

Supporting information

**Realization of Color hue tuning via efficient Tb³⁺-Mn²⁺ energy transfer in
Sr₃Tb(PO₄)₃:Mn²⁺, a potential near-UV excited phosphor for White LEDs**

Yongchao Jia,^{a,b} Wei Lü,^a Ning Guo,^{a,b} Wenzhen Lü,^{a,b} Qi Zhao,^{a,b} Hongpeng You^{a,*}

^aState key Laboratory of Rare Earth Resource Utilization, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun 130022, P. R. China.

^bGraduate University of the Chinese Academy of Sciences, Beijing 100049, P. R. China.

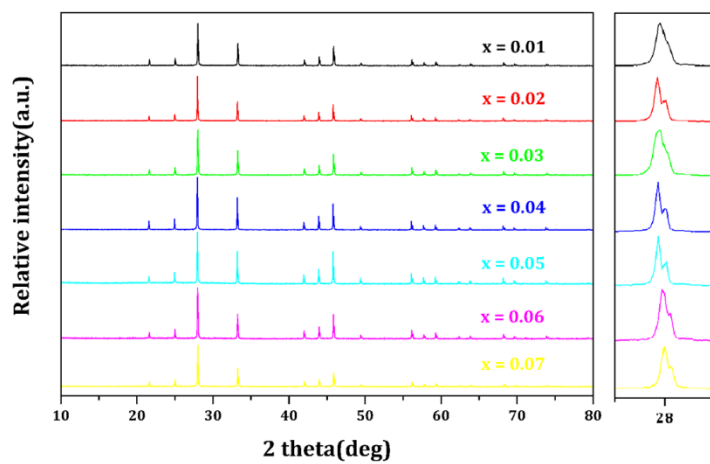
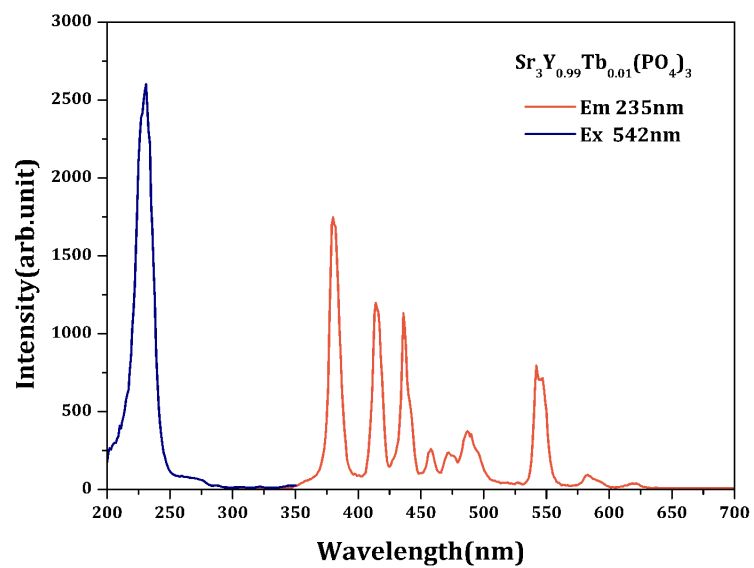


Figure S1. XRD patterns of STP: $x\text{Mn}^{2+}$ ($x = 0.01, 0.02, 0.03, 0.04, 0.05, 0.06, 0.07$).

The panel on the right details the evolution of reflection near $2\theta = 28.0^\circ$.



FigureS2. PLE and PL spectra of the $\text{Sr}_3\text{Y}_{0.99}(\text{PO}_4)_3:0.01\text{Tb}^{3+}$ phosphor.

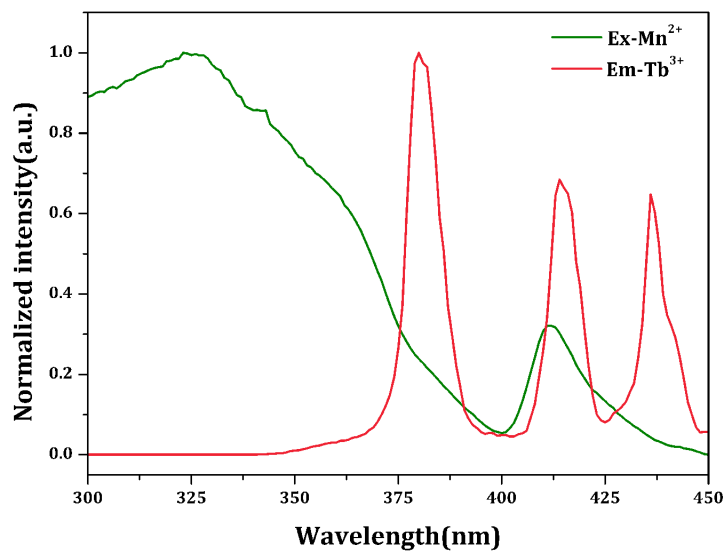


Figure S3. Spectra overlap between the normalized PL of $\text{Sr}_3\text{Y}_{0.99}(\text{PO}_4)_3:0.01\text{Tb}^{3+}$ and PLE of $\text{Sr}_{2.91}\text{Y}(\text{PO}_4)_3:0.09\text{Mn}^{2+}$.