Abstract Submitted
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FMR Investigations on Ni-Co thin films[1] JUSTIN BAIZE, The University of Texas Pan American, STEVEN MICHALSKI, ROGER D. KIRBY, University of Nebraska Lincoln, MIRCEA CHIPARA, DAVID J. SELLMYER, University of Nebraska Lincoln — Magnetic interactions between thin films of Co and Ni spaced by a conducting, non-magnetic film (Pt) are analyzed by utilizing a Bruker ELEXSYS - EPR spectrometer operating in the X-band (9 GHz). Ferromagnetic resonance spectra have been recorded at room temperature in the out-of-plane configuration, for different orientation of the external applied film relative to the plane of the sample. The effect of the metallic film (Pt) thickness on the interaction between Ni and Co is investigated. For most orientations, the ferromagnetic line of such multilayers is the result of a convolution between the lines of Ni and Co films and has been fitted by a superposition of two Lorentzian lines. The outcome of the interaction between the two magnetic layers on the position and the width of ferromagnetic resonance lines is analyzed in detail.

[1]ESR measurements were done within the laboratory of Professor A. Rajca from the Chemistry Department of the University of Nebraska Lincoln.

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