Supporting information

Scintillation material based on metal iodates by rare earth doping modification with performance of radioluminescence and X-ray imaging

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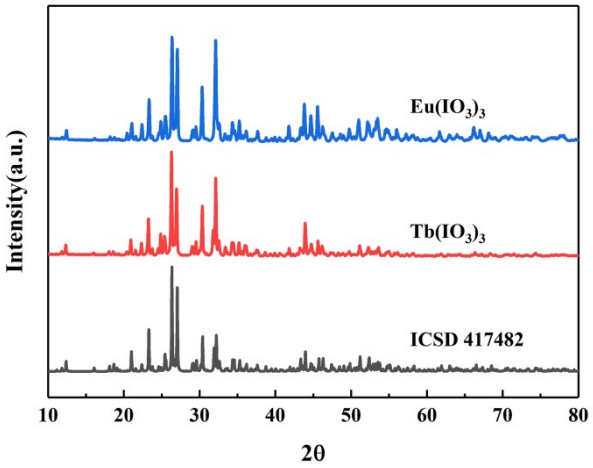

Fig. S1 XRD patterns of $Ln(IO_3)_3$ (Ln= Eu, Tb)

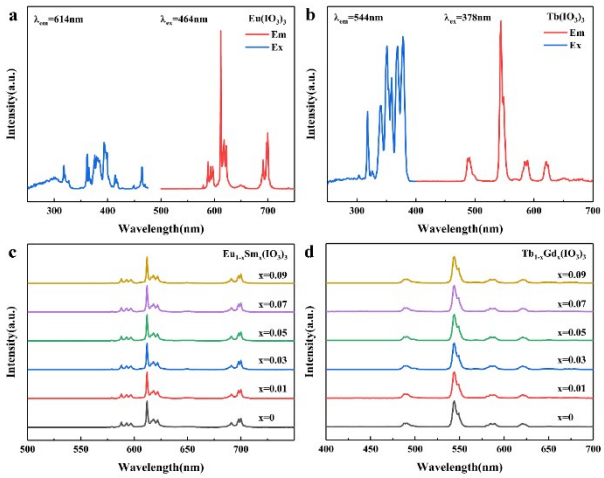

Fig. S2 PL and PLE spectra of (a) $Eu(IO_3)_3$ and (b) $Tb(IO_3)_3$. PL spectra of (c) xSm^{3+}:$Eu(IO_3)_3$ and (d) xGd^{3+}:$Tb(IO_3)_3$ (x=0, 1%, 3%, 5%, 7%)

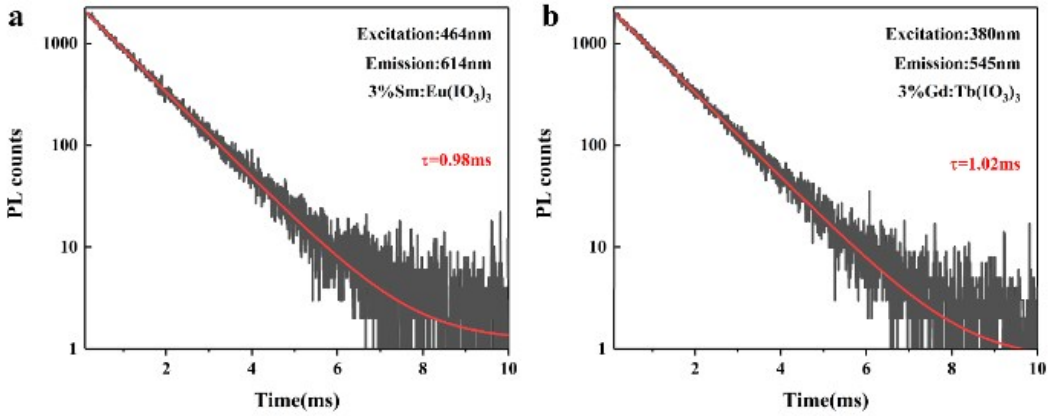

Fig. S3 The photoluminescence decay curves of 3%Sm^{3+}:$Eu(IO_3)_3$ and (d) 3%Gd^{3+}:$Tb(IO_3)_3$

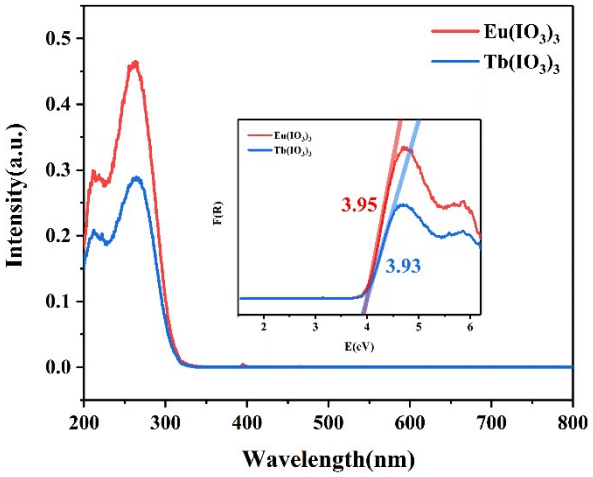

Fig. S4 Absorption spectra and (inset) band gap of $Ln(IO_3)_3$ (Ln= Eu, Tb)

