

Fig. S1. X-ray diffraction patterns of BN_x composites. All composites bear the signatures of NFO and BaM. We have plotted the stick patterns for NFO (PDF No. 00-003-0875) and BaM (PDF No. 00-007-0276) in the bottom pane to visualise the one-to-one correspondence of the Bragg's positions of each phase to the respective NFO and BaM lines.

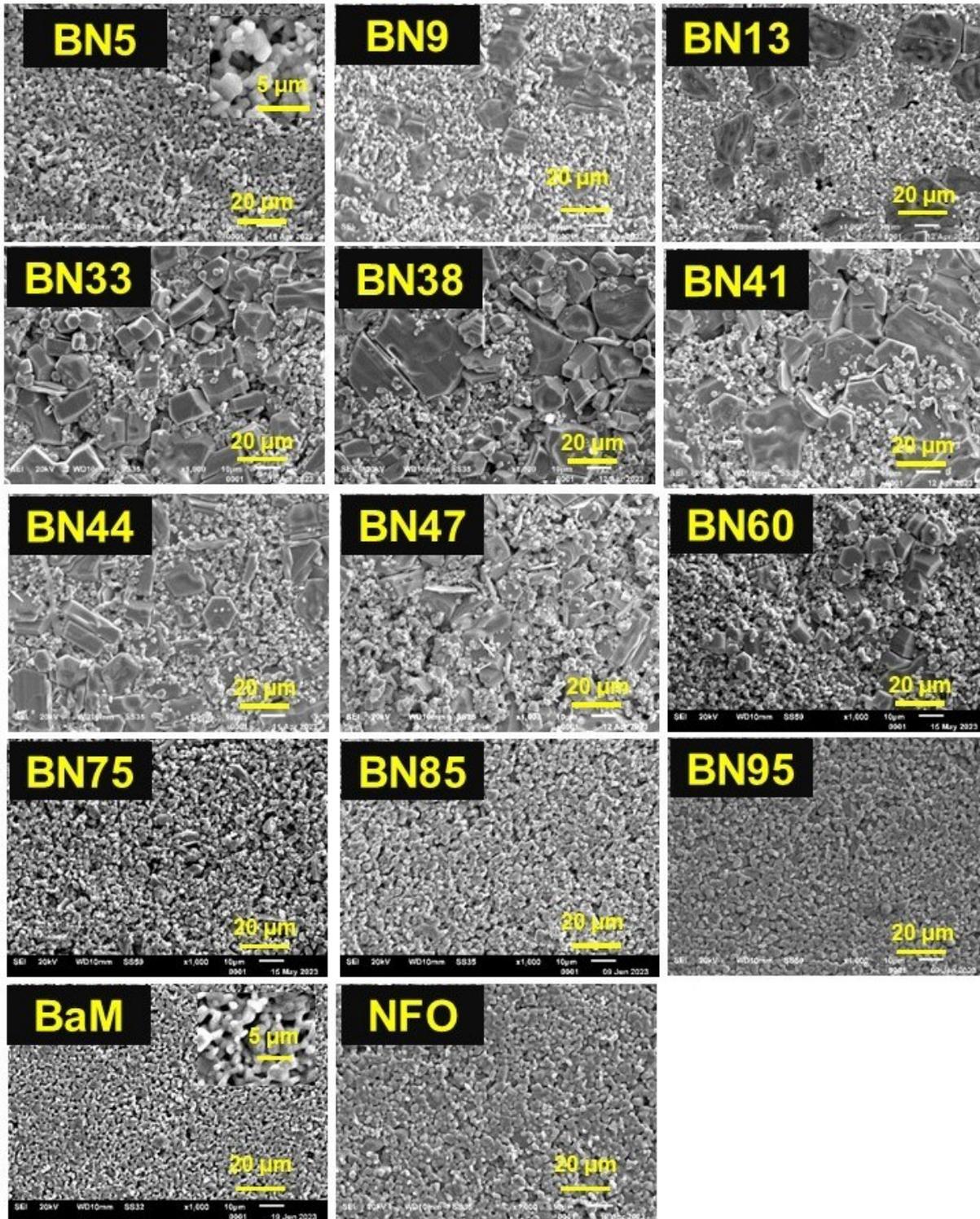


Fig. S2. SEM images of BN_x (x=5, 9, 13, 33, 38, 41, 44, 47, 60, 75, 85 and 95). Hexagonal BaM grains develop with increasing grain size as the NFO content increases. After BN41 the BaM grains deteriorate in size. SEM images of pure BaM and NFO are also shown at the bottom.

