

Supporting Information:

Bidentate Aliphatic Quaternary Ammonium Ligand- Stabilized CsPbBr₃ Perovskite Nanocrystals with High PLQY (92.3%) and Superior Stability

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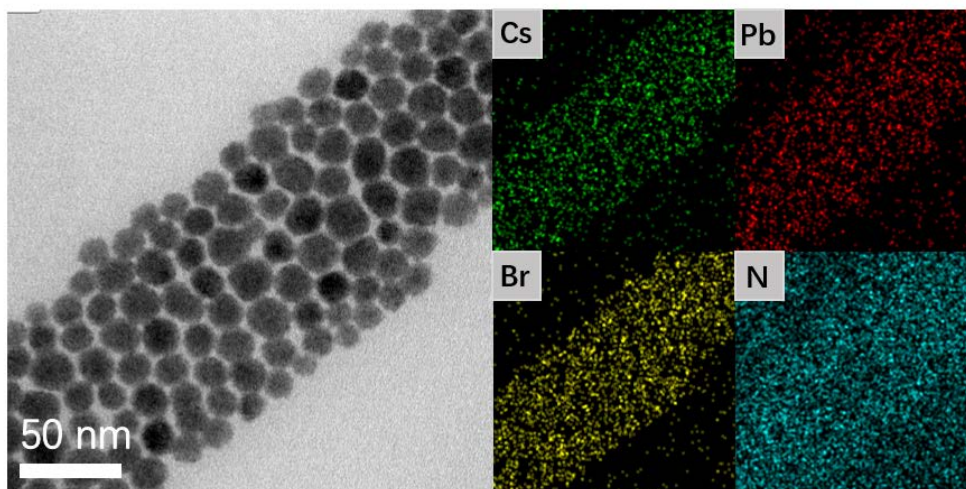


Fig. S1 Element mapping images of DTDB-CsPbBr₃ NCs.

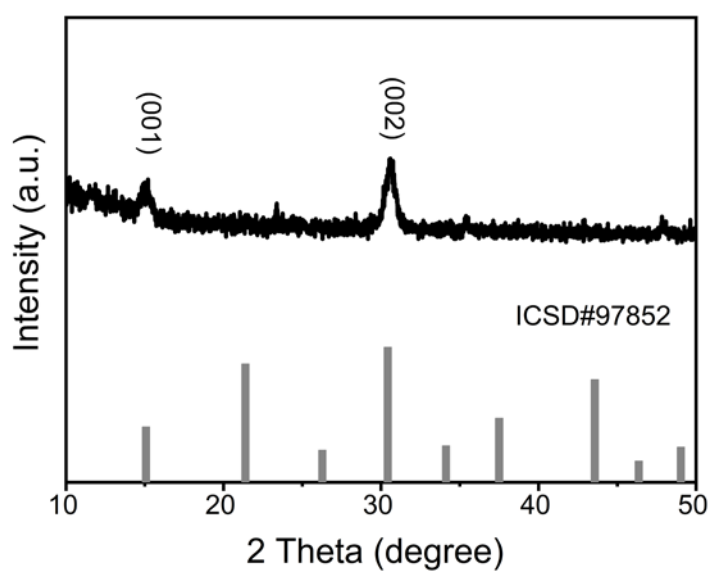


Fig. S2 XRD pattern of DTAB-CsPbBr₃ NCs.

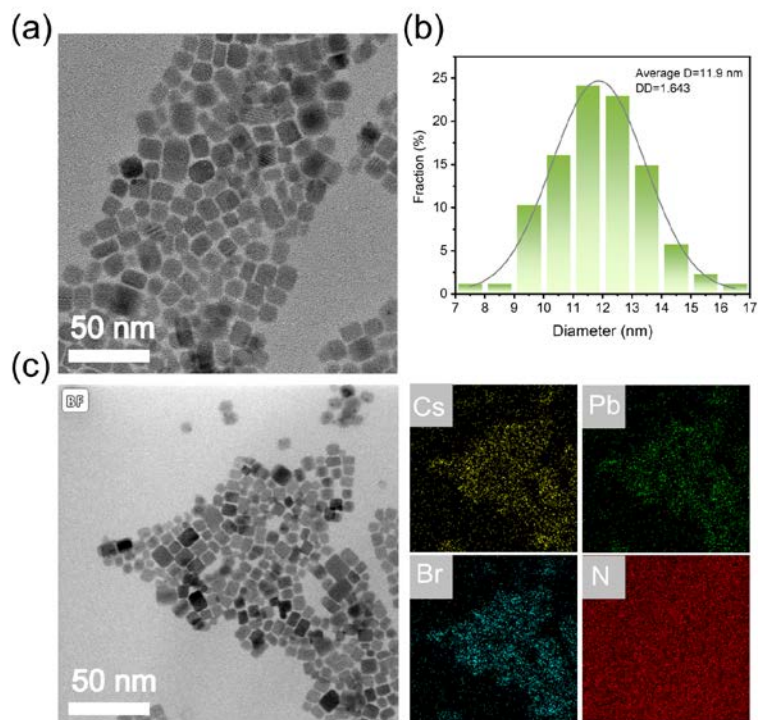


Fig. S3 (a) TEM images of DTAB-CsPbBr₃ NCs. (b) particle size distribution of DTAB-CsPbBr₃ NCs. (c) Element mapping images of DTAB-CsPbBr₃ NCs.

