Biferroic electro - Acoustic ceramics with BiFeO3 composition

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Abstract: Bismuth ferrite, one of a few multiferroics, has attracted much attention for many decades since 1960. BiFeO3 (BFO) belongs to perovskite class of complex oxides. BFO is one of only a few materials in which (anti)ferromagnetism and ferroelectricity coexis in room temperature. Authors prepared BiFeO3 ceramics by solid state reaction method. The synthesized powders were characterized by X-ray diffraction method. Thermogravimetric and differential thermal analysis were investigated. The microstructure of the BFO ceramics was investigated by means of scanning transmission electron microscopy, and the ferroelectric characteristic of BFO ceramics was demonstrated. BFO is very interesting ceramic material for potential applications in the memory devices, sensors, satellite communications, optical filters and smart devices.

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