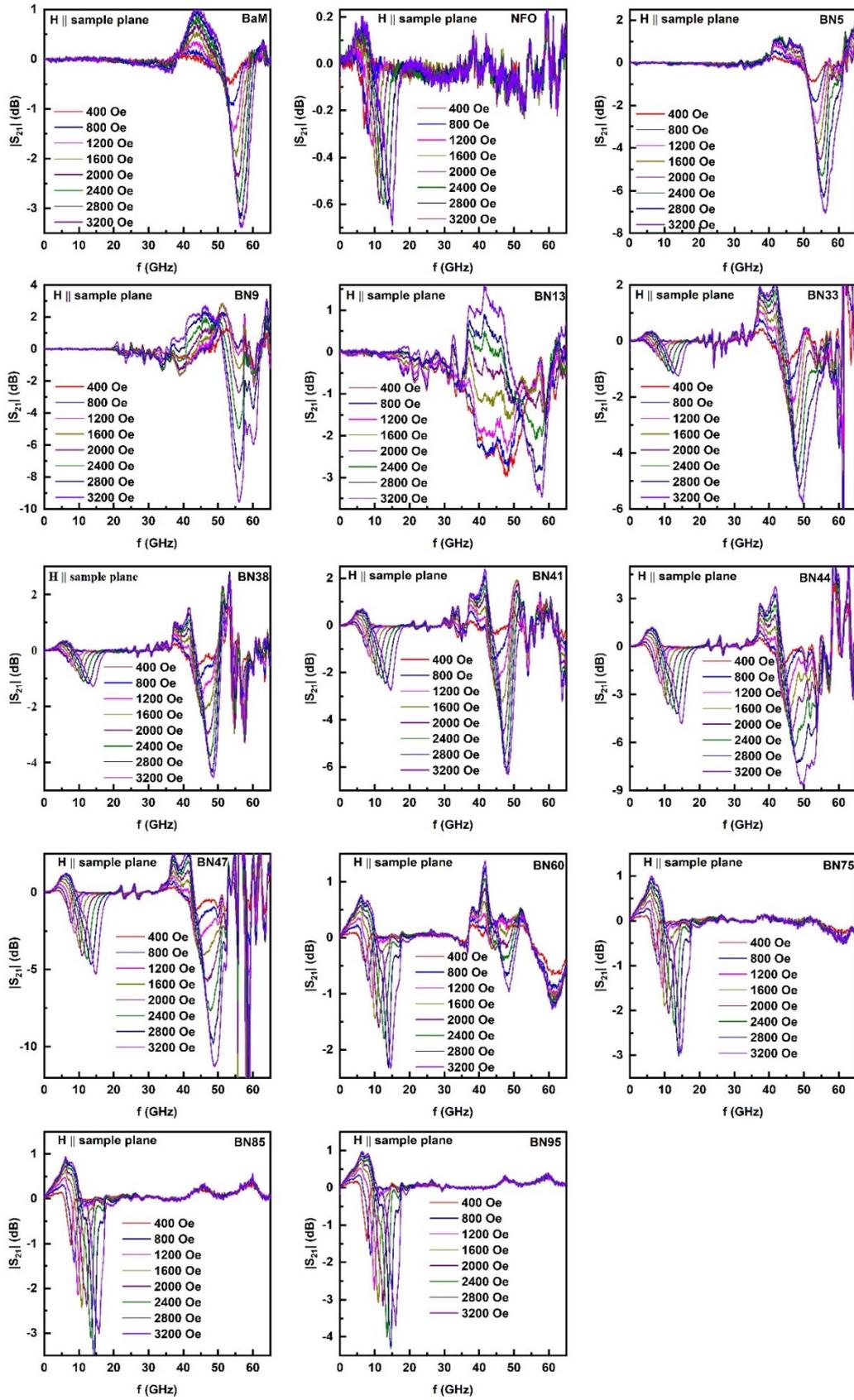


Fig. S3. FMR spectra for BNx composites, BaM and NFO at selected magnetic fields.

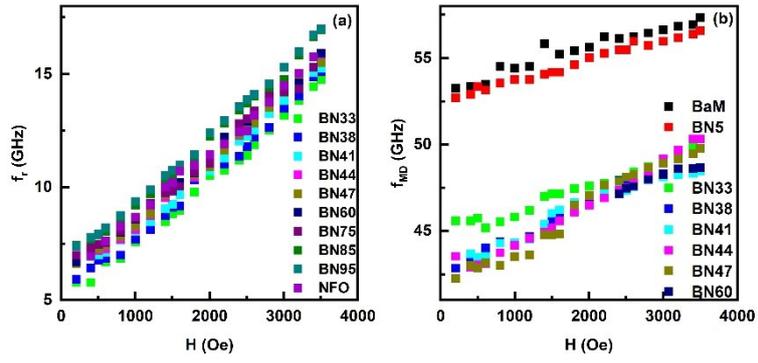


Fig. S4. Ferromagnetic resonance frequency of (a) NFO part and (b) magneto-dielectric mode frequencies of BN_x composites are plotted as function of external magnetic field (H).

