

Influence of Ca²⁺ Impurity on Structure, Morphological and Optical Characteristics of Eux VO₄ and La_{1-x}EuxVO₄ Nanoparticles

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O.V. Chukova; S.G. Nedilko; S.A. Nedilko; A.A. Slepets; T.A. Voitenko; S.V. Virko [All Authors](#)

1

Paper
Citation

13

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Text Views



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Abstract

Document Sections

I. Introduction

II. Synthesis and
Experimental
Details

III. Influence of ca²⁺
Impurities on
Crystal Structure

IV. Morphology of the
Nanoparticles

V. Effects of ca²⁺
Impurities on
Luminescent

Abstract:

Un-doped and Ca-doped Eu_xVO₄ and La_{1-x}Eu_xVO₄ vanadate nanoparticles were synthesized by sol-gel method. Phase compositions, morphology and luminescent characteristics of the samples were investigated. The Ca-doping influences on structure of luminescence spectra and chromaticity characteristics of all the samples even at low concentrations. The structure of Ca-related light absorption and emission centers is discussed using results about crystal structure and morphology of the samples.

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