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Micro Structure of Nickel in Spin Coated Thin Film Magnets

KATHERINE VIDES, Queensborough Comm Coll, RASIKA DAHANAYAKE, PUBUDU SAMARASEKARA, University of Peradeniya, SUNIL DEHIPAWALA, Queensborough Comm Coll — Micro-Structure of Nickel compounds in thin film magnets was investigated using Extended X ray Absorption Fine Structure (EXAFS) and X-ray Absorption Near Edge Structure (XANES). These thin film magnets were prepared by spin coating several layers of precursor containing iron and Nickel on a glass substrate. Thickness of the films was controlled by spin rate. Several magnets were prepared with different thicknesses and each film was annealed to either 200C or 350c in air. Variation of oxidation state and nearest neighbor bond lengths of each magnet was measured to characterize Ni in the film.

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