EXTREME ULTRAVIOLET LITHOGRAPHY

1. Title:	Wideband Multilayer mirrors for EUV optical systems
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3. Abstract body:

Normal incidence multilayer mirrors opened up new opportunities to produce high resolution imaging optics for EUV and soft x-ray spectral regions. However, the interference nature of reflection, resulting in a narrow spectral and angular band pass of a multilayer mirror sometimes limits the ultimate possibilities of multilayer optics. In this work, optical properties of depth-graded multilayer mirrors of different composition providing constant reflectivity at 13.5 nm wavelength in a wide angular range have been considered. It is theoretically shown that a reflectivity up to about 60% can be achieved in the [0, 18º] range of the incidence angle. The effect of different physical and technological factors on the reflectivity are discussed. The first experimental results are presented.