

ABSTRACT**Lithographic Apparatus and Device Manufacturing Method**

An optical element of a lithographic projection apparatus which comprises a Si/Mo multilayer structure, an outer capping layer and an interlayer positioned between the multilayer structure and the outer capping layer wherein the interlayer has thickness of between 0.3 and 0.7 times the wavelength of the incident radiation. In a first embodiment
5 the interlayer is comprised of a material chosen from the group C and Mo and has a thickness of between 6.0 and 9.0 nm. In a second embodiment the interlayer is comprised of an inner interlayer of Mo next to the multilayer structure and an outer layer of C next to the capping layer. In the second embodiment the interlayer of C is at least 3.4 nm thick and the capping layer of Ru is at least 2.0 nm thick.

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Fig. 2