

Abstract Submitted
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LuFe₂O₄ nanostructures on MgO(111) substrate¹ XIAOSHAN XU², Oak Ridge National Lab, WENBIN WANG, University of Tennessee, GAI ZHENG, PAUL SNIJDER, THOMAZ WARD, JIAN SHEN, Oak Ridge National Lab — LuFe₂O₄ nanostructures have been deposited on MgO(111) substrate using pulsed laser deposition. Substrate temperature and gas pressure are found to be very critical to form the LuFe₂O₄ phase. Scanning electron microscopy (SEM) and atomic force microscopy (AFM) show very well crystalized morphology with triangular symmetry. The common orientations of the nanostructures are consistent with epitaxial growth. X-ray diffraction data show that (001) face of LuFe₂O₄ is parallel to the substrate face MgO(111).

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