

Supporting Information

Host-sensitized luminescence properties in $\text{KLa}_5\text{O}_5(\text{VO}_4)_2\text{:Eu}^{3+}$ for solid-state lighting applications

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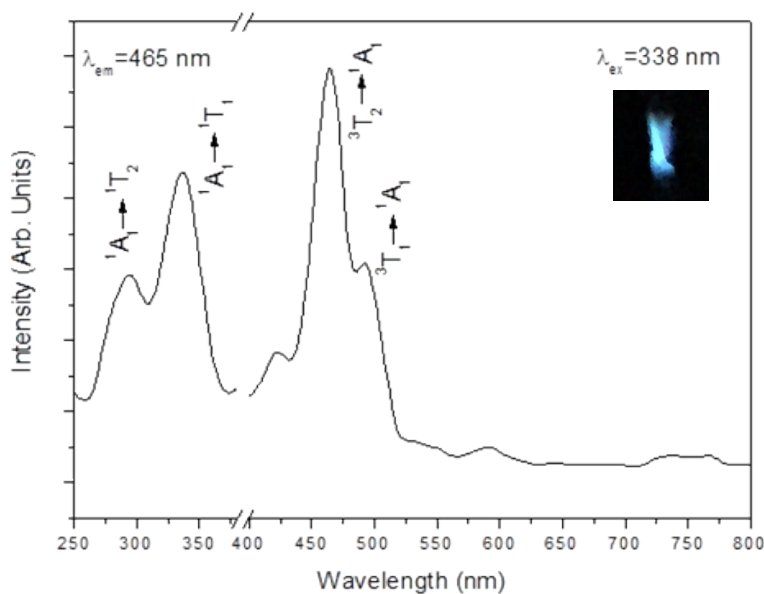


Figure S1. Normalized PL (obtained for $\lambda_{\text{ex}} = 338 \text{ nm}$) and PLE spectra (monitored at 465 nm) of $\text{KLa}_5\text{O}_5(\text{VO}_4)_2$ (inset photography of this phosphor under the same excitation).

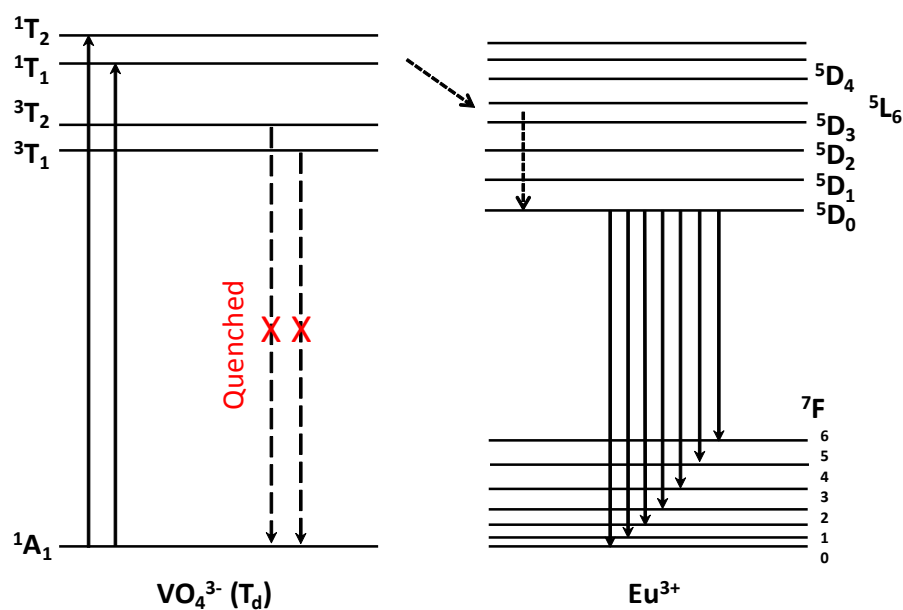


Figure S2. Schematic diagram illustrating the $\text{VO}_4^{3-}\text{--Eu}^{3+}$ energy transfer and Eu^{3+} emission processes.

