

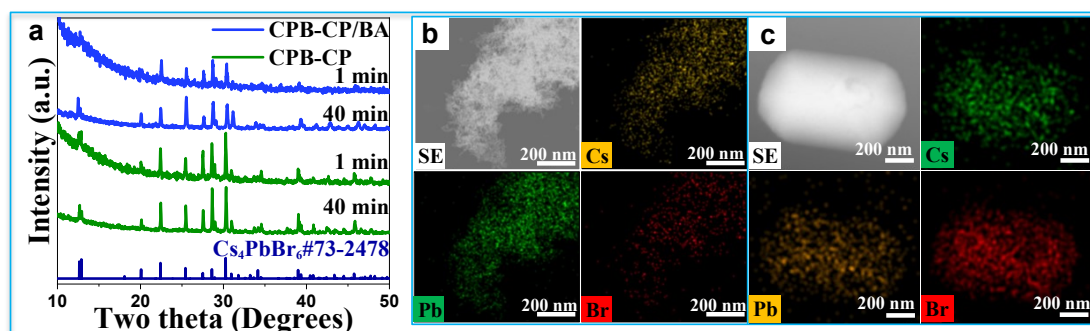
Supporting Information

**Evaporation-induced nano to micro-sized transformation of  
photoluminescent Cs<sub>4</sub>PbBr<sub>6</sub> crystals**

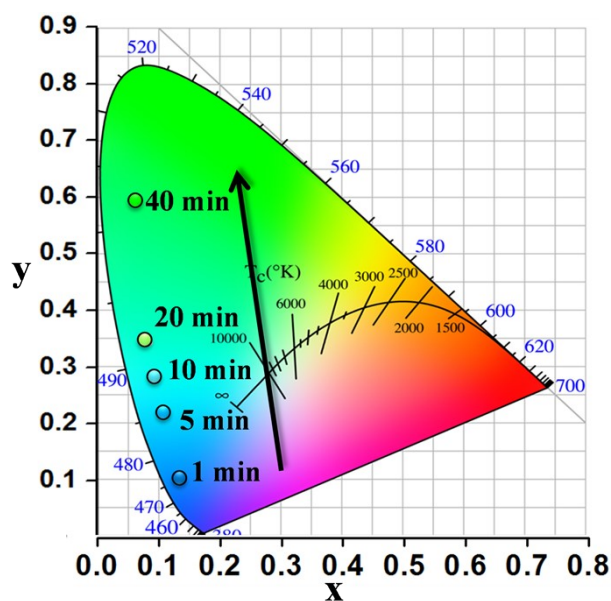
Hong Zhu, Yuexiao Pan,\* Hongzhou Lian, and Jun Lin\*

*<sup>a</sup>Nanomaterials and Chemistry Key Laboratory, Faculty of Chemistry and Materials Engineering, Wenzhou University, Zhejiang Province, Wenzhou 325027, P. R. China.  
Tel. & Fax: (+86) 577-8837-3017. E-mail: yxpan8@gmail.com;*

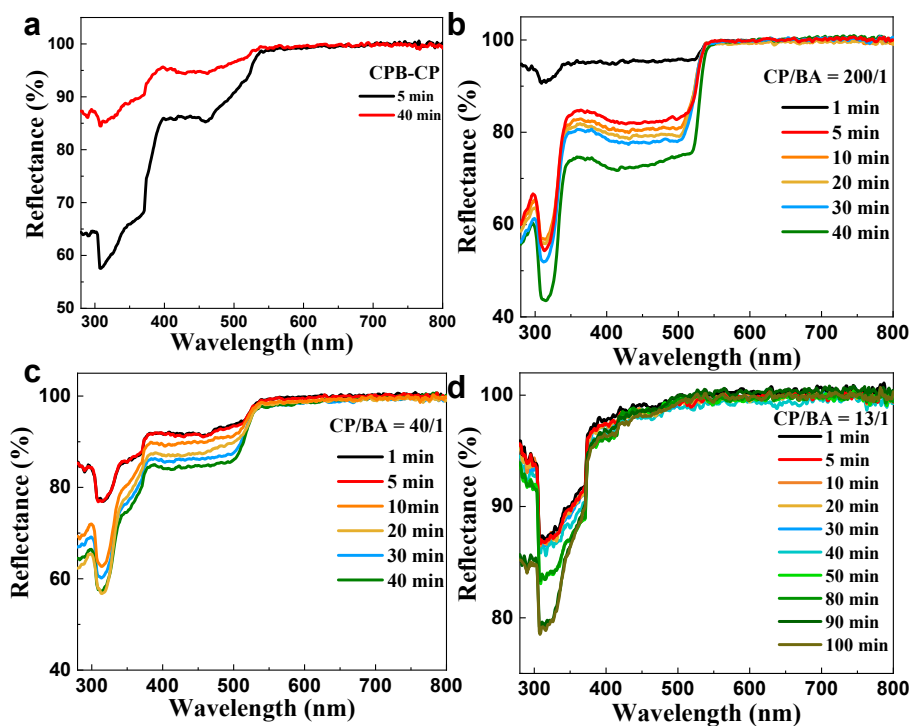
*<sup>b</sup>State Key Laboratory of Rare Earth Resource Utilization, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun 130022, P. R. China.  
Fax: +86-431-85698041; Tel: +86-431-85262031. E-mail: [jlin@ciac.ac.cn](mailto:jlin@ciac.ac.cn);*



**Figure S1** (a) The XRD of fresh-centrifuged and dried CPB-CP and CPB-CP/BA samples with different drying time; The element mapping of CPB-CP/BA (b) NCs with blue luminescence and (c) MCs with green luminescence measured by TEM.

