



PHYSICS AND ASTRONOMY COLLOQUIUM

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“Thin-Film Alchemy: Using Strain and Dimensionality to Unleash the Hidden Properties of Oxides”

Abstract

Guided by theory, unparalleled properties – those of hidden ground states – are being unleashed by exploiting large strains in concert with the ability to precisely control dimensionality in epitaxial oxide heterostructures. For example, materials that are not ferroelectric or ferromagnetic in their unstrained state can be transmuted into ferroelectrics, ferromagnets, or materials that are both at the same time. Similarly, new tunable dielectrics with unparalleled performance have been created. Results of fundamental scientific importance as well as revealing the tremendous potential of utilizing multicomponent oxide thin films to create devices with enhanced performance will be shown.

Wednesday, September 16, 2015

3:00 p.m.

Elliott Building

Room 167