

# Structure and spectroscopy characterization of $\text{La}_{1-x}\text{Sm}_x\text{VO}_4$ luminescent nanoparticles synthesized co-precipitation and sol-gel methods

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## Highlights

- $\text{La}_{1-x}\text{Sm}_x\text{VO}_4$  nanoparticles synthesized by co-precipitation and sol-gel methods.
- Phase compositions of the samples depend on method of synthesis and Sm concentration.
- Morphology and optical properties depend on phase compositions.
- Two types of luminescence centers are connected with tetragonal or monoclinic phases.