Supporting information

Luminescence Properties and Energy Transfer of A Novel $Bi^{3+}$and Mn^{2+}-coactivated $Y_3Ga_5O_{12}$ Single-component White Light-emitting Phosphor

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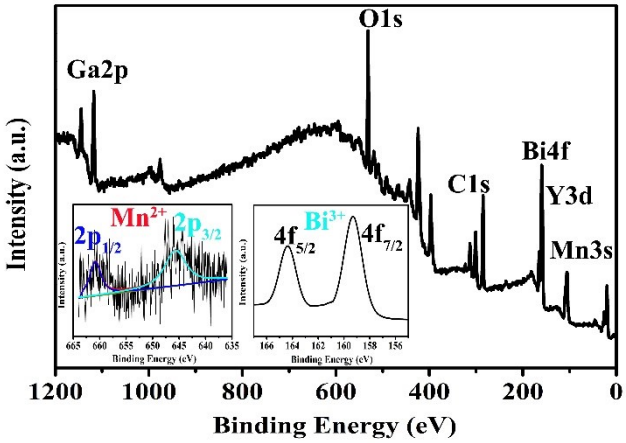

Figure S1 XPS spectra of the YGO:0.01Bi^{3+},0.008Mn^{2+} sample.

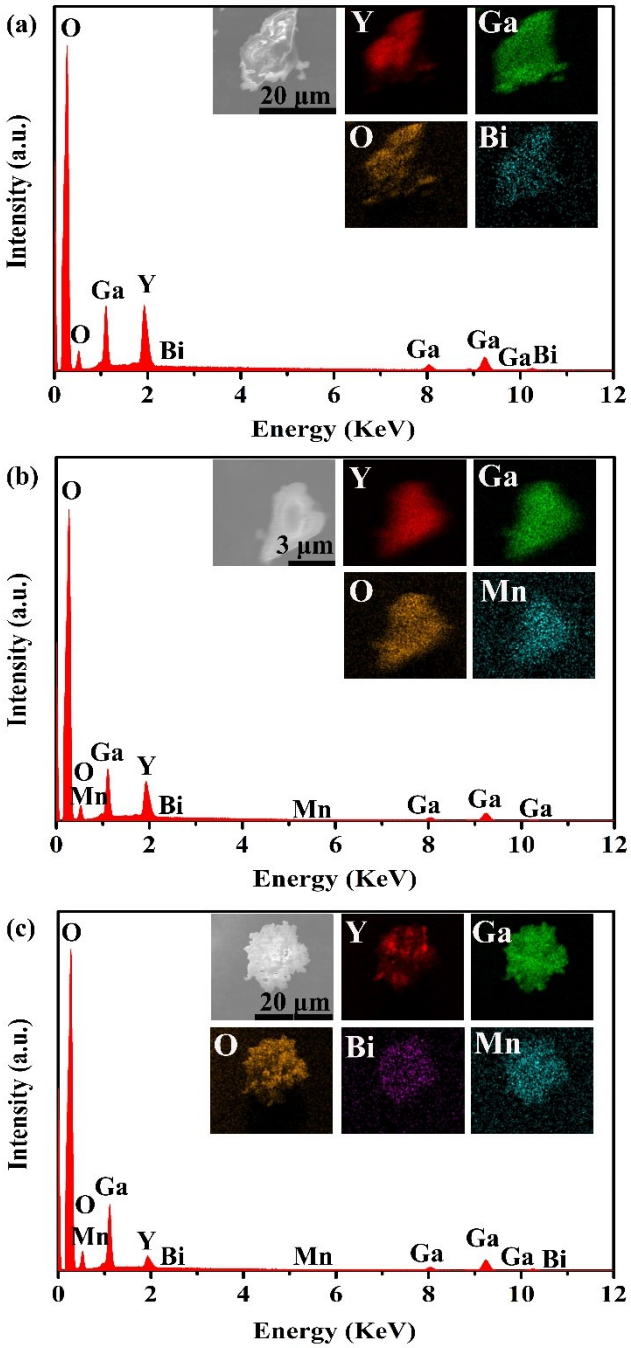

Figure S2 EDS elemental mapping of YGO:0.01Bi^{3+}, YGO:0.008Mn^{2+} and YGO:0.01Bi^{3+},0.008Mn^{2+} samples.

