(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
23 April 2009 (23.04.2009)

PCT

(10) International Publication Number
WO 2009/049744 A1

(51) International Patent Classification:
H01L 51/00 (2006.01)

(21) International Application Number:
PCT/EP2008/007896

(22) International Filing Date:
19 September 2008 (19.09.2008)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
07020363.3 18 October 2007 (18.10.2007) EP

(71) Applicants *(for all designated States except US)*: **MERCK PATENT GMBH** [DE/DE]; Frankfurter Strasse 250, 64293 Darmstadt (DE). **KONARKA TECHNOLOGIES GMBH** [DE/DE]; Landgrabenstrasse 94, 90443 Nürnberg (DE).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **JAMES, Mark** [GB/GB]; 2 Nerquis Close, Romsey SO51 7LU (GB). **MCCULLOCH, Iain** [GB/GB]; 2 Goodacre Drive, Chandlers Ford, Southampton SO53 4LG (GB). **DUFFY, Warren** [GB/GB]; 75 Suffolk Road, Flat 1, Hampshire, Southampton SO15 5EF (GB). **MAY, Philip, Edward** [GB/GB]; 58 Canterbury Avenue, Sidcup DA15 9AS (GB). **WALKER, Dan** [GB/GB]; Flat 9, St. Georges House, Woodside Road, Southampton SP17 2GZ (GB). **WALLER, David, P.** [US/US]; 31 Coolidge Avenue, Lexington, MA 02420 (US). **CHILDERS, Richard, Kendall** [US/US]; 190 Saw Mill Drive, Dracut, MA 01826 (US). **RODMAN, Sheila, E.** [US/US]; 250 Kennedy Drive #403, Malden, MA 02148 (US).

(74) Common Representative: **MERCK PATENT GMBH**; Frankfurter Strasse 250, 64293 Darmstadt (DE).

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

(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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

WO 2009/049744 A1

(54) Title: CONDUCTING FORMULATION

(57) Abstract: The invention relates to novel formulations comprising an organic semiconductor (OSC) and a conductive additive, to their use as conducting inks for the preparation of organic electronic (OE) devices, especially organic photovoltaic (OPV) cells, to methods for preparing OE devices using the novel formulations, and to OE devices and OPV cells prepared from such methods and formulations.