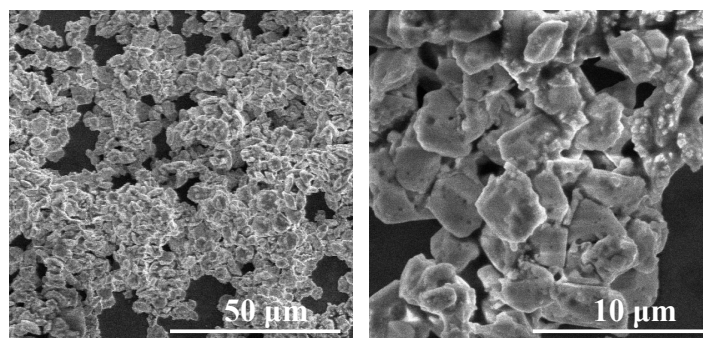


**Figure S2** The commission international de L'Eclairage (CIE) chromaticity coordinates of CPB-CP/BA NCs changing with the drying duration at room temperature in air.

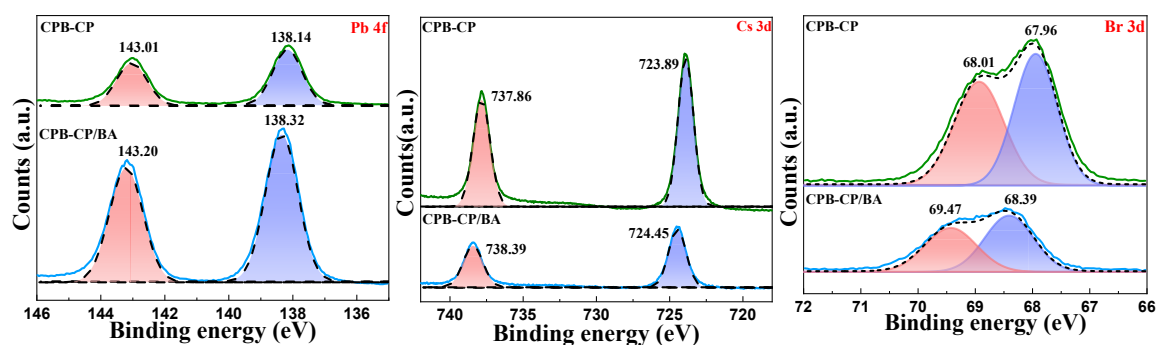


**Figure S3** The reflectance spectra of the CPB-CP MCs (a) and CPB-CP/BA crystals (b-d) with various ratios of CP/BA changing with the drying duration at room

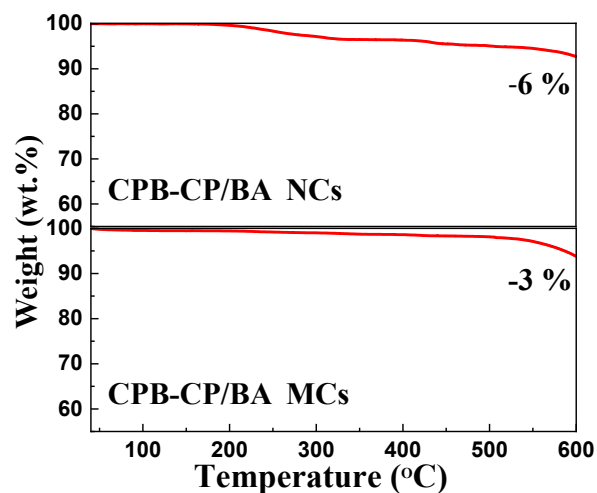
temperature.



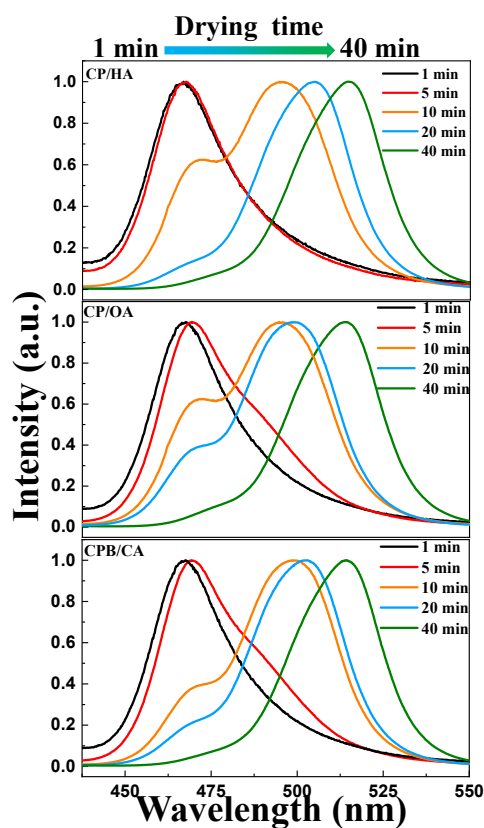
**Figure S4** The SEM images of CPB-CP MCs obtained in solution of pure CP solution.



