

Piezoelectric sensors and transducers

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Abstract

The last ten years have witnessed exciting new developments in the field of piezoelectrics (relaxor-ferroelectrics with high electromechanical coefficients, textured ceramics, lead free materials, high temperature morphotropic phase boundary (MPB) compositions, new hardening mechanisms). Through selected examples we shall discuss how this recent research has helped improve our understanding of the piezoelectric phenomena in general (e.g., mechanisms of the enhanced response at the MPB, nature of the softening and hardening), and what can be expected in terms of materials and device performance employing the new compositions.

(invited presentation)