Harmonic analysis of the polarization hysteresis loops for aged PZT

Srilomsak, Sutham (School of Ceramic Engineering, Suranaree University of Technology); Schulze, Walter A.; Pilgrim, Steven M.; Williams Jr., Francis A.

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Abstract: Lead Zirconate Titanate (PZT) suffers aging, which cause its properties to deteriorate. Understanding the aging of PZT is critical to the design of devices. This work used harmonic analysis to study polarization hysteresis loops (PEloop) of aged PZT. The results indicated that harmonics 1-5 have unique effect on the shape of PE-loops. The changing of these amplitudes and phase angles of these harmonics during aging period caused PE-loops to alter their shapes with time.

Ei controlled terms: Lead compounds - Harmonic analysis - Polarization - Ferroelectric devices