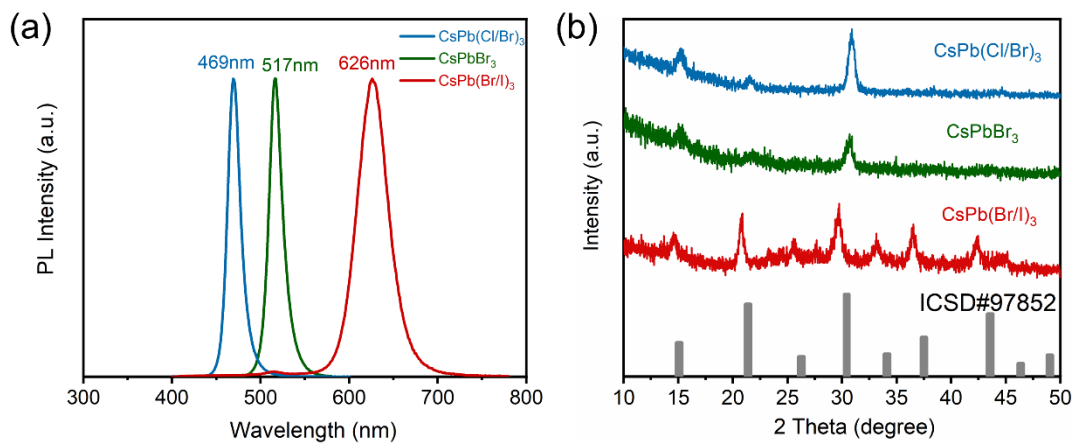


Fig. S4 (a) PL spectra of DTDB-CsPbBr₃, DTDB-CsPbBrCl₂ and DTDB-CsPbBr_{0.6}I_{2.4} NCs ($\lambda_{\text{ex}} = 450$ nm) and (b) XRD patterns.

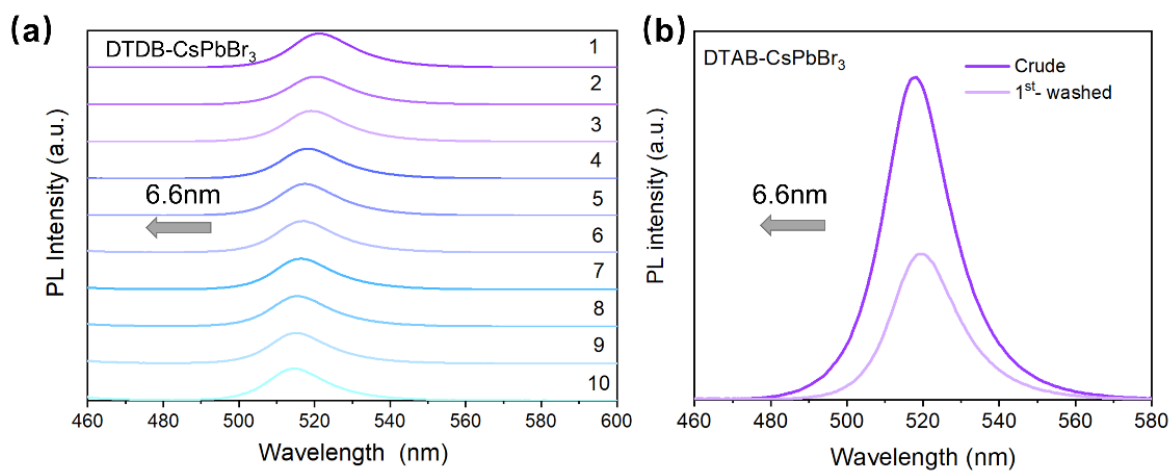


Fig. S5 PL spectra of DTDB-CspbBr₃ (a) and DTAB-CspbBr₃ NCs (b) during the purification processes.

