supplementary materials

Structural Disorder in Layered Hybrid Halide Perovskites: Types of Stacking Faults, Influence on Optical Properties and Their Suppression by Crystallization Engineering

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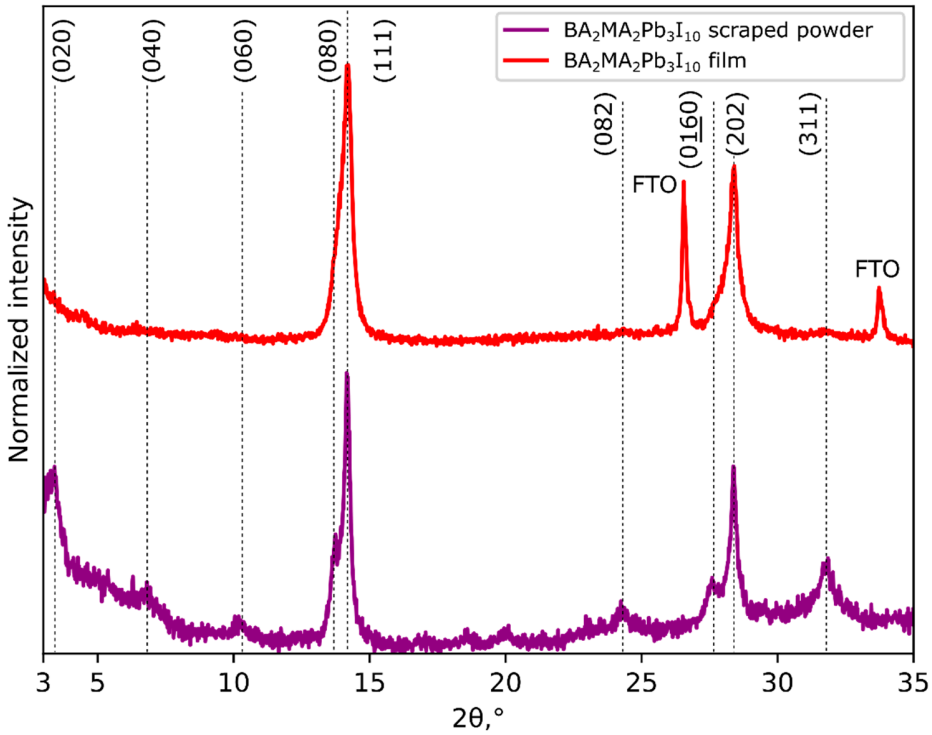


Figure S1. Comparison of XRD patterns of n3 film (red line) and scraped off powder from n3 film (purple line).

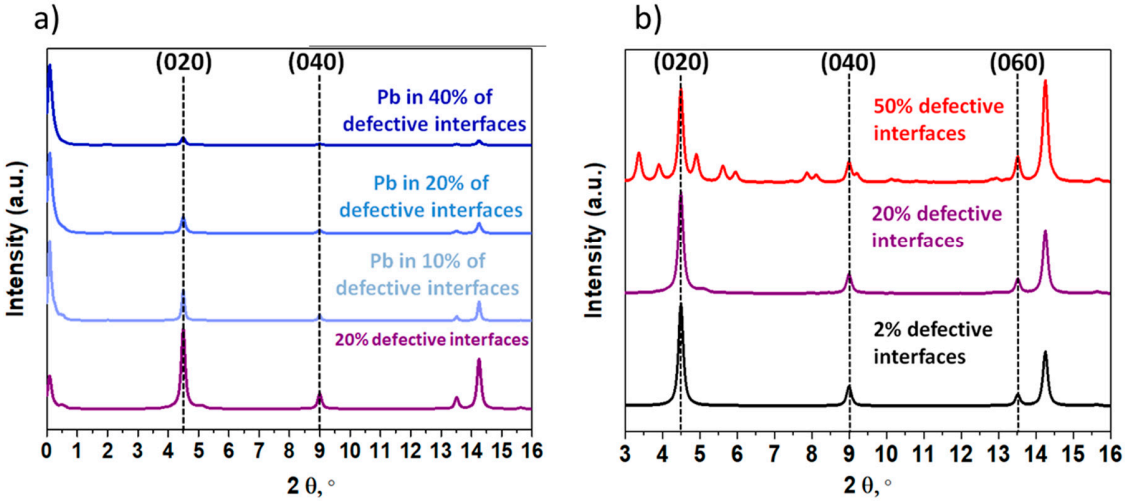


Figure S2. Calculated XRD patterns of $BA_2MAPb_2I_7$ structure with different SF-B(t1) defect concentrations in the case of additional lead cations (a) and unoccupied / missing octahedra (b) on the shift plane.

