

Increasing the effective absorption of Eu^{3+} -doped luminescent materials towards practical light emitting diodes for illumination applications

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Supplementary material

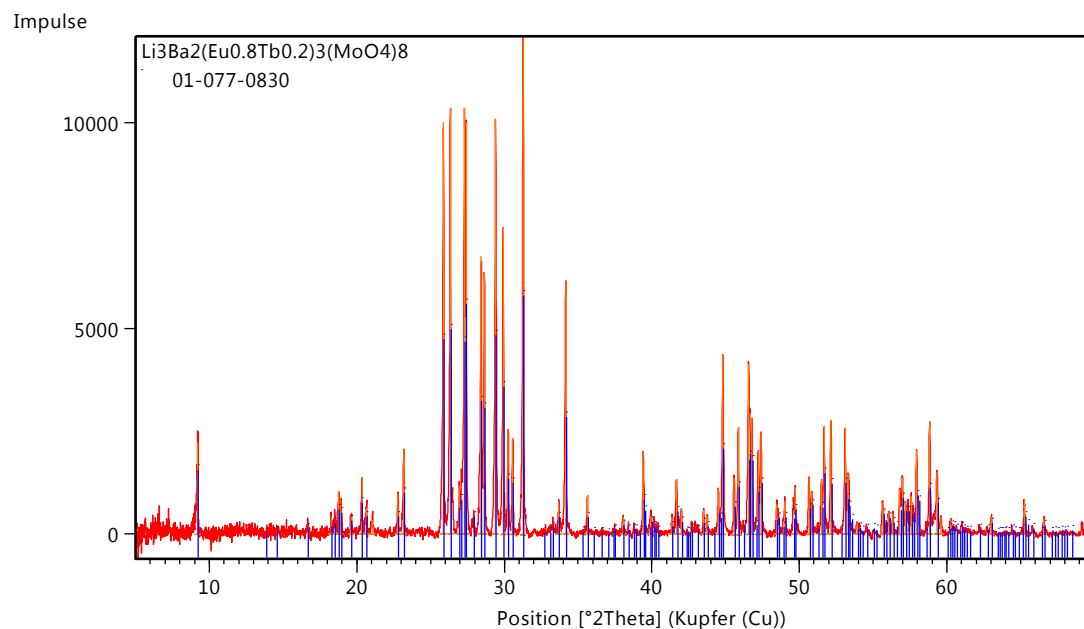


Figure S1 X-ray diffraction (XRD) data of the synthesized $\text{Li}_3\text{Ba}_2(\text{Eu}_{0.8}\text{Tb}_{0.2})_3(\text{MoO}_4)_8$ powder, together with the reference pattern (ICCD No. 01-077-0830).

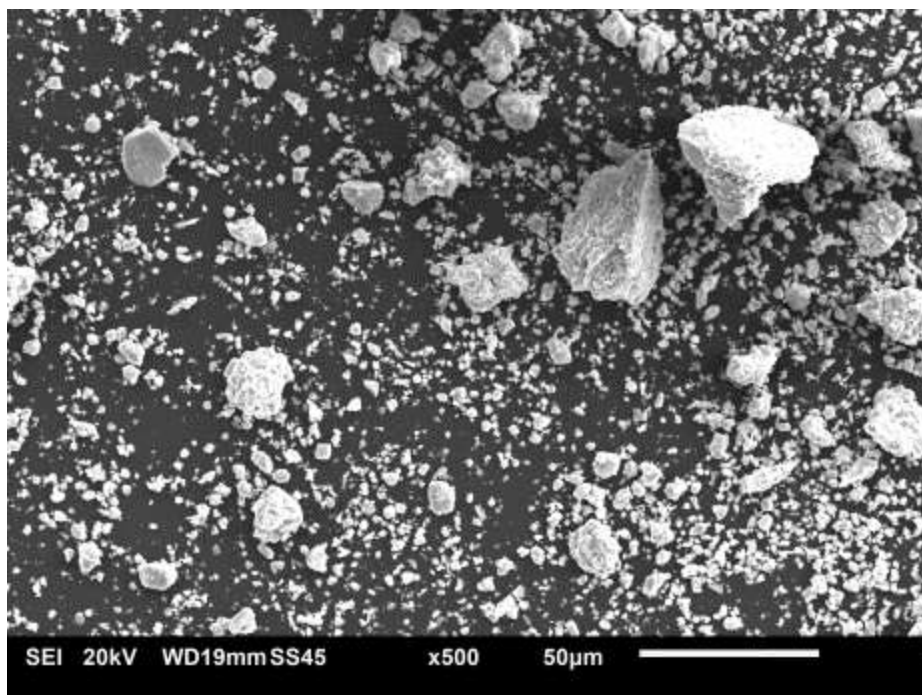


Figure S2 Scanning electron microscope (SEM) image of the synthesized $\text{Li}_3\text{Ba}_2(\text{Eu}_{0.8}\text{Tb}_{0.2})_3(\text{MoO}_4)_8$ powder.

