The Cu underlayer effects on the coercivity of Si/Cu/Co/Cu multilayers[+]

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The Magneto-Optical Kerr Effect (MOKE) is useful tool to examine the interface and surface magnetic characteristics of ultra-thin multilayered system. Recently, we built MOKE system and examined the Cu underlayer effect of Co-based multilayered system. By varying Cu underlayer thicknesses (deposition time), we were able to observe the variation of the coercivity of the Co films. Comparing the chemical depth profiles and element specific core-level spectra using x-ray photoelectron spectroscopy, we were correlated the variation of magnetization and chemical interdiffusion of the system. As a result, we found the increases of coercivity of Cu underlayer thickness increases which suggest the insertion of Cu between Co and substrate

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