

Magnetic and multiferroic properties of dilute Fe-doped BaTiO₃ crystals

M. Staruch¹, H. ElBidweihy², M. G. Cain³, P. Thompson^{4,5}, C.A. Lucas^{4,5}, and P. Finkel¹

¹U.S. Naval Research Laboratory, Washington, DC, U.S.A.

²U.S. Naval Academy, Annapolis, MD, U.S.A.

³Electrosiences Ltd., Farnham, Surrey, U.K.

⁴XMaS Beamline, European Synchrotron Radiation Facility, Grenoble, F-38043, France

⁵Department of Physics, University of Liverpool, Oliver Lodge Laboratory, Liverpool. L69 7ZE.
U.K.

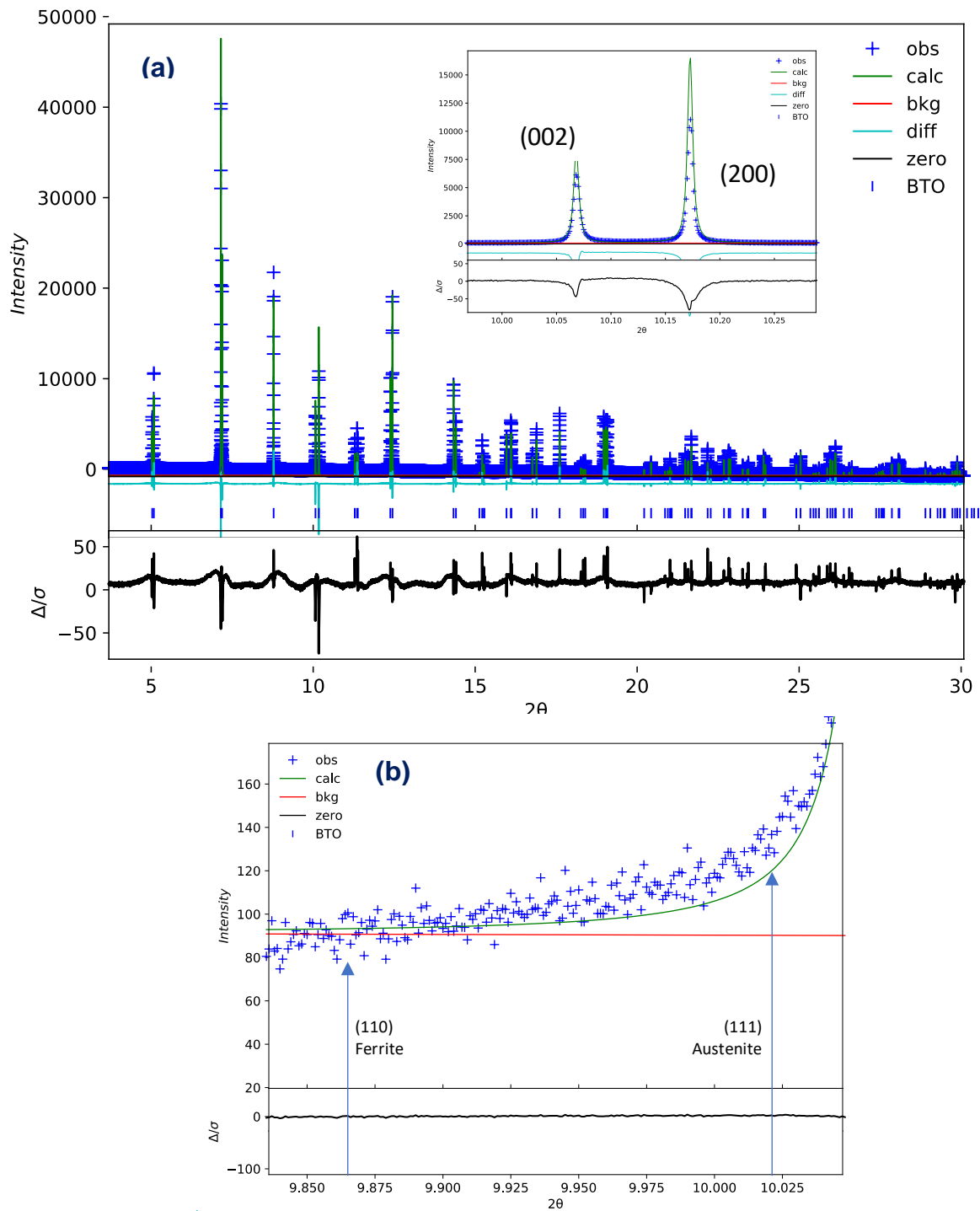


Figure S1. (a) Rietveld refined x-ray diffraction data based on P4mm Barium Titanate tetragonal crystallography. The final fitted parameters are identified in the text. Inset - tetragonal 200/002

peak set showing no net texture in this crushed sample. (b) X-Ray diffraction trace with arrows indicating location of I_{\max} reflections from austenite and ferrite (cubic Fe). No secondary phases are present to detection levels of approximately 0.5%