MAGNETO-OPTICAL ANISOTROPY IN Co/Cu MULTILAYERS

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9.7 cm

The dc-sputtered Co/Cu multilayers (MLS) have been investigated by spectroscopic ellipsometry and Kerr effect spectroscopy in polar and longitudinal geometry in the photon energy range 0.8-5.6 eV. The off-diagonal components of the conductivity tensor derived from the optical and magneto-optical spectra measured for different samples magnetization directions show that the system cannot be described by a single off-diagonal tensor component. The aim of the work is an investigation of the nature of the observed anisotropy between the σ_{xy} and σ_{xz} components of the effective dielectric tensor of Co/Cu MLS. To clarify the microscopic origin of the effect of magneto-optical anisotropy of Co/Cu MLS *ab initio* spin-polarized LMTO calculations of the model Co/Cu MLS have been performed. The relation between magneto-optical anisotropy and the structure of the MLS interfacial region has been examined and discussed.

13.4 cm

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