

Turkish Journal of Physics

Turkish Journal

of


Physics

Synthesis and Characteristics of Nickel Manganite by Lithiation

S. V. SALVI, M. R. PARAB

Department of Physics, The Institute of Science,
15 / M. C. Road Mumbai - 400 032-INDIA

Abstract: Spinel nickel manganite has been synthesized using ceramic technique, from $(2\text{MnO}_2+\text{NiO})$ mixture reduced using LiAlH_4 . Powder X-ray diffractometry (XRD) indicates the formation of cubic spinel ($a=8.33 \text{ \AA}$), while IR absorption spectral features are rather broad, though similar to those of spinel. The d.c. electrical conductivity of the ceramic is much smaller than that reported for NiMn_2O_4 . Even though the band gap remains the same, when the sintering temperature is increased from 950°C to 1100°C , all other changes are insignificant except that the porosity and particle size nearly halve. The characteristics of the system are discussed in terms of 'lithiation'.

 [Keywords](#)
 [Authors](#)



phys@tubitak.gov.tr

[Scientific Journals Home](#)
[Page](#)

Turk. J. Phys., **24**, (2000), 701-708.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Phys.,vol.24,iss.6.](#)