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Test abstract from Alison

We present the results of ab initio density functional calculations of perovskite-structure La(Al,Fe,Cr)O3. Our calculations reveal two structurally distorted ground states of opposite polarization. Motivated by the growth of three-layer superlattices with enhanced polarization, we investigate the ferroelectricity and magnetic ordering of the La(Al,Fe,Cr)O3 system with the goal of finding emergent multiferroicity due to interfacial strain and inversion symmetry breaking. Finally, we investigate constrained tetragonal LaAlO3 to determine its role in the ferroelectric properties of the supercell.

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