

Supporting information

Dy-doped BiFeO₃ thin films: piezoelectric and bandgap tuning

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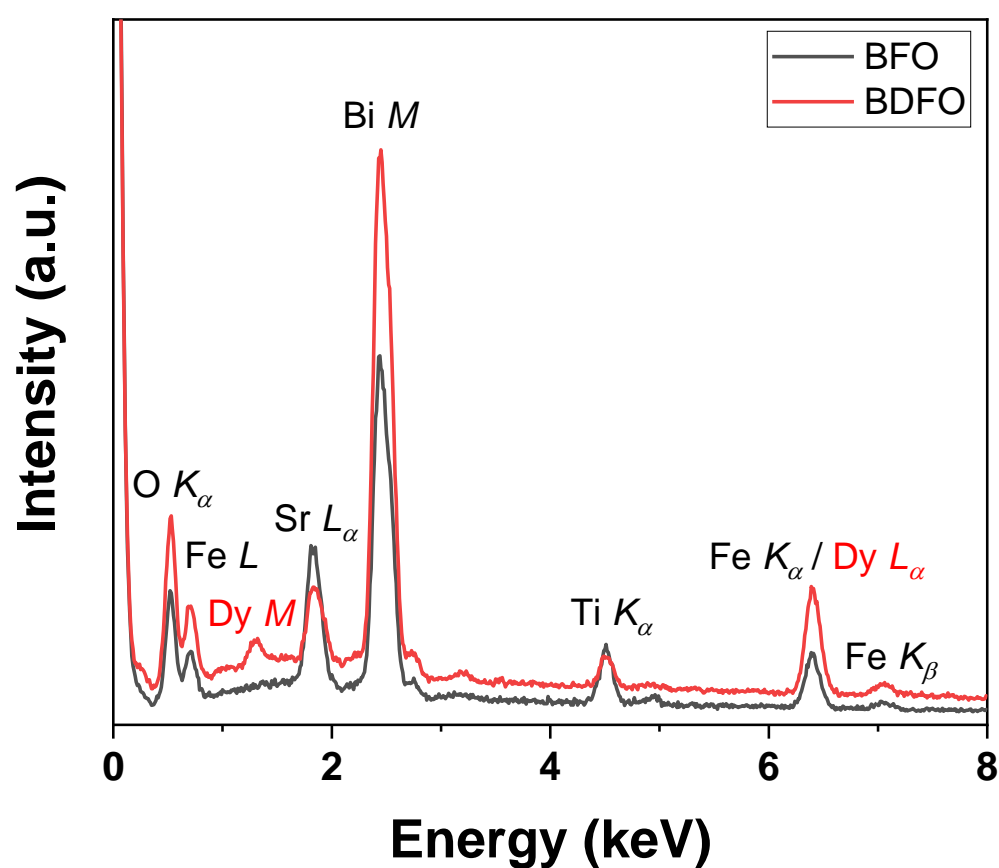


Fig. S1. EDX spectra of pure BFO and BDFO-11% films.

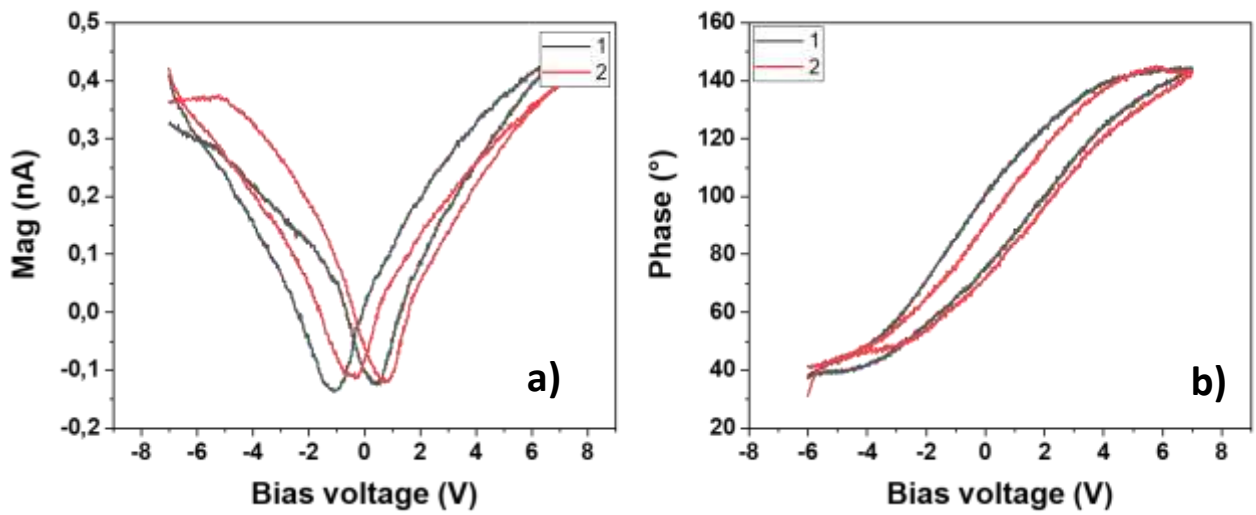


Fig. S2. PFS spectroscopy of two different BDFO-6% films (sample 1 in black and sample 2 in red): a) films piezoelectric response (Mag) and b) phase switching.

