

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 January 2007 (11.01.2007)

PCT

(10) International Publication Number
WO 2007/002980 A1

(51) International Patent Classification:

C09B 47/04 (2006.01) **C07F 9/00** (2006.01)
C07D 487/22 (2006.01) **G11C 7/00** (2006.01)
C07F 1/08 (2006.01)

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(21) International Application Number:

PCT/AU2006/000780

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(22) International Filing Date: 8 June 2006 (08.06.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/172,815 5 July 2005 (05.07.2005) US

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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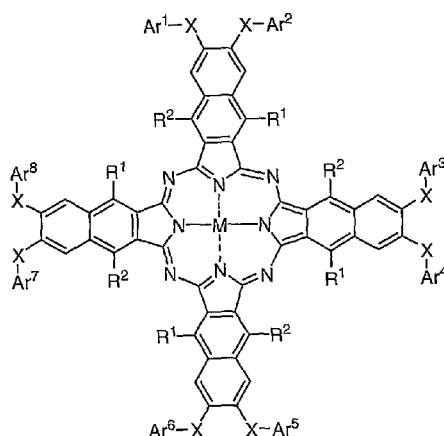
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Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RED-SHIFTED WATER-DISPERSIBLE NAPHTHALOCYANINE DYES



(I)

(57) Abstract: A naphthalocyanine dye of formula (I) is provided; wherein M is a metal group or is absent; R^1 and R^2 are independently selected from hydrogen or C_{1-12} alkoxy; X is selected from O, S or NH ; Ar^1 , Ar^2 , Ar^3 , Ar^4 , Ar^5 , Ar^6 , Ar^7 and Ar^8 are selected from phenyl, naphthyl, pyridyl, furanyl, pyrrolyl, thiophenyl, each of Ar^1 , Ar^2 , Ar^3 , Ar^4 , Ar^5 , Ar^6 , Ar^7 and Ar^8 being optionally substituted with 1, 2, 3, 4 or 5 groups, the or each group being independently selected from C_{1-12} alkyl, C_{1-12} alkoxy, C_{1-12} arylalkyl, C_{1-12} arylalkoxy, $-(OCH_2CH_2)_dOR^d$, cyano, halogen, amino, hydroxyl, thiol, $-SR^v$, $-NR^uR^v$, nitro, phenyl, phenoxy, $-CO_2R^v$, $-C(O)R^v$, $-OCOR^v$, $-SO_2R^v$, $-OSO_2R^v$, $-NHC(O)R^v$, $-CONR^uR^v$, $-CONR^uR^v$, sulfonic acid, sulfonic acid salt and sulfonamide; d is an integer from 2 to 5000; R^d is H, C_{1-8} alkyl or $C(O)C_{1-8}$ alkyl; and R^u and R^v are independently selected from hydrogen, C_{1-12} alkyl, phenyl or phenyl- C_{1-8} alkyl. Dyes of this type are especially suitable for use in netpage and Hyperlabel™ systems.

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