Supporting Information for New Journal of Chemistry.

Environment-friendly Mn and Cu co-doped CsBr nanocrystals with doping-controlled dual-emission and chrominance

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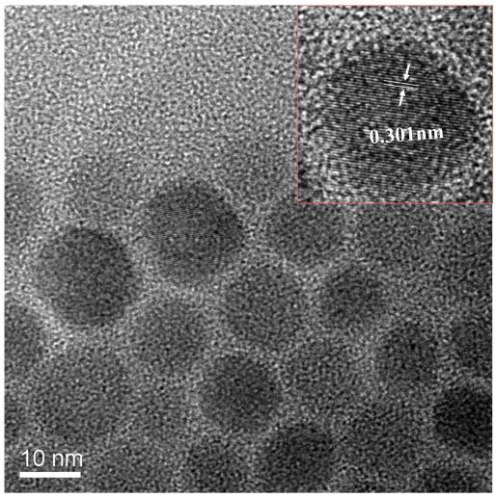

Fig. S1 TEM image of CsBr NCs. Insets are corresponding HRTEM images.

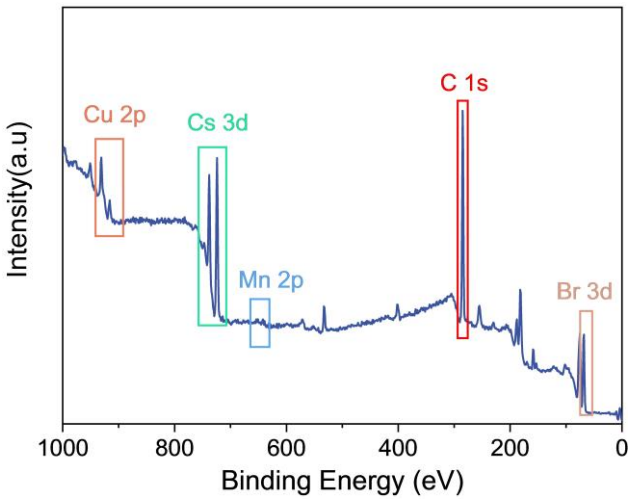

Fig. S2 XPS spectra of Cu,Mn:CsBr NCs.

