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A Magnetization and GMR Study on Multilayered Fe/Ag/Co Thin Film

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**Abstract:** Single layer Fe(20Å) and Co(20Å) and multilayered Ag(20Å)/[Fe(20Å)/Ag(40Å)/Co(20Å)/Ag(40Å)] x 3/Ag(20Å) films were prepared in UHV by magnetron sputtering technique onto the silicon substrates. Films were determined to have polycrystalline nature through SEM examination. Magnetization measurements were made on single and multilayer films. Due to the polycrystalline structure of the films, rounded magnetization curves were obtained. The GMR effect showed a rounded behaviour which also is an indication of the polycrystallinity of the films. The GMR effect, measured in Fe/Ag/Co multilayer structure, was analyzed with the help of magnetization behaviour of the multilayer structure and magnetization behaviour of the single layer films Fe(20Å) and Co(20Å).

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