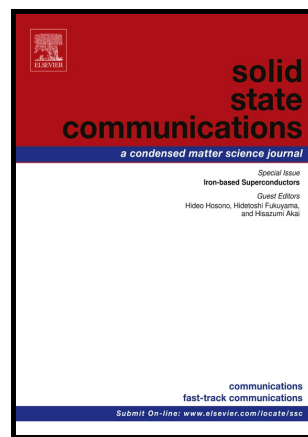


Structural, Magnetic and Specific heat studies of $\text{Bi}_{1-x}\text{La}_x\text{Mn}_2\text{O}_5$ ($x = 0, 0.1, 0.2$ and 0.3) multiferroics

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**Structural, Magnetic and Specific heat studies of $\text{Bi}_{1-x}\text{La}_x\text{Mn}_2\text{O}_5$ ($x = 0, 0.1, 0.2$ and 0.3)
multiferroics**

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Abstract

A series of multiferroic materials with the compositional formula $\text{Bi}_{1-x}\text{La}_x\text{Mn}_2\text{O}_5$ ($x = 0, 0.1, 0.2$ and 0.3) in single phase were prepared by the solid state reaction technique. After characterizing the samples structurally, a systematic investigation of specific heat and magnetization studies were carried out over the temperature range, 2–300K. Based on these studies, it has been observed that the magnetization versus temperature plots of all the samples are found to split in the ZFC and FC modes and the observed behavior is explained on the basis of magnetic inhomogeneity. Finally, using the specific heat data, the magnetic entropy values were calculated using Einstein model.

Key words: Multiferroics, Heat capacity, semi adiabatic heat pulse method, Magnetic Entropy.

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