

EFFECT OF SYNTHESIS METHOD ON THE STRUCTURE AND PROPERTIES OF PEROVSKITE NaNbO_3 TYPE NANOMATERIALS

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Abstract

Ferroelectric nanostructures have attracted much attention recently due to the ongoing demand for miniaturization of devices and discover new phenomena. One of the materials studied intensively in recent years is potassium niobates with perovskite structure is a promising material for electro-optic, nonlinear optical, and photorefractive applications such as frequency doubling, wave guiding, and holographic storage.

The structure and morphology of NaNbO_3 perovskites are studied in the context of their possible use for sensors application. Materials are prepared by hydrothermal, sol-gel and ultrasonic method using different thermal treatments. Powders obtained were characterized by X-Ray diffraction (XRD), scanning electron microscopy (SEM) and Fourier Transform Infrared Spectroscopy (FTIR).

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