Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C

Supporting Information

A novel single-composition trichromatic white-emitting $Sr_{3.5}Y_{6.5}O_2(PO_4)_{1.5}(SiO_4)_{4.5}:Ce^{3+}/Tb^{3+}/Mn^{2+}$ phosphor: synthesis, luminescent properties and applications for white LEDs

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Table S1. Crystallographic Data for $Sr_{3.5}Y_{6.5}O_2(PO_4)_{1.5}(SiO_4)_{4.5}$ Based on Rietveld Refinement.

Formula	$Sr_{3.5}Y_{6.5}O_2(PO_4)_{1.5}(SiO_4)_{4.5}$
Space group	P63/m
Cell parameters	$a = b = 9.4418(13)$ Å, $c = 6.8992(9)$ Å
	$\alpha = 90^o$, $\beta = 90^o$, $\gamma = 120^o$
	$V = 529.27(16)$ Å, $Z = 1$
	R- Bragg = 5.74
Reliability factors	$R_{exp} = 4.56\%$
	$R_{wp} = 9.63\%$
	$R_p = 6.32\%$
	$GOF = 2.11$

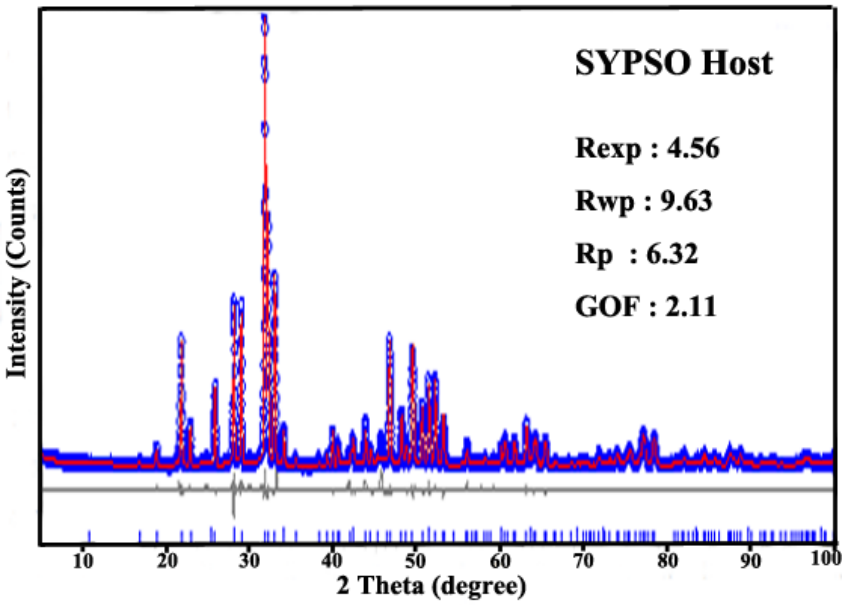

Figure S1. Rietveld refinement XRD patterns of SYPSO Compound at room temperature by TOPAS program. (Solid red lines are calculated intensities, and circles are the observed intensities. Short vertical lines show the position of Bragg reflections of the calculated pattern. Gray solid lines below the profiles stand for the difference between the observed and the calculated intensities.

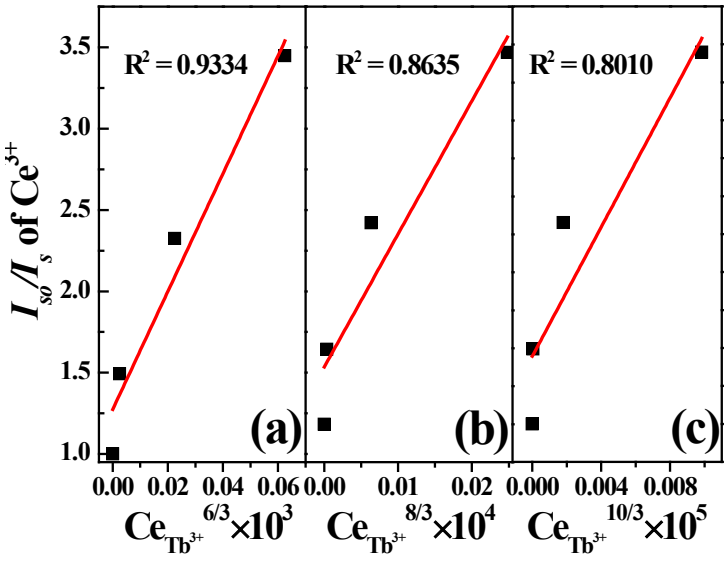

Figure S2. Dependence of I_{S0}/I_S of Ce^{3+} on (a) $C^{6/3}$, (b) $C^{8/3}$, and (c) $C^{10/3}$.

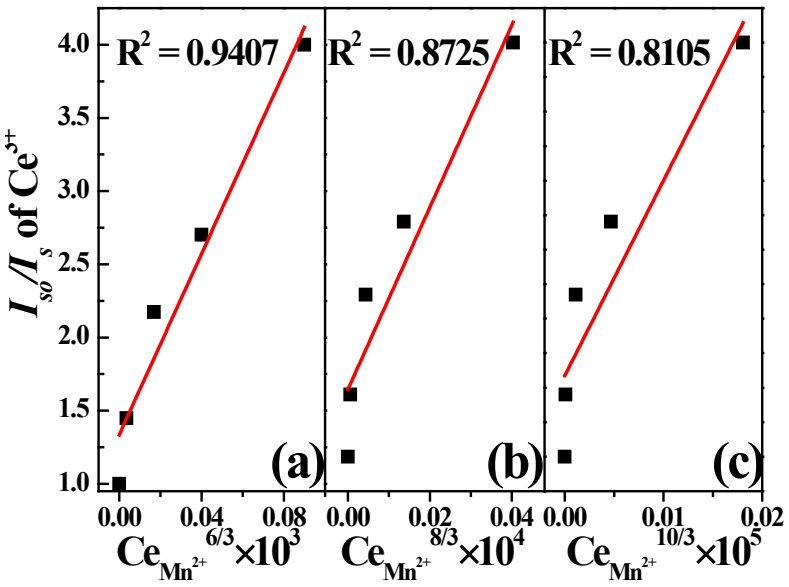

Figure S3. Dependence of I_{S0}/I_S of Ce^{3+} on (a) $C^{6/3}$, (b) $C^{8/3}$, and (c) $C^{10/3}$.