Electronic Supplementary Material (ESI) for Inorganic Chemistry Frontiers.

Supporting Information

Amino-Bridged Attapulgite-Perovskite Nanocomposites: The Role of Bridged Linkage to Optical Property and Stability

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Results and Discussion

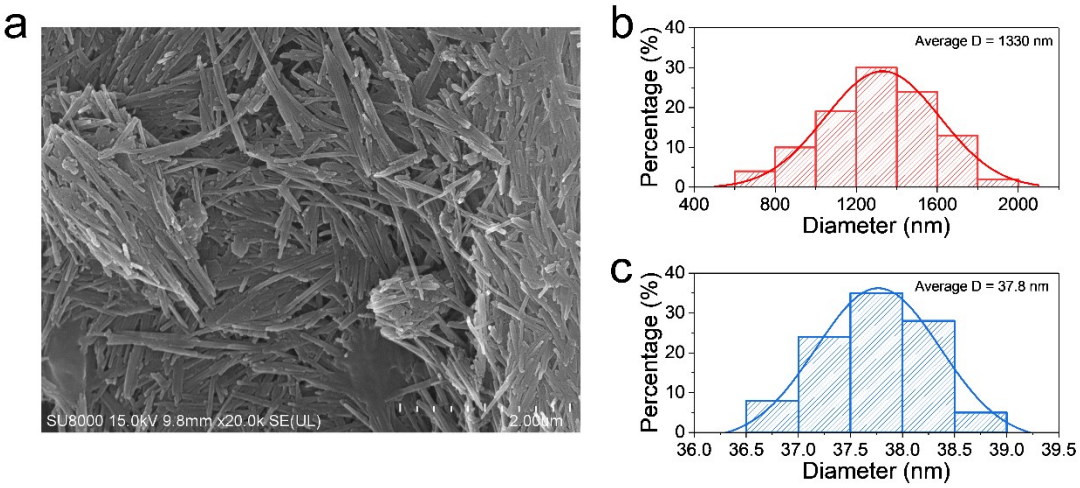

Figure S1 (a) SEM image of pristine ATP NRs. The (b) vertical and (c) lateral size distribution of pristine ATP NRs.

