

Improved phase purity and film quality in quasi-2D perovskite light emitting diodes by an additive with trimethacrylate group

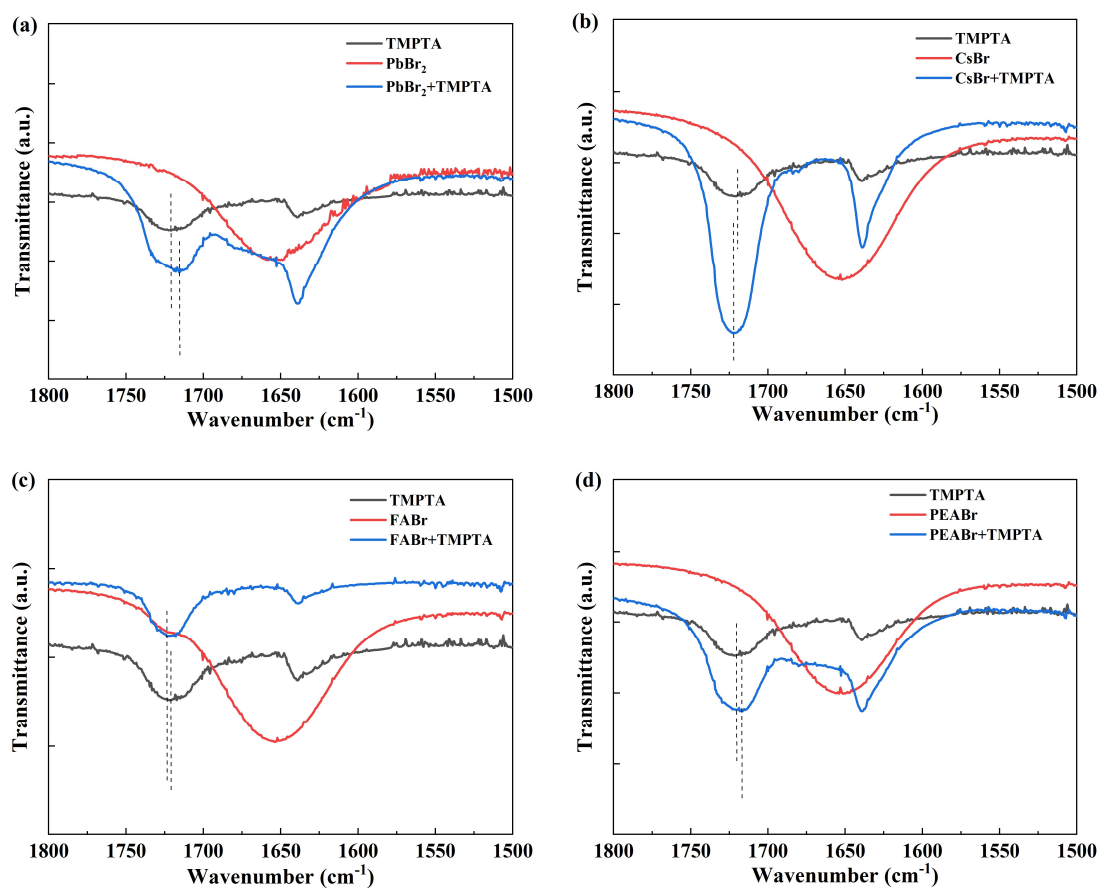
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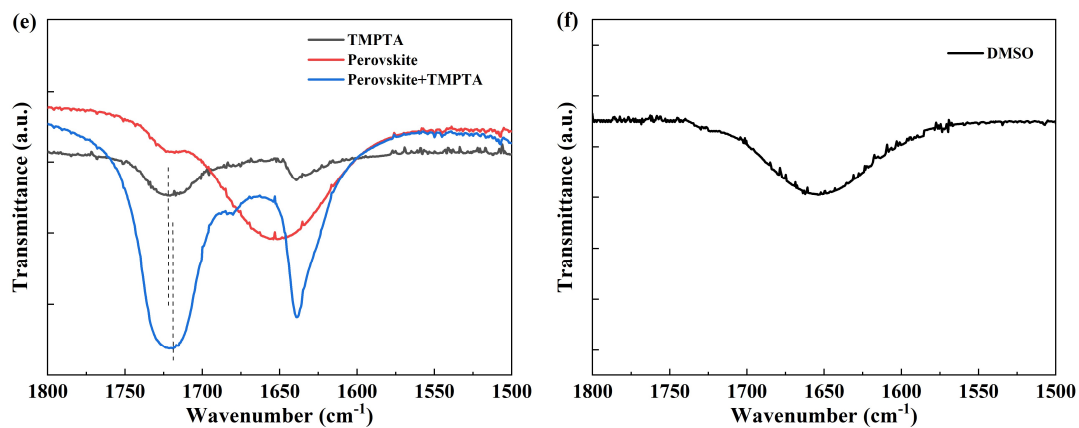


Fig. S1 (a-f) FTIR spectra from different pure substances and their mixed solutions in DMSO solvent.

