

Supporting information

3D Hybrid perovskites solid solution: A facile approach for deposition of nanoparticles and thin films via B-site substitution

Muhammad Aamir, Rana Farhat Mehmood, Arshad Farooq Butt, Malik Dilshad Khan, Mohammad Azad Malik, Neerish Revaprasadu, Jean-Michel Nunzi, Muhammad Sher, and Javeed Akhtar *

Email: javeed.chem@must.edu.pk

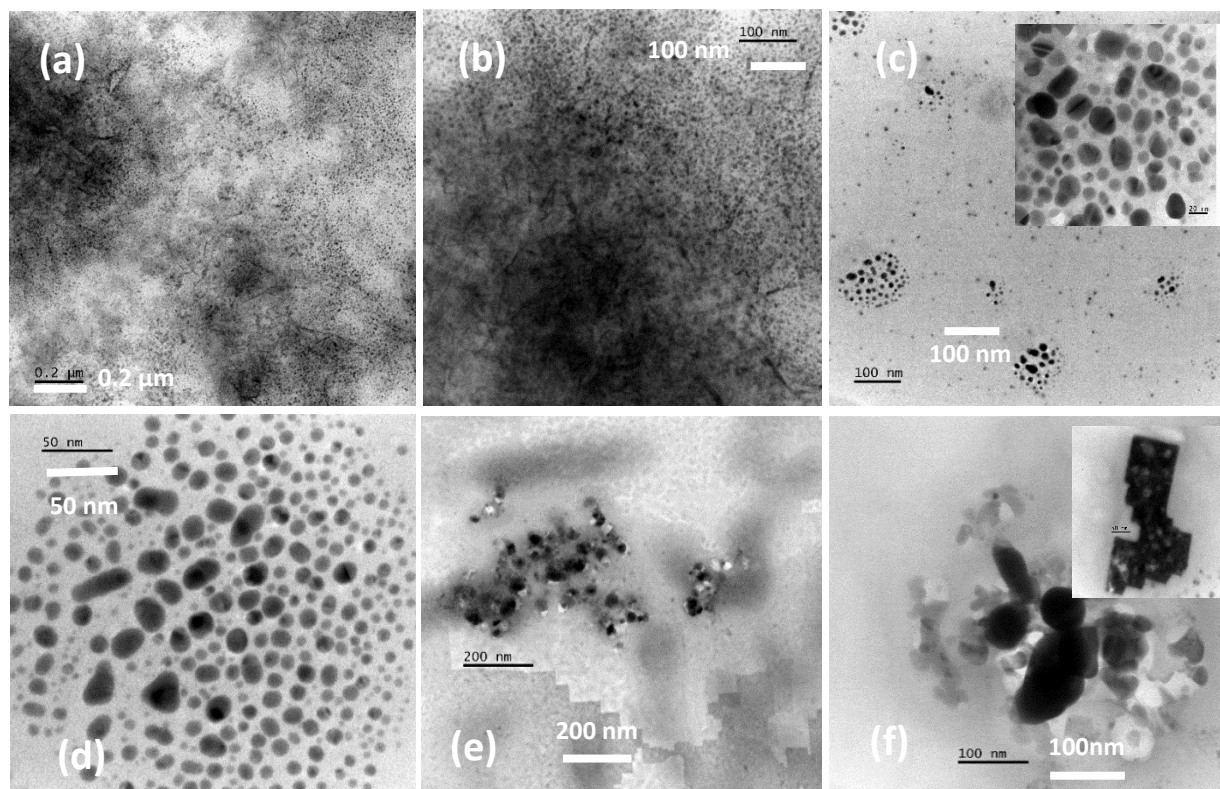


Figure S1. TEM images of as-prepared (a) CH₃NH₃PbBr₃, (b) CH₃NH₃Pb_{0.8}Cu_{0.2}Br₃, (c) CH₃NH₃Pb_{0.6}Cu_{0.4}Br₃, (d) CH₃NH₃Pb_{0.4}Cu_{0.6}Br₃, (e) CH₃NH₃Pb_{0.2}Cu_{0.8}Br₃ and (f) CH₃NH₃CuBr₃ perovskite nanoparticles at different magnifications

