

Supporting Information

Inserting Metal Cation in Hybrid Organometallic Halide Perovskite Nanocrystals for Enhanced Stability: Eco-friendly Synthesis, Lattice Strain Engineering, and Defect Chemistry Studies

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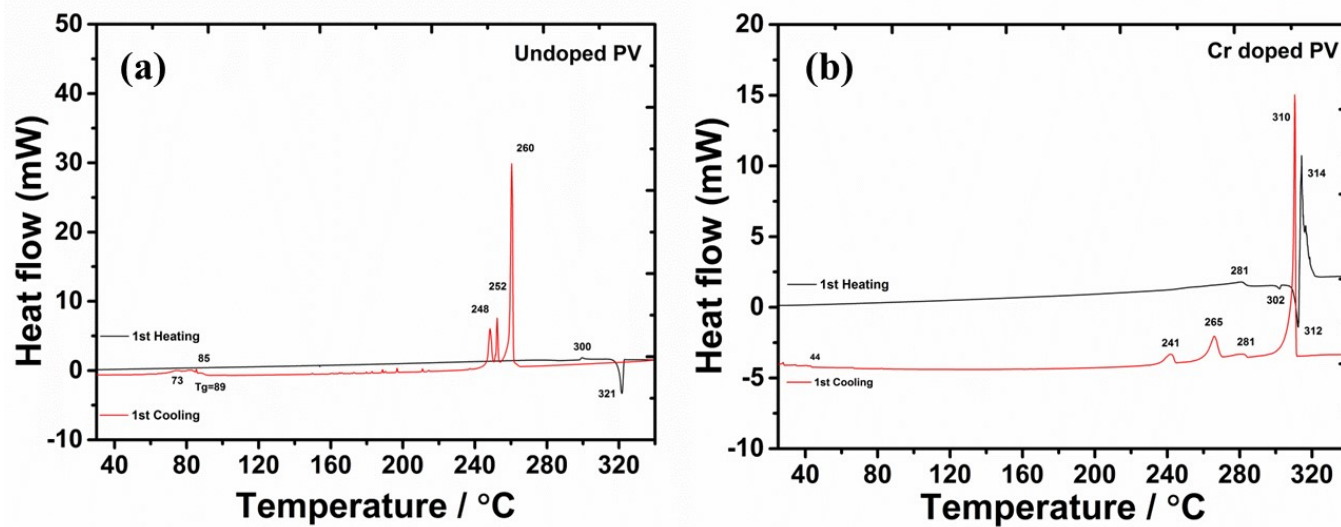


Figure S1 DSC spectra of heating and cooling curves of (a) undoped and (b) Cr doped perovskite $\text{CH}_3\text{NH}_3\text{PbBr}_3$ nanocrystals.

