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Tuning of BiFeO₃ multiferroic properties by light doping with Nb

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Abstract

Bulk ceramic samples of BiFeO₃ were light doped (up to 1%) with Nb⁵⁺ in the place of Fe³⁺ (B-site doping) and their multiferroic properties were investigated using spectroscopy (XRD, SEM), polarization (PMTS) and magnetization (SQUID) techniques. It is shown that even the small percentages of doping can notably change electric and magnetic behavior. Electric conductivity differs by two orders of magnitude between

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