

Title (en)

ARRANGEMENT FOR SUPPRESSING RADIATION FEEDBACK, AND LASER SYSTEM COMPRISING SUCH AN ARRANGEMENT

Title (de)

ANORDNUNG ZUR UNTERDRÜCKUNG VON STRAHLUNGSRÜCKKOPPLUNG UND LASERANLAGE MIT EINER SOLCHEN ANORDNUNG

Title (fr)

SYSTÈME POUR EMPÊCHER UNE RÉINJECTION DE RAYONNEMENT ET INSTALLATION LASER ÉQUIPÉE D'UN TEL SYSTÈME

Publication

EP 4115481 A1 20230111 (DE)

Application

EP 20712842 A 20200303

Priority

EP 2020055489 W 20200303

Abstract (en)

[origin: WO2021175412A1] The invention relates to an optical arrangement (20) for filtering laser radiation. The arrangement (20) has a wavelength-selective element (28), a first Fabry-Pérot interferometer (10), a polariser (36), and an A/4 phase shifter (38). The optical axis of the Fabry-Pérot interferometer (10) is oriented at an angle greater than 0° and less than 6° with respect to the laser beam incident on the Fabry-Pérot interferometer (10). The Fabry-Pérot interferometer (10) is designed both to couple out unwanted radiation portions (30) of the primary laser beam (24) incident on the Fabry-Pérot interferometer (10) and to couple out unwanted radiation portions (52) of the secondary laser beam (46) reflected by a laser beam target (40). Preferably, the arrangement (20) comprises at least one further Fabry-Pérot interferometer. Particularly preferably, the arrangement (20) comprises a telescope arrangement for expanding the primary laser beam (24) incident on the Fabry-Pérot interferometer (10). The invention also relates to a laser system comprising such an arrangement (20). Preferably, the laser system comprises an amplifier system which is located between two arrangements (20). Particularly preferably, the laser system is designed to generate EUV radiation. To this end, the laser beam target (40) can be in the form of a droplet.

IPC 8 full level

H01S 3/00 (2006.01); **H01S 3/223** (2006.01)

CPC (source: EP KR)

B23K 26/064 (2015.10 - EP KR); **B23K 26/702** (2015.10 - EP KR); **H01S 3/005** (2013.01 - KR); **H01S 3/0064** (2013.01 - EP KR);
H01S 3/0078 (2013.01 - EP KR); **H01S 3/2232** (2013.01 - KR); **H01S 3/005** (2013.01 - EP); **H01S 3/2232** (2013.01 - EP);
H01S 2301/02 (2013.01 - EP KR)

Citation (search report)

See references of WO 2021175412A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

WO 2021175412 A1 20210910; CN 115244799 A 20221025; EP 4115481 A1 20230111; KR 20220134656 A 20221005

DOCDB simple family (application)

EP 2020055489 W 20200303; CN 202080098031 A 20200303; EP 20712842 A 20200303; KR 20227031838 A 20200303