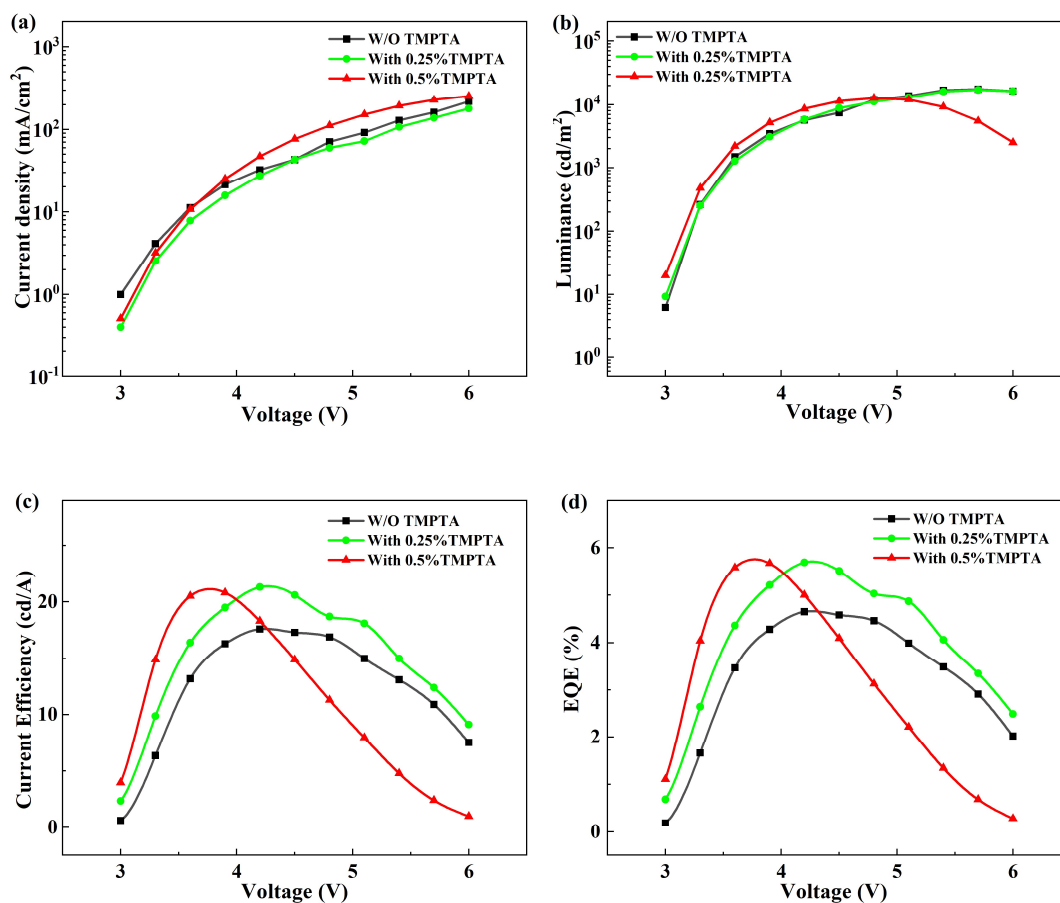


Fig.S2 Current density-voltage-luminance curves, current efficiency and external quantum efficiency versus current density (CE-J and EQE-J) curves of the PeLEDs using CB as the anti-solvent. The ratio of TMPTA is its concentration in CB anti-solvent.

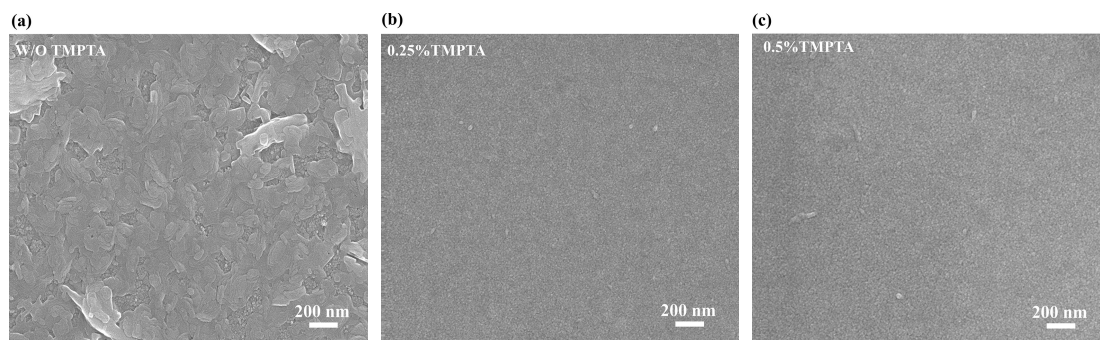


Fig.S3 (a-c) SEM images of the perovskite films fabricated using CB as the anti-solvent and with different contents of TMPTA in CB.