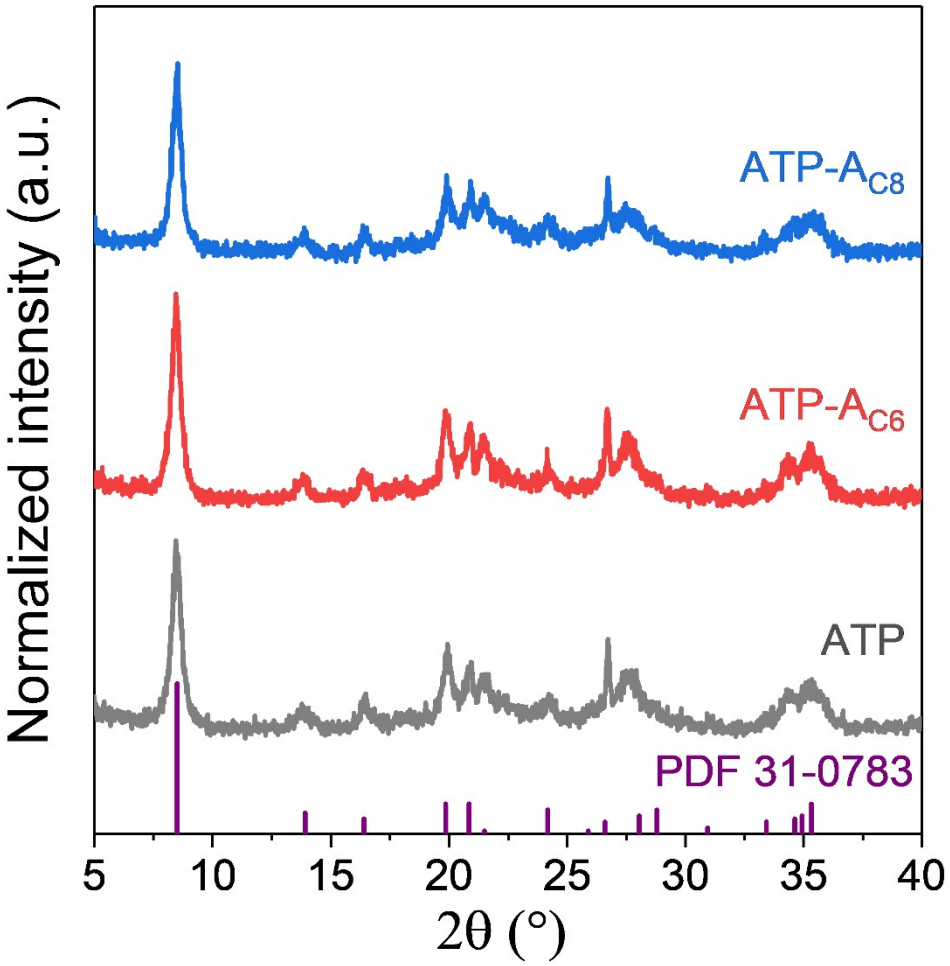

Figure S2 XRD patterns of ATP, ATP-A_{C6} and ATP-A_{C8}.

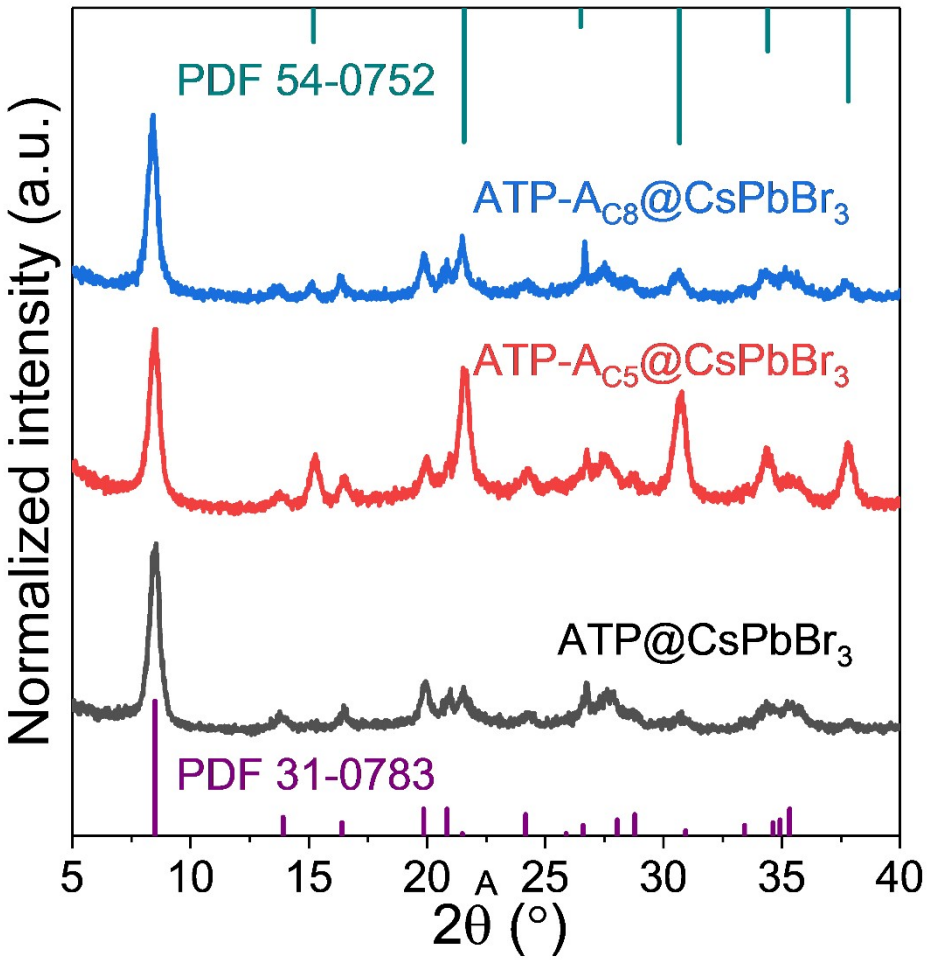

Figure S3 XRD patterns of ATP@$CsPbBr_3$, ATP-A_{C6}@$CsPbBr_3$ and ATP-A_{C8}@$CsPbBr_3$ nanocomposites.

