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Supplementary Information

Large-scale continuous preparation of high stable α-$CsPbI_3$/m-SiO_2 nanocomposites by microfluidics reactor for solid state lighting application

Runze Guo [a], Yufeng Liu [a], Yongzheng Fang [a, *], Zhifu Liu, [a] Langping Dong [a], Lei Wang [b], Wenyao Li [c, *], Jingshan Hou [a, *]

[a] School of Materials Science and Engineering, Shanghai Institute of Technology, Shanghai, 201418, P. R. China. E-mail: fyz1003@sina.com (Yongzheng Fang); houjingshan@sit.edu.cn (Jingshan Hou).

[b] School of Chemistry and Materials Science, Nanjing Normal University, Nanjing, 210023, P. R. China.

[c] School of Materials Engineering, Shanghai University of Engineering Science, Shanghai, 201620, P. R. China. E-mail: liwenyao314@gmail.com (Wenyao Li).

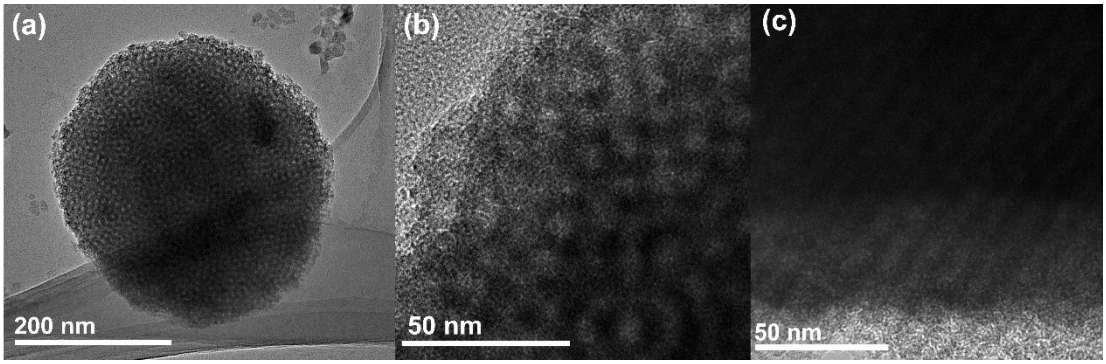

Fig. S1. (a) TEM image of the mesoporous silica nanoparticles. (b, c) HRTEM image of the edge of the mesoporous silica.

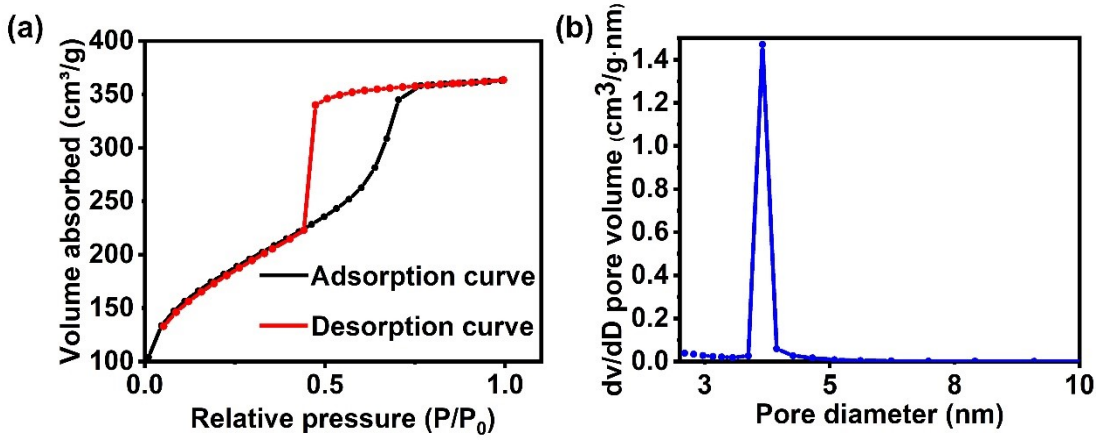

Fig. S2. N_2 adsorption and desorption curves of m-SiO_2 (b) pore size distribution chart of m-SiO_2

