



Library Indian Institute of Science Education and Research Mohali



DSpace@IISERMohali (/jspui/)

/ Thesis & Dissertation (/jspui/handle/123456789/1)

/ Master of Science (/jspui/handle/123456789/2)

/ MS-09 (/jspui/handle/123456789/393)

Please use this identifier to cite or link to this item: <http://hdl.handle.net/123456789/672>

Title: Fabrication and Characterization of Multiferroics

Authors: Gupta, Prateek (/jspui/browse?type=author&value=Gupta%2C+Prateek)

Keywords: Physics
Magnetoelectric Multiferroics

Issue Date: 26-Jun-2015

Publisher: IISER-M

Abstract: Magnetoelectric multiferroics are materials which exhibit co-existing magnetic and ferroelectric phases, with coupling between magnetic and electric ordering. These have become a very hot area of research in the past decade or so; mainly due to their novel physical properties and applications in data storage devices, sensors and spintronics. The project investigates the multiferroic properties of double perovskite Y2NiMnO6 in bulk as well as polycrystalline thin films. Y2NiMnO6 has been shown theoretically to be polar in its magnetic ground state with an intrinsic polarization comparable with other magnetically-driven ferroelectrics like TbMnO3 , TbMn2O5 , HoMnO3 . [1]. To investigate these properties the bulk sample was prepared by using solid state synthesis and thin film of the material were deposited on different substrates using pulsed laser deposition method. Characterization of material was done by x-ray diffraction, atomic force microscopy and piezoresponse force microscopy.


URI: <http://hdl.handle.net/123456789/672> (<http://hdl.handle.net/123456789/672>)

Appears in MS-09 (/jspui/handle/123456789/393)
Collections:

Files in This Item:

File	Description	Size	Format	
MS-09096.pdf (/jspui/bitstream/123456789/672/1/MS-09096.pdf)		4.32 MB	Adobe PDF	View/Open (/jspui/bitstream/123456789/672/1/MS-09096.pdf)

[Show full item record \(/jspui/handle/123456789/672?mode=full\)](/jspui/handle/123456789/672?mode=full)

 [\(/jspui/handle/123456789/672/statistics\)](/jspui/handle/123456789/672/statistics)

Items in DSpace are protected by copyright, with all rights reserved, unless otherwise indicated.