Fabrication and characterization of novel multiferroic cantilevers for microtransuducers

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Abstract: It is believed that new technologies tend to initiate with new materials and manufacturing processes, which are used for new products. Magnetoelectric multiferroics are the class of materials which have coexistence of magnetic and ferroelectric properties, with coupling between two order parameters. These materials therefore find novel applications in multiple memories apart from MEMS sensors and actuators. However, the research on these materials is not reached to technology level. The microfabrication technologies required for preparing device structures of these materials need extensive optimization. Patterning these films into the required structures can also be a challenge. This paper presents the first achievement towards the practical realization of MEMS devices of such novel promising material. ©2009 IEEE.

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