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Title:	Insights into the conduction mechanism of magneto-dielectric BaFe _{10.5} In _{1.5} O ₁₉ :
Other Titles:	an impedance spectroscopy and AC conductivity study
Authors:	Sharma, Gaurav (/jspui/browse?type=author&value=Sharma%2C+Gaurav)
Keywords:	duction mechanism magneto-dielectric
Issue Date:	2022
Publisher:	Springer Link
Citation:	Journal of Materials Science: Materials in Electronics, 33(7), 4072-4080.
Abstract:	Impedance spectroscopy and ac conductivity analysis as a function of temperature have been employed to investigate the conduction mechanism in indium-doped M-type barium hexaferrite (BaFe _{10.5} In _{1.5} O ₁₉). Impedance spectra revealed the temperature dependence of dielectric relaxation. The grain and grain boundary contributions to the dielectric properties have been deconvoluted by modeling the Nyquist plot (Z'' vs. Z') with an equivalent electrical circuit. The ac conductivity was found to follow Jonscher's power law and the temperature-dependent behavior of critical exponent (s) substantiated the presence of overlapping large polaron tunneling (OLPT) as the underlying conduction mechanism in the investigated temperature regime.
Description:	Only IISER Mohali authors are available in the record.
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