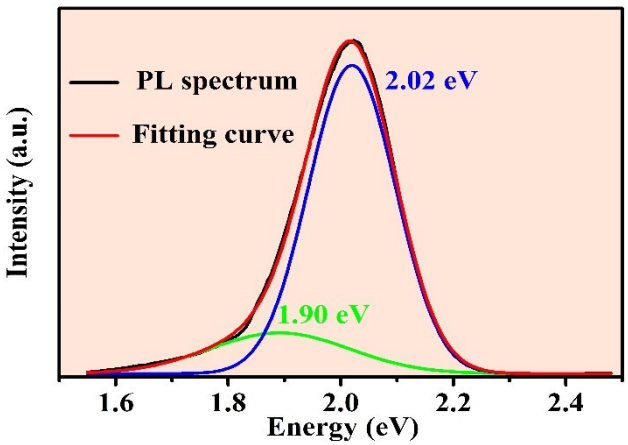

Figure S3 PL spectrum of YGO:0.008Mn^{2+} and Gaussian fitting curves.

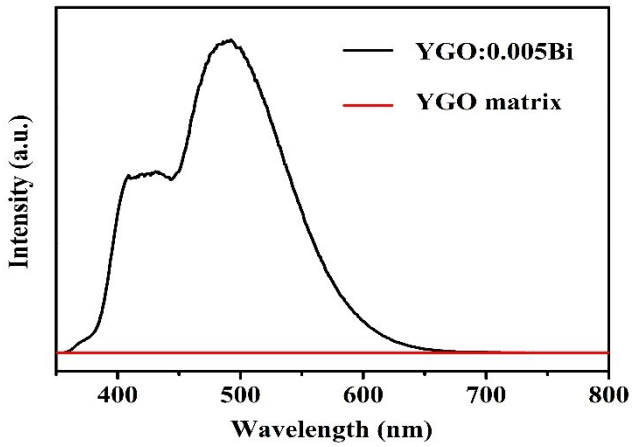

Figure S4 The comparison of emission spectra between YGO matrix and YGO:0.005Bi^{3+} sample.

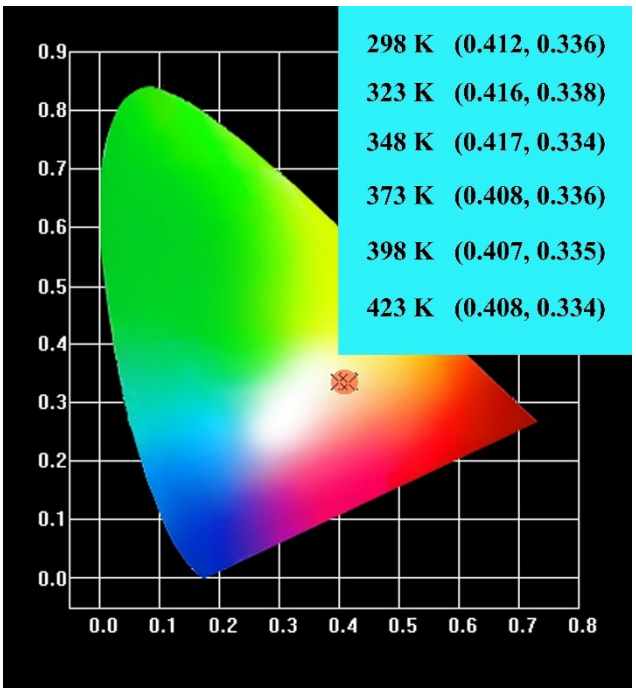

Figure S5 Chromaticity coordinates of YGO:0.01Bi^{3+},0.008Mn^{2+} sample in the range of 298-423 K.

Table S1 Ionic radius of cations in the $Y_3Ga_5O_{12}$:Bi^{3+},Mn^{2+}.

Radius (Å)/CN	4	6	8
Y^{3+}			1.02
Ga^{3+}	0.470	0.620	
Mn^{2+}	0.660	0.670	0.960
Bi^{3+}		1.03	1.17