

The influence of Sc substitution on the crystal structure and scintillation properties of LuBO₃:Ce³⁺ based on combinatorial material chip and high-throughput XRD

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KEYWORDS: combinatorial material technology, LuBO₃:Ce, scandium, high-throughput XRD, scintillation.

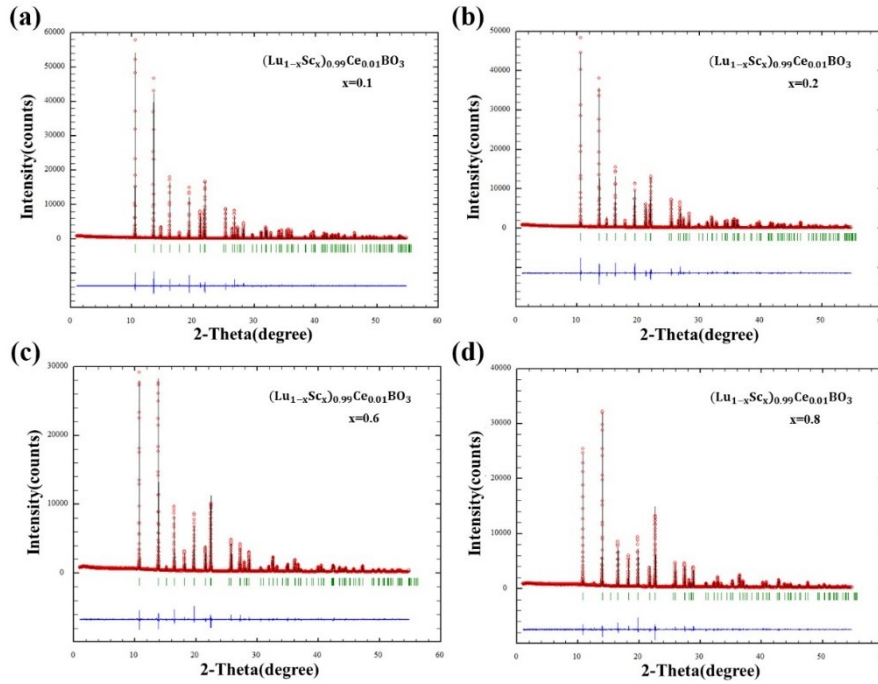


Fig. S1. Rietveld refinement patterns of LSBO:Ce for $x = 0.1$ (a), $x = 0.2$ (b), $x = 0.6$ (c) and $x = 0.8$ (d).

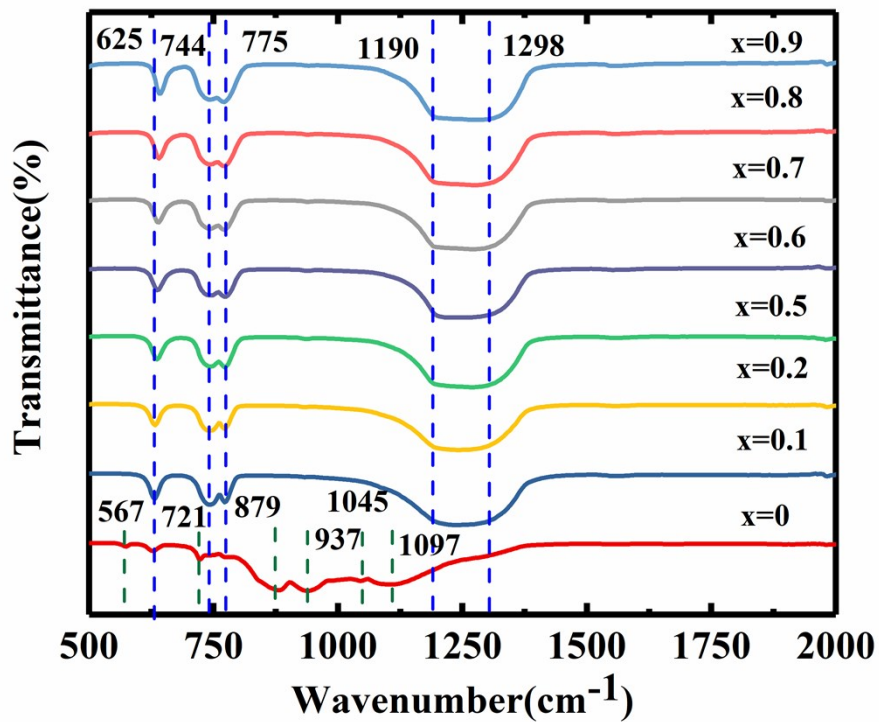


Fig. S2 FT - IR spectra of LSBO:Ce ($x = 0 - 0.9$).

