

Supporting Information for

**Probing the Local Strain-Mediated Magnetoelectric Coupling in  
Multiferroic Nanocomposites by Magnetic Field-Assisted  
Piezoresponse Force Microscopy**

Gabriel Caruntu<sup>1\*</sup>, Marian Vopsaroiu<sup>2‡</sup>, Amin Yourdkhani<sup>1</sup> and  
Gopalan Srinivasan<sup>3</sup>

<sup>1</sup>Advanced Materials Research Institute, Department of Chemistry,

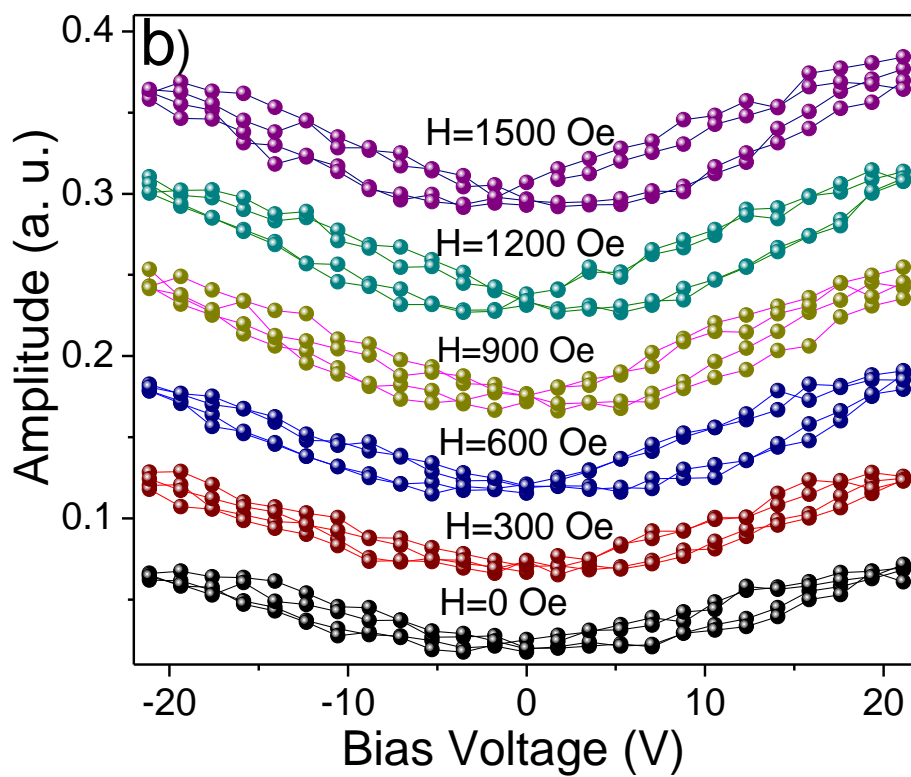
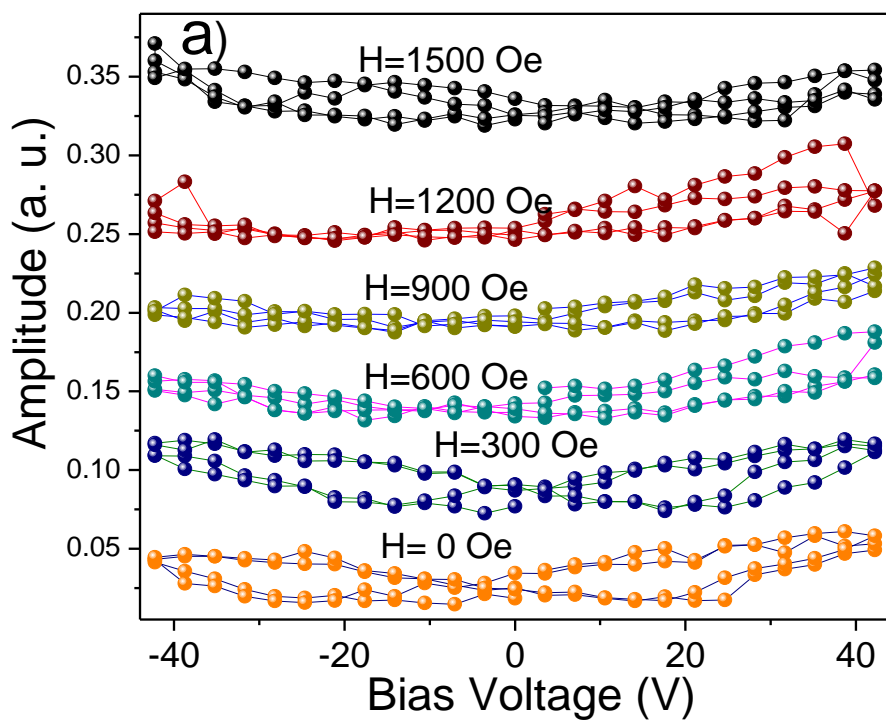
<sup>2</sup>National Physical Laboratory, Hampton Road, Teddington, TW11 0LW, UK

