

Title (en)

CHEMICALLY REACTIVE PLANE-RIGIDIZED CYANINE DYES AND THEIR DERIVATIVES

Title (de)

CHEMISCH REAKTIVE IN EINER EBENE ERSTARRTE CYANINFARBSTOFFE SOWIE DERIVATE

Title (fr)

COLORANTS A BASE DE CYANINE RIGIDIFIES DANS UN PLAN ET CHIMIQUEMENT REACTIFS, ET DERIVES DE CES DERNIERS

Publication

EP 1163372 A1 20011219 (EN)

Application

EP 00919582 A 20000323

Priority

- US 0007783 W 20000323
- US 12583999 P 19990324

Abstract (en)

[origin: WO0056933A1] The invention describes novel plane-rigidized cyanine near-infrared (NIR) fluorescent dyes, their methods of preparation and use in the non-isotopic labeling of biological molecules. Such dyes contain a central cyclic hydroanthraquinone framework which provides for a stable and rigid structure to ensure low reactivity with neighboring molecules, a sharp absorption band, a high quantum yield, and emissions in a region largely devoid of natural background auto-fluorescence. Such dyes further comprise variable end groups flanking the central cyclic framework, allowing formation of a number of different plane-rigidized dyes, each having a slightly different emission wavelength. Functional groups are provided for attachment to target biological molecules. Moreover, hydrophilic functional groups are provided where necessary to significantly increase the water solubility of the dye molecules.

IPC 1-7

C12Q 1/68; C12P 19/34

IPC 8 full level

C09B 23/01 (2006.01)

CPC (source: EP)

C09B 23/0066 (2013.01)

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 0056933 A1 20000928; AU 4024500 A 20001009; EP 1163372 A1 20011219; EP 1163372 A4 20021002

DOCDB simple family (application)

US 0007783 W 20000323; AU 4024500 A 20000323; EP 00919582 A 20000323