

Abstract Submitted
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Magnetoelastic/piezoelectric laminated structures for tunable remote contact-less magnetic sensing and energy harvesting PETER FINKEL, Drexel University — We report a method for tunable, contact-less, magnetic field sensing using magnetoelastic coupling properties of the magnetoelastic/piezoelectric laminated composite structure. The magnetically tunable, flexural resonant mode in the bimorph FeNi36% (invar) /PVDF clamped cantilever has been investigated as a function of stress and external magnetic field using Doppler laser spectroscopy. Here we demonstrated that this bimorph structure can be used for low frequency contact-less detection of magnetic field fluctuation and magnetic field monitoring.

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