

Abstract Submitted
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Observation of Ferromagnetic Resonance in SrRuO₃ Using the Time-Resolved Magneto-Optical Kerr Effect M.C. LANGNER, C.L.S. KANTNER, Dept. of Physics, UC Berkeley and Lawrence Berkeley National Lab, Y.H. CHU, L.W. MARTIN, Dept. of Materials Science, UC Berkeley, R. RAMESH, Dept. of Physics and Dept. of Materials Science, UC Berkeley, J. ORENSTEIN, Dept. of Physics, UC Berkeley and Lawrence Berkeley National Lab — We report the observation of ferromagnetic resonance (FMR) in strontium ruthenate using the time-resolved magneto-optical Kerr effect. The FMR oscillations in the time-domain appear in response to a sudden, optically induced change in the direction of easy-axis anisotropy. The large FMR frequency, 250 GHz, and damping parameter are consistent with strong spin-orbit coupling. The damping coefficient, as well as other parameters associated with the magnetization dynamics, have a non-monotonic temperature dependence, suggestive of a link to the anomalous Hall effect.

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