

Abstract Submitted
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Magnetoelectric coupling in hexagonal LuFeO₃ thin films HAO

LIU, Fudan University — The magnetic and polar properties of single-crystalline hexagonal LuFeO₃ films have been studied. Both theoretical and experimental approaches indicated the coexisting of multiple ferroic orders. The spontaneous electric polarization is associated with a structural change, which also influences the magnetic properties, predicting a strong magnetoelectric coupling in these films. To investigate the magnetoelectric coupling, the micro capacitance structures were fabricated by photolithography combined with Ar ion beam etching method. The capacitance vs voltage curves show significant magnetic field effect, indicating strong magnetoelectric coupling in this system.

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