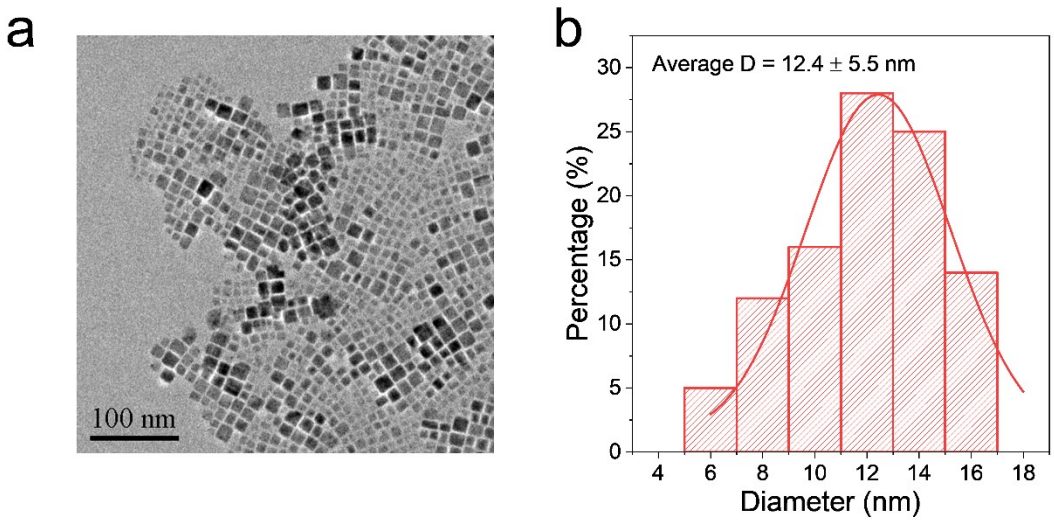

Figure S4 (a) TEM image and (b) size distribution of pure $CsPbBr_3$ NCs.

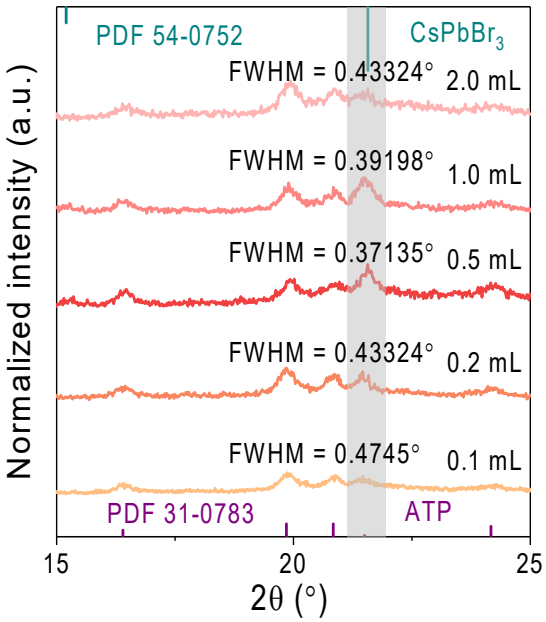

Figure S5 The FWHM values of XRD diffraction peak at 2θ = 21.57° with different dosage of APTMS.