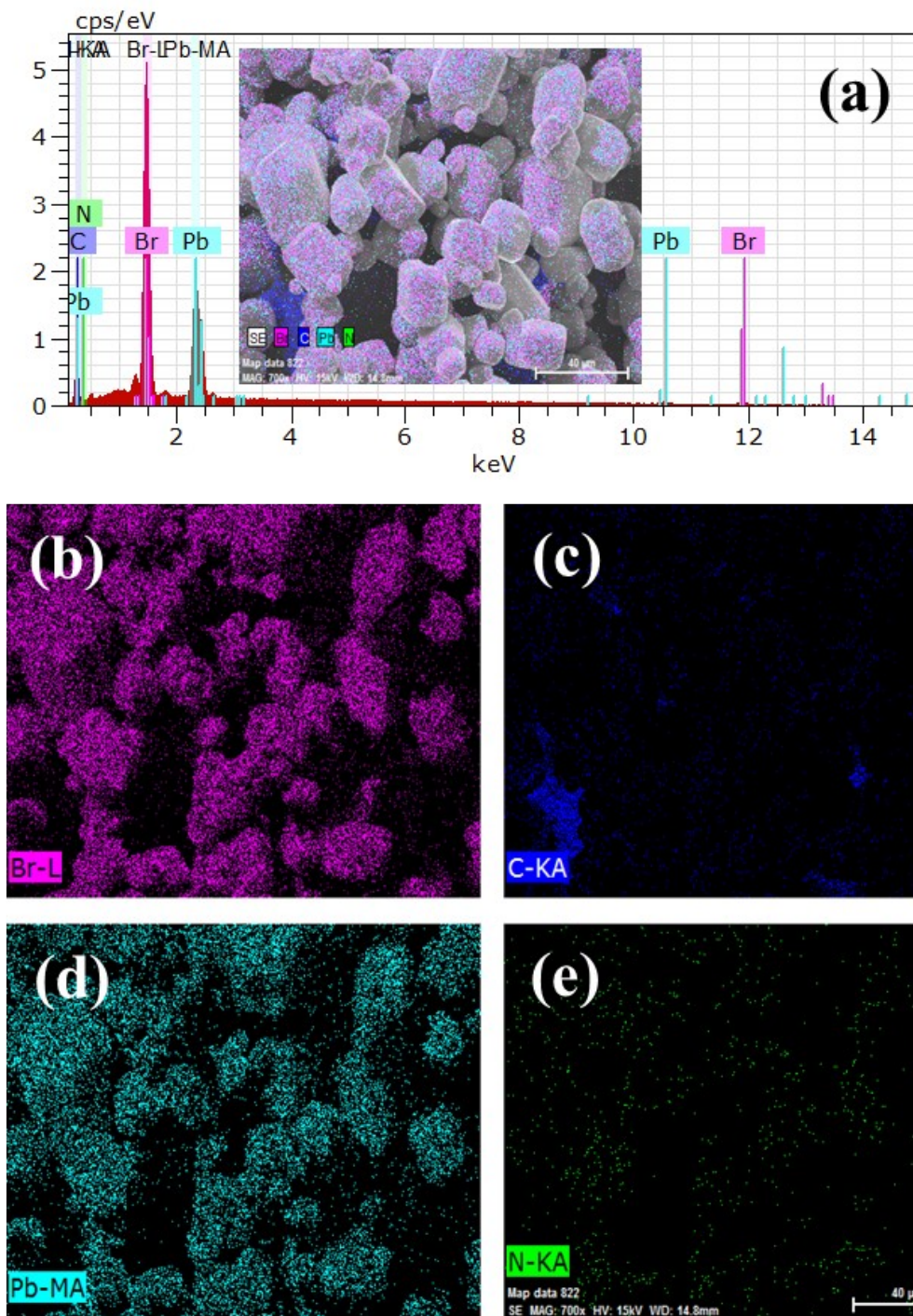


Figure S2 (a) EDX spectra with inset FESEM image and FESEM elemental images of (b) Br element, (c) C element, (d) Pb element, (e) N element of undoped perovskite nanocrystals.