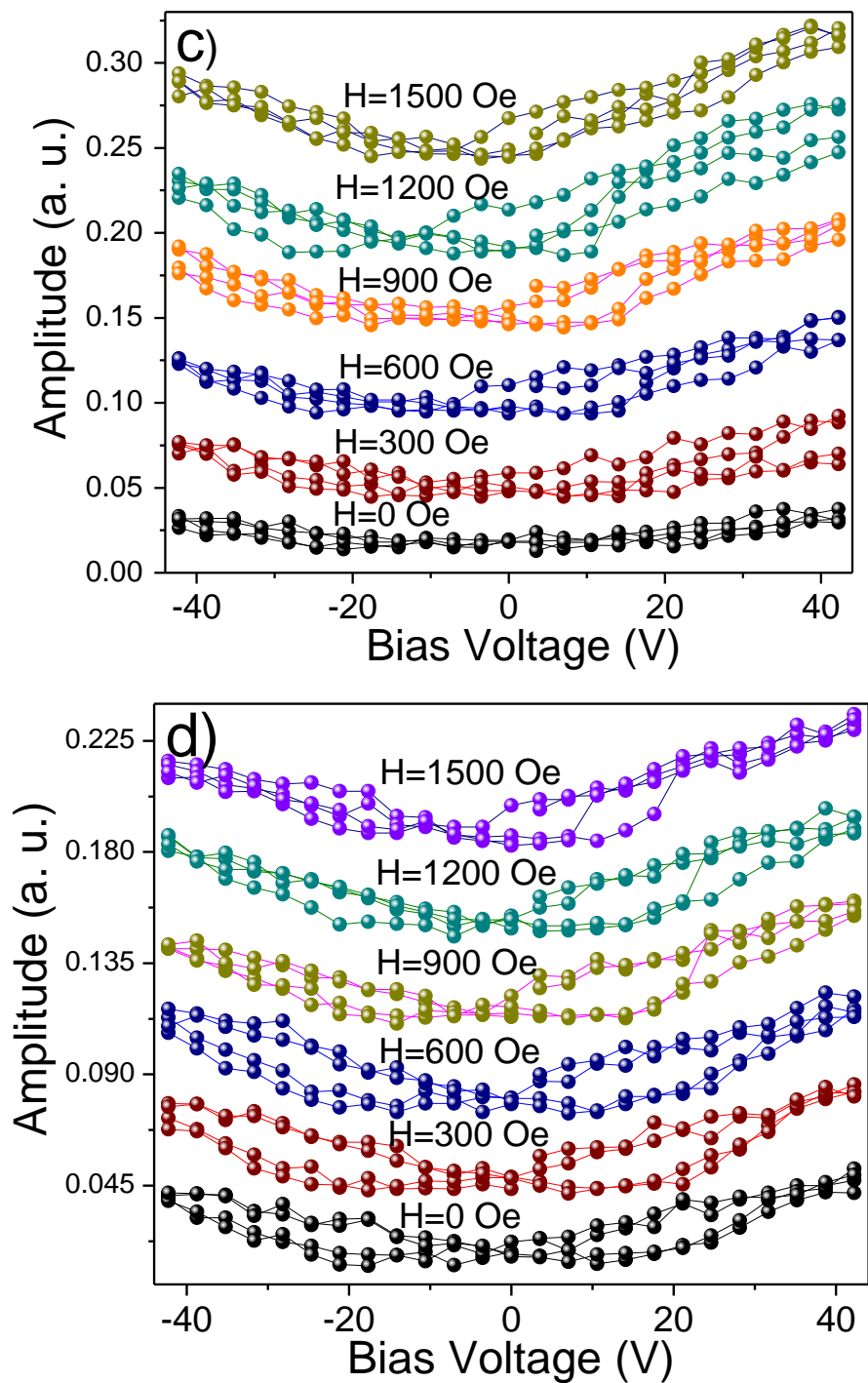
<sup>3</sup>Physics Department, Oakland University, Rochester, MI 48309-4401, USA

