

Title (en)
LIGHT SHEET MICROSCOPE

Title (de)
LICHTBLATTMIKROSKOP

Title (fr)
MICROSCOPE À FEUILLE DE LUMIÈRE

Publication
EP 3610314 A1 20200219 (DE)

Application
EP 18724461 A 20180410

Priority
• DE 102017107733 A 20170410
• EP 2018059175 W 20180410

Abstract (en)
[origin: WO2018189187A1] The invention relates to a light sheet microscope (10), comprising a detection lens (32) for imaging a target region (58) of a sample (44), which is located in a focal plane (54) of the detection lens (32), an illumination lens (20) for focusing an illumination light bundle (50) into the sample (44), wherein the detection lens (32) and the illumination lens (20) lie opposite each other by the optical axes thereof (O2, O1), aligned perpendicular to the focal plane, (54) and define a sample space (38) therebetween containing the focal plane (54), a sample holder (40) having at least one carrier surface (42) arranged in the sample space (38), on which the sample can be attached (44), and a light deflection device (46) having a deflection surface (48), which is arranged in the sample space (38) laterally offset relative to the optical axis (O1) of the detection lens (32) and is designed to deflect the illumination light bundle (50) focused through the illumination lens (20) in a direction perpendicular to the optical axis (O1) of the detection lens (32) such that the deflected illumination light bundle (50) forms a light-sheet-like illumination light distribution (52) focused in the focal plane (54), wherein the light deflection device (46) has a collision portion (86) facing the carrier surface (42), which defines a mechanical stop for the carrier surface (42) on the light deflection device (46), preventing a coplanar arrangement of the carrier surface (42) in the focal plane (54). According to the invention, the carrier surface (42) is inclined relative to the focal plane (54) at a predetermined inclination angle such that a portion of the carrier surface (42) is arranged in the focal plane (54).

IPC 8 full level
G02B 21/00 (2006.01); **G02B 21/06** (2006.01); **G02B 21/34** (2006.01)

CPC (source: EP US)
G02B 21/0032 (2013.01 - EP US); **G02B 21/006** (2013.01 - US); **G02B 21/06** (2013.01 - EP US); **G02B 21/34** (2013.01 - EP US); **G02B 21/367** (2013.01 - EP); **G02B 21/006** (2013.01 - EP); **G02B 21/367** (2013.01 - US)

Citation (search report)
See references of WO 2018189187A1

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

DOCDB simple family (publication)
DE 102017107733 A1 20181011; **DE 102017107733 B4 20190131**; CN 110520778 A 20191129; EP 3610314 A1 20200219; US 11287624 B2 20220329; US 2020064608 A1 20200227; WO 2018189187 A1 20181018

DOCDB simple family (application)
DE 102017107733 A 20170410; CN 201880022851 A 20180410; EP 18724461 A 20180410; EP 2018059175 W 20180410; US 201816498401 A 20180410