

Supporting Information

Scalable Room-Temperature Synthesis of $\text{Cs}_4\text{PbBr}_6/\text{CsPbBr}_3$ Microcrystals Exhibiting Excellent Photoluminescence

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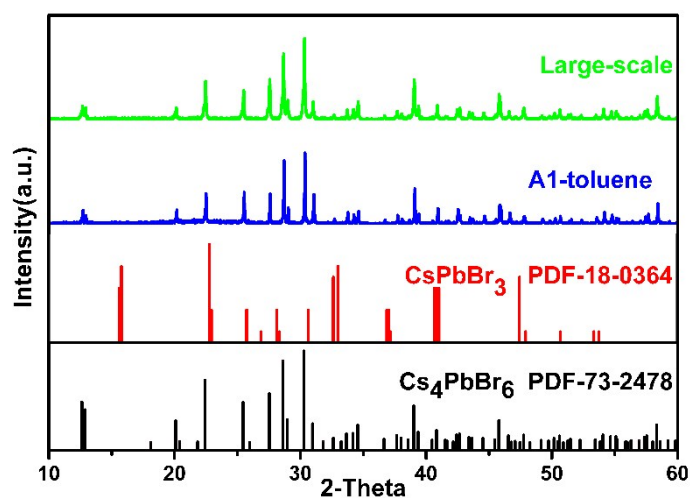


Figure S1: XRD patterns of A1 from laboratory-scale and large-scale preparations compared to those of CsPbBr_3 and Cs_4PbBr_6 .

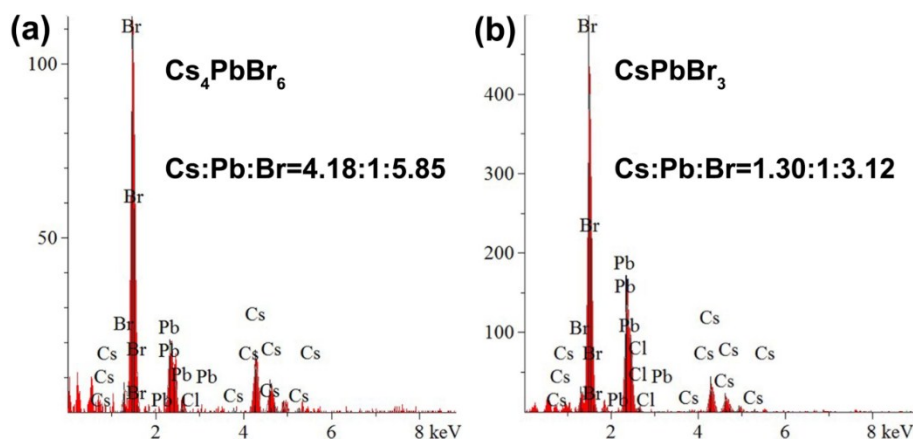


Figure S2: EDS patterns of (a) A1 and (b) A5.