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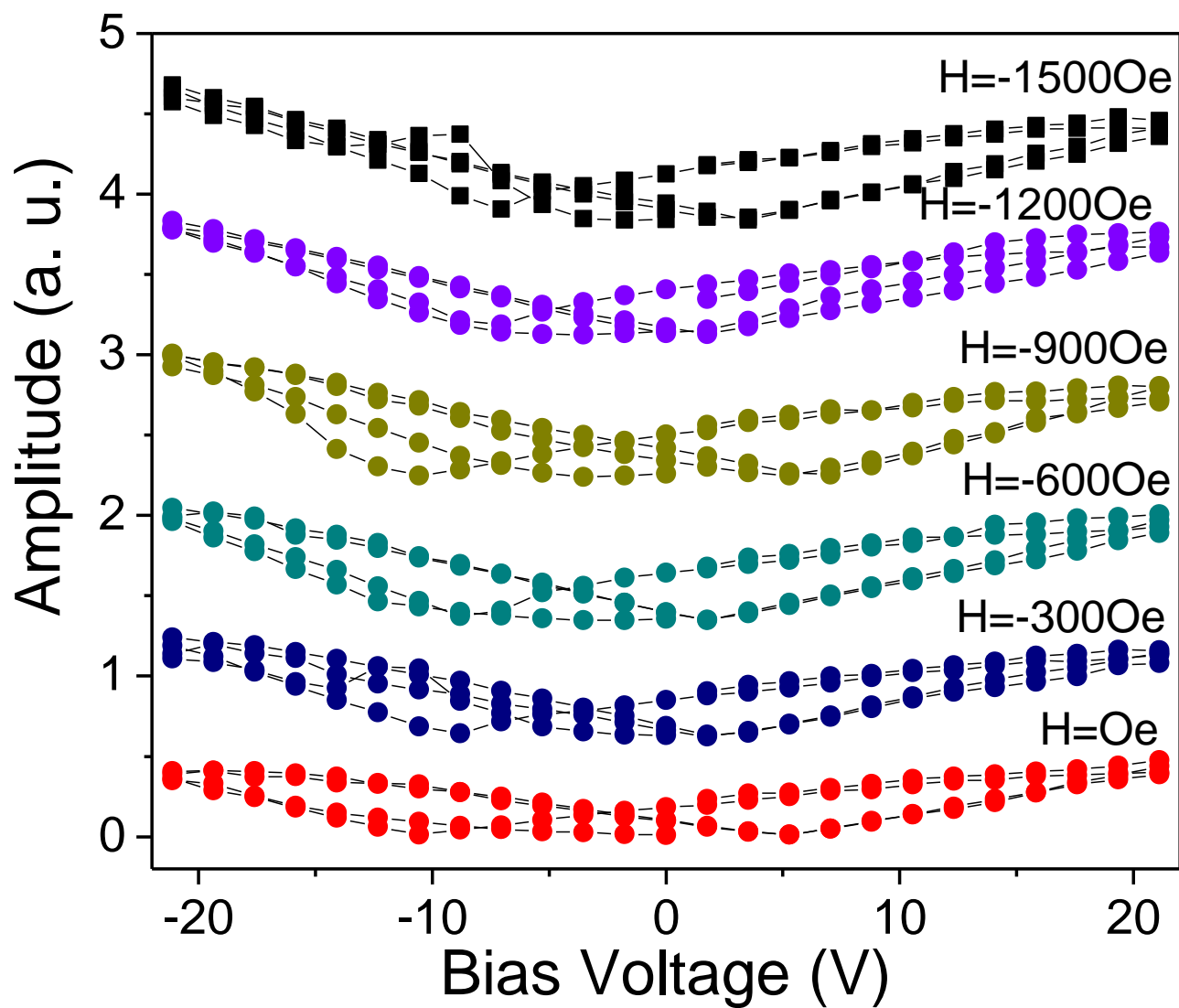
\*Corresponding author. E-mail: gcaruntu@uno.edu