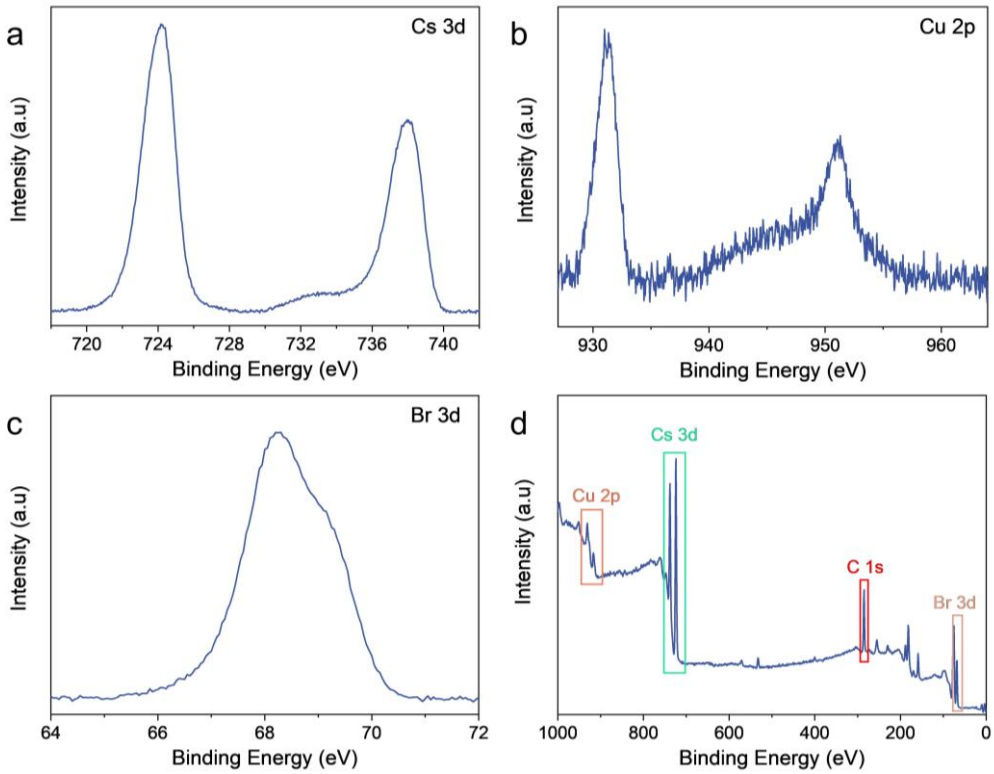

Fig. S3 High-resolution XPS results for (a) Cs, (b) Cu, (c) Br and (d) XPS spectra of Cu:CsBr NCs.

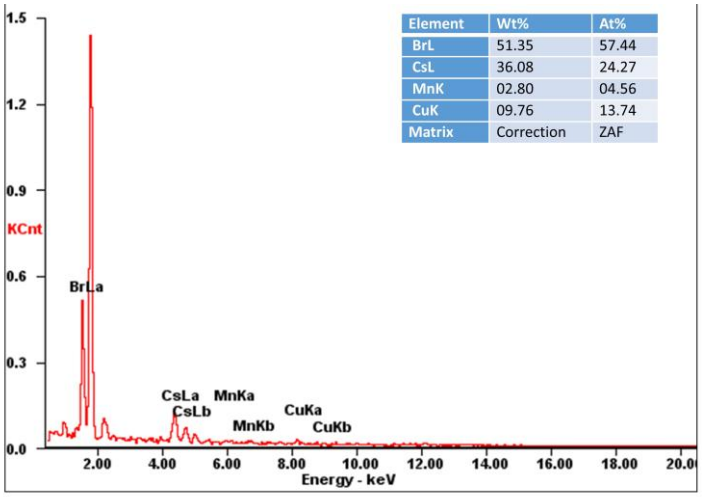

Fig. S4 EDAX spectra of Cu,Mn:CsBr NCs thin film. Inset is the weight ratio and atomic ratio of elements Br, Cs, Mn and Cu.

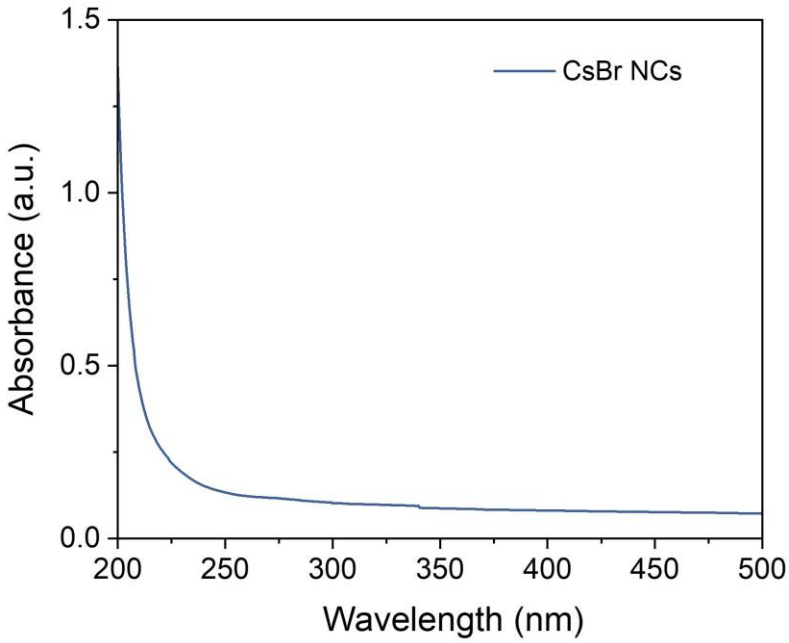

Fig. S5 The absorption spectra of CsBr NCs.

