Supplementary information for Synthesis and Characterization of Methylammonium Lead Tri-Bromide Perovskites Thin Films by Sequential Physical Vapor Deposition

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Figure S1: XRD spectra of PbBr₂, MABr and MAPbBr₃ constaining 500 nm thick MABr annealed at different times.



Figure S2: XRD spectra of MAPbBr₃ for various thicknesses of MABr, including the spectrum for 200 nm PbBr₂:200 nm MABr.



Figure S3: XRD spectra of MAPbBr₃ including 200 nm PbBr₂:200 nm MABr, 100 nm PbBr₂:100 nm MABr and 200 nm PbBr₂:100 nm MABr thickness ratios.



Figure S4: UV-Vis spectra of MAPbBr₃ including 500 nm thick MABr annealed at different times.



Figure S5: UV-Vis spectra of MAPbBr₃ for various thicknesses including 200 nm PbBr₂: 200 nm MABr sample.



Figure S6: UV-Vis spectra of MAPbBr₃ for various thicknesses of MABr synthesized on glass.



Figure S7: FWHMcos(Θ) *vs. 4sin*(Θ) *for MAPbBr*₃ *film with different thicknesses of MABr.*



Figure S8: Micro-strain of MAPbBr₃ thin film vs. thickness of MABr.

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