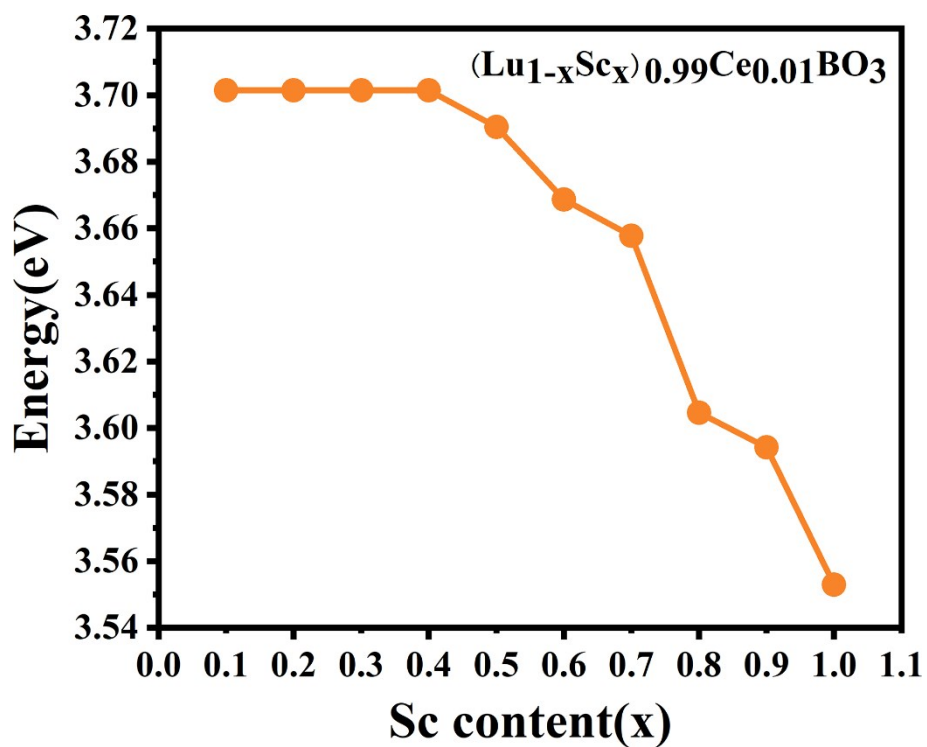


Fig. S3 Energy between the lowest 5d and 4f energy levels of LSBO:Ce.

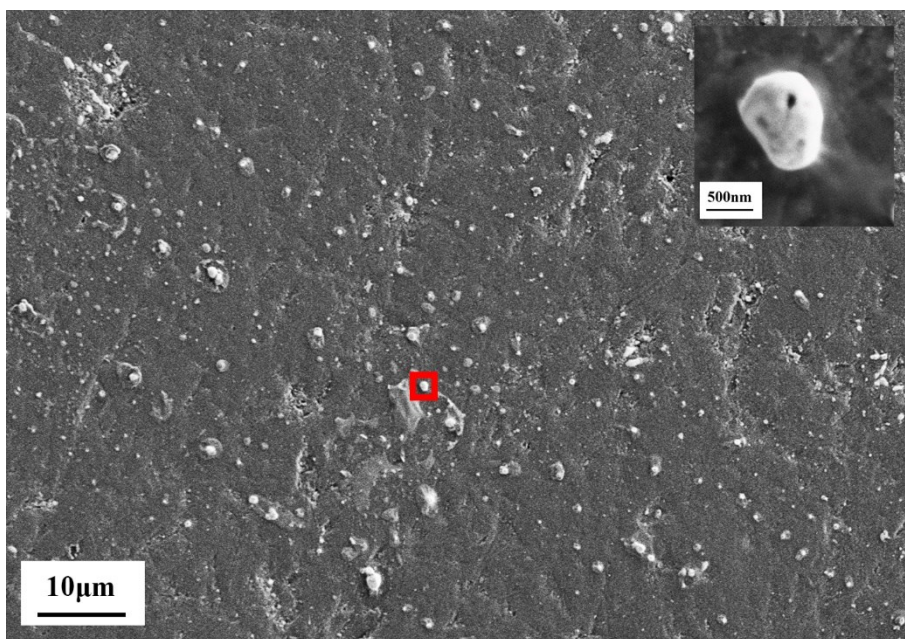


Fig. S4 SEM image of the LSBO:Ce @ PMMA scintillation screen with 7 wt% content of LSBO:Ce, the inset shows a single particle.