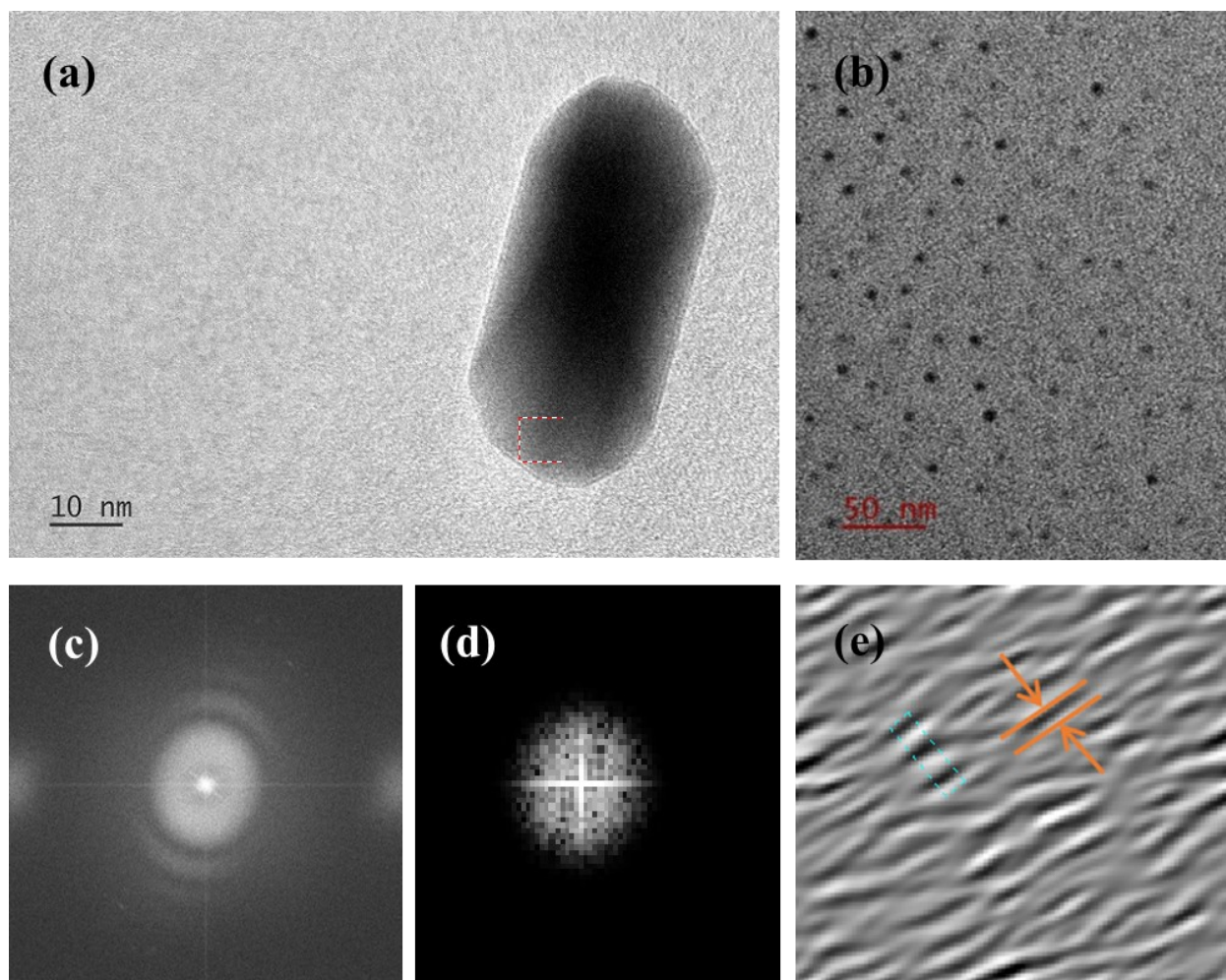


Figure S3 TEM image of single nanorods (a) high resolution (b) low resolution with (c-e) FFT pattern and calculations.