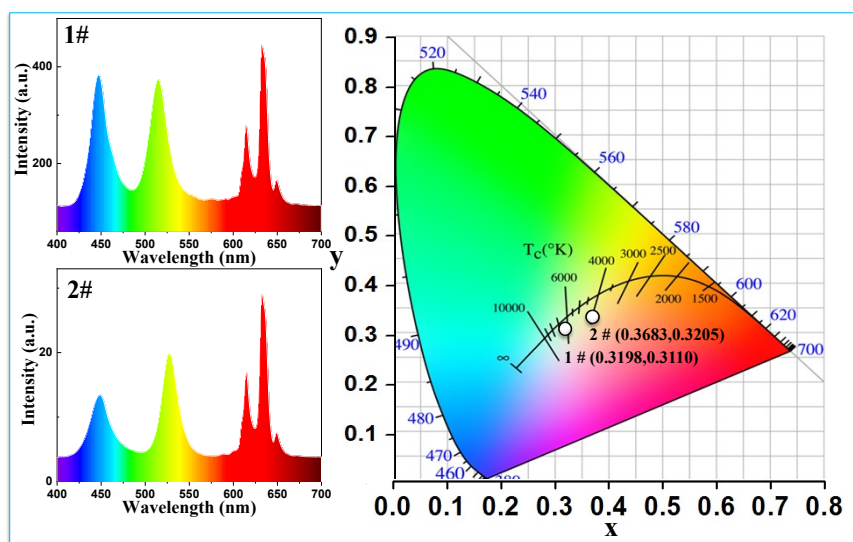
**Figure S5** The enlarged XPS of Pb, Cs, and Br elements in both the CPB-CP and CPB-CP/BA MCs.



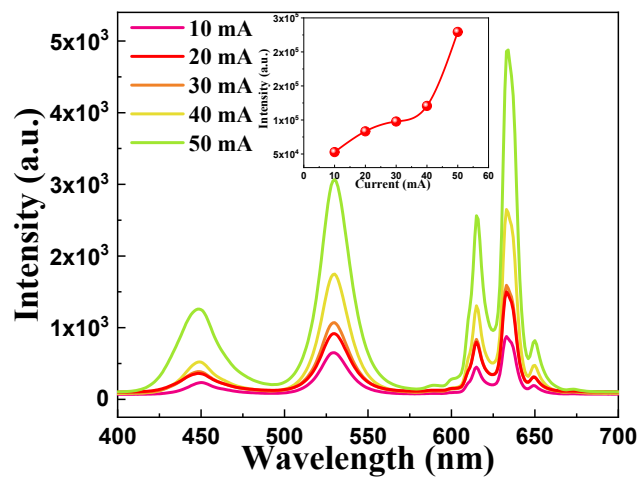
**Figure S6** The thermogravimetrics (TG) and differential thermal analysis (DTA) of CPB-CP/BA NCs and MCs.



**Figure S7** The normalized time-dependent emission spectra of samples prepared with different organic amines.



**Figure S8** The electroluminescence spectra of WLEDs fabricated with different ratios of tricolor components from blue chip, green CPB-CP/BA MCs, and red  $\text{K}_2\text{SiF}_6:\text{Mn}^{4+}$  phosphor.



**Figure S9** The output electroluminescence spectra of a WLED consisting of blue chip, green CPB-CP/BA MCs, and red  $\text{K}_2\text{SiF}_6:\text{Mn}^{4+}$  phosphor, and the intensities of intensity as a function of driven current.

## Tables

**Table 1** FT-IR spectra of functional groups and wavenumbers corresponding to CPB-CP/BA.

Compound	Vibration	Wavenumber (cm <sup>-1</sup> )
H <sub>2</sub> O	stretching vibration of O–H bond	3428
	bending vibration of the O–H bond	1644
CP	deformation vibration of C–H bond	3007 and 2906
	deformation of asymmetric and stretching vibrations originating from the C–H of CP.	1451 and 903
BA	C–C vibration can be assigned to the BA	1011
	The N–H out-of-plane bending vibration	755

**Table 2** The color rendering index, luminous efficacy and chromaticity coordinates of WLED.

	Current (mA)	LE (lm W <sup>-1</sup> )	CCT (K)	CRI	CIE Coordinates (x,y)
1#	20	10.35	6298	79	(0.3198,0.3110)
2#	20	11.02	3878	76	(0.3683,0.3205)