

Title (en)

OPTICAL DEVICE, OPTICAL MODULE AND MICROSCOPE FOR SCANNING LARGE SAMPLES

Title (de)

OPTISCHE VORRICHTUNG, OPTISCHES MODUL UND MIKROSKOP ZUM ABTASTEN GROSSER PROBEN

Title (fr)

DISPOSITIF OPTIQUE, MODULE OPTIQUE ET MICROSCOPE POUR LE BALAYAGE D'ÉCHANTILLONS LARGES

Publication

EP 3762707 A1 20210113 (DE)

Application

EP 19707738 A 20190220

Priority

- DE 102018203247 A 20180305
- EP 2019054146 W 20190220

Abstract (en)

[origin: WO2019170413A1] The invention relates to an optical device (1) for illuminating a sample (25) located in a sample volume (23) with illumination light (15) and for detecting scattered and/or fluorescent light (27) from the sample (25). The device (1) comprises an illumination assembly (3) for transmitting the illumination light (15) along an illumination path (21) into the sample volume (23) and comprises a detection assembly (5) for collecting and relaying the scattered and/or fluorescent light (27) along a detection path (29). The invention also relates to an optical module (95) and a microscope (37), in particular a confocal microscope (39), comprising a mechanical receiving device (97) for optical modules (95). Solutions from the prior art are geometrically limited in terms of the arrangement of the illumination assembly (3) and the detection assembly (5), offer a low depth of immersion and have the disadvantage of more frequent collisions with the sample (25). The optical device (1) according to the invention improves the solutions from the prior art in that an attachment element (7) is provided, in which at least some portions of the illumination path (21) and/or the detection path (29) run.

IPC 8 full level

G01N 21/47 (2006.01); **G01N 21/64** (2006.01); **G02B 21/00** (2006.01)

CPC (source: EP US)

G01N 21/47 (2013.01 - US); **G01N 21/4795** (2013.01 - EP); **G01N 21/6458** (2013.01 - EP US); **G02B 21/0032** (2013.01 - US); **G02B 21/0064** (2013.01 - US); **G02B 21/0076** (2013.01 - EP US); **G02B 21/06** (2013.01 - EP); **G02B 21/24** (2013.01 - US); **G02B 21/33** (2013.01 - US); **G01N 2021/4726** (2013.01 - EP); **G01N 2201/0633** (2013.01 - US); **G02B 21/24** (2013.01 - EP)

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 102018203247 A1 20190905; CN 111819434 A 20201023; EP 3762707 A1 20210113; JP 2021515910 A 20210624; US 12019227 B2 20240625; US 2021063714 A1 20210304; WO 2019170413 A1 20190912

DOCDB simple family (application)

DE 102018203247 A 20180305; CN 201980017115 A 20190220; EP 19707738 A 20190220; EP 2019054146 W 20190220; JP 2020546447 A 20190220; US 201916977820 A 20190220