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Magnetoelectric Effects in hexagonal ferrite-PZT bilayers V.M. MATHE, G. SRINIVASAN, Oakland University, Rochester, MI — Magnetoelectric (ME) bilayers consisting of magnetostrictive and a piezoelectric layer are of interest for studies on the nature of ME interactions and useful technologies. Co_2Z and Zn_2Y are well known hexagonal ferrites with easy plane or uniaxial anisotropy. PZT has high piezoelectric coefficient. This study is on samples with Co_2Z or Zn_2Y as a magnetostrictive layer and PZT as a piezoelectric layer to form magnetoelectric bilayers. Low frequency (100 Hz) ME coefficient was measured over 0-17 kOe for various orientations of bilayers in a plane parallel to ac and bias magnetic fields. We measured a strong dependence of the ME voltage coefficients on magnitude and orientation of the bias field. The data are compared with theory. VLM gratefully acknowledge the award of a BOYSCAST fellowship and a FAST TRACK fellowship by DST, India. The research was supported by NSF grants.

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