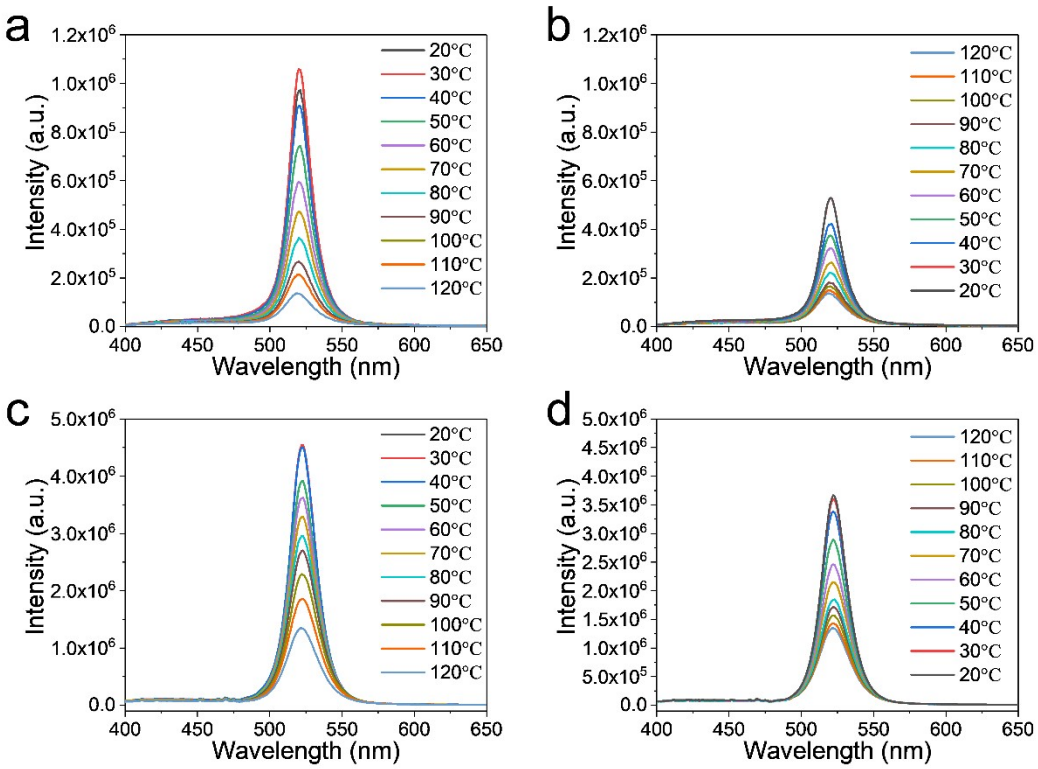

Figure S6 PL spectra of ATP@$CsPbBr_3$ nanocomposite during the (a) heating and (b) cooling processes. PL spectra of ATP-A_{C6}@$CsPbBr_3$ nanocomposite during the (c) heating and (d) cooling processes.

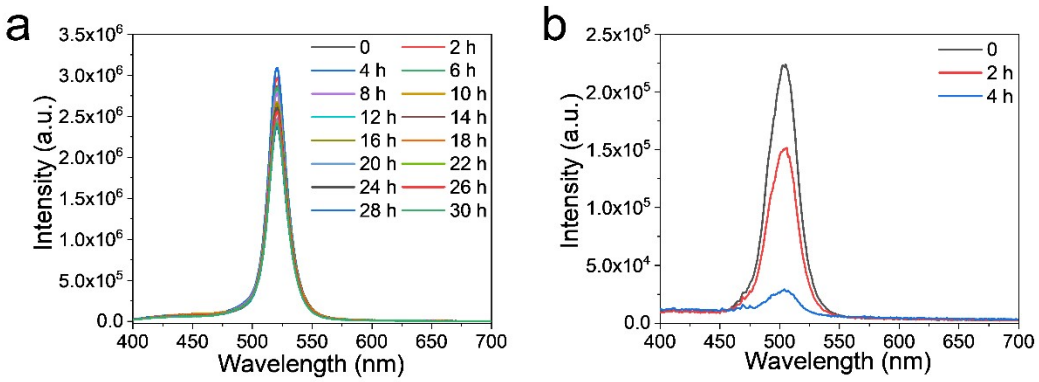

Figure S7 PL spectra of ATP-A_{C6}@$CsPbBr_3$ and ATP@$CsPbBr_3$ nanocomposites under continuous exposure of UV light.

Table S1 PL decay characteristics of ATP@$CsPbBr_3$, ATP-A_{C6}@$CsPbBr_3$ and ATP-A_{C8}@$CsPbBr_3$ nanocomposites.

Samples	A_1	τ_1/ns	A_2	τ_2/ns	τ_{avg}/ns
ATP@$CsPbBr_3$	590.87	10.99	455.78	34.60	27.7
ATP-A_{C6}@$CsPbBr_3$	915.02	8.71	320.42	63.21	47.8
ATP-A_{C8}@$CsPbBr_3$	778.91	11.74	292.65	57.62	41.5

Table S2 Performance parameters of LED device fabricated by ATP-A_{C6}@$CsPbBr_3$ nanocomposite and pure $CsPbBr_3$ NCs.

Green source	luminous efficiency (lm/W)	CRI	CIE x	CIE y	CCT (K)
ATP-A_{C6}@$CsPbBr_3$	38	78	0.37	0.36	3981
$CsPbBr_3$	34	54	0.30	0.34	6967