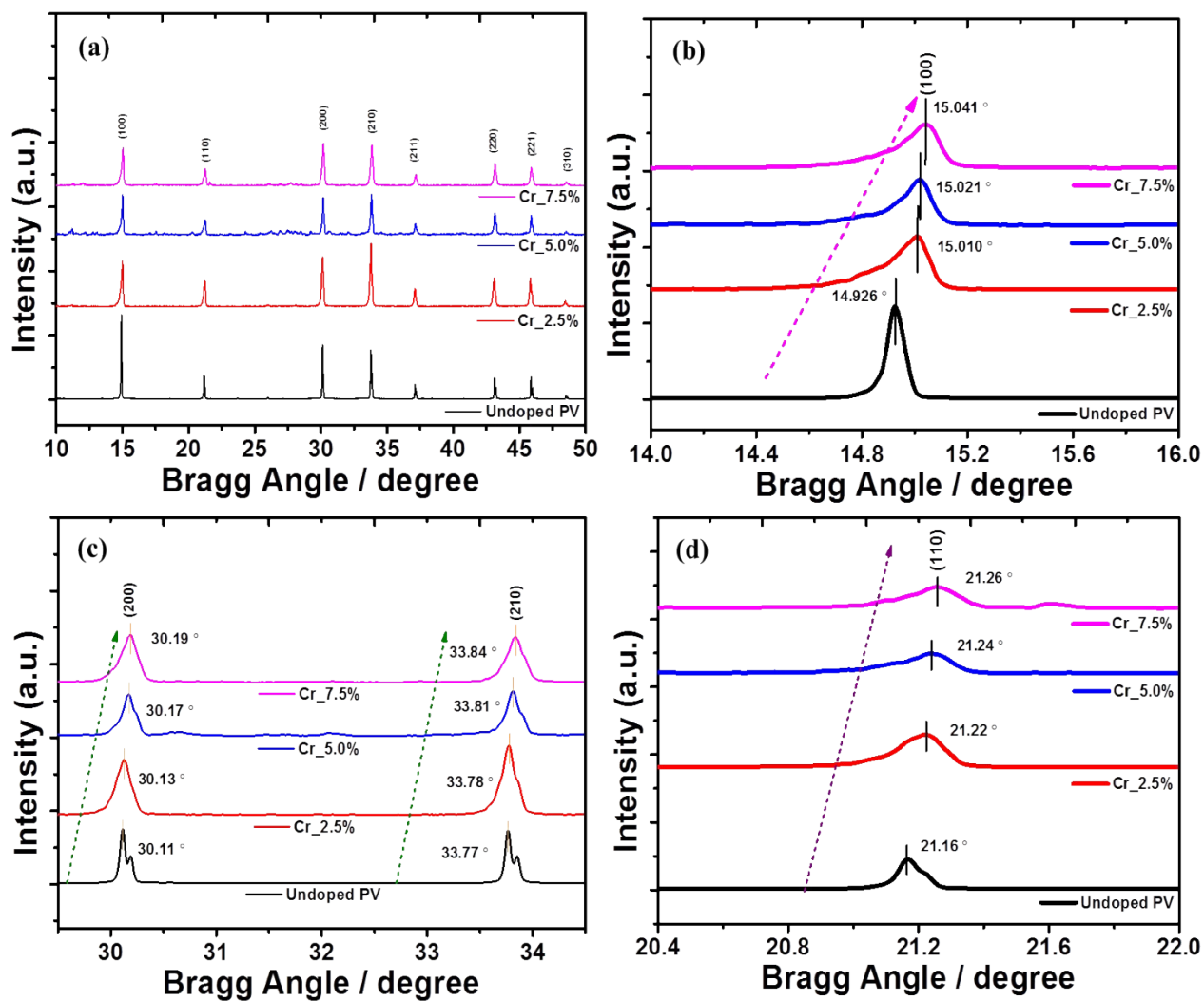


Figure S4 XRD spectra of (a) undoped and Cr doped perovskite nanocrystals (b) high resolution peak of (100) plane, (b) high resolution peak of (200) and (210) planes, and (d) high resolution peak of (110) plane of perovskite phase.