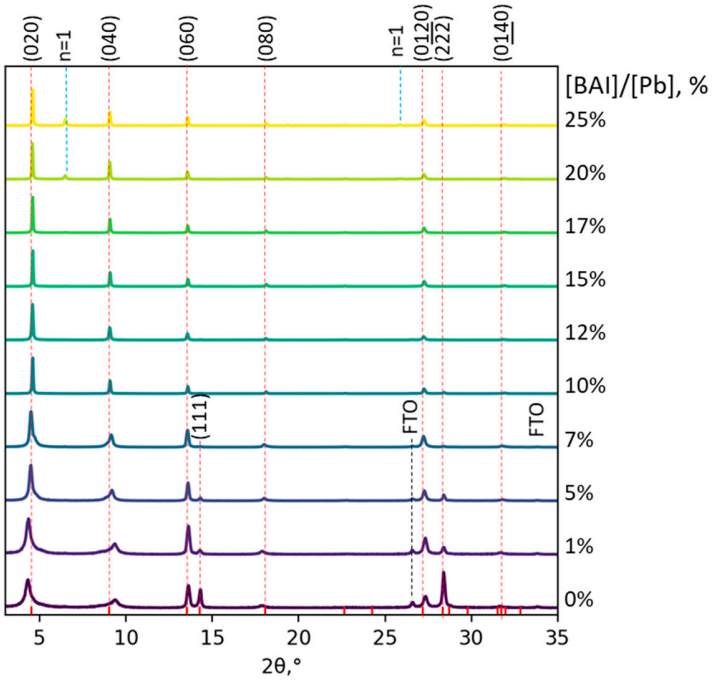


Figure S3. XRD patterns of $BA_2MAPb_2I_7$ films with different concentrations of BAI excess (0 – 25%) given in percentage of $[Pb^{2+}]$ concentration in solution.

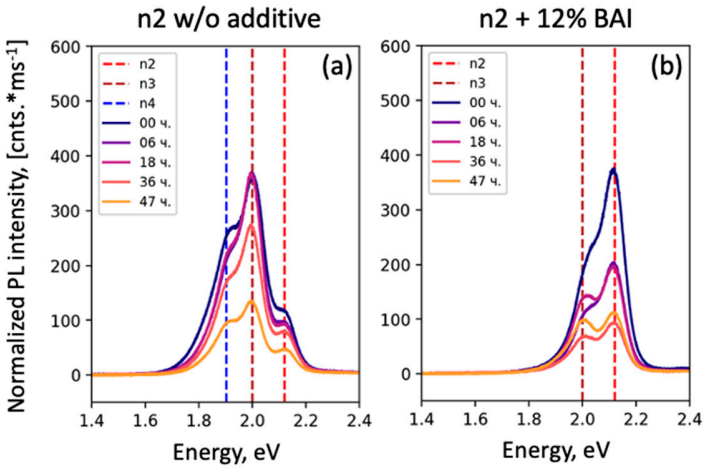


Figure S4. PL spectra of n2 perovskite without (a) and with 12% BAI additive (b) at different time of 100°C heating in inert dry atmosphere.