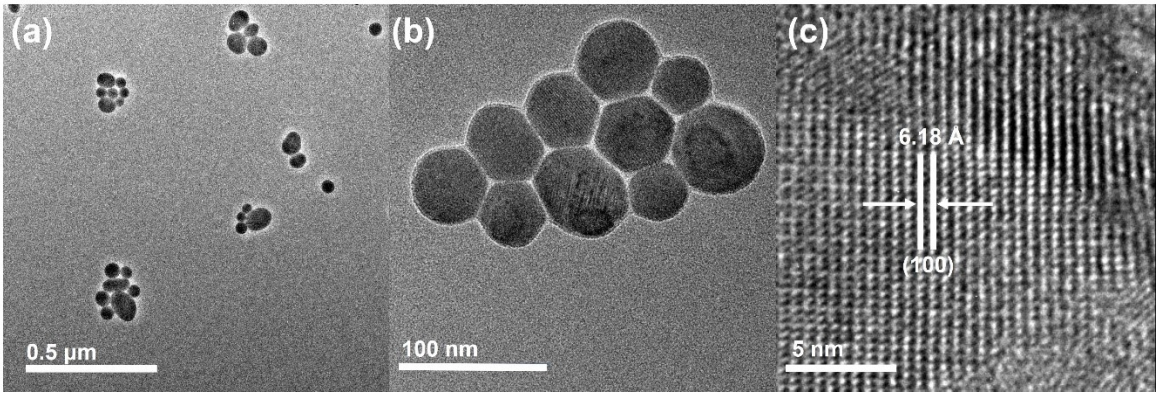

Fig. S3. (a, b) TEM image of monodispersed $CsPbI_3$ NCs. (c)HRTEM image of a $CsPbI_3$ NCs.

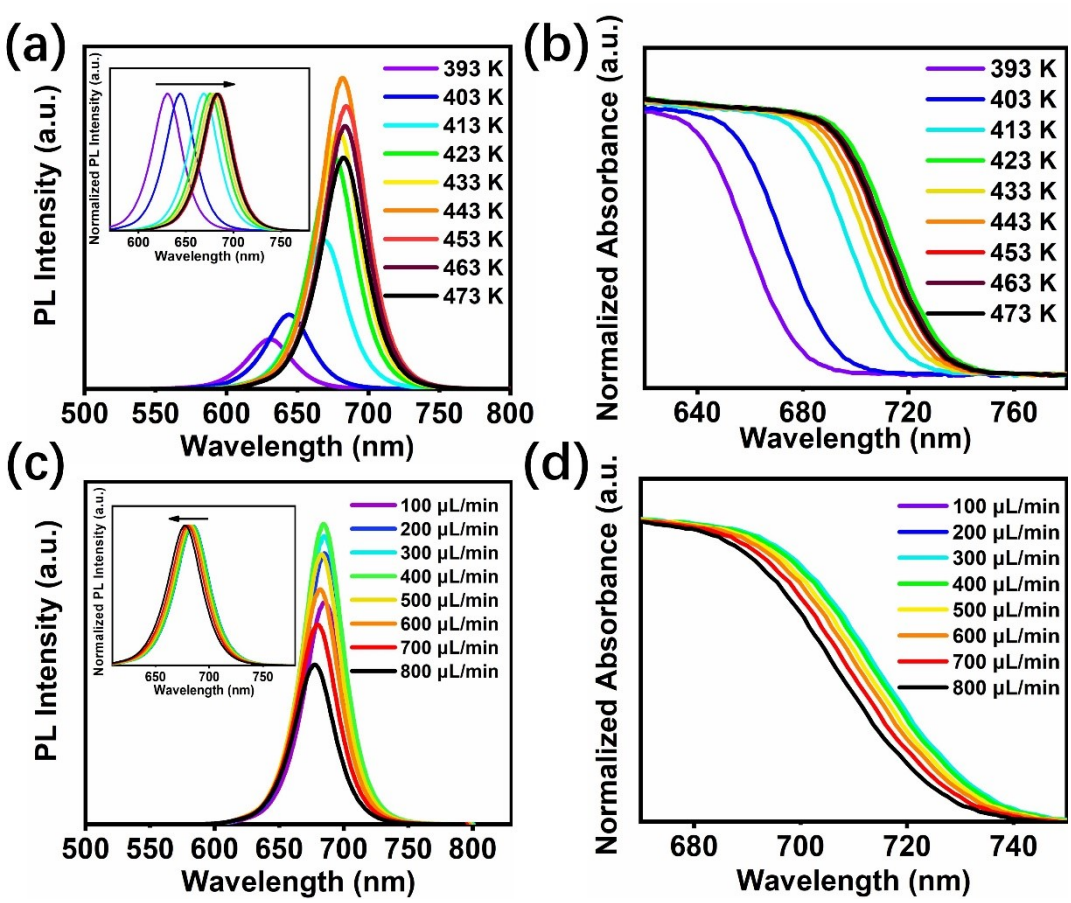

Fig. S4. The PL spectra and normalized absorbance spectra of CPI/m-SiO_2 using microfluidics platform by different (a, b) temperature (inset image is the normalized PL spectrum) (c, d) injection speed