‡ Currently known as Melvin M. Vopson

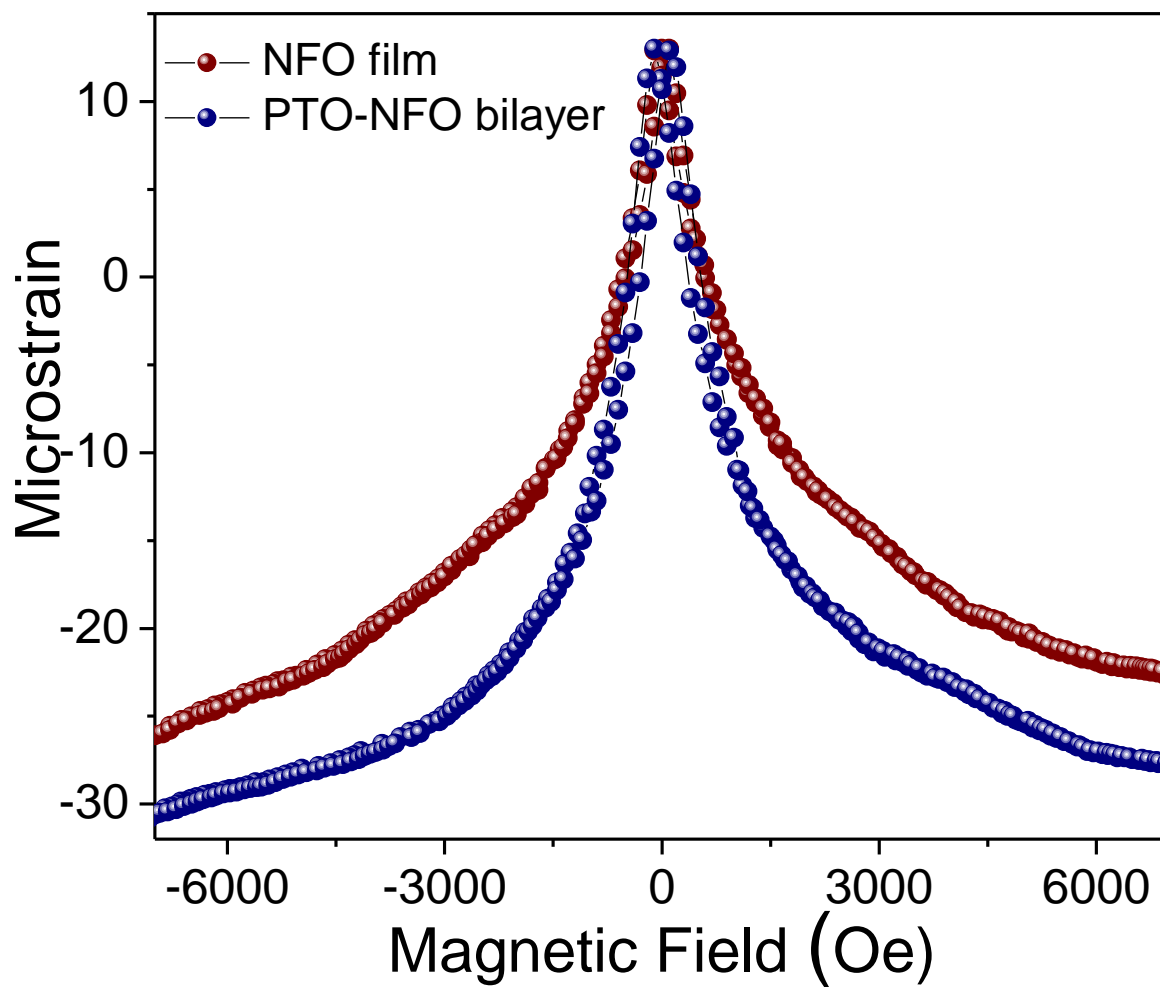




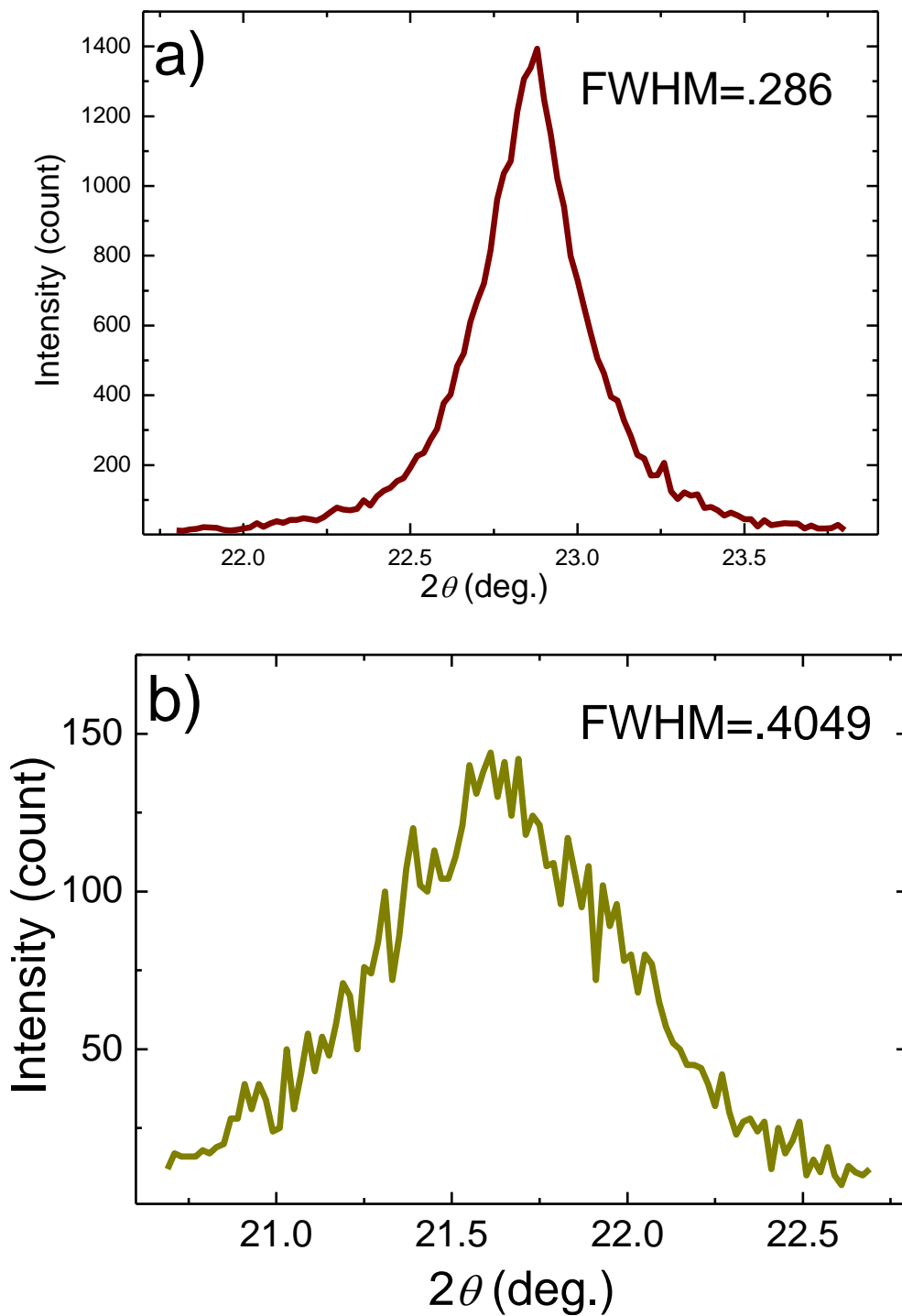
**Figure S11.** Magnetic field-dependent piezoresponse amplitude curves of the PTO-NFO bilayered structure measured in DART mode at different frequencies: 80 kHz (a), 120 kHz (b), 200 kHz (c) and 240 kHz (d), respectively



