

Supporting Information

Water-Induced Controllable Synthesis of CsPbBr₃ Nanorods/Nanocubes from CsBr Nanocrystals

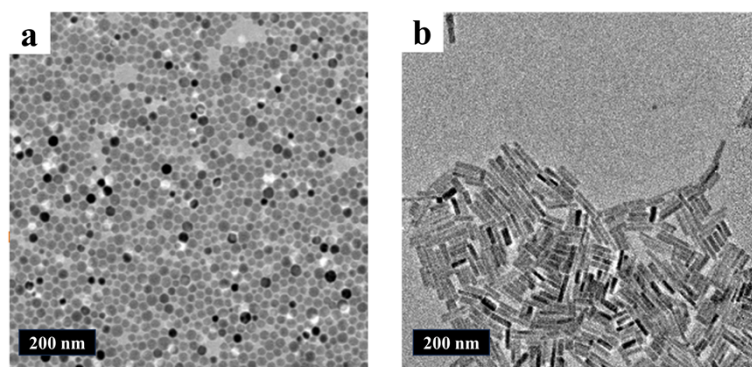


Figure S1. (a) The transmission electron microscope (TEM) image of CsBr nanocrystals. (b) TEM of long CsPbBr₃ NRs.

Table S1. Comparison of PL QY, average PL lifetimes (τ_{PL}), radiative recombination lifetimes (τ_r), and apparent non-radiative recombination lifetimes (τ_{nr}) of CsPbBr₃ NCs, short NRs and long NRs.

	PLQY	$T_{ave}(ns)$	$T_r(ns)$	$T_{nr}(ns)$	$k_r(ns^{-1})$	$k_{nr}(ns^{-1})$
Long NRs	22%	10.1	45.9	12.9	0.022	0.078
Short NRs/NCs	29%	12.2	42.1	17.2	0.024	0.058
NCs	48%	17.6	36.7	33.84	0.027	0.029

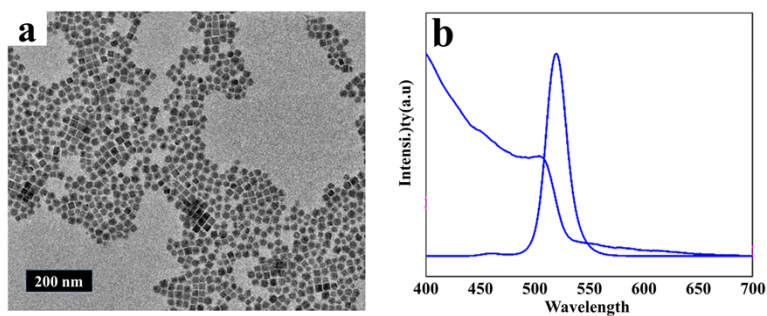


Figure S2. (a) TEM of CsPbBr₃ NCs. (b) Photoluminescence (PL) spectra and UV-visible absorption of CsPbBr₃ NCs in hexane solution.

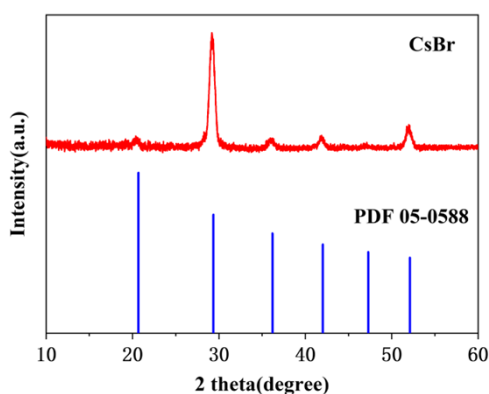


Figure S3. (a) X-ray diffraction (XRD) pattern of CsBr NRs.

