

FTIR SPECTROSCOPY OF THE VANADATE NANOPARTICLES OF VARIOUS CATION COMPOSITIONS

The $\text{La}_{1-x}\text{Ca}_x\text{VO}_4$ and $\text{La}_{1-x-y}\text{Eu}_y\text{Ca}_x\text{VO}_4$ ($0 \leq x, y \leq 0.2$) micro/nanosized powders were prepared by aqueous nitrate-citrate sol-gel synthesis. Phase composition of the sample depends on the x, y values. Phase transformation and especially Ca^{2+} ions influence IR spectroscopy and luminescence behavior of studied compounds, as Ca^{2+} ions impact both on VO_4^{3-} molecular groups and La^{3+} and Eu^{3+} ions.

Primary author: SLEPETS, Alina (Taras Shevchenko National University of Kyiv)

Presenter: SLEPETS, Alina (Taras Shevchenko National University of Kyiv)

Track Classification: Laser Physics and Optoelectronics