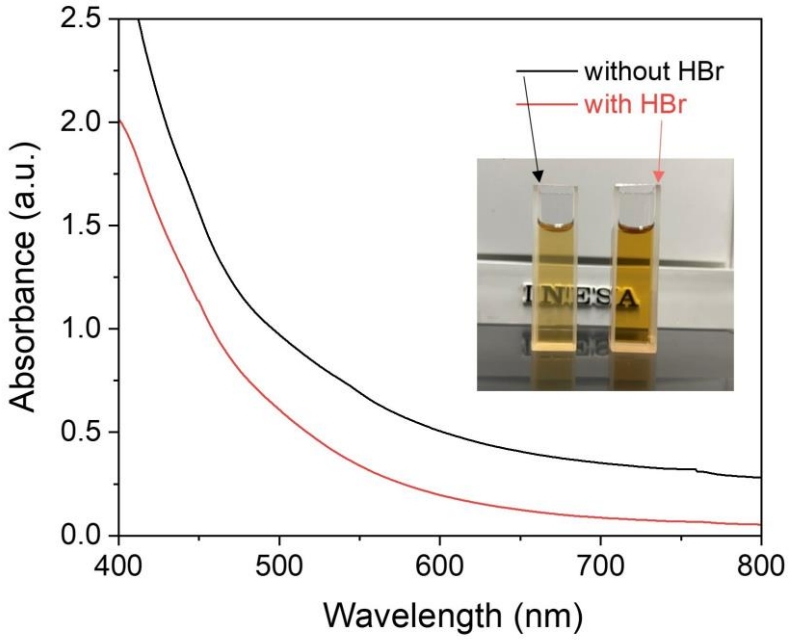

Fig. S6 The absorption spectra of mixed solution with 100 μL HBr or without HBr. The inset is the photograph of mixed solution. Note: The mixed solution was obtained by the following steps. Oleylamine, oleic acid, $MnBr_2$, and HBr (0 or 100uL) were added to octadecene. Subsequently, the flask was transferred to the glove box, the temperature was increased to 150 °C, and keep at that temperature for 30 min.

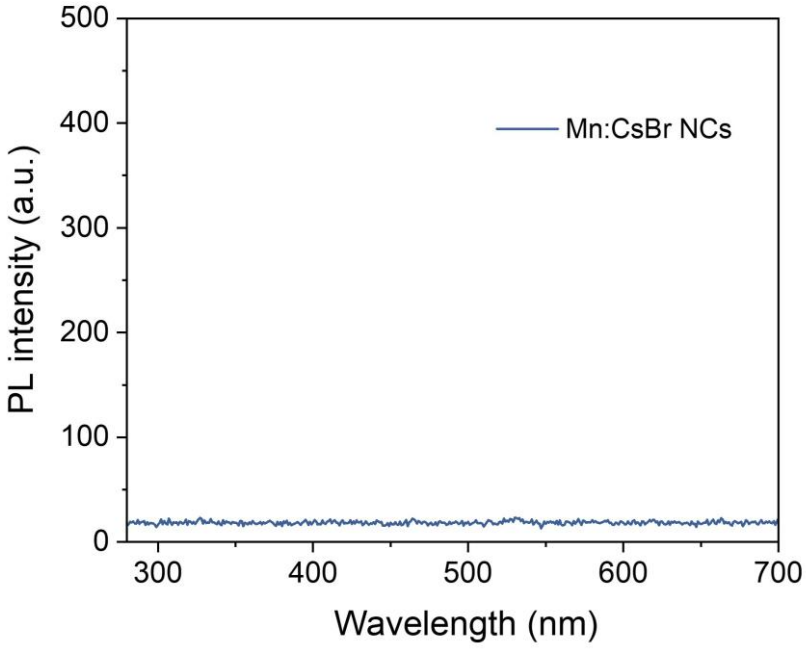

Fig. S7 The PL spectra of Mn:CsBr NCs. Note: The preparation procedure of Mn:CsBr NCs is the same as that of Cu:CsBr NCs, but employing 100 μL of HBr and replacing $CuBr_2$ with $MnBr_2$.