## Dielectric Properties of Ni-Al Nano Ferrites Synthesized by Citrate Gel Method

Authors : D. Ravinder, K. S. Nagaraju

**Abstract :** Ni-Al ferrite with composition of NiAlxFe2-xO4 (x=0.2, 0.4 0.6, and 0.8, ) were prepared by citrate gel method. The dielectric properties for all the samples were investigated at room temperature as a function of frequency. The dielectric constant shows dispersion in the lower frequency region and remains almost constant at higher frequencies. The frequency dependence of dielectric loss tangent (tan $\delta$ ) is found to be abnormal, giving a peak at certain frequency for mixed Ni-Al ferrites. A qualitative explanation is given for the composition and frequency dependence of the dielectric loss tangent. **Keywords :** ferrites, citrate method, lattice parameter, dielectric constant

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