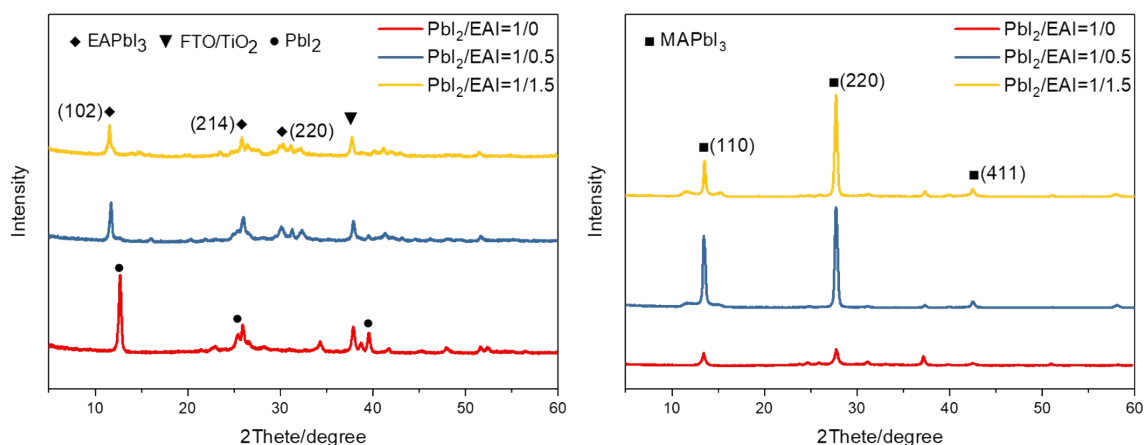


Fig. S5 XRD patterns of the 1D EAPbI₃ films obtained from the EAPbI₃ solutions with different PbI₂/EAI ratios (the ratio of PbI₂/EAI=1/0, 1/0.5, 1/1.5) before and after the MA gas treatment.

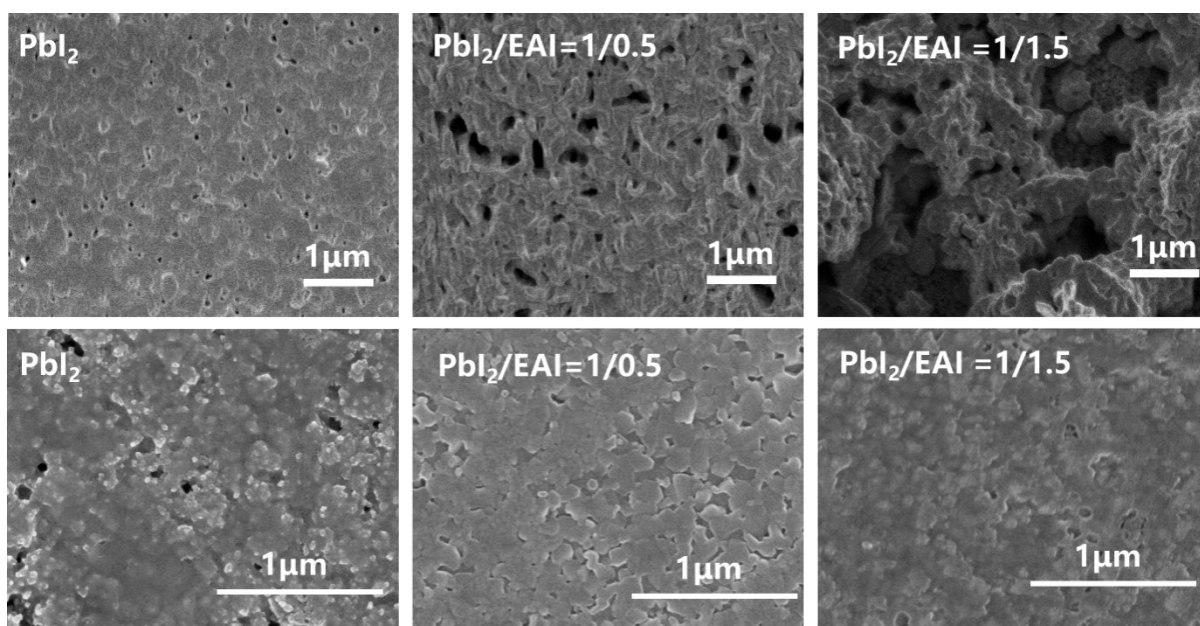


Fig. S6 The top-view SEM images of the 1D EAPbI₃ films obtained from the PbI₂/EAI solutions with different ratios (the ratio of PbI₂/EAI=1/0, 1/0.5, 1/1.5) before and after the MA gas treatment.