

Supporting Information for

Healthy and Stable Lighting via Single-Component White Perovskite Nanoplates

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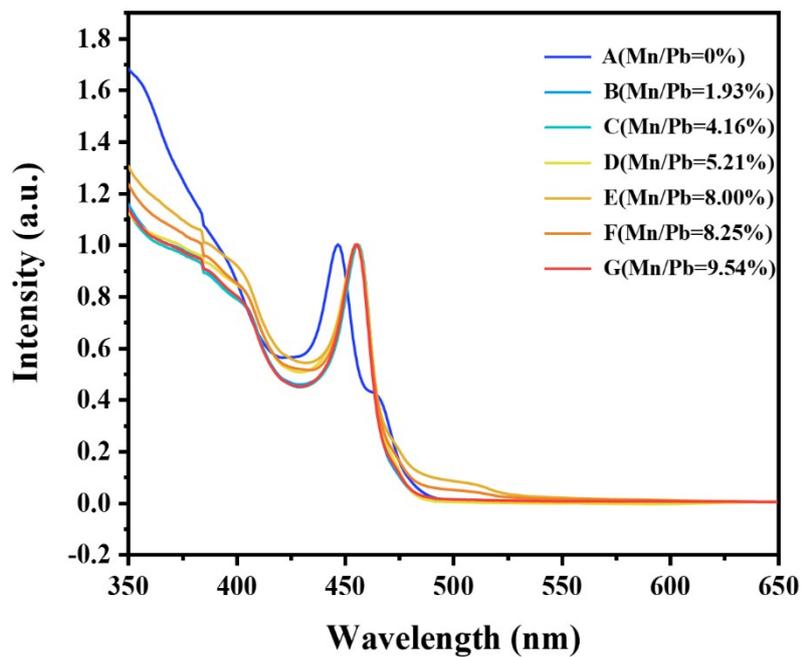


Figure S1. UV-vis absorption spectra for $\text{CsMn}_x\text{Pb}_{1-x}\text{Br}_3$ NPLs.

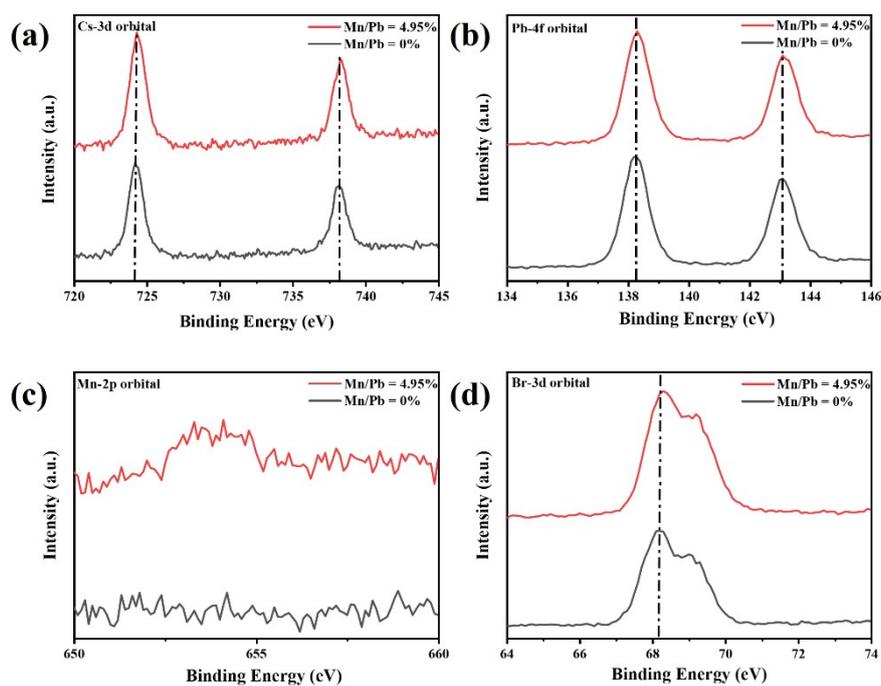


Figure S2. Fine XPS spectra of (a) Cs 3d, (b) Pb 4f, (c) Mn 2p, and (d) Br 3d for white (red curve) and blue (black curve) NPLs.

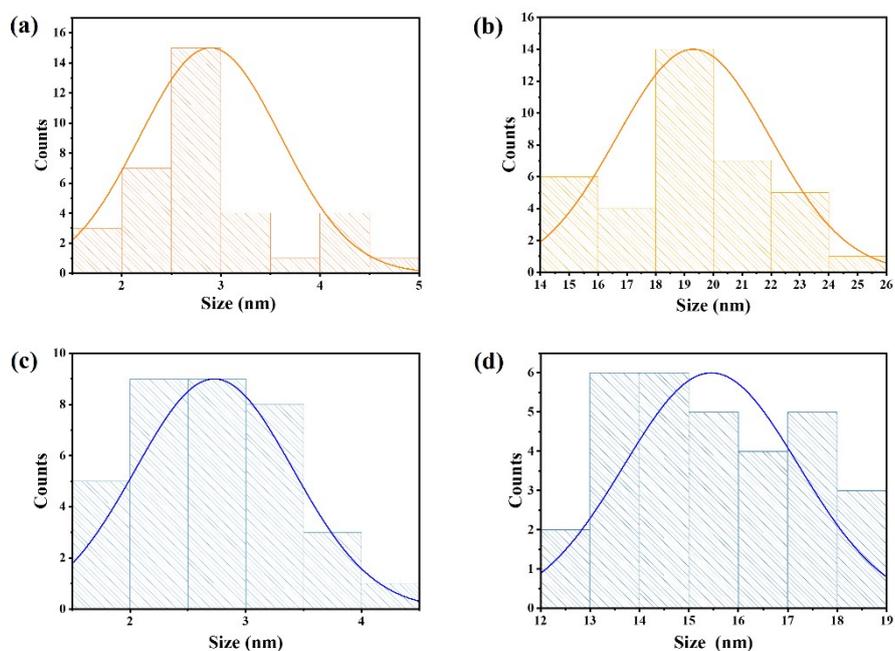


Figure S3. Thickness (a) and edge (b) distributions for white NPLs. Thickness (c) and edge (d) distributions for blue NPLs.