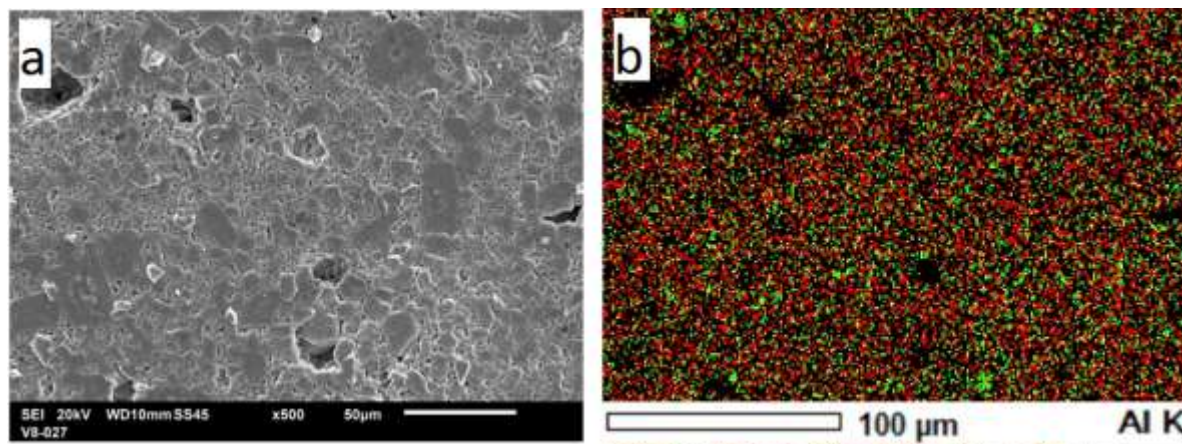


Figure S3 Microstructure (SEM, a) and element mapping (EDX, b) of 99/1 $\text{Li}_3\text{Ba}_2(\text{Eu}_{0.8}\text{Tb}_{0.2})_3(\text{MoO}_4)_8$ / $\text{Lu}_3\text{Al}_5\text{O}_{12}:\text{Ce}^{3+}$ composite ceramic with 92.6 %TD sinter density.

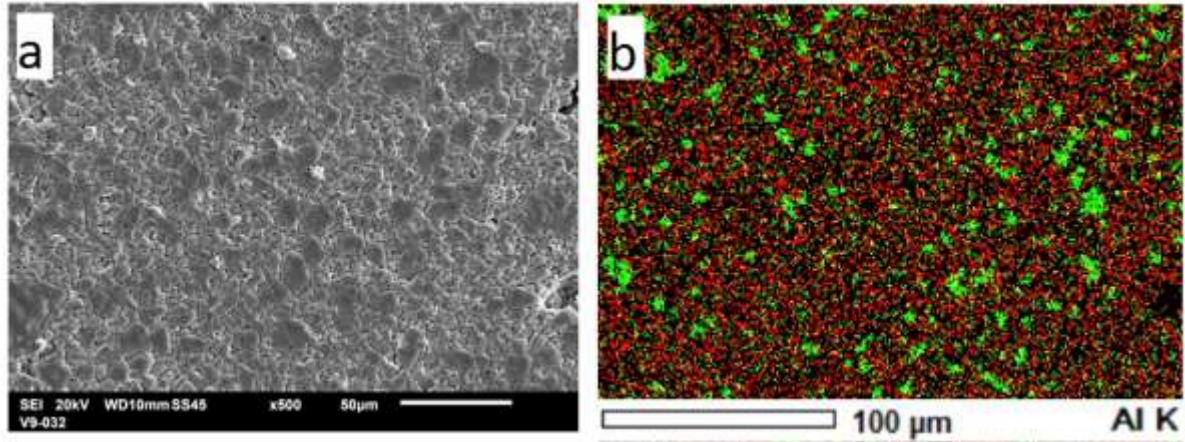


Figure S4 Microstructure (SEM, a) and element mapping (EDX, b) of 95/5 $\text{Li}_3\text{Ba}_2(\text{Eu}_{0.8}\text{Tb}_{0.2})_3(\text{MoO}_4)_8 / \text{Lu}_3\text{Al}_5\text{O}_{12}:\text{Ce}^{3+}$ composite ceramic with 93.0 %TD sinter density.

