

Electronic Supplementary Information

Air-stable $\text{CsPb}_{1-x}\text{Bi}_x\text{Br}_3$ ($0 \leq x \ll 1$) perovskite crystals: **optoelectronic and photostriction properties**

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This file includes Figure S1-S6:

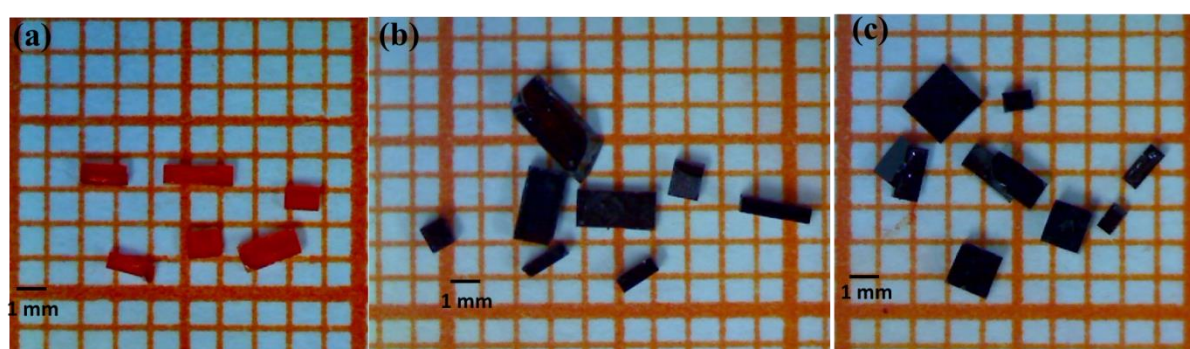


Figure S1. Photographs of the (a) CsPbBr_3 , (b) $\text{CsPb}_{0.975}\text{Bi}_{0.025}\text{Br}_3$, and (c) $\text{CsPb}_{0.9}\text{Bi}_{0.1}\text{Br}_3$ single crystals.

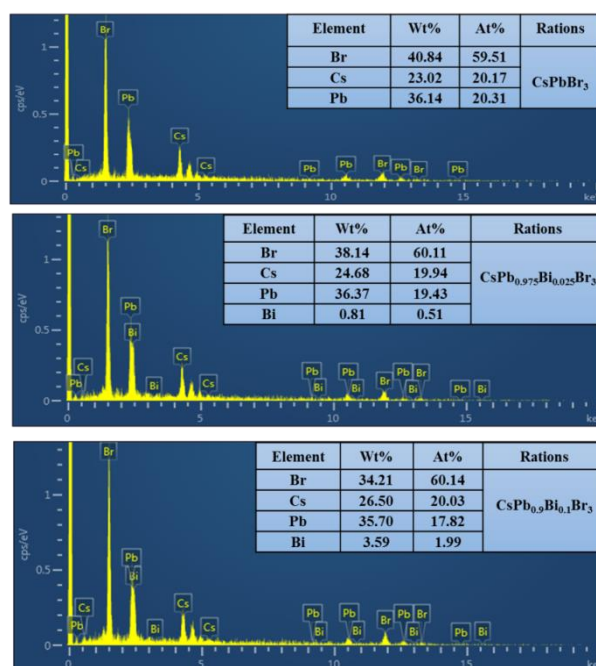


Figure S2. EDS results of the CsPbBr_3 , $\text{CsPb}_{0.975}\text{Bi}_{0.025}\text{Br}_3$, and $\text{CsPb}_{0.9}\text{Bi}_{0.1}\text{Br}_3$ single crystals.