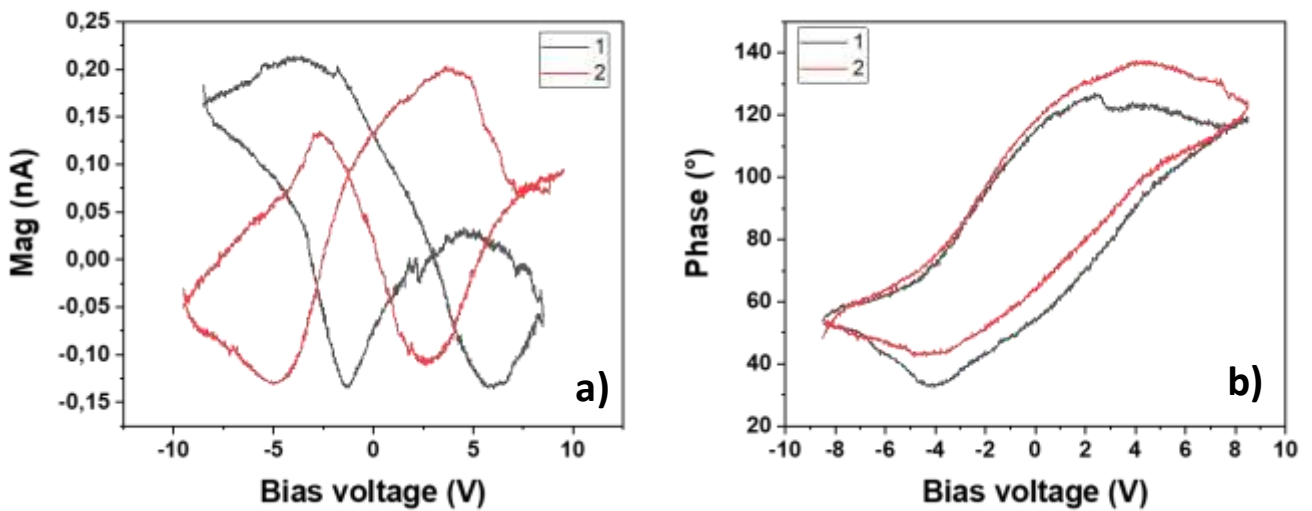


Fig. S3. PFS spectroscopy of two different BDFO-8% films (sample 1 in black and sample 2 in red): a) film piezoelectric response (Mag) and b) phase switching.

BDFO-6%

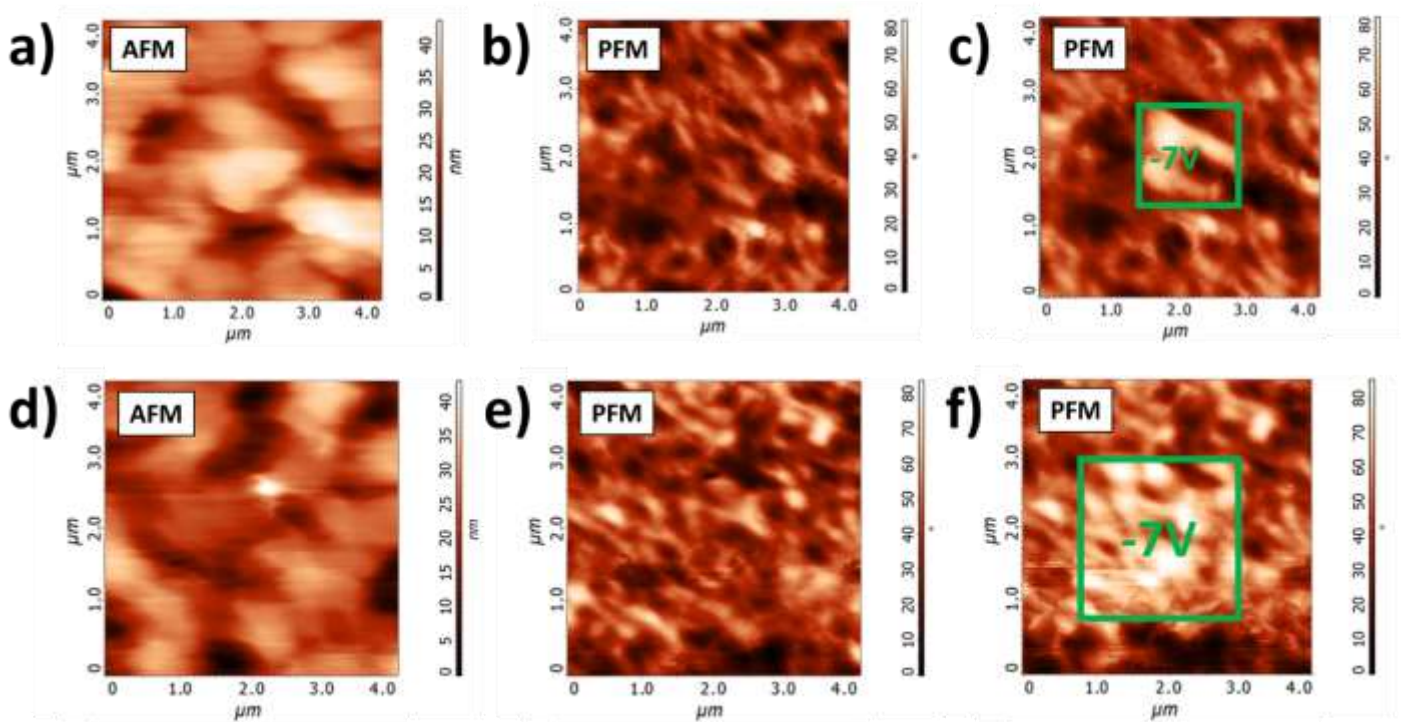


Fig. S4. BDFO-6% films: a) AFM topography scan, b) PFM phase scan before applying +7V bias voltage c) PFM phases scan after applying + 7V bias voltage of sample 1; d) AFM topography scan, e) PFM phase scan before applying + 7V bias voltage, f) PFM phases scan after applying + 7V bias voltage of sample 2.