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ADSIFACT	Perroelectric random access memory (PERAM) has been in mass production for over 15 years. Higher polarization ferroelectric materials are needed for future devices which can operate above about 100 °C. With this goal in mind, co-doping of thin Pb(Zr_{40} , Ti ₆₀)O ₃ (PZT) films with 1 at.% Bi and 1 at.% Fe was examined in order to enhance the ferroelectric properties as well as characterize the doped material. The XRD patterns of PZT-5% BiFeO ₃ (BF) and PZT 140-nm thick films showed (111) orientation on (111) platinized Si wafers and a 30 °C increase in the tetragonal to cubic phase transition temperature, often		Post to CiteUlike Post to Connotea Post to Bibsonomy		
	called the Curie temperature, from 350 to 380 °C with co-doping, indicating that Bi and Fe are substituting into the PZT lattice. Raman spectra revealed decreased band intensity with Bi and Fe co-doping of PZT		View by s	ubject	
	compared to PZT. Polarization hysteresis loops show similar values of remanent polarization, but square- shaped voltage pulse-measured net polarization values of PZT-BF were higher and showed higher		All Subjec	ts	•
	endurance to repeated cycling up to 10 ¹⁰ cycles. It is proposed that Bi and Fe are both in the +3 oxidation state and substituting into the perovskite A and B sites, respectively. Substitution of Bi and Fe into the PZT lattice likely creates defect dipoles, which increase the net polarization when measured by the short voltage pulse positive-up-negative-down (PUND) method.		All Dates		
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