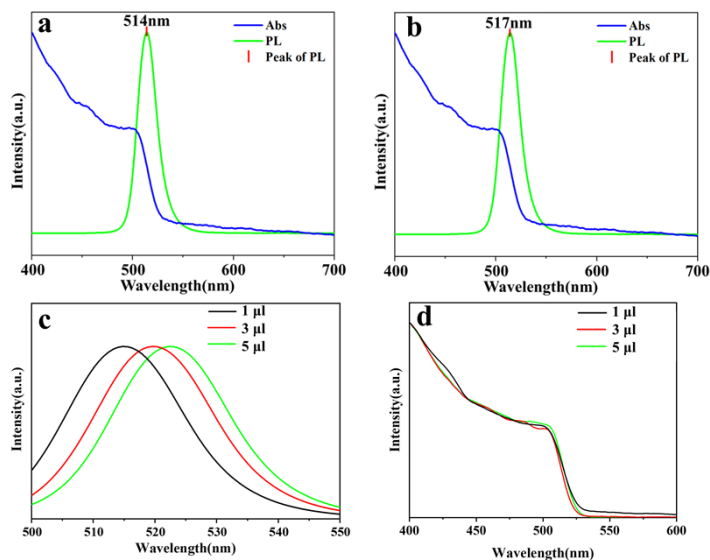


Figure S4. PL spectra and UV-visible absorption spectra of CsPbBr₃ NRs obtained with the addition of (a) 1 μ l and (b) 3 μ l water. (c) PL spectra and (d) UV-visible absorption spectra of CsPbBr₃ NRs obtained with the addition of different amounts of water.

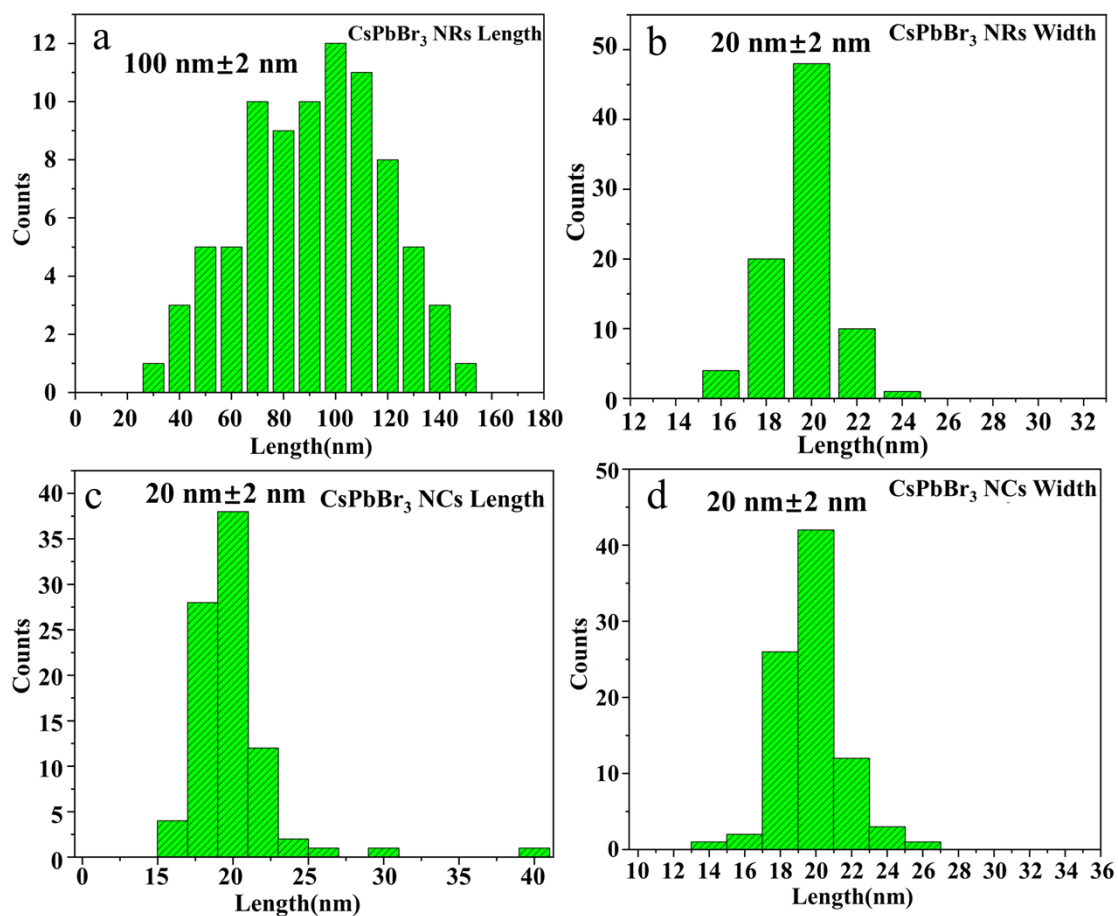


Figure S5. (a,b) Width and length distribution statistics of CsPbBr₃ NRs obtained in reactions with the addition of 5 μ l of water. (c,d) Width and length distribution statistics of CsPbBr₃ NRs obtained in reactions with the addition of 1 μ l of water.

