

Supporting information

Structure and Photoluminescence of Eu³⁺ Doped Sr₂InTaO₆ Red Phosphor with High Color Purity

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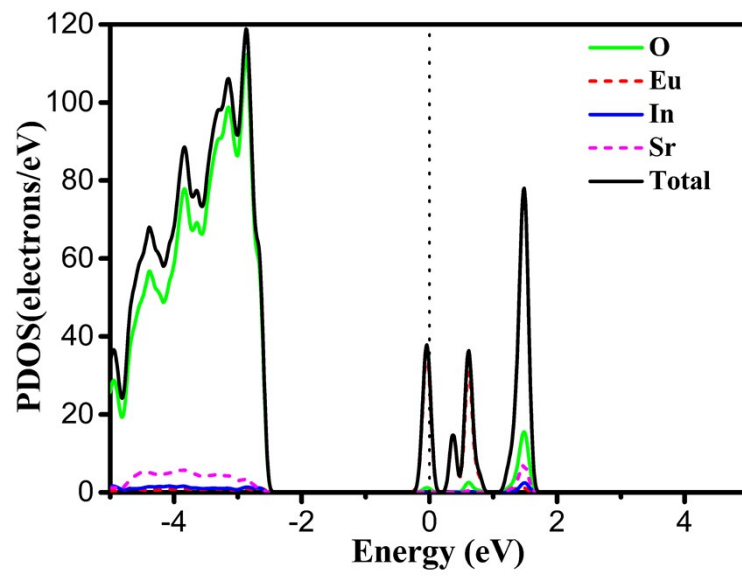


Figure S1 The corresponding projected density of states of host Sr₂InTaO₆:0.12Eu³⁺.

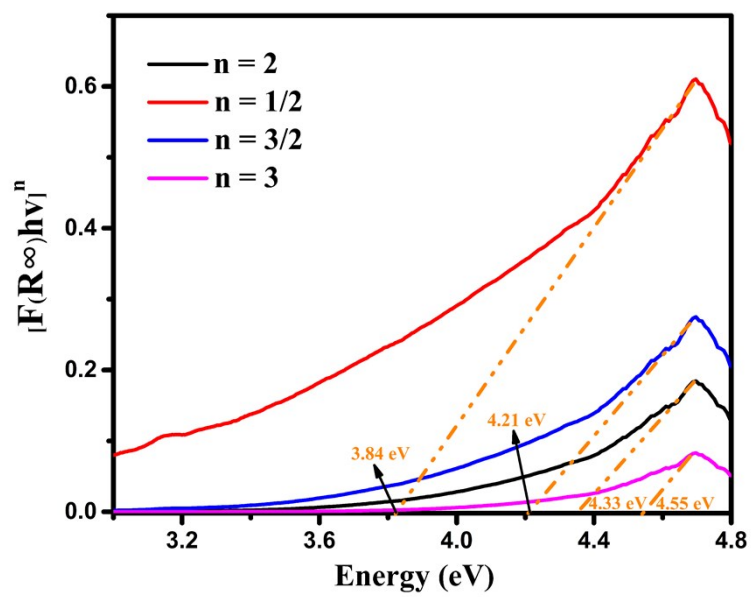


Figure S2 absorption spectra of $\text{Sr}_2\text{InTaO}_6$ as calculated by the Kubelka-Munk function for different n indexes ($n = 1/2, 2, 3/2$ and 3).

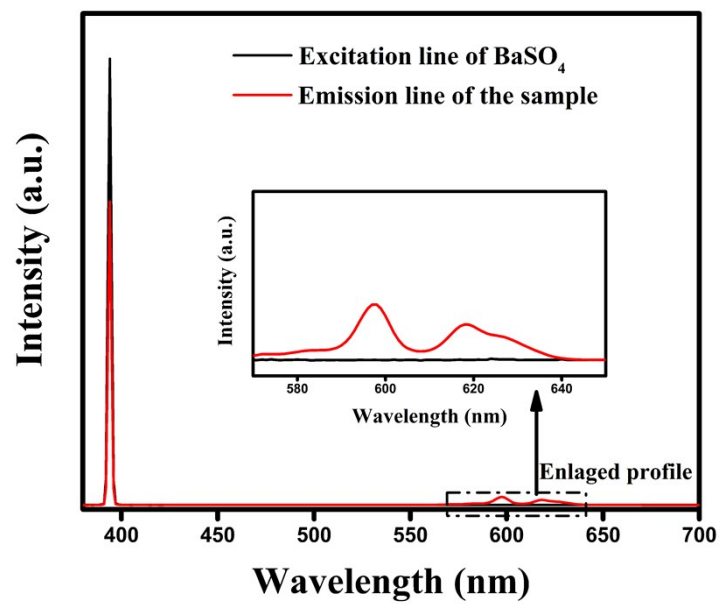


Figure S3 Excitation line of BaSO₄ and emission spectrum of Sr₂InTaO₆:0.12Eu³⁺ phosphor collected by using an integrating sphere.

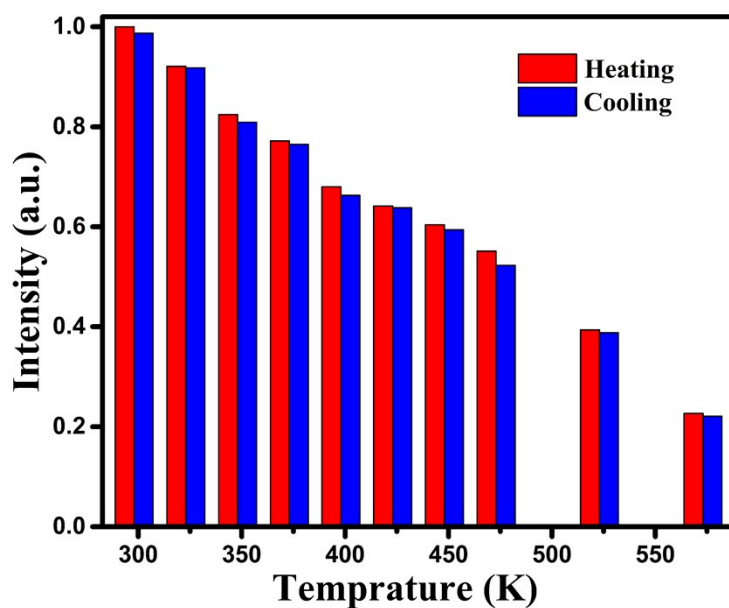


Figure S4 The temperature-dependent PL properties of the $\text{Sr}_2\text{InTaO}_6:0.12\text{Eu}^{3+}$ phosphor under 394 nm excitation in the heating and cooling process over 298–573 K