

Title (en)
STED FLUORESCENCE MICROSCOPY HAVING TWO-PHOTON EXCITATION

Title (de)
STED-FLUORESZENZMIKROSKOPIE MIT ZWEIPHOTONEN-ANREGUNG

Title (fr)
MICROSCOPIE DE FLUORESCENCE STED À EXCITATION BIPHOTONIQUE

Publication
EP 2185919 A1 20100519 (DE)

Application
EP 08787227 A 20080814

Priority
• EP 2008060694 W 20080814
• DE 102007039111 A 20070818

Abstract (en)
[origin: WO2009024529A1] In order to depict at high spatial resolution a structure marked with a fluorescent colorant in a sample, pulsed excitation light (5) being focused in the sample in order to excite the fluorescent colorant present in the focus region to spontaneous emission of fluorescent light, damping light (10) having a different wavelength than the excitation light (5) being directed at the sample in order to damp the spontaneous emission of fluorescent light by the fluorescent colorant outside of a measurement region smaller than the focus region, and the fluorescent light spontaneously emitted by the fluorescent colorant being registered, the wavelength of the excitation light is selected such that the excitation light excites the fluorescent colorant by means of a multi-photon process, and the damping light (10), having a shorter wavelength than the excitation light (5), is directed at the sample continuously over a plurality of pulses (19) of the excitation light (5).

IPC 8 full level
G01N 21/63 (2006.01); **G01N 21/64** (2006.01); **G02B 21/00** (2006.01)

CPC (source: EP US)
G01N 21/636 (2013.01 - EP US); **G01N 21/6458** (2013.01 - EP US); **G02B 21/0076** (2013.01 - EP US)

Citation (search report)
See references of WO 2009024529A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA MK RS

DOCDB simple family (publication)
DE 102007039111 A1 20090226; **DE 102007039111 B4 20141120**; CN 101821607 A 20100901; CN 101821607 B 20130605;
EP 2185919 A1 20100519; JP 2010537179 A 20101202; JP 5269901 B2 20130821; US 2010176307 A1 20100715; US 7863585 B2 20110104;
WO 2009024529 A1 20090226

DOCDB simple family (application)
DE 102007039111 A 20070818; CN 200880103629 A 20080814; EP 08787227 A 20080814; EP 2008060694 W 20080814;
JP 2010521402 A 20080814; US 70638810 A 20100216