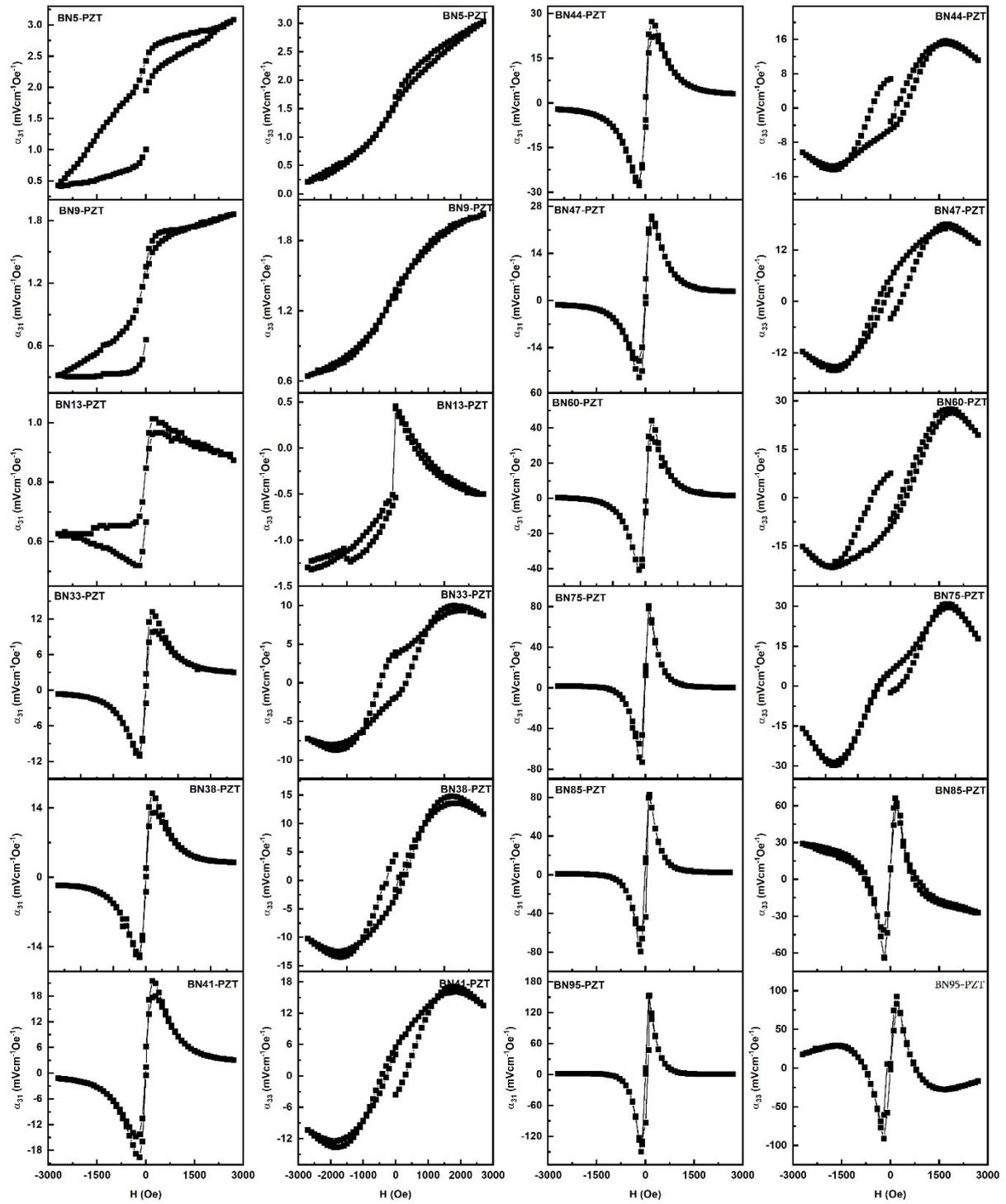


Fig. S5. MEVC plots for BN_x-PZT bilayer composites.

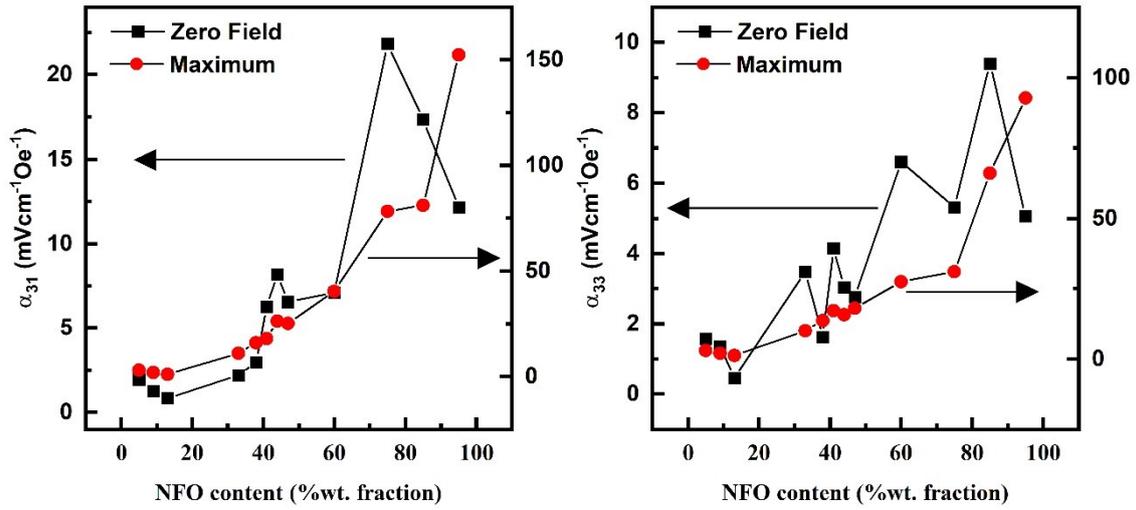


Fig. S6. Zero bias and maximum achievable ME coefficient for BN_x-PZT bilayers in transverse and longitudinal modes.