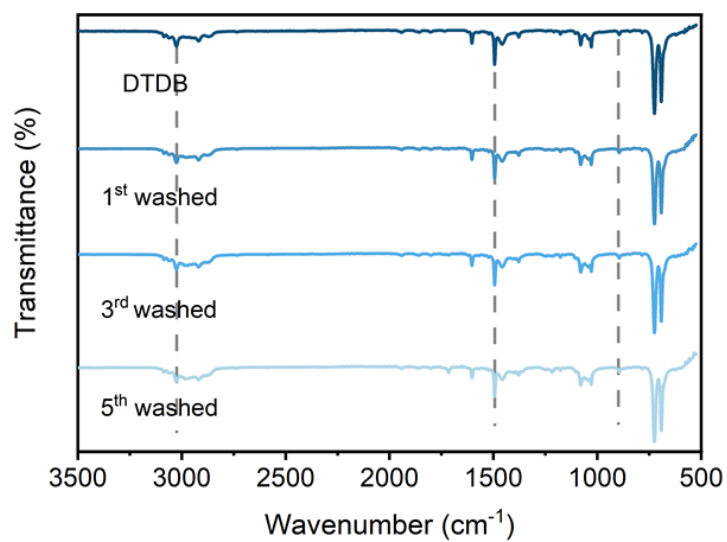


Fig. S6 FTIR spectra of DTDB-CspbBr₃ NCs and DTDB ligand.

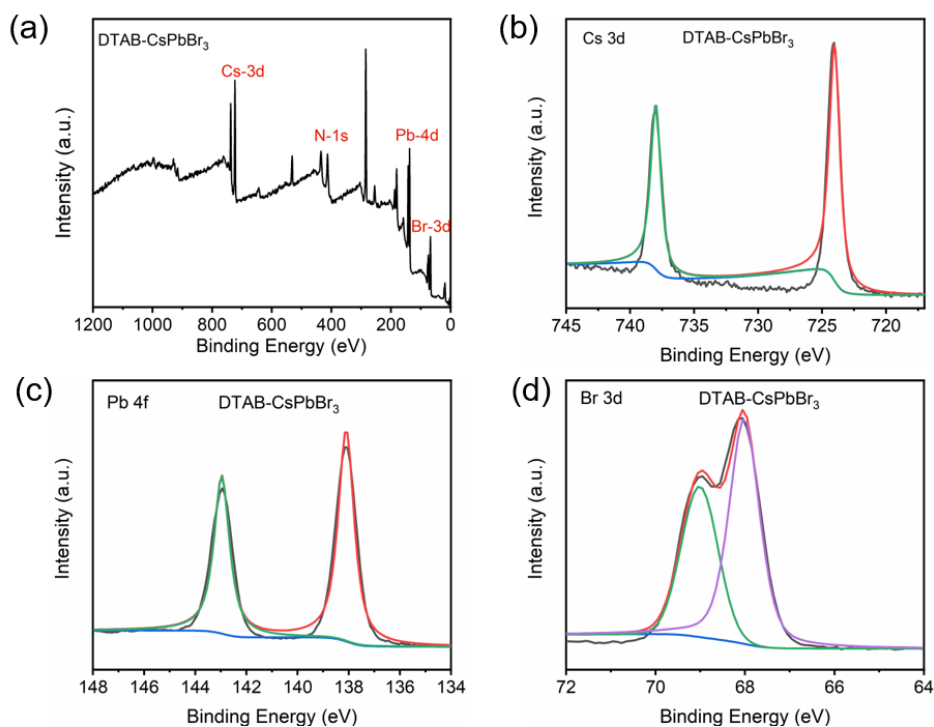


Fig. S7 (a) XPS spectra of DTAB-CsPbBr₃ NCs. High-resolution XPS spectra corresponding to (b) Cs 3d, (c) Pb 4f and (d) Br 3d.

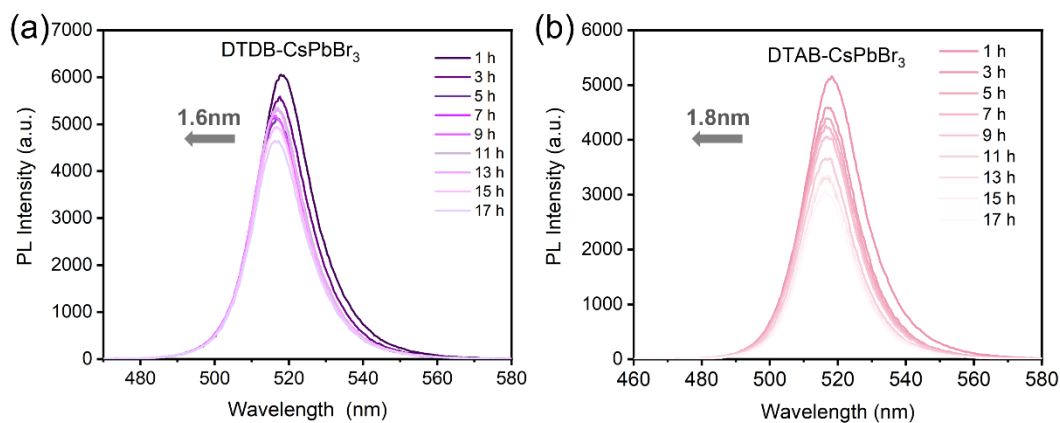


Fig. S8 (a) Corresponding PL spectra of DTDB-CsPbBr₃ and (b) DTAB-CsPbBr₃ NCs during water resistance tests.