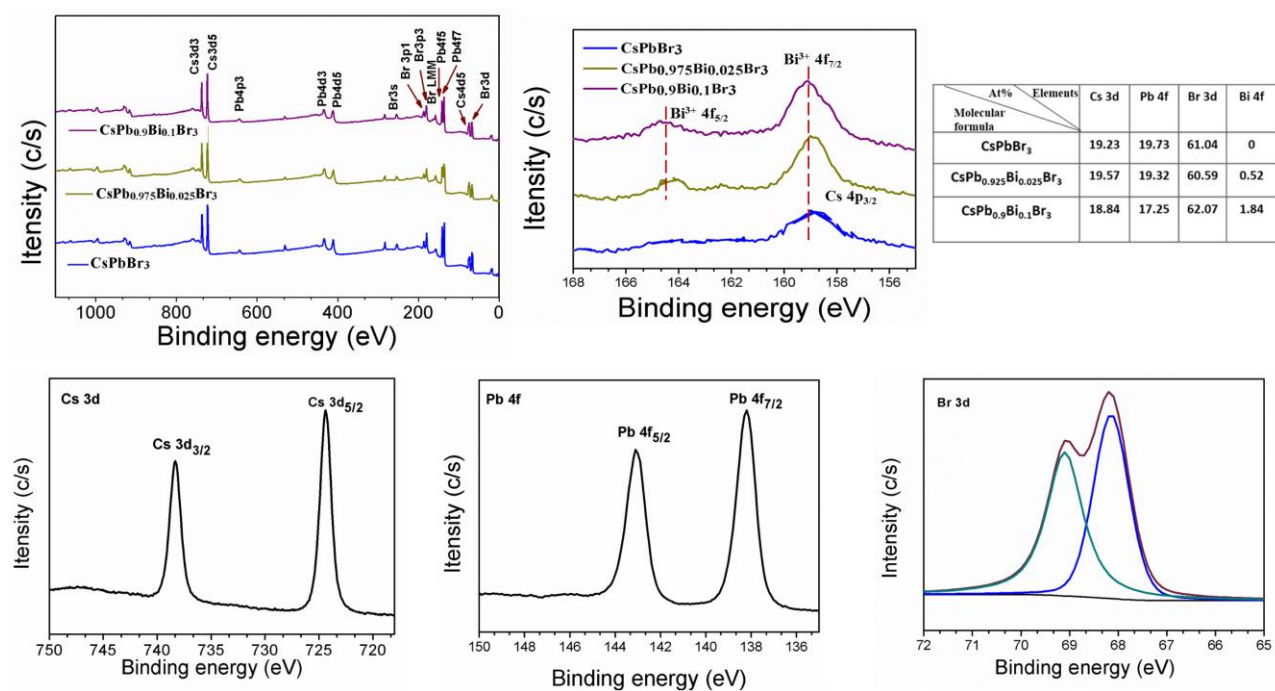


Figure S3. XPS spectra of CsPbBr₃, CsPb_{0.975}Bi_{0.025}Br₃, and CsPb_{0.9}Bi_{0.1}Br₃ single crystals.

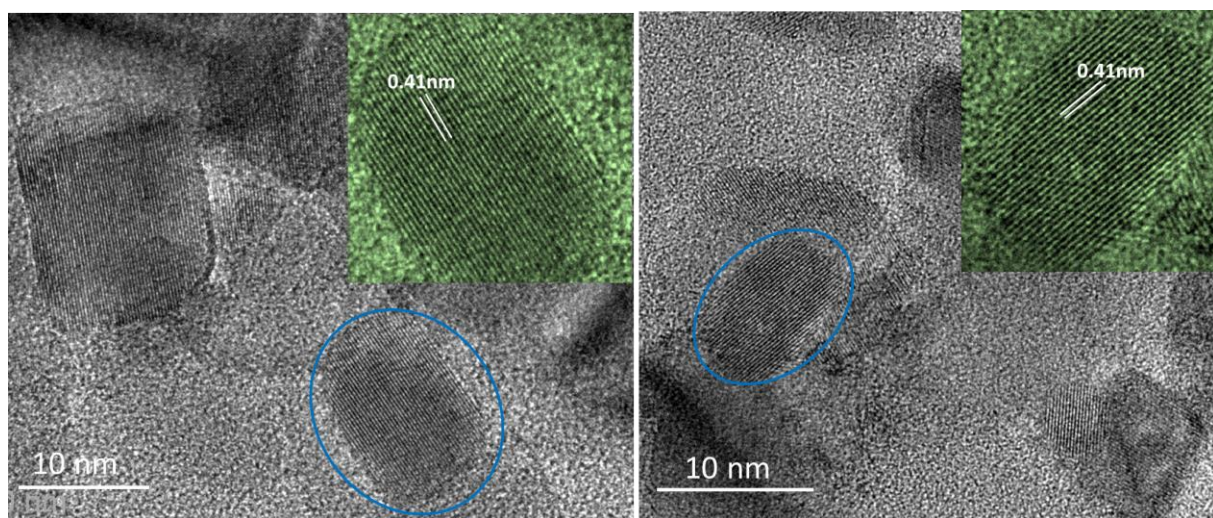


Figure S4. TEM images of CsPbBr₃, CsPb_{0.975}Bi_{0.025}Br₃, and CsPb_{0.9}Bi_{0.1}Br₃ thin films.

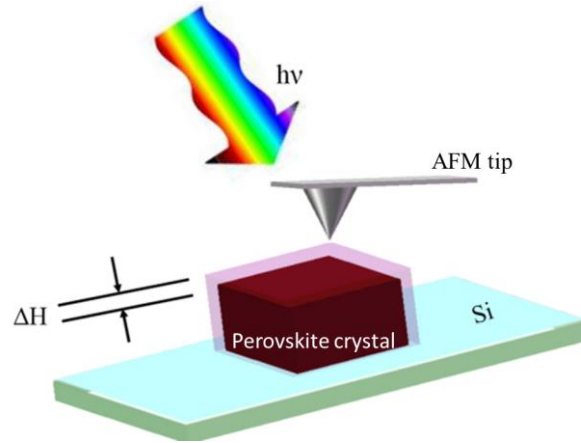


Figure S5. Schematic diagram of the photostriction measurement procedures.

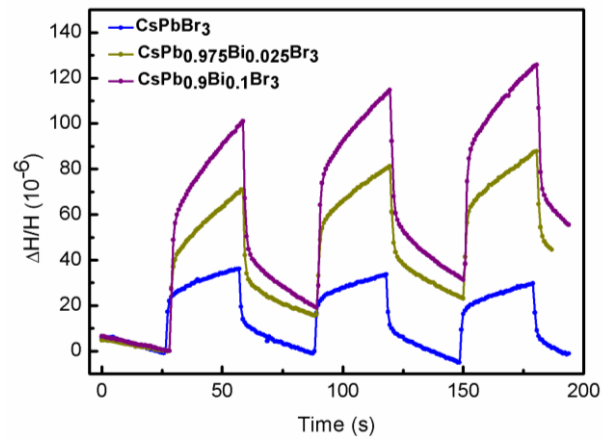


Figure S6. Comparison of the effective photostriction ($\Delta H/H$) of CsPbBr₃, CsPb_{0.975}Bi_{0.025}Br₃, and CsPb_{0.9}Bi_{0.1}Br₃ single crystals under 1000 W/m² illumination of white light.