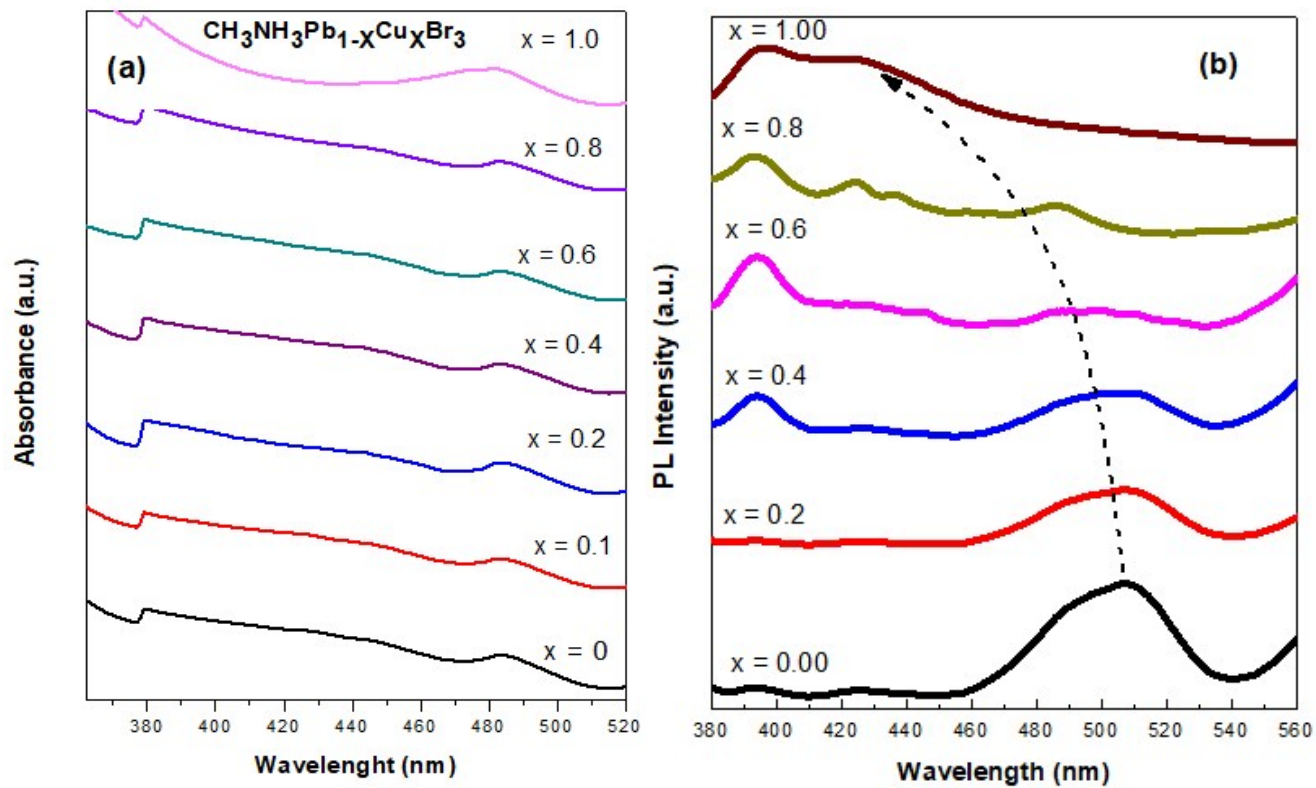


Figure S2. (a) UV-Vis spectra and (b) photoluminescence spectra of $\text{CH}_3\text{NH}_3\text{Pb}_{1-x}\text{Cu}_x\text{Br}_3$ perovskite nanoparticles.

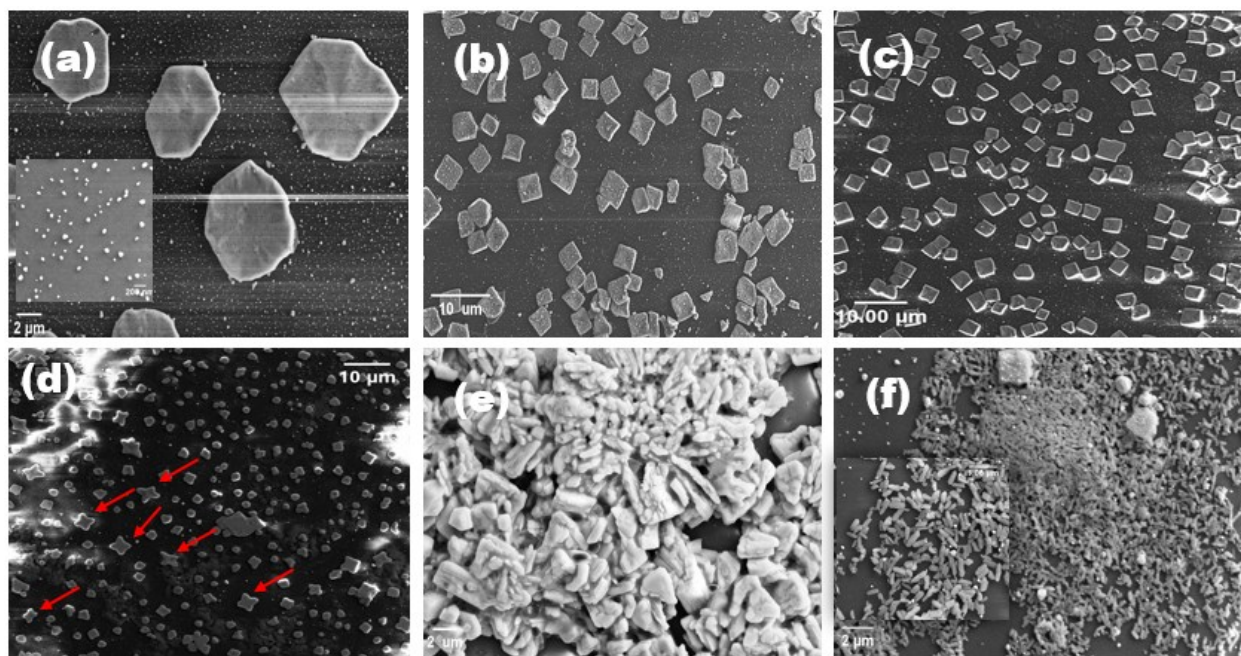


Figure S3. Field Emission Scanning Electron Microscopy images of as-synthesized (a) $\text{CH}_3\text{NH}_3\text{PbBr}_3$, (b) $\text{CH}_3\text{NH}_3\text{Pb}_{0.8}\text{Cu}_{0.2}\text{Br}_3$, (c) $\text{CH}_3\text{NH}_3\text{Pb}_{0.6}\text{Cu}_{0.4}\text{Br}_3$, (d) $\text{CH}_3\text{NH}_3\text{Pb}_{0.4}\text{Cu}_{0.6}\text{Br}_3$, (e) $\text{CH}_3\text{NH}_3\text{Pb}_{0.2}\text{Cu}_{0.8}\text{Br}_3$, and (f) $\text{CH}_3\text{NH}_3\text{CuBr}_3$ at different magnifications.