

Abstract Submitted
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Investigation of Giant Magnetoresistance in thin Ni-Cu-NiFe Structures¹ C.D. STEHNO, University of Dallas, W.J. YEH, University of Idaho — During the summer of 2005, the REU program at the University of Idaho investigated the phenomenon of Giant Magnetoresistance (GMR) in Nickel/Copper/Nickel-Iron structures. Layer thicknesses were on the order of 10s of nanometers. The three-layer structures were deposited on silicone wafers by means of a magnetron-plasma sputtering system. The sputtering rate of the copper on silicon was determined to be 0.112 nm/sec at 50W and 90mm. Deposit thicknesses was measured with an elipsometer. Seven samples of varying thicknesses were made during the course of the program which yielded GMR changes between 0.15% and 1.3% with a Co 10nm, Cu 8nm, and CoFe 30nm structure.

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