

Title (en)

Radiation-sensitive recording material comprising IR-absorbing cyanine dyes having a betaine structure or having a betaine structure and containing an anion, and recording material prepared therewith

Title (de)

Strahlungsempfindliches Aufzeichnungsmaterial mit IR-absorbierenden, betainischen oder betainisch-anionischen Cyaninfarbstoffen und damit hergestelltes Aufzeichnungsmaterial

Title (fr)

Produit d'enregistrement sensible aux rayons actiniques contenant des colorants cyanines absorbant des rayons infrarouges et ayant une structure bétaine ou ayant une structure bétaine et contenant un anion, et matériau pour l'enregistrement préparé à partir de ce produit

Publication

EP 0978376 B1 20050309 (DE)

Application

EP 99114554 A 19990724

Priority

DE 19834746 A 19980801

Abstract (en)

[origin: EP0978376A2] Positive radiation-sensitive mixture containing a water-insoluble organic polymeric binder, which dissolves or at least swells in aqueous alkaline solution, contains, as infrared (IR)-absorbing dye, a betaine or betaine anionic cyanine dye (I) with a pyrimidin-2,4,6-trion-6-yl-substituted (poly)methin group. Positive radiation-sensitive mixture containing a water-insoluble organic polymeric binder, which dissolves or at least swells in aqueous alkaline solution, contains, as infrared (IR)-absorbing dye, a betaine or betaine anionic cyanine dye of formula (I): with a pyrimidin-2,4,6-trion-6-yl-substituted (poly)methin group; R<1-8> = hydrogen (H), R or 6-10 C aryl, optionally mono- or poly-substituted by R; R = halogen, sulfonate, carboxylate, phosphonate, hydroxyl (OH), 1-4 carbon (C) alkoxy, nitro, amino or mono- or di-(1-4 C alkyl)-amino; R<9>, R<10> = linear or branched 1-6 C alkyl, 7-16 C aralkyl or 6-10 C aryl, optionally mono- or poly-substituted by R; R<11>, R<12> = optionally substituted 1-4 C alkyl or 6-10 C aryl; Z<1>, Z<2> = sulfur (S), di-(1-4 C alkyl)methylene or ethen-1,2-diy; A = C or a chain with conjugated double bonds forming a delocalized pi -electron system between the quaternary nitrogen (N) atoms of the 3H-indolium, quinolinium or benzothiazolium group and the enolate oxygen (I) atom of the pyrimidin-2,4,6-trione group.

IPC 1-7

B41C 1/10

IPC 8 full level

B41C 1/10 (2006.01); **G03F 7/00** (2006.01); **G03F 7/004** (2006.01); **G03F 7/039** (2006.01)

CPC (source: EP US)

B41C 1/1008 (2013.01 - EP US); **B41C 1/1016** (2013.01 - EP US); **B41C 2201/02** (2013.01 - EP US); **B41C 2201/14** (2013.01 - EP US); **B41C 2210/02** (2013.01 - EP US); **B41C 2210/06** (2013.01 - EP US); **B41C 2210/20** (2013.01 - EP US); **B41C 2210/22** (2013.01 - EP US); **B41C 2210/24** (2013.01 - EP US); **B41C 2210/262** (2013.01 - EP US); **Y10S 430/106** (2013.01 - EP US); **Y10S 430/127** (2013.01 - EP US); **Y10S 430/145** (2013.01 - EP US)

Cited by

EP1162063A3; WO2012101046A1; EP2095948A1; EP1834764A1; US7198883B2; EP3778253A1; WO2021028385A1; WO2014106554A1; EP2933278A1; EP3170662A1; WO2017085002A1; EP2955198A1; EP2963496A1; WO2015189092A1; WO2016001023A1; US8419923B2; EP3637188A1; WO2020074258A1; EP2065211A1; EP2213690A1; WO2010086211A1; US8978554B2; EP2871057A1; WO2015067581A1; EP2098376A1; EP2106924A1; US7425405B2; EP2944657A1; WO2022128283A1; US7195861B2; US7354696B2; US7467587B2; US7195859B2; EP3032334A1; EP2263874A1; WO2011067382A1; US8313885B2; EP3130465A1; US9738064B2; WO2017157579A1; WO2017157572A1; WO2017157578A1; WO2017157571A1; WO2017157576A1; WO2017157575A1; EP1396338A1; EP2489512A1; WO2012110359A1; WO2014017640A1; US9029066B2; EP3441223A1; WO2019029945A1; WO2019039074A1; EP3239184A1; WO2017186556A1; EP3474073A1; WO2019076584A1; EP3650938A1; WO2020094368A1; EP3715140A1; WO2020200905A1; EP3922462A1; WO2021249754A1

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

DE 19834746 A1 20000203; DE 59911722 D1 20050414; EP 0978376 A2 20000209; EP 0978376 A3 20010912; EP 0978376 B1 20050309; JP 2000206687 A 20000728; JP 4259685 B2 20090430; US 2002006575 A1 20020117; US 6492093 B2 20021210

DOCDB simple family (application)

DE 19834746 A 19980801; DE 59911722 T 19990724; EP 99114554 A 19990724; JP 21923899 A 19990802; US 36285799 A 19990729