

Title (en)
LASER FEMTOSECOND MICROTOME FOR CUTTING OUT A MATERIAL SLICE BY A LASER BEAM, IN PARTICULAR IN A CORNEA

Title (de)
LASER-FEMTOSEKUNDEN-MIKROTOM ZUM AUSSCHNEIDEN EINER MATERIALSCHEIBE DURCH EINEN LASERSTRAHL, INSBESONDERE IN EINEM ECKBEREICH

Title (fr)
MICROTOME LASER FEMTOSECONDE POUR DECOUPE PAR FAISCEAU LASER D'UNE TRANCHE DE MATIERE, NOTAMMENT DANS UNE CORNEE

Publication
EP 1945402 A2 20080723 (FR)

Application
EP 06841997 A 20061103

Priority

- FR 2006051136 W 20061103
- FR 0553345 A 20051104

Abstract (en)
[origin: WO2007051951A2] The invention relates to a laser femtosecond microtome for cutting out at least one slice of material from a material block by means of a focused laser beam, wherein said material block comprises a front surface and a slice carrying said front surface, the slice extends at least partially on a X, Z plane perpendicular to an axis Z of the block thickness, is separated from the remaining part of the block by a cleavage surface formed by an assembly of bubbles brought together and each bubble is formed in the focus area of at least one convergent laser beam pulse of an optical axis L. According to said invention, the optical axis L of the laser beam convergent part (3) forms an angle ranging from 45° to + 45° with respect to the X, Z plane. An ellipsoid-shaped focus area has the smallest axis thereof in the direction of the axis Y.

IPC 8 full level
B23K 26/073 (2006.01); **A61F 9/01** (2006.01); **B23K 26/40** (2006.01)

CPC (source: EP US)
A61F 9/00827 (2013.01 - EP US); **A61F 9/00836** (2013.01 - EP US); **B23K 26/0736** (2013.01 - EP US); **B23K 26/361** (2015.10 - EP US); **B23K 26/40** (2013.01 - EP US); **B23K 26/55** (2015.10 - EP US); **A61F 9/00829** (2013.01 - EP US); **A61F 2009/00872** (2013.01 - EP US); **B23K 2103/30** (2018.07 - EP US); **B23K 2103/42** (2018.07 - EP US); **B23K 2103/50** (2018.07 - EP US)

Citation (search report)
See references of WO 2007051951A2

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
WO 2007051951 A2 20070510; **WO 2007051951 A3 20070628**; **WO 2007051951 B1 20070823**; CA 2628597 A1 20070510; EP 1945402 A2 20080723; FR 2892962 A1 20070511; FR 2892962 B1 20090605; US 2009018532 A1 20090115

DOCDB simple family (application)
FR 2006051136 W 20061103; CA 2628597 A 20061103; EP 06841997 A 20061103; FR 0553345 A 20051104; US 9262106 A 20061103