Supplementary Material

Highly Luminescent and Ultrastability Cesium Lead Halide Perovskite Nanocrystals glass for Plant-growth Lighting Engineering

Jianming Liu, Linli Shen, Ya Chen, Yi Zhao, Yaqian Zhang, Mengfeifei Jin, Haisheng Yang, Yujie Zhang, Weidong Xiang(*), Xiaojuan Liang(*)

College of Chemistry and Materials Engineering, Wenzhou University, Wenzhou 325 035, China
E-mail: Xiangweidong001@126.com, lxj6126@126.com

<table>
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<th>Sample</th>
<th>B$_2$O$_3$</th>
<th>ZnO</th>
<th>SiO$_2$</th>
<th>Na$_2$CO$_3$</th>
<th>Cs$_2$CO$_3$</th>
<th>PbO</th>
<th>NaCl</th>
<th>NaBr</th>
<th>NaI</th>
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Table S1 Specific content of all CsPbX$_3$(Cl, Br and I) NCs glass samples.
Fig. S1 XRD patterns of the CsPbBr₃₋ₓIₓ (x= 3, 2, 1.5, 1 and 0) (ICSD-29073 and ICSD-161481).

Fig. S2 PL emission spectra of CsPbBr₃₋ₓIₓ (x= 3, 2, 1.5, 1 and 0) NCs glass.

Fig. S3 The absorption spectra CsPbBr₃₋ₓIₓ (x= 3, 2, 1.5, 1 and 0) NCs glass.
Fig. S4 (a) CsPbBr$_2$I$_1$ NCs glass exposure to the environment with 85 % RH at 85 °C, (b) Thermal cycling measurements of CsPbBr$_2$I$_1$ NCs glass. High set point temperatures are highlighted in red for clarity. (c) CsPbBr$_2$I$_1$ NCs glass under the UV-lamp with different exposure times and the corresponding PL intensity.

Fig. S5 Tg-DSC curves of CsPbX$_3$ QDs glass.

Fig. S6 Time-resolved PL decay profiles of CsPbX$_3$ (X=Cl and Br) NCs glasses.