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Electronic supplementary information

Mn^{2+}-Based Narrow-Band Green-Emitting Cs_3MnBr_5 Phosphor and the Performance Optimization by Zn^{2+} Alloying

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Table 1. Main parameters of processing and refinement of the Cs_3MnBr_5 sample

Compound	Cs_3MnBr_5
Sp.Gr.	*I*4/*mcm*
a, Å	9.60672 (13)
c, Å	15.5716 (2)
V, Å^3	1437.08 (4)
Z	2
2*θ*-interval, º	10-105
R_{wp}, %	5.13
R_p, %	3.84
R_{exp}, %	2.31
χ^2	2.21
R_B, %	3.08

Table S2. Fractional atomic coordinates and isotropic displacement parameters (Å^2) of Cs_3MnBr_5

	x	*y*	*z*	B_{iso}
Cs1	0.16040 (14)	0.66040 (14)	0.5	2.5 (2)
Cs2	0	0	0.25	3.0 (2)
Mn1	0	0.5	0.25	1.3 (3)
Br1	0.14742 (16)	0.64742 (16)	0.15389 (11)	3.0 (2)
Br2	0	0	0	2.3 (2)

Table S3. Main bond lengths (Å) of Cs_3MnBr_5

Cs1—Br1^{i}	3.8082 (19)	Cs2—Br1^{iv}	3.9646 (16)
Cs1—Br1^{ii}	3.5439 (19)	Cs2—Br2	3.8929 (1)
Cs1—Br2^{iii}	3.6080 (13)	Mn1—Br1	2.5002 (16)

Symmetry codes: (i) -*x*, *y*, -*z*+1/2; (ii) -*y*+1, -*x*+1, -*z*+1/2; (iii) -*x*, *y*+1, -*z*+1/2; (iv) *x*, *y*-1, *z*; (v) -*x*, *y*, *z*+1/2.

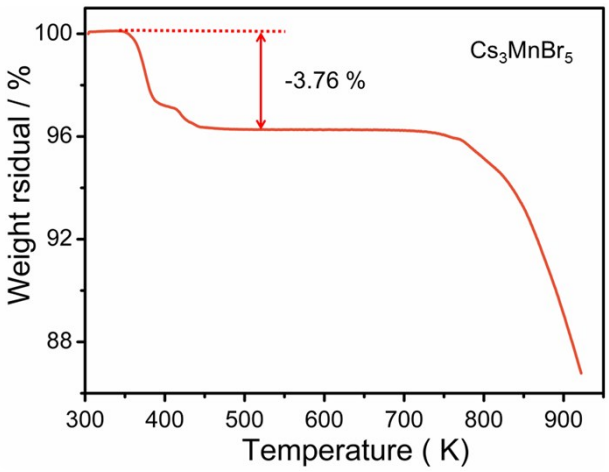

Fig. S1 The TG curve of Cs_3MnBr_5 sample.