

Electronic Supplementary Material (ESI) for Nanoscale Horizons

Supplementary Material

Effect of Alkaline Earth Metal Chloride Additives BCl_2 (B = Mg, Ca, Sr and Ba) on Photovoltaic Performance of FAPbI_3 Based Perovskite Solar Cells

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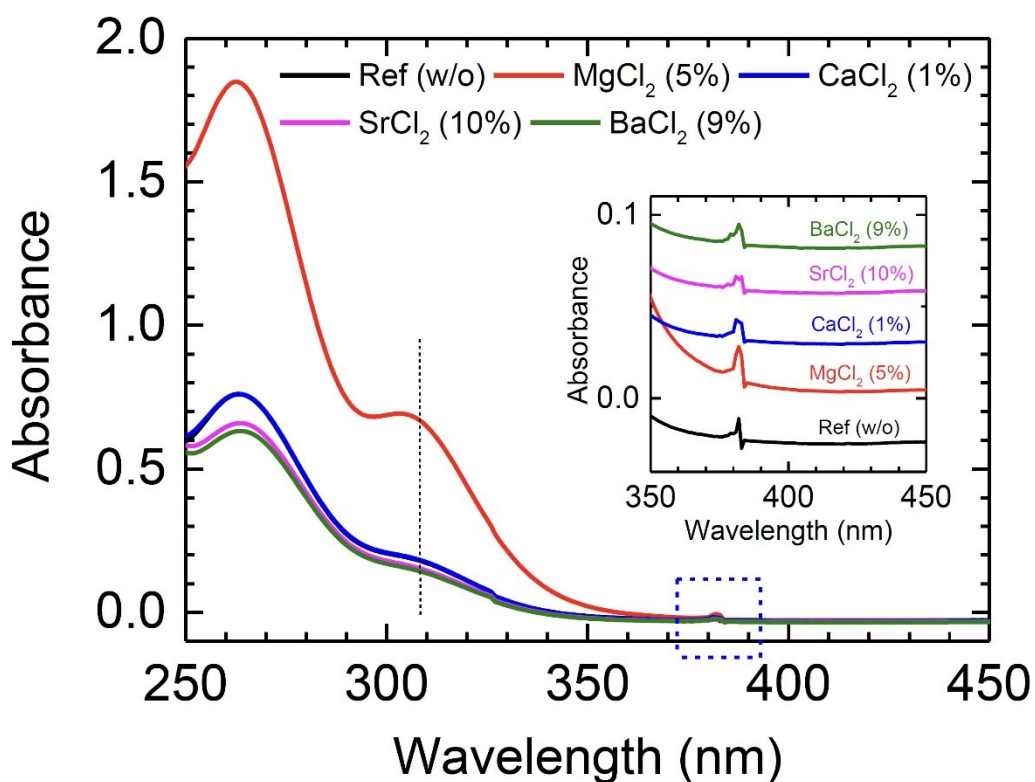


Fig. S1. The absorbance of precursor solution with or without BCl_2 additives. The solution concentration was 1.4×10^{-4} M.

