

Abstract

A Co thin film 14 is formed through evaporation on a Si substrate 10 having a Cu sheet layer 12 between the film 14 and the substrate 10. The Si substrate 10 with an orientation (100) or (111) is used. The thickness of the Cu seed layer (12) and the Co thin film (14) are both approximately 100 nm. The Co thin film (14) is a single crystal thin film having a face-centered cubic lattice structure with an orientation of (100) or (111). The thus structured Co thin film 14 has the maximum 0.4° polar Kerr rotation angle with respect to ultraviolet light having a wavelength of 200-230 nm.