



Microwave Preparation, Characterizations and Thermal Study of Nano sized LiMn_2O_4

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ABSTRACT

Microwave synthesis method for the synthesis of nanomaterials is the energy efficient method, less time consuming method and also known for its simplicity. Metal oxide nanomaterial preparation using microwave route finds much importance in the field of synthetic technology. Here is an attempt to prepare lithium manganate (LiMn_2O_4) nanomaterials by microwave route using polymer as a fuel. As prepared lithium manganate sample was characterized for its structure by employing powder X-ray diffraction (XRD) tool. The morphology of the prepared oxide material was studied by Scanning Electron Micrograph (SEM) tool. Fourier Transform infrared (FTIR) spectral study was undertaken to know the bonding in the prepared oxide sample. Thermal behavior of the sample was well studied.

Keywords: Microwave, nanomaterials, Bonding, Structure, Morphology.