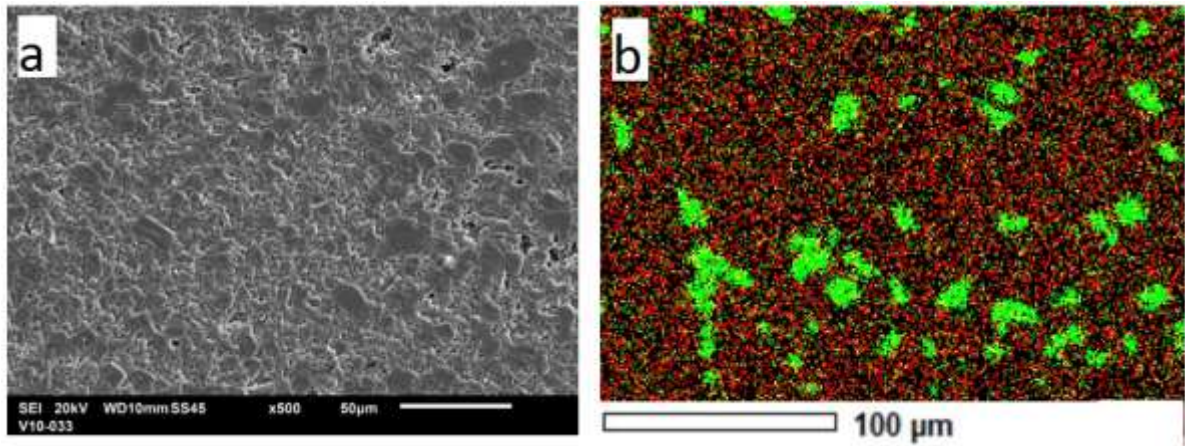


Figure S5 Microstructure (SEM, a) and element mapping (EDX, b) of 90/10 $\text{Li}_3\text{Ba}_2(\text{Eu}_{0.8}\text{Tb}_{0.2})_3(\text{MoO}_4)_8 / \text{Lu}_3\text{Al}_5\text{O}_{12}:\text{Ce}^{3+}$ composite ceramic with 93.1 %TD sinter density.

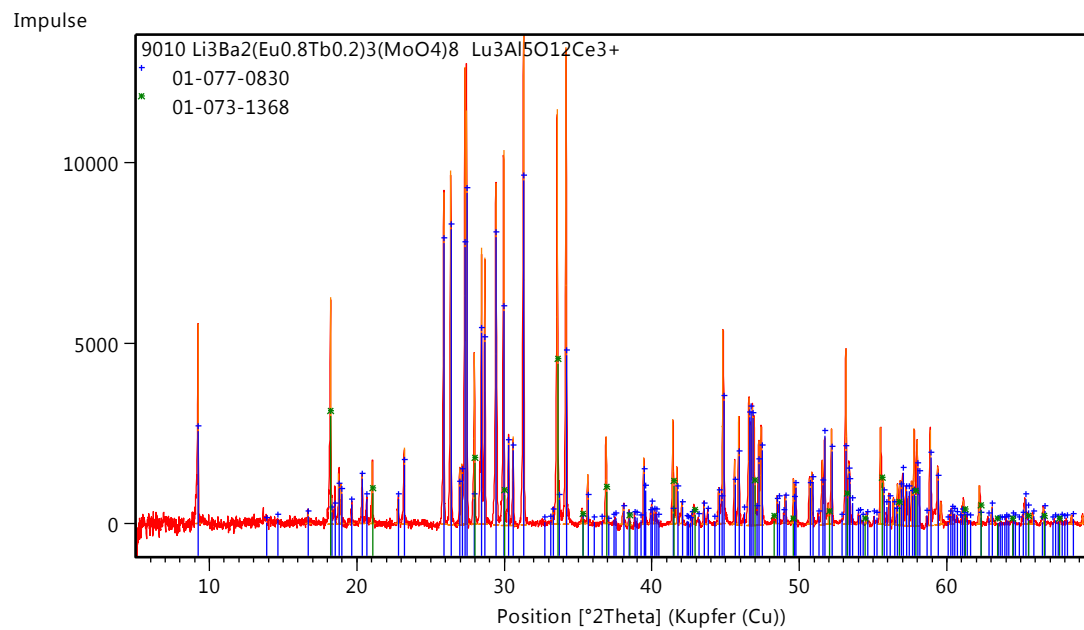


Figure S6 XRD data of the 90/10 $\text{Li}_3\text{Ba}_2(\text{Eu}_{0.8}\text{Tb}_{0.2})_3(\text{MoO}_4)_8 / \text{Lu}_3\text{Al}_5\text{O}_{12}:\text{Ce}^{3+}$ composite ceramic (red), together with the reference patterns for $\text{Li}_3\text{Ba}_2(\text{Eu}_{0.8}\text{Tb}_{0.2})_3(\text{MoO}_4)_8$ (blue, ICDD No. 01-077-0830) and $\text{Lu}_3\text{Al}_5\text{O}_{12}$ (green, ICDD No. 01-073-1368).