

Title (en)

MULTICOLOUR EXCITATION MODULE FOR A MULTIPHOTON IMAGING SYSTEM, AND ASSOCIATED METHOD AND SYSTEM

Title (de)

MEHRFARBIGES ERREGERMODUL FÜR EIN MULTIPHOTONENABBILDUNGSSYSTEM SOWIE ZUGEHÖRIGES VERFAHREN UND SYSTEM

Title (fr)

MODULE D'EXCITATION MULTI-COULEURS POUR UN SYSTEME D'IMAGERIE MULTI-PHOTONIQUE, SYSTEME ET PROCEDE ASSOCIES

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Application

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Abstract (en)

[origin: WO2013113861A1] The present invention concerns a multicolour excitation module 1 for a multiphoton imaging system 100. Such a module is used for imaging a sample 7 comprising at least three chromophores. The module 1 comprises: a first femtosecond laser source 2, emitting a first excitation beam 20; a second femtosecond laser source 3 emitting a second excitation beam 30. The first excitation beam 20 comprises a so-called "pumping" portion, said pumping portion acting as a pump beam to synchronously excite the second laser source 3, and a so-called "excitation" portion. An optical delay line 4 is arranged to spatially and temporally superpose the second excitation beam 30 and the excitation portion of the first excitation beam, so as to excite at least a third of the chromophores by multiphoton absorption, said absorbed photons coming from the first and second excitation beams 20, 30. The invention also concerns the complete multiphoton imaging system 100, and a method implemented in this module 1.

IPC 8 full level

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Citation (search report)

See references of WO 2013113861A1

Citation (examination)

CAMPAGNOLA P J ET AL: "High-resolution nonlinear optical imaging of live cells by second harmonic generation", BIOPHYSICAL JOURNAL, ELSEVIER, AMSTERDAM, NL, vol. 77, no. 6, 1 December 1999 (1999-12-01), pages 3341 - 3349, XP002248209, ISSN: 0006-3495

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