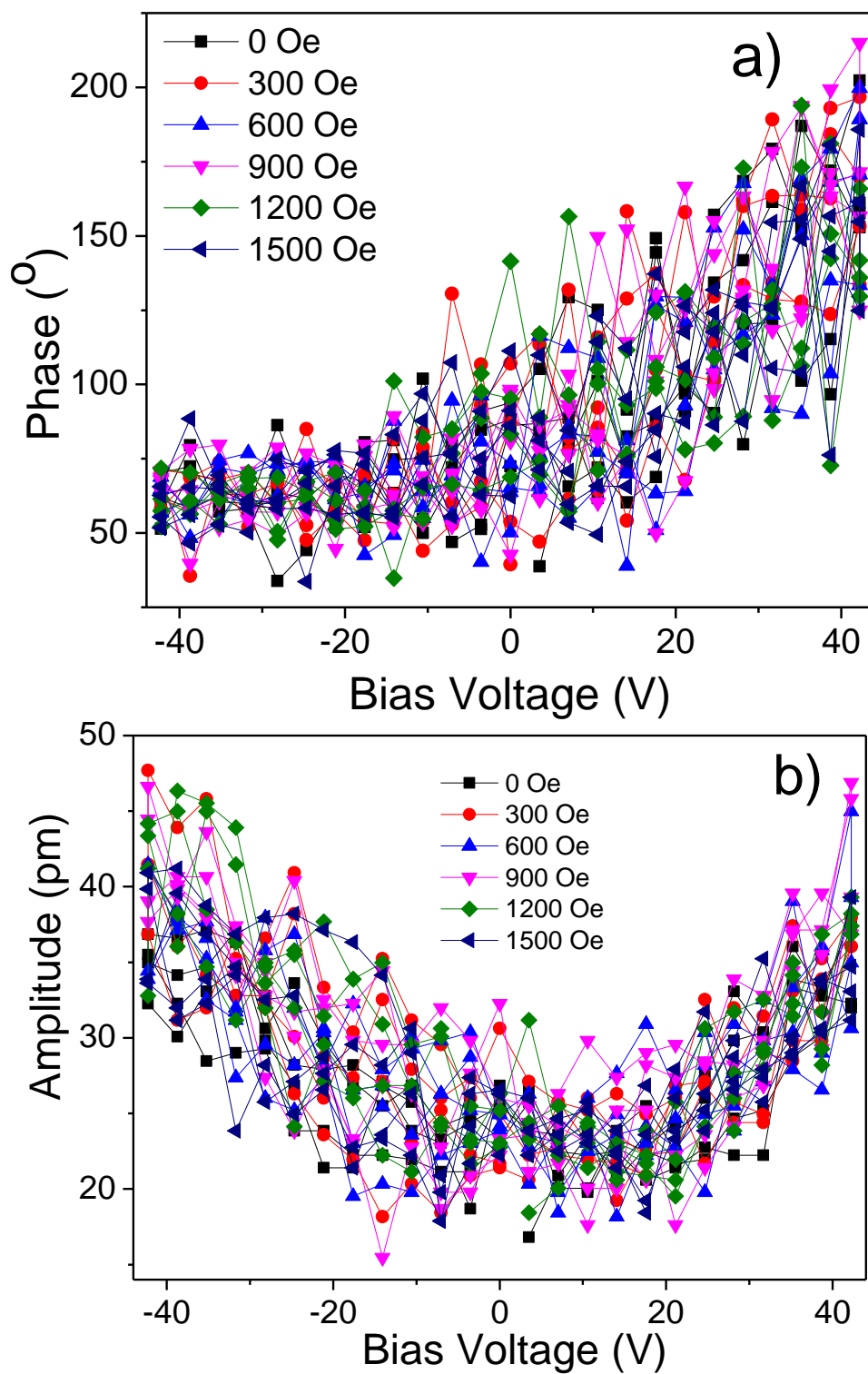
**Figure SI2.** Magnetic field-dependent piezoresponse amplitude curves of the PTO-NFO bilayered structure measured by applying a negative magnetic field. The plots were translated vertically to increase their visibility



**Figure SI3.** Magnetostriction of the NFO (red curve) and the NFO-PTO (blue curve) bilayered structure



**Figure SI4.** Rocking curves of the BaTiO<sub>3</sub> (a) and CoFe<sub>2</sub>O<sub>4</sub> (b) layers of the epitaxial bilayered nanocomposite film



**Figure SI5.** Phase and amplitude curves of the piezoelectric signal of a SrTiO<sub>3</sub>-Ni ferrite bilayered structure used as a reference under various magnetic field