

Title (en)
LENS SYSTEM CONSISTING OF FLUORIDE CRYSTAL LENSES

Title (de)
OBJEKTIV MIT FLUORID-KRISTALL-LINSEN

Title (fr)
OBJECTIF COMPORTANT DES LENTILLES DE CRISTAL DE FLUORURE

Publication
EP 1390783 A2 20040225 (DE)

Application
EP 02738037 A 20020508

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Abstract (en)

[origin: WO02093209A2] A lens system, especially a projection lens system for a microlithographic projection illumination system, comprising at least one fluoride crystal lens. The disruptive influence of birefringence is reduced by using a lens which is a lens (100) with a lens axis which is approximately perpendicular in relation to the crystal planes {100} or the equivalent crystal planes of the fluoride crystal. In lens systems consisting of at least two fluoride crystal lenses, it is useful to arrange the fluoride crystal lenses in such a way that they are twisted in relation to each other. The lens axes of the fluoride crystal lenses can thus point in crystal direction (111) or (110), in addition to direction (100). It is also possible to reduce the disruptive influence of birefringence by using groups with twisted (100) lenses and groups with other twisted lenses (111) or other twisted (110) lenses. The disruptive influence of birefringence can be reduced further by providing the optical element with a compensating coating.

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US 2005122594 A1 20050609; US 2006171020 A1 20060803; US 7126765 B2 20061024; US 7145720 B2 20061205; US 7180667 B2 20070220;
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