

Supporting Information

Controlled mechano-luminescence properties of SrGa₂O₄:

Tb³⁺ co-doping with Dy³⁺ and Eu³⁺ ions

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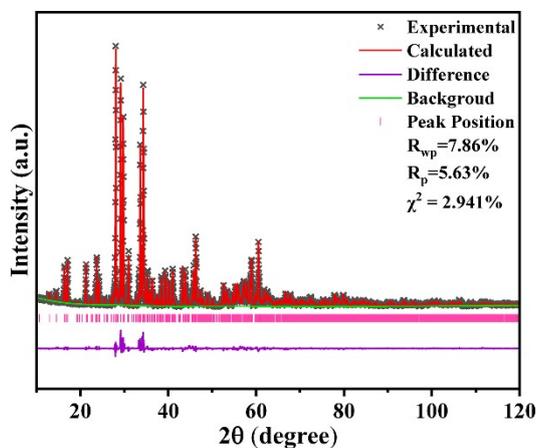


Fig. S1. XRD Rietveld refinement of SGO: 0.005Tb³⁺, 0.004Dy³⁺.

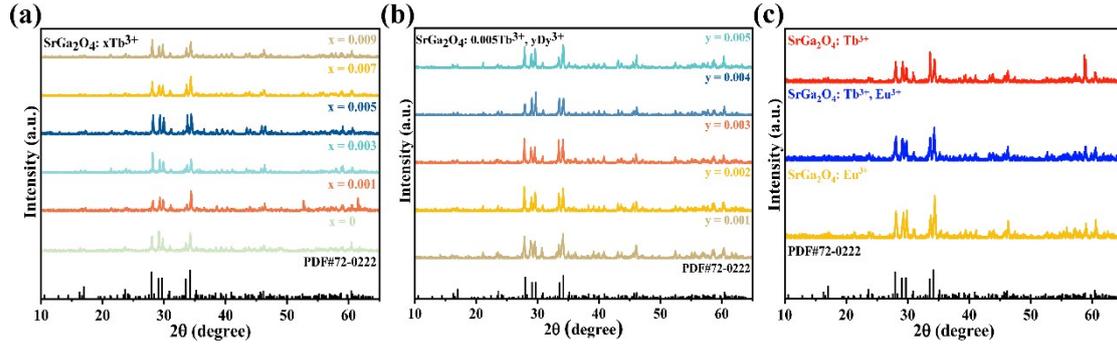


Fig. S2. XRD patterns of (a) SGO: $x\text{Tb}^{3+}$ ($x = 0.001, 0.002, 0.003, 0.004,$ and 0.005), (b) SGO: $0.005\text{Tb}^{3+}, y\text{Dy}^{3+}$ ($y = 0.001, 0.002, 0.003, 0.004,$ and 0.005), (c) SGO: Tb^{3+} , SGO: $\text{Tb}^{3+}, \text{Eu}^{3+}$ and SGO: Eu^{3+} , respectively.

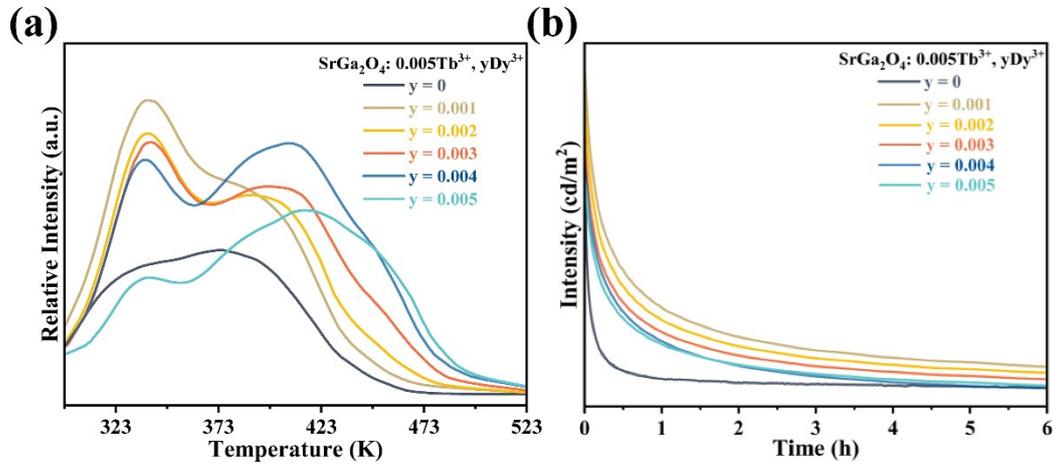


Fig. S3. (a) TL and (b) LPL lifetime curves of SGO: $0.005\text{Tb}^{3+}, y\text{Dy}^{3+}$ ($y = 0.001, 0.002, 0.003, 0.004,$ and 0.005) samples recorded at room temperature, respectively.

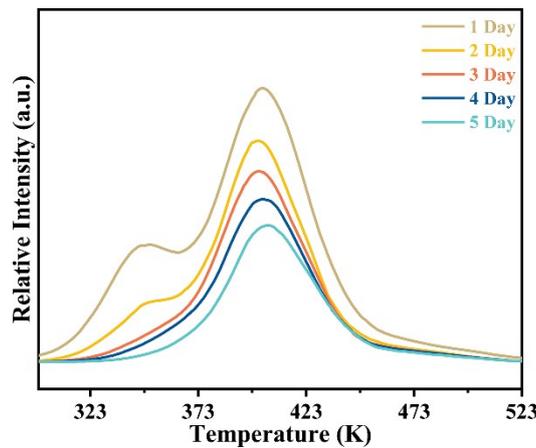


Fig. S4. Time-dependent TL curves of SGO: $0.005\text{Tb}^{3+}, 0.004\text{Dy}^{3+}$ after UV pre-irradiation 20 min.