EUV thin film ellipsometry

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With multilayer polarizers, EUV(97eV) ellipsometry of thin film sample has been carried out for the first time as far as we know. The relative amplitude attenuation Rp/Rs of a Mo single layer sample was measured as a function of the angle of incidence. Reflectance of s-polarization was also measured for comparison. Wide variation of phase and amplitude upon reflection revealed high sensitivity of EUV ellipsometry to the optical structure of thin films. Results of ellipsometry and reflectometry with single layer model analysis confirmed that ellipsometry has higher resolution than reflectometry in respect to the optical structures of the sample.