

Abstract Submitted
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Growth and characterization of EuO thin films¹ TOM BRENNER,
M. EBLEN-ZAYAS, Carleton College — Eu-rich EuO is a ferromagnetic semiconductor that exhibits an insulator-metal transition associated with the onset of ferromagnetism and a colossal magnetoresistance response. In addition, the material is of interest for its possible use in spintronics. The materials properties are extremely sensitive to the stoichiometry of films. We will compare the properties of these films as a function of growth parameters, and discuss the stability of these films over time. In addition, we will present work comparing the properties of EuO thin films grown via reactive evaporation of Eu in the presence of an oxygen partial pressure with EuO films grown by Eu deposition followed by oxidation.

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