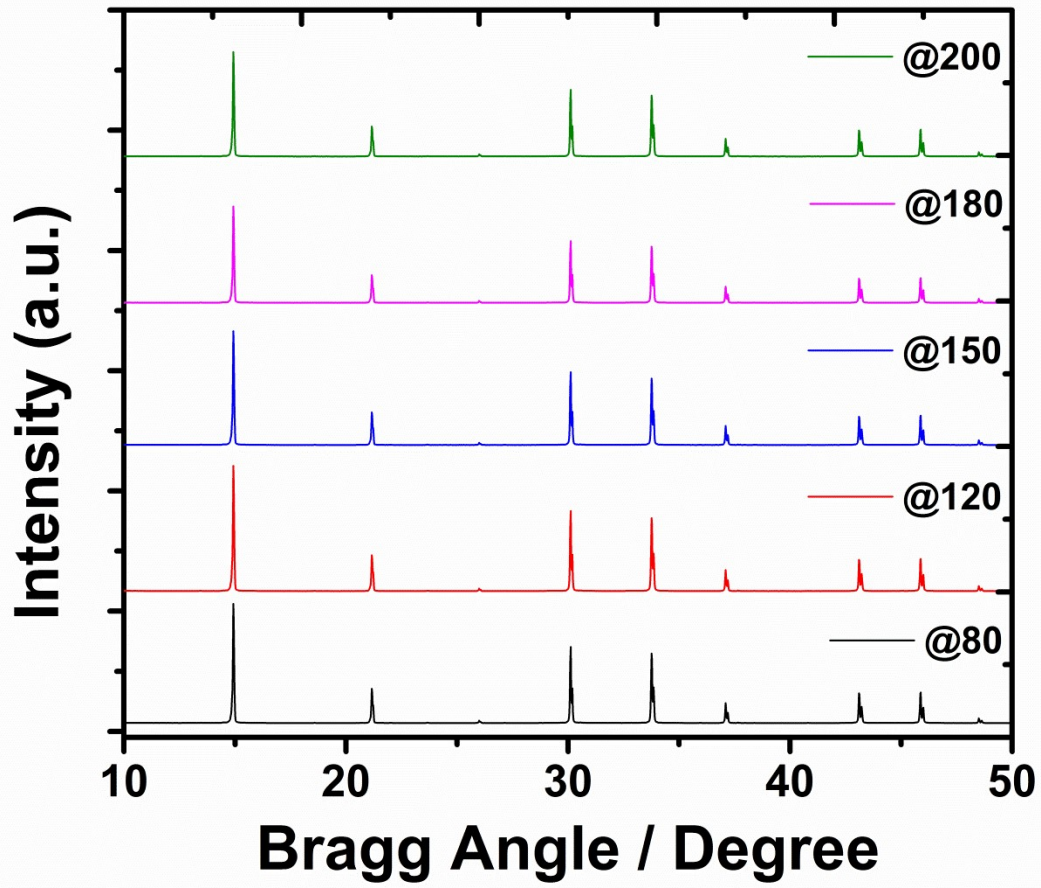


Figure S5 XRD spectra of Cr doped perovskite nanocrystals for phase stability at different temperatures.

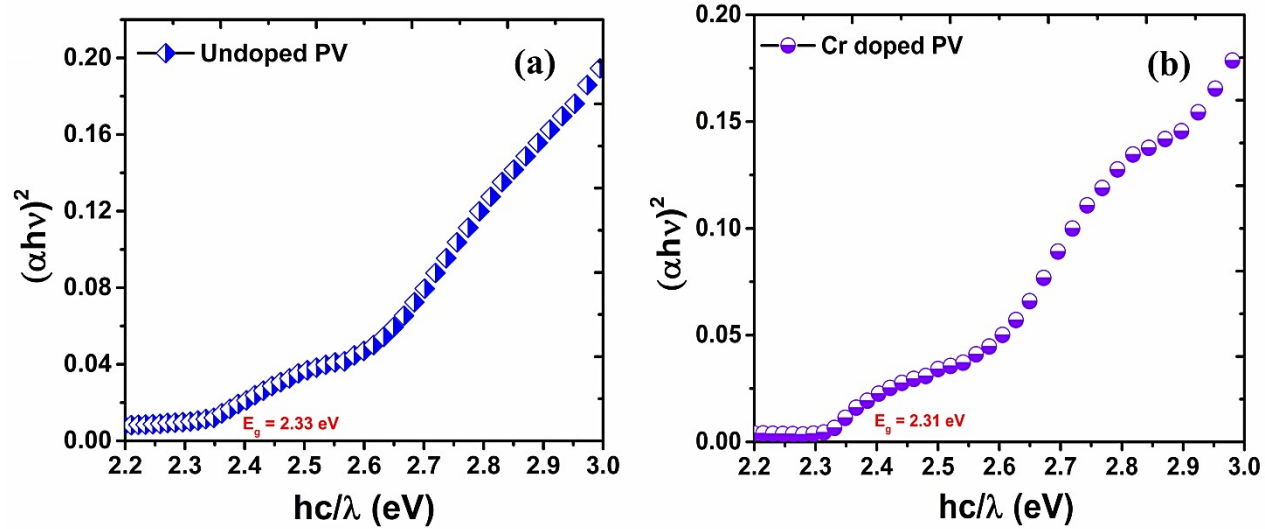


Figure S6 Tauc plots of (a) undoped and (b) Cr doped perovskite $\text{CH}_3\text{NH}_3\text{PbBr}_3$ nanocrystals.