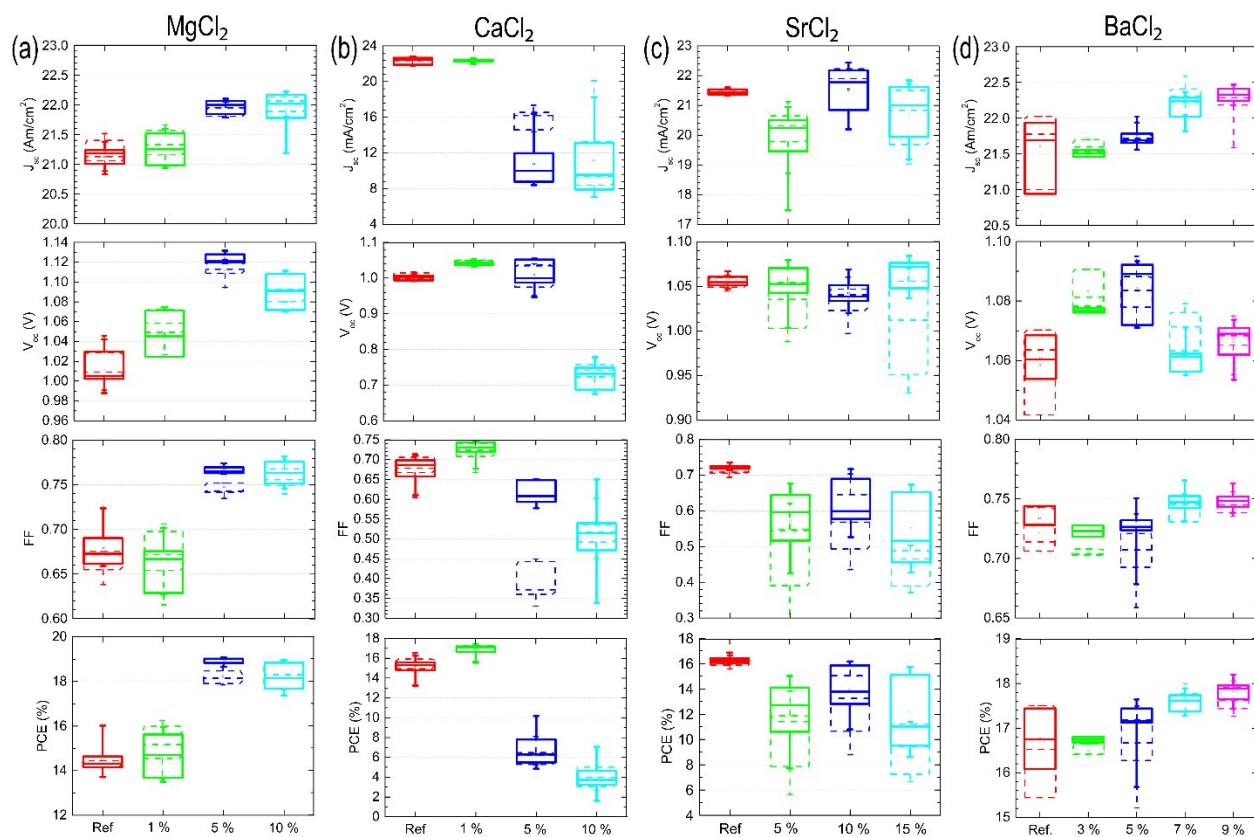


Fig. S2. Photovoltaic parameters of J_{sc} , V_{oc} , FF and PCE depending on the concentration of additive of (a) $MgCl_2$, (b) $CaCl_2$, (c) $SrCl_2$ and (d) $BaCl_2$. Solid boxes and dotted boxes represent the reverse scanned data and the forward scanned data, respectively.

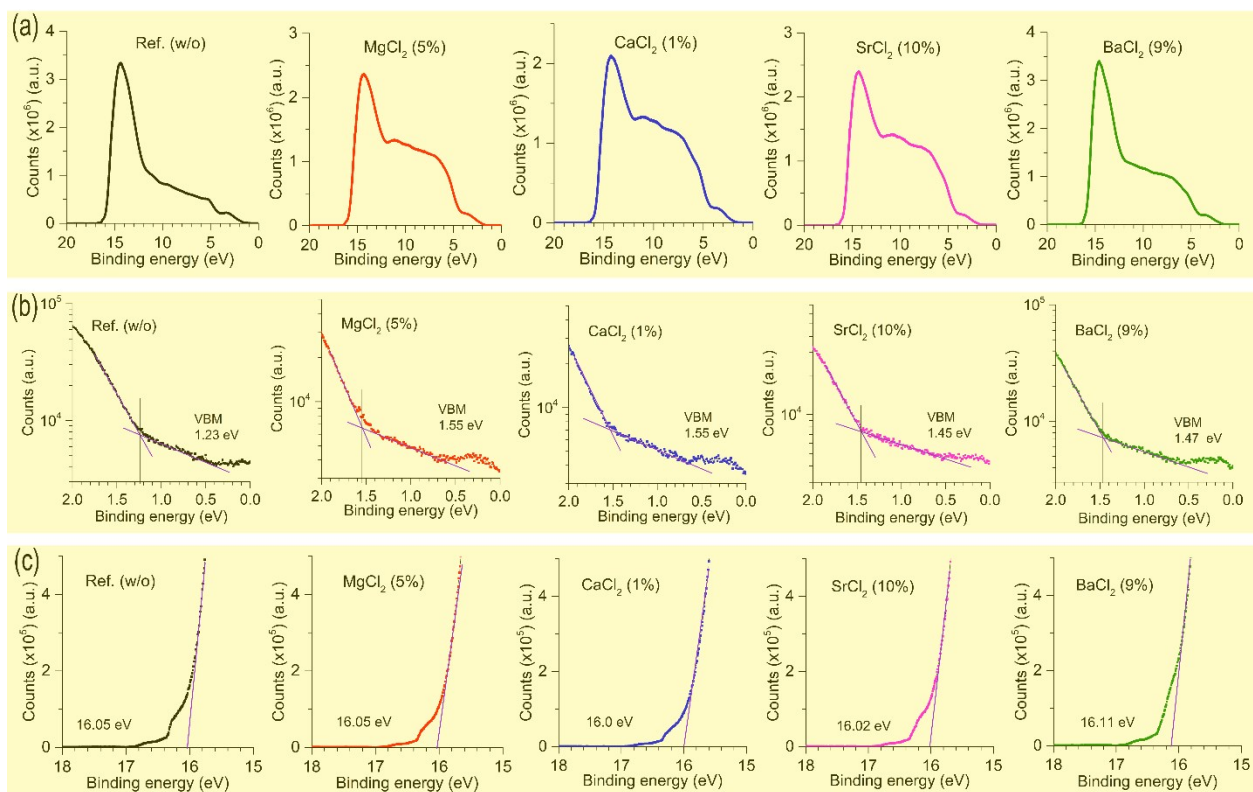


Fig. S3. (a) UPS full spectra, (b) logarithmic scale UPS for determining VBM (valence band maximum) and (c) E_{cutoff} (cut-off energy) for the pristine FAPbI₃ film (Ref. (w/o)) and those with additives of MgCl₂, CaCl₂, SrCl₂ and BaCl₂.