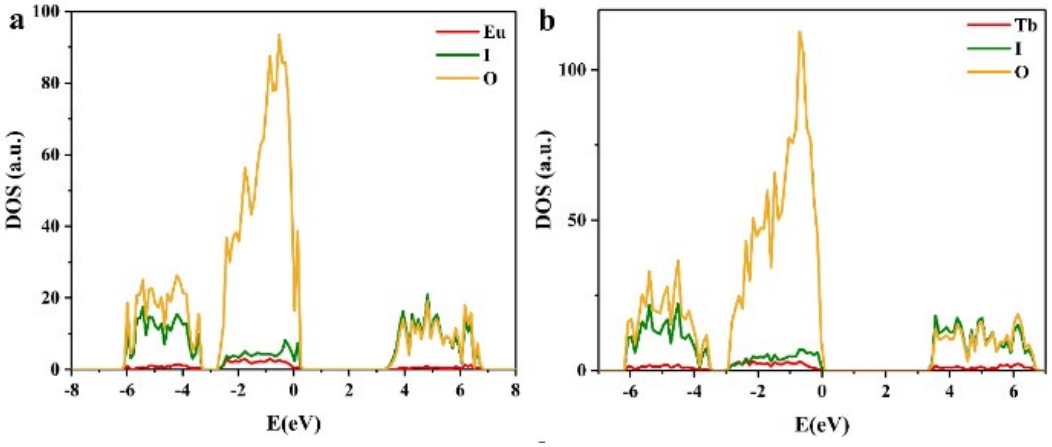

Fig. S5 DOS of (a) $Eu(IO_3)_3$ and (b) $Tb(IO_3)_3$

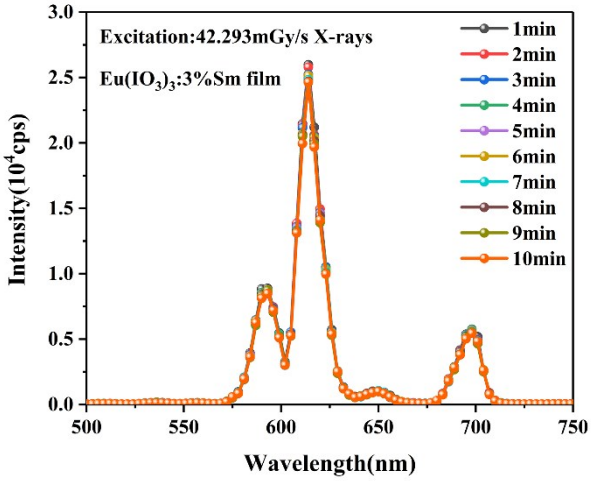

Fig. S6 RL spectra of $Eu(IO_3)_3$:3%Sm film under 10 minutes continuous irradiation

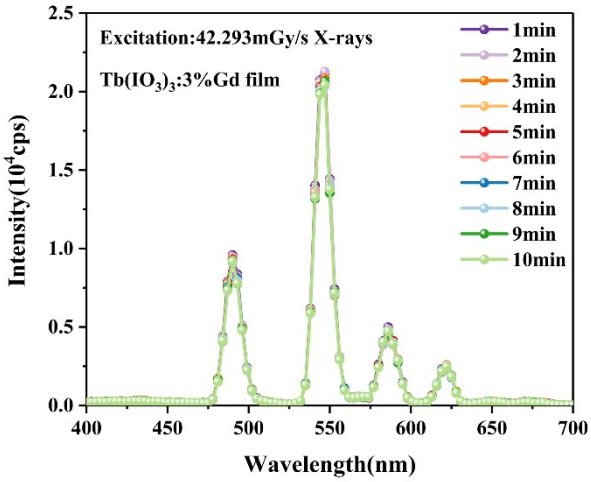

Fig. S7 RL spectra of $Tb(IO_3)_3$:3%Gd film under 10 minutes continuous irradiation

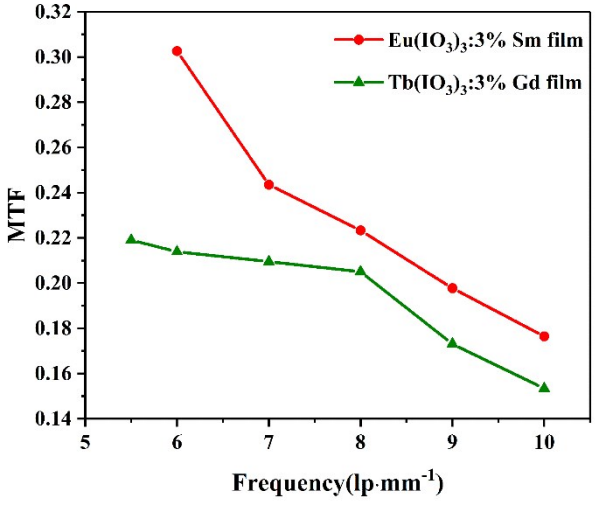

Fig. S8 MTF value of $Eu(IO_3)_3$:3%Sm and $Tb(IO_3)_3$:3%Gd films by line-pair pattern method