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FMR and magnetization study of NiFe/Ag/CoNi trilayer film

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Abstract

The polycrystalline FeNi/Ag/CoNi asymmetric trilayer films were prepared by the UHV magnetron sputtering on silicon. In plane magnetization measurements showed double-step hysteresis loops. Magnetoresistance (MR) measurements revealed giant magnetoresistance effect with magnitudes in 0.15-0.29% range at room temperature. The saturation magnetizations and the interaction between layers were studied by ferromagnetic resonance and revealed an undistinguishably weak interlayer coupling from out-of-plane geometry of measurements. The MR data are interpreted based on the incomplete domain alignment model for polycrystalline magnetic films. © 1998 IEEE.

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Keywords

FMR, GMR, Magnetic films, Magnetization