Electronic Supplementary Material (ESI) for Nanoscale.

Improvement in Quantum Yield by Suppression of Trions in Room Temperature Synthesized $CsPbBr_3$ Perovskite Quantum Dots for Backlight Display

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Supporting Information

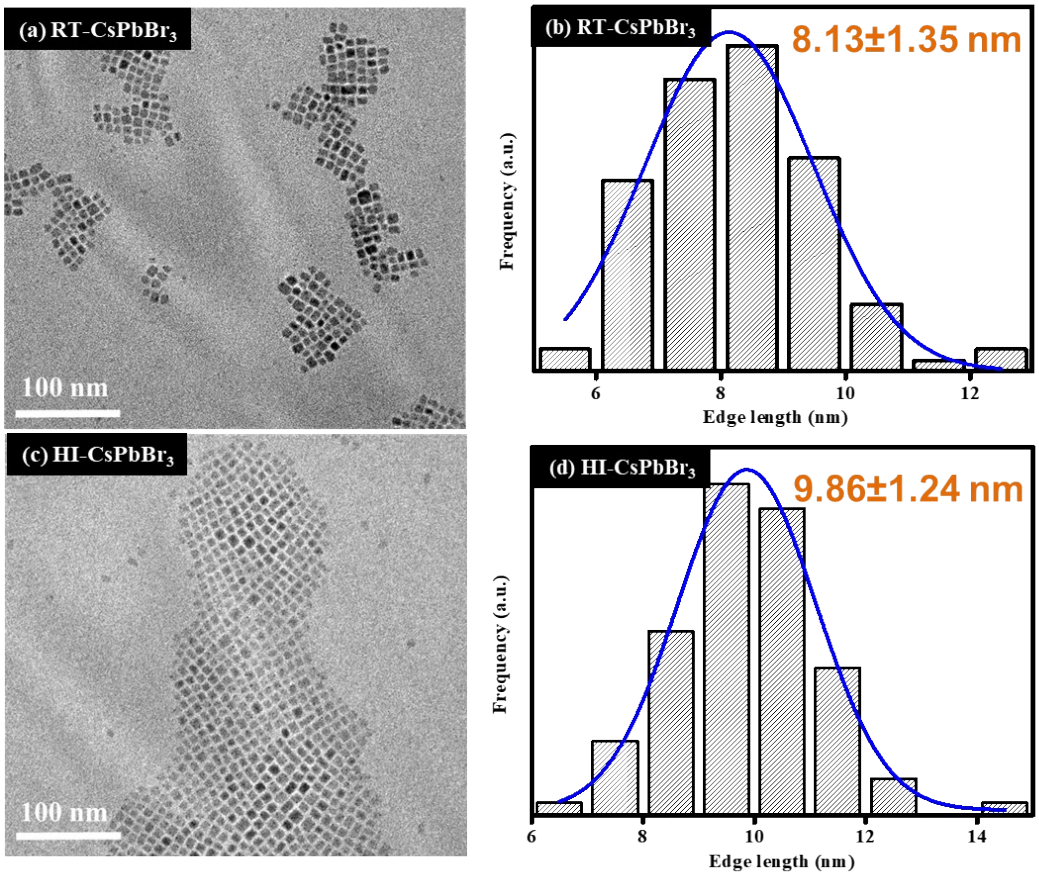

Figure S1. Transmission electron microscopy of (a,b) RT-$CsPbBr_3$ and (c,d) HI-$CsPbBr_3$ with histogram.

