

Strong Eu^{3+} luminescence in $\text{La}_{1-x-y}\text{Er}_x/2\text{Eu}_x/2\text{Ca}_y\text{VO}_4$ nanocrystals: The result of co-doping optimization

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Highlights

- The $\text{LaVO}_4\text{:Eu}$ nanoparticles co-doped with Ca^{2+} and Er^{3+} ions are synthesized for the first time.
- XRD reveals dependence of crystal structure on dopants concentration: monoclinic or tetragonal.
- Considerable increase of emission intensity of Eu^{3+} ions is ascribed to cumulative effects of dopants.
- Dopants influence on crystal phases, defects structure and efficiency of excitation the Eu^{3+} ions.