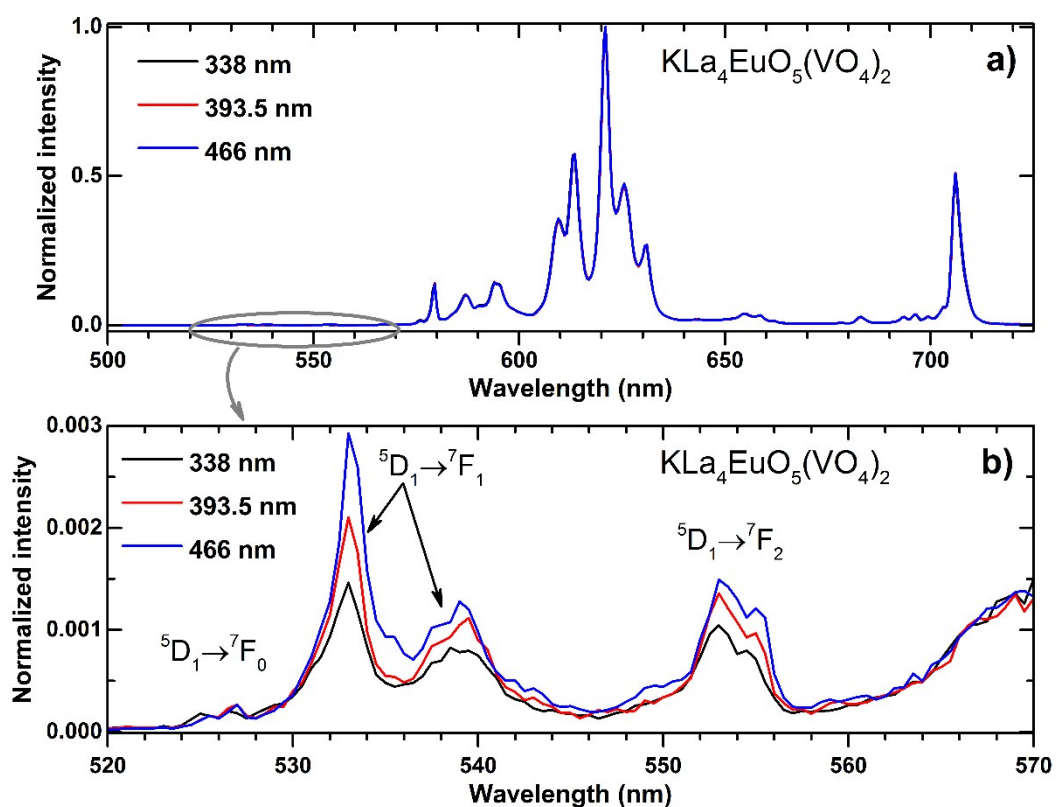


Figure S3. a) Normalized emission spectra of $\text{KLa}_4\text{EuO}_5(\text{VO}_4)_2$ under different excitation wavelengths; b) magnified emission spectra in the range of 520-670 nm.

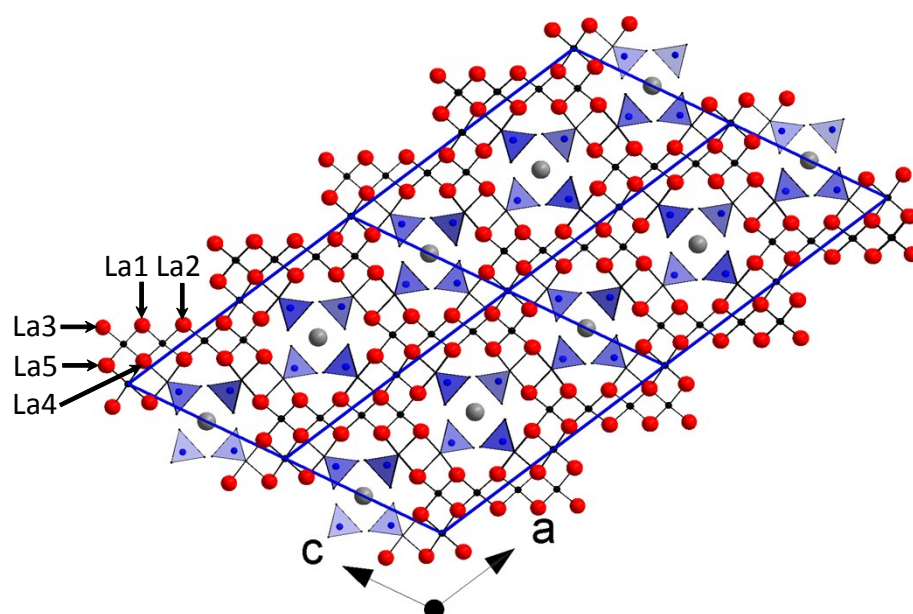


Figure S4. Crystal structure of $\text{KLa}_5\text{O}_5(\text{VO}_4)_2$ with enhancement of the five lanthanum crystallographic sites.