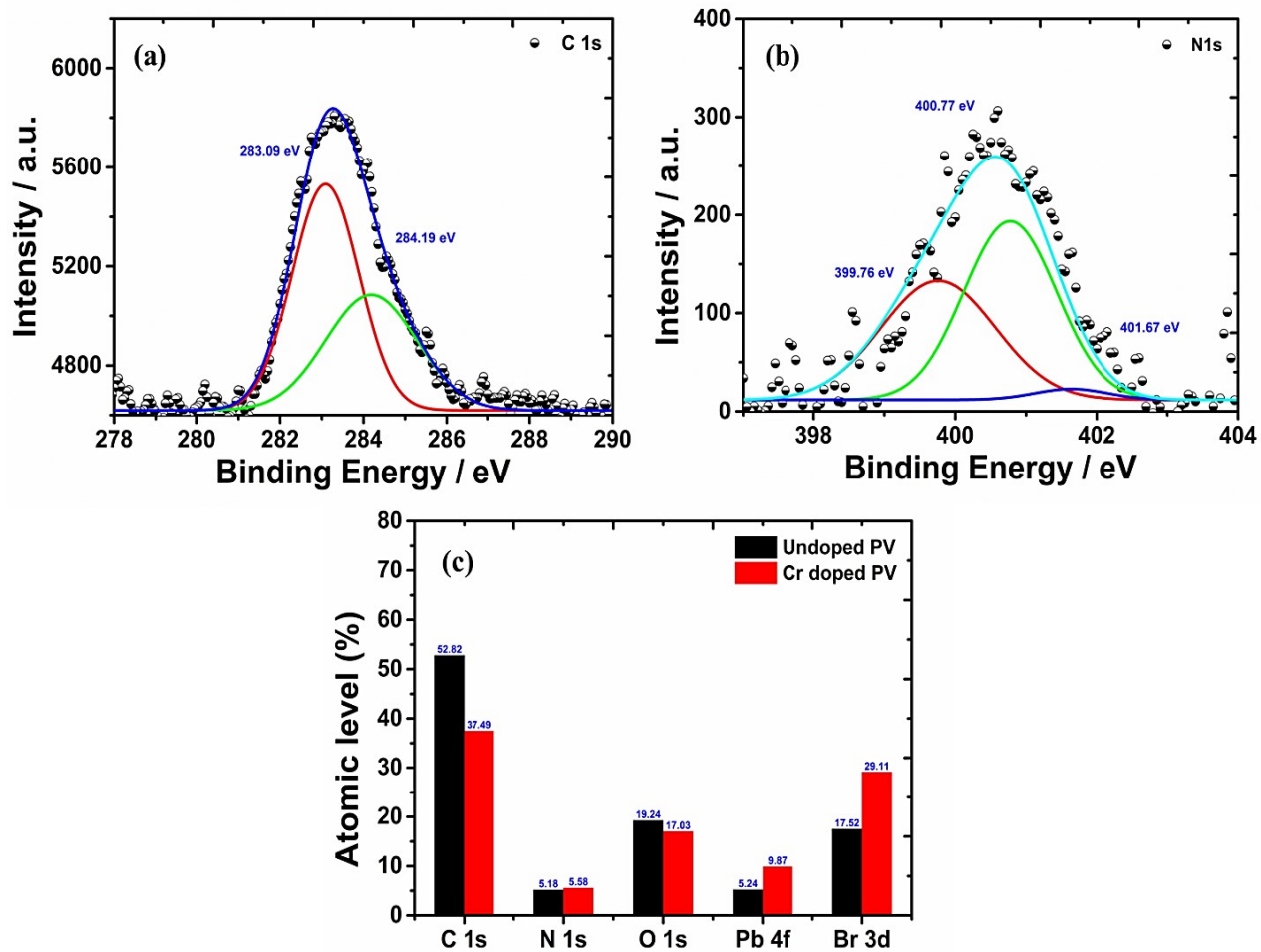


Figure S7 XPS analysis of (a) C 1s, (b) O 1s, and (c) histogram profile of various elements of Cr doped perovskite microrods.