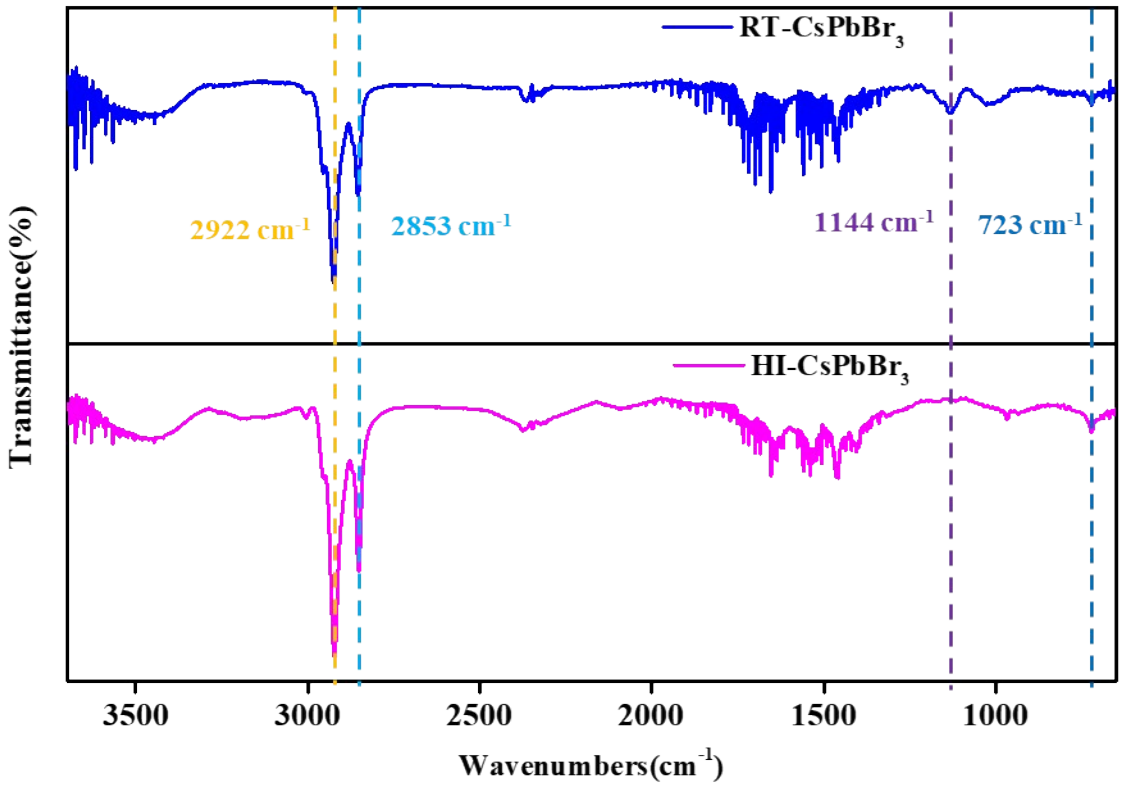

Figure S2. Fourier-transform infrared spectroscopy (FTIR) spectrum of RT-$CsPbBr_3$ and HI-$CsPbBr_3$ PQDs.

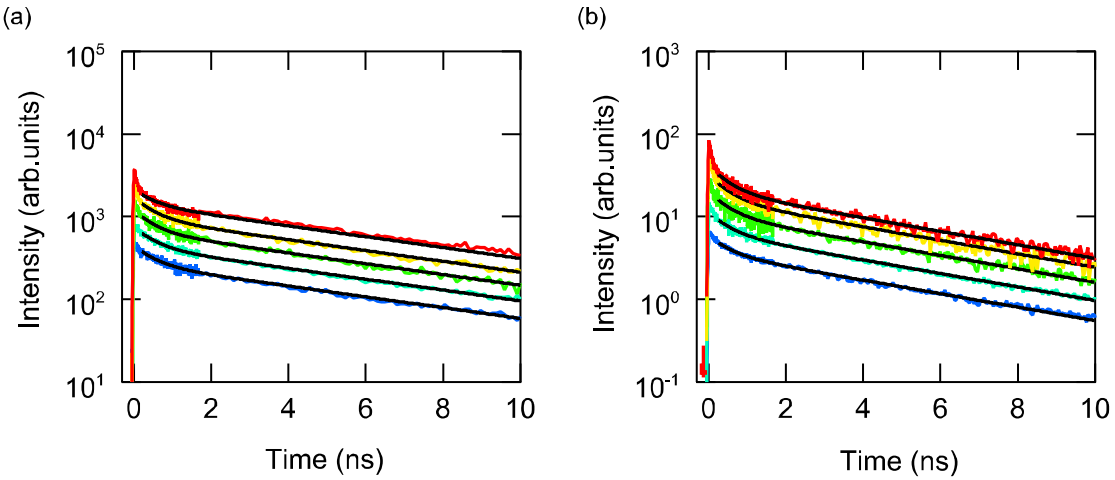

Figure S3. Time-resolved PL intensities for (a) RT-$CsPbBr_3$ and (b) HI-$CsPbBr_3$ perovskite quantum dot ensembles. The excitation photon fluence was changed from 3.3×10^{13} to 4.5×10^{14} cm^{-2}.