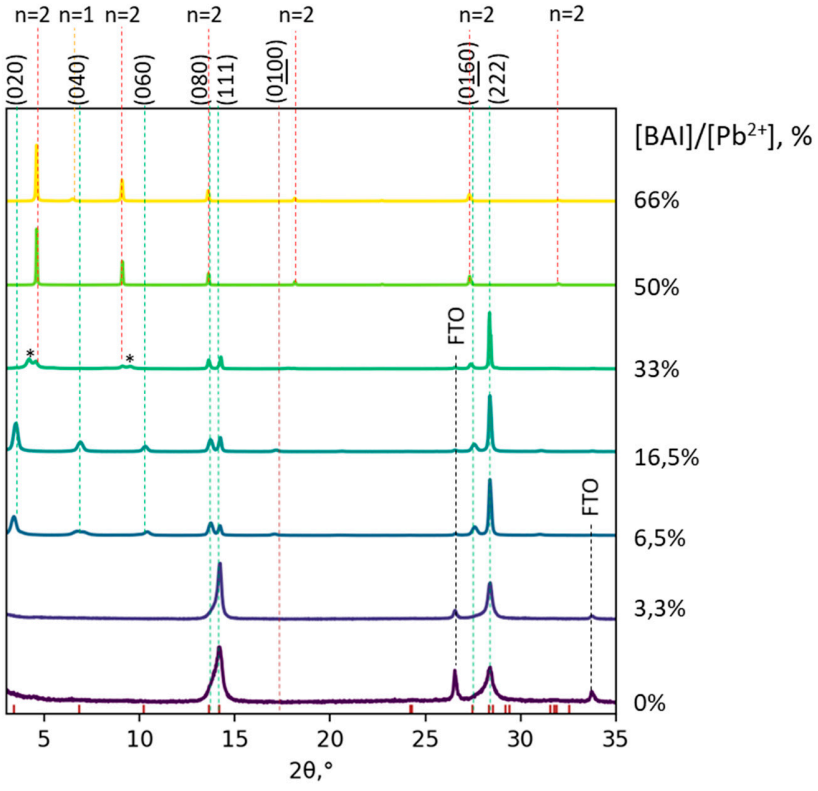


Figure S5. XRD patterns of $BA_2MA_2Pb_3I_{10}$ films with different concentrations of BAI excess given in percentage of $[Pb^{2+}]$ concentration in solution.

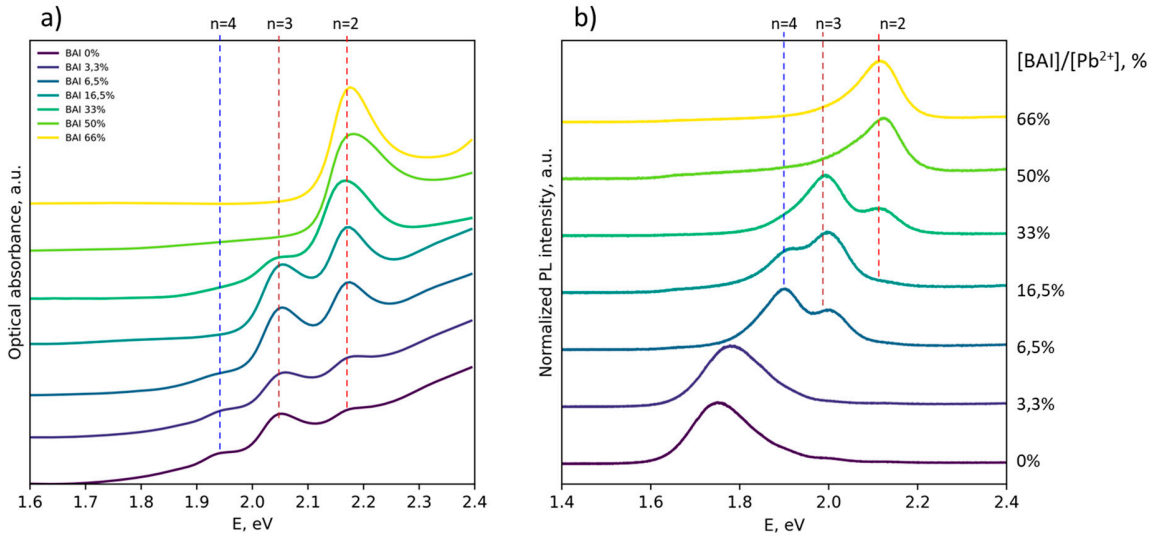


Figure S6. UV-vis absorption (a) and PL (b) spectra of $BA_2MA_2Pb_3I_{10}$ films with different concentrations of super stoichiometric BAI given in percentage of $[Pb^{2+}]$ concentration in solution.