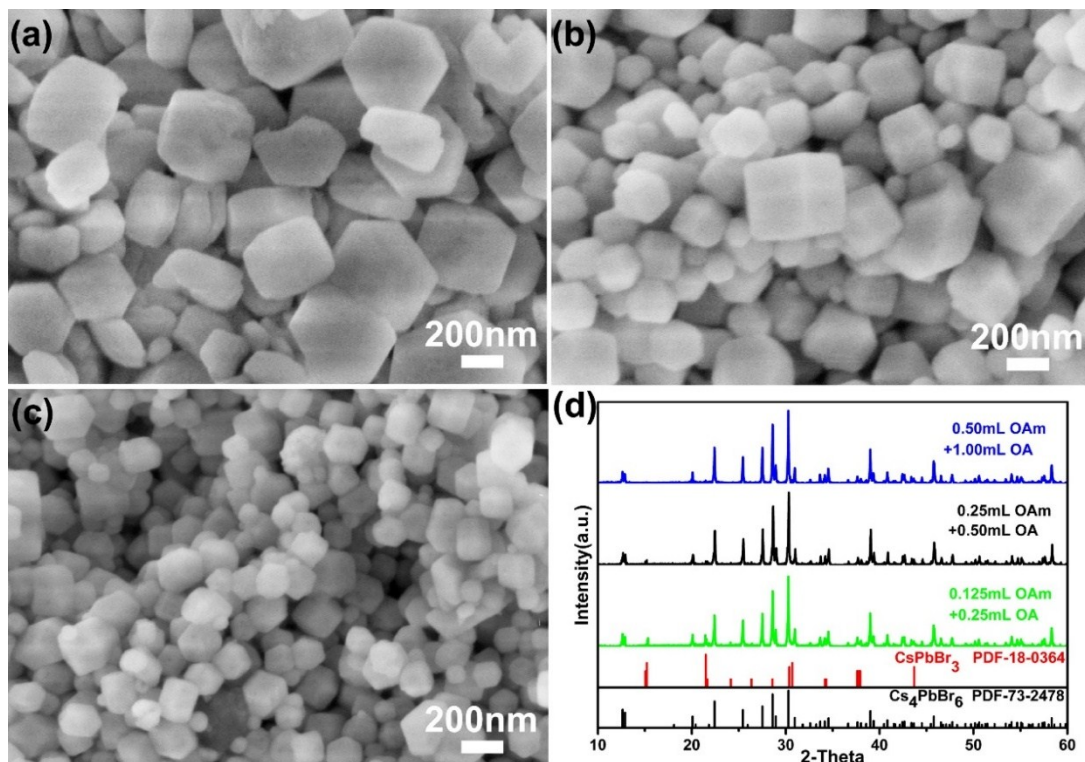


Figure S3: SEM images of MCs prepared with different amounts of ligands: (a) 0.125 mL of OAm and 0.25 mL of OA, (b) 0.25 mL of OAm and 0.5 mL of OA, and (c) 0.50 mL of OAm and 1 mL of OA. (d) Corresponding XRD patterns.

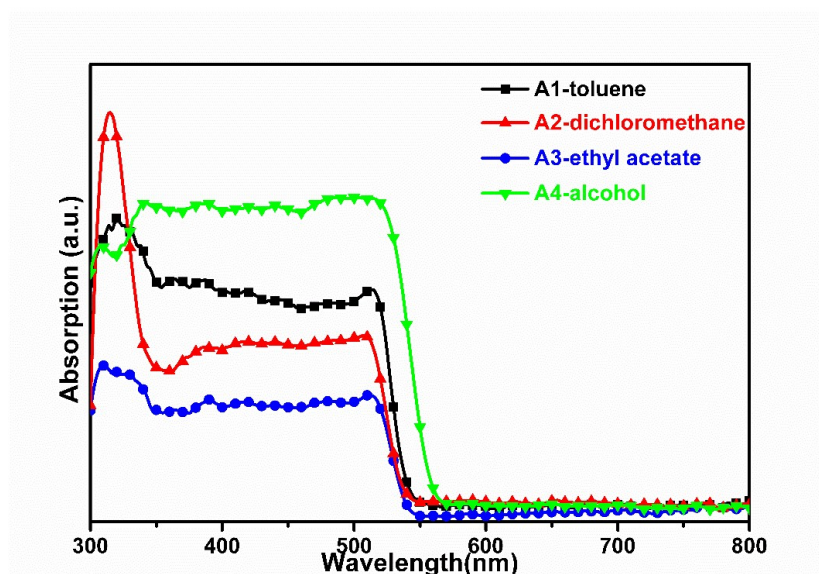


Figure S4: Steady-state absorption spectra of A1–A4.

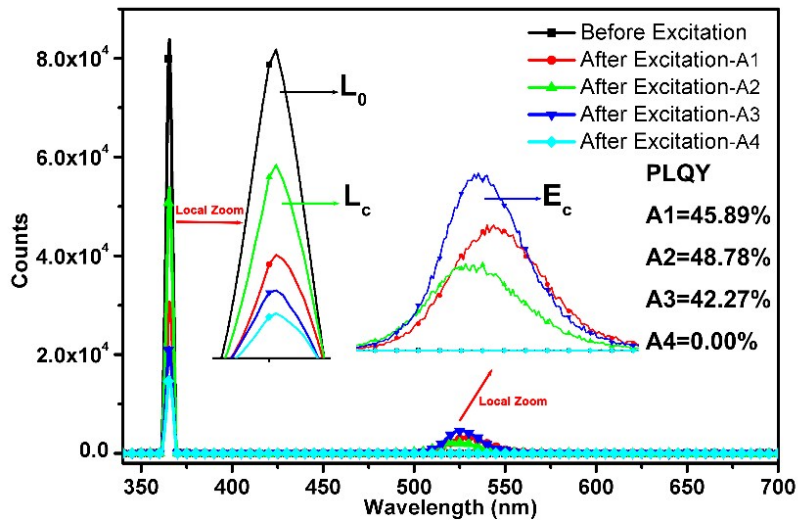


Figure S5: The PLQY of the MCs prepared with different antisolvents: toluene (A1), dichloromethane (A2), ethyl acetate (A3), and alcohol (A4).

L_0 : Spectral integral area of incident light before excitation

L_c : Spectral integral area of incident light after excitation

E_c : Spectral integral area of emitted light after excitation

Number of photons absorbed = $L_0 - L_c$

Number of photons emitted = E_c

$$\text{PLQY} = \frac{\text{Number of photons emitted}}{\text{Number of photons absorbed}} = \frac{E_c}{L_0 - L_c}$$