CHAPTER 50

TECHNOLOGY
APPLIED PHYSICS

Doctoral Theses

450. COONDOO (Indrani)
Electrical and Micro-Structural Investigations of W Doped SBT Ferroelectric Ceramic.
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Abstract

Emphasizes on the effect of sintering conditions on tungsten substituted $SrBi_2Ta_2O_9$ ferroelectric with the influence of substitution of a rare earth ion, europium. The W- and Eu - doped sample have been prepared and influence of their addition, on the microstructure, electrical conductivity, dielectric, ferroelectric and piezoelectric properties have been investigated. The experimental observations obtained from the systematic studies of the influence of different sintering tempreture on the microstructural, dielectric and ferroelectric properties of SBT are discussed. All the studied samples show the formation of a single phase layered structure and observed that with increasing sintering temprature, the porosity in the sample reduces. The dielectric, ferroelectric and piezoelectric properties improve with increase in sintering temperature.

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