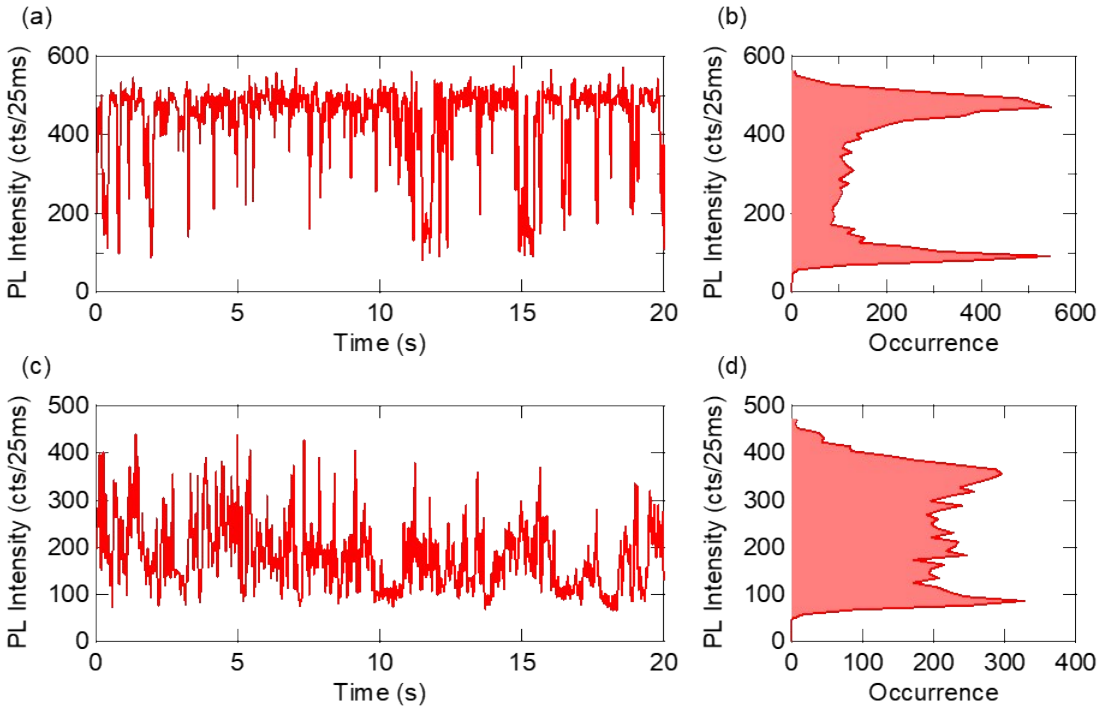

Figure S4. Single-dot PL intensity time traces for (a,b) a blinking RT-$CsPbBr_3$ and (c,d) a flickering RT-$CsPbBr_3$. The histograms of the PL intensities are shown in (b) and (d) for a blinking and flickering RT-$CsPbBr_3$. The excitation photon fluence is 9.8×10^{11} photons/cm^2.

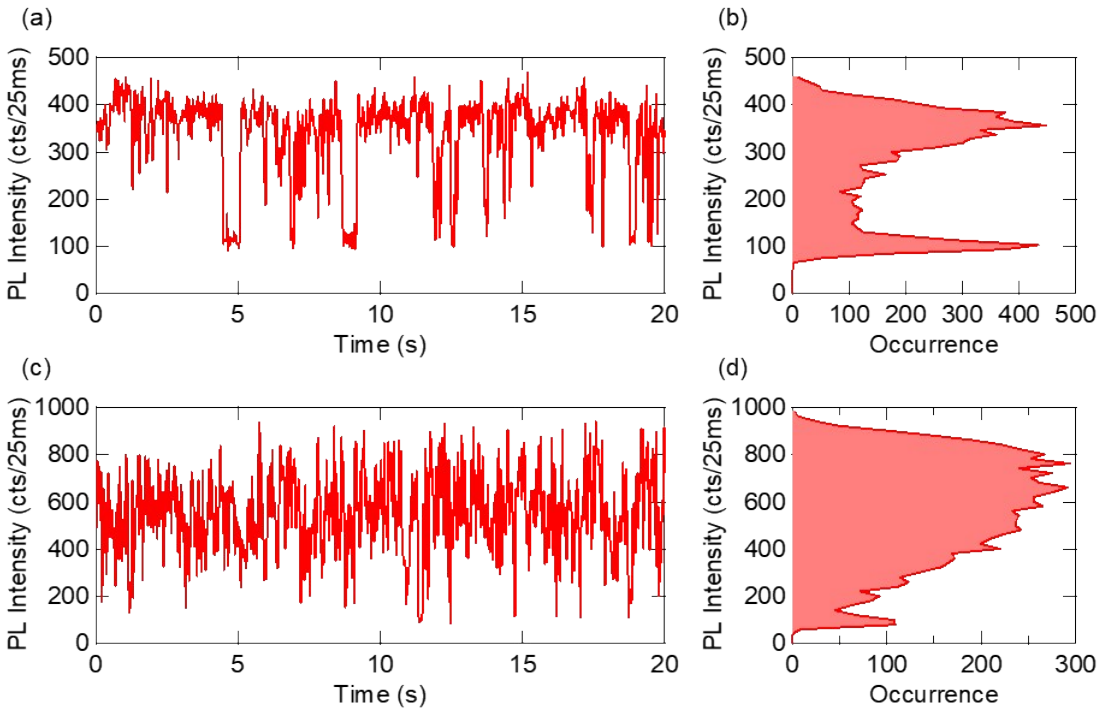

Figure S5. Single-dot PL intensity time traces for (a,b) a blinking HI-$CsPbBr_3$ and (c,d) a flickering HI-$CsPbBr_3$. The histograms of the PL intensities are shown in (b) and (d) for a blinking and flickering HI-$CsPbBr_3$. The excitation photon fluence is 9.8×10^{11} photons/cm^2.