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# Discussion on Microstructural Changes Caused by Deposition Temperature of LZO Doped Mg Piezoelectric Films

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**Abstract :** This article deposited LZO-doped Mg piezoelectric thin films via RF sputtering and observed microstructure and electrical characteristics by varying the deposition temperature. The XRD analysis results indicate that LZO-doped Mg exhibits excellent (002) orientation, and there is no presence of ZnO(100), Influenced by the temperature's effect on the lattice constant, the (002) peak intensity increases with rising temperature. Finally, we conducted deformation intensity analysis on the films, revealing an over fourfold increase in deformation at a processing temperature of 500°C.

**Keywords :** RF sputtering, piezoelectricity, ZnO, Mg
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