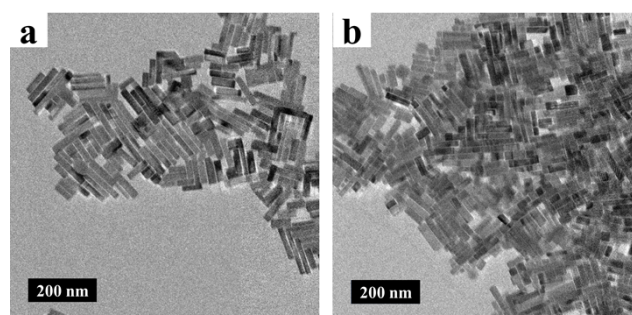


Figure S6. TEM images of CsPbBr₃ NRs obtained in reactions with the addition of 10 μ l (a) and 20 μ l of water (b).

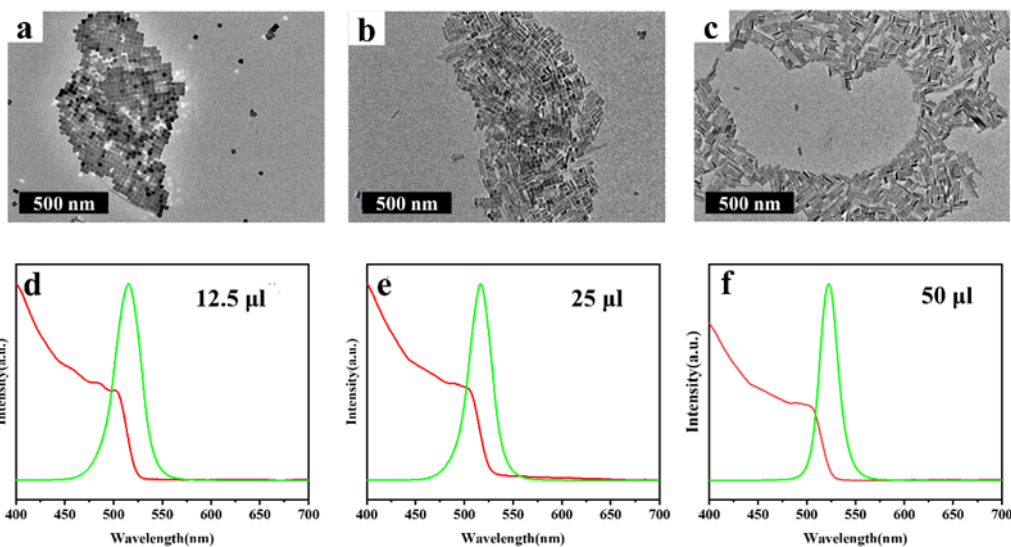


Figure S7. (a-c) TEM images of CsPbBr₃ NRs obtained by reacting with 50 μl, 25 μl, and 12.5 μl of OA and OLA. (d-f) PL spectra and UV-visible absorption spectra of CsPbBr₃ NRs by reacting with 50 μl, 25 μl, and 12.5 μl of OA and OLA

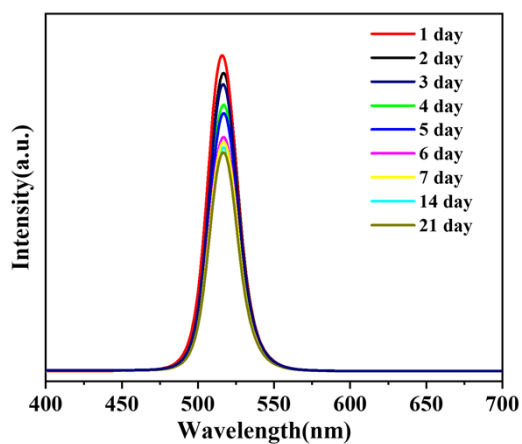


Figure S8. The relationship between PL intensity and storage time of CsPbBr₃ long NRs under ambient conditions