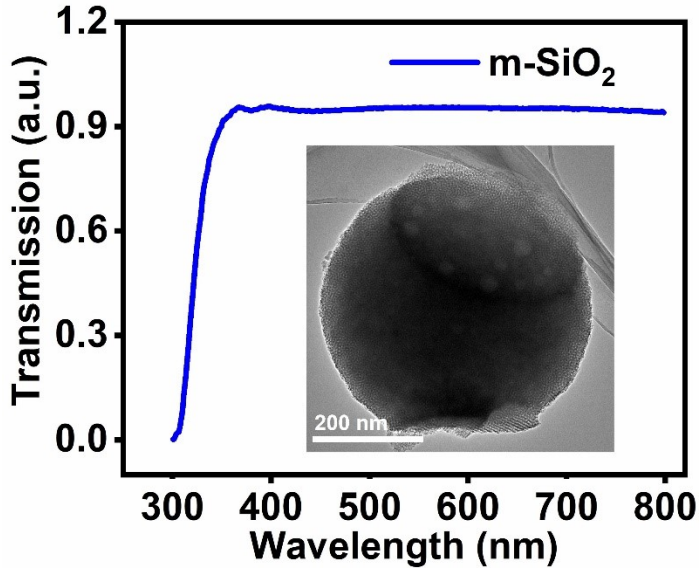

Fig. S5. Transmittance test results of mesoporous silica and the inset image is the TEM image of m-SiO_2

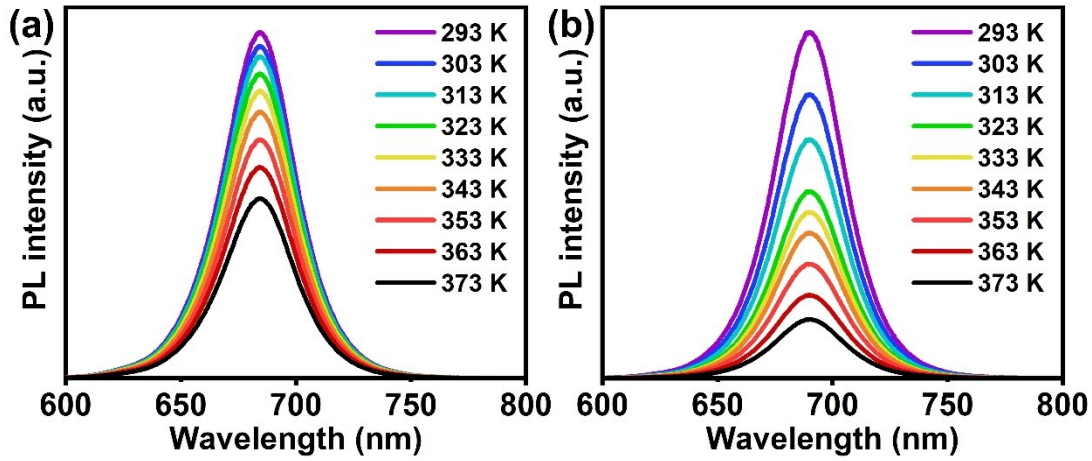

Fig. S6. Temperature-dependent PL spectra of (a) $CsPbI_3$/m-SiO_2 nanocomposites and (b) $CsPbI_3$ NCs.

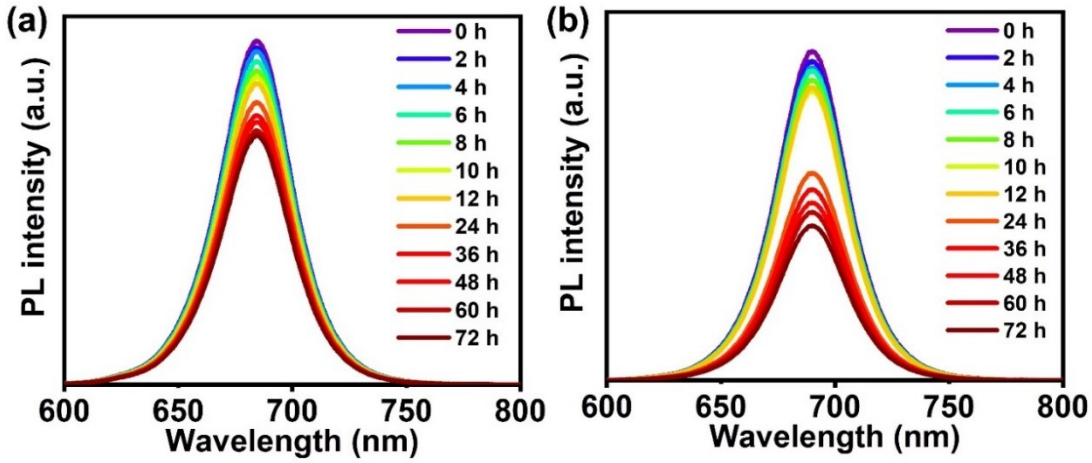

Fig. S7. Attenuation of light intensity with the illumination time of (a) $CsPbI_3$/m-SiO_2 nanocomposites and (b) $CsPbI_3$ NCs.