

Structural, Microstructural and Optical Studies of (Bi_{0.5}Na_{0.5})TiO₃-GdFeO₃ Solid Solution

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Abstract. The polycrystalline samples of $((\text{Bi}_{0.5}\text{Na}_{0.5})_{1-x}\text{Gd}_x)(\text{Ti}_{1-x}\text{Fe}_x)\text{O}_3$ (BNTGFO) with $x=0.0$ and 0.5 solid solution were prepared using a solid-state reaction technique. The formation of the desired materials and their structural properties were carried out by using the X-ray diffractions. Scanning electron microscope confirms the polycrystalline nature of the samples contains uniform grain distribution of unequal size. The presence of functional group was confirmed by Fourier transform infrared spectroscopy (FTIR).

Keywords: X-ray diffraction; SEM; FTIR.

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