

Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

Fabrication and properties of LuFe₂O₄ thin film¹ WENBIN WANG,
University of Tennessee & Oak Ridge National Lab, XIAOSHAN XU, ZHENG GAI,
PAUL C. SNIJDERS, THOMAS Z. WARD, Oak Ridge National Lab, JIAN SHEN,
University of Tennessee & Fudan University — We have succeed in growing the
LuFe₂O₄ polycrystalline thin film on the MgO(111) substrate with the Pulsed laser
deposition(PLD) method. The surface structures, crystallographic and magnetic
properties of the sample were characterized by XRD, AFM, SEM and SQUID. XRD
pattern shows the sample crystallized in both (001) and (110) directions, which is
also reflected in their morphological appearance in both AFM and SEM images.
SQUID measurements reveal strong ferromagnetic signal in the thin film.

¹Research sponsored by the Division of Materials Sciences and Engineering, Office
of Basic Energy Sciences, U.S. Department of Energy.

Wenbin Wang
University of Tennessee & Oak Ridge National Lab

Date submitted: 21 Nov 2010

Electronic form version 1.4