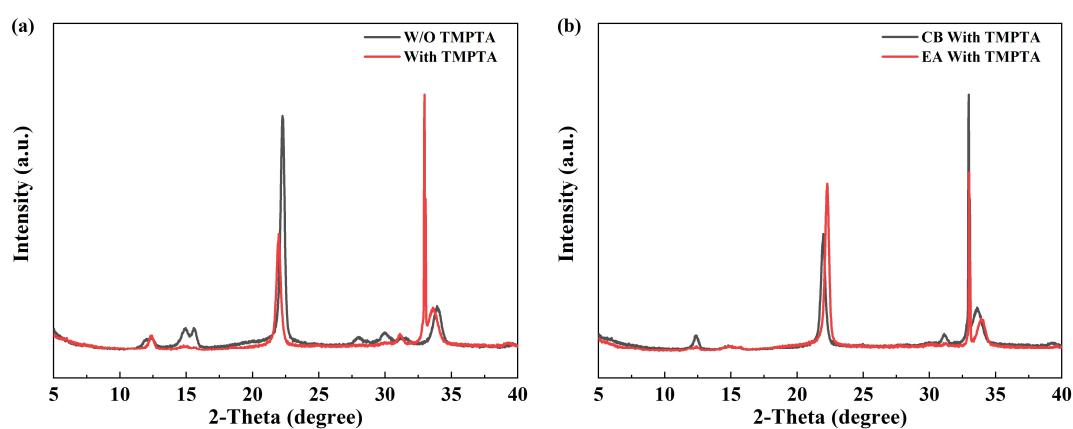


Fig.S4 (a) XRD patterns of the perovskite films fabricated with and without TMPTA in chlorobenzene. (b) Comparison of the XRD patterns of the perovskite films with TMPTA added in different anti-solvents.

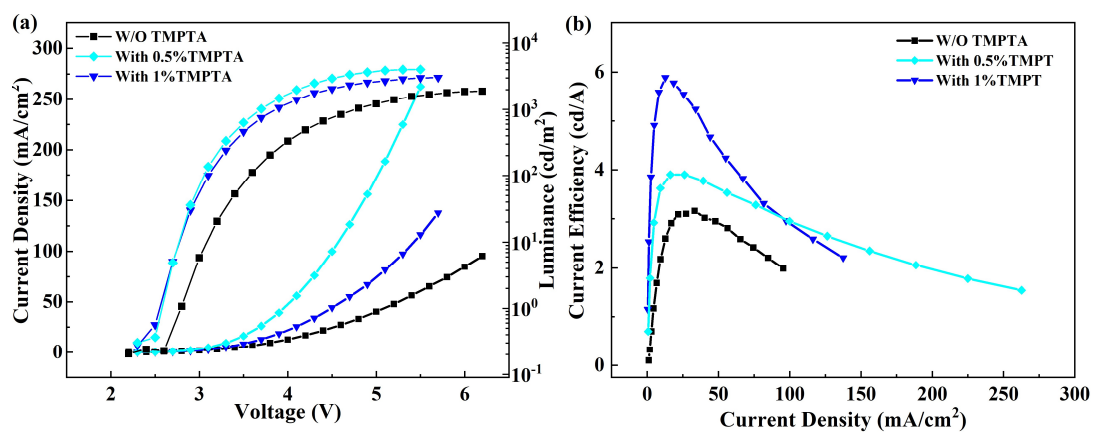


Fig.S5 (a) Current density-voltage-luminance (J-V-L) curves, (b) current efficiency-current density (CE-J) curves of the PeLEDs with CsPbBr₃ as the emission layer. The ratio of TMPTA is its concentration in precursor solution.

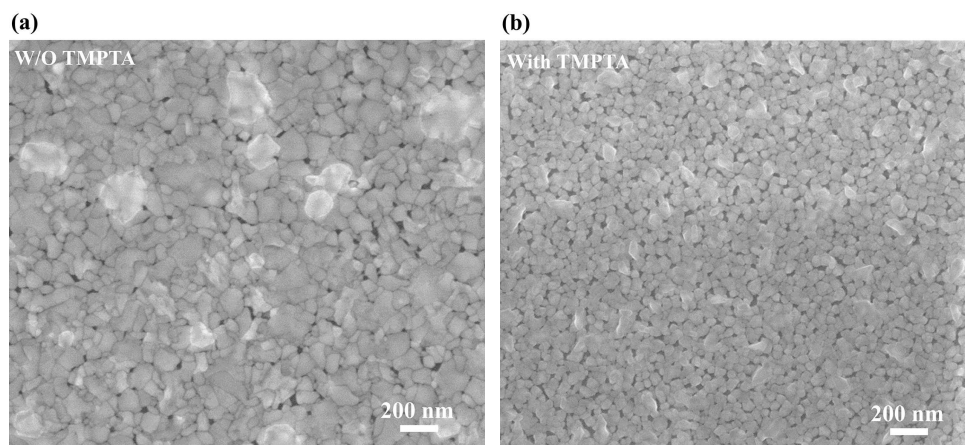


Fig.S6 Top-view SEM images of the CsPbBr₃ perovskite films without or with TMPTA modification.