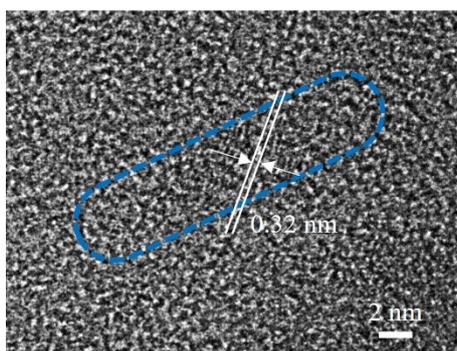


Figure S4. HRTEM image for white NPLs.

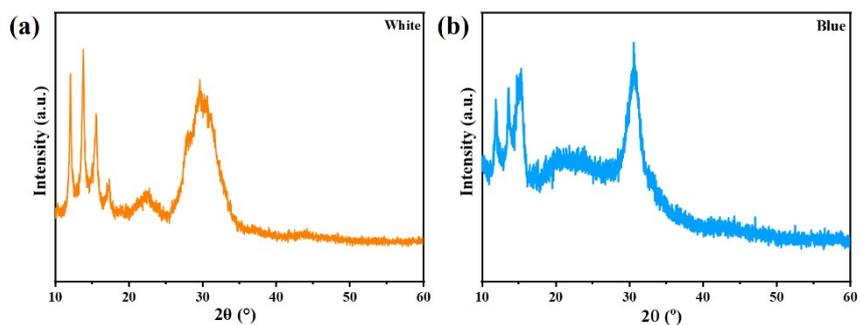


Figure S5. XRD patterns of pure white and blue NPLs.

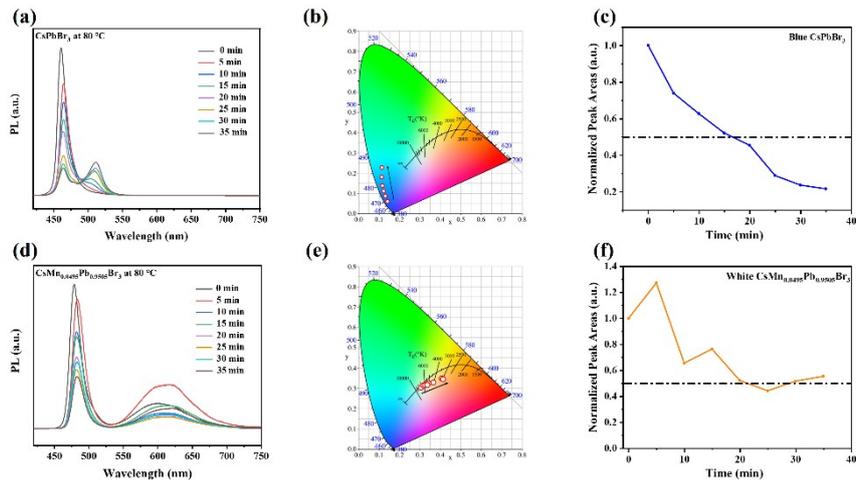


Figure S6. (a) PL spectra evolution of blue NPLs at 80 °C. (b) Thermal stability for CIE coordinates of blue NPLs. (c) Blue light component evolution of blue NPLs with time at 80 °C. (d) PL spectra evolution of white NPLs at 80 °C. (e) Thermal stability for CIE coordinates of white NPLs. (f) White light component evolution of white NPLs with time at 80 °C.

Table S1. The actual ratios of the Mn/Pb by ICP-MS for different Mn/Pb feed ratios

Samples	Mn (ppb)	Pb (ppb)	Mn/Pb
B	2.209	121.002	1.93%
C	5.794	139.126	4.16%
D	8.060	154.718	5.21%
E	11.318	141.494	8.00%
F	11.345	137.490	8.25%
G	11.795	123.702	9.54%

Table S2. PL lifetime of blue light component for blue and white NPLs

Samples	τ_1 (ns)	A_1 (%)	τ_2 (ns)	A_2 (%)	τ_{avg} (ns)
A	12.93	40	15.36	60	14.49
B	8.48	41	12.78	59	11.42
C	7.68	26	9.52	74	9.11
D	5.57	/	/	/	5.57
E	5.11	/	/	/	5.11
F	4.77	/	/	/	4.77
G	3.96	/	/	/	3.96

Table S3. PL lifetime of orange-red light component for white NPLs

Samples	τ_1 (ms)	A_1 (%)	τ_2 (ms)	A_2 (%)	τ_{avg} (ms)
A	0.00147	83	0.12505	17	0.11834
B	0.00135	44	0.21513	56	0.21408

C	0.13133	37	0.30811	63	0.27272
D	0.11332	30	0.29232	70	0.26682
E	0.11906	30	0.29678	70	0.27071
F	0.16050	53	0.33160	47	0.27119
