

Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

Characterization of EuO_{1-x} thin films grown by oxidation of metallic Eu¹ B. COLWELL, A. KINSEY, S. SCHLOTTER, M. EBLEN-ZAYAS, Carleton College — EuO_{1-x} is of interest due to the similarities between its magnetic and transport properties and those of the manganites, and it also holds potential for spintronics applications. We have grown polycrystalline EuO_{1-x} films by oxidizing metallic Eu films. The films are characterized by x-ray diffraction, as well as measuring the resistivity and magnetization responses as a function of temperature. We will report on the relationship between the growth conditions and the properties of these samples, including a description of how annealing impacts the film properties.

¹This work has been supported by the Research Corporation and NSF DMR-0804715.

Melissa Eblen-Zayas
Carleton College

Date submitted: 08 Dec 2010

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