

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

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
17 February 2011 (17.02.2011)

PCT

(10) International Publication Number
WO 2011/018144 A2

(51) International Patent Classification:
C07D 209/56 (2006.01)

(21) International Application Number:
PCT/EP2010/004262

(22) International Filing Date:
14 July 2010 (14.07.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09010387.0 12 August 2009 (12.08.2009) EP

(71) Applicant (for all designated States except US): **MERCK PATENT GMBH** [DE/DE]; Frankfurter Strasse 250, 64293 Darmstadt (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BLOUIN, Nicolas** [CA/GB]; Flat 1, 409 Winchester Road, Southampton SO16 7DE (GB). **MITCHELL, William** [GB/GB]; 55 Donnington Drive, Chandler's Ford SO53 3PE (GB). **WANG, Changsheng** [GB/GB]; 3 Edward Avenue, Durham DH6 5EB (GB). **TIERNEY, Steven** [GB/GB]; 8 Compton House, Carlisle Road, Southampton SO16 4BS (GB).

(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, CL, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(54) Title: PHENANTHRO[1,10,9,8-C,D,E,F,G]CARBAZOLE POLYMERS AND THEIR USE AS ORGANIC SEMICONDUCTORS

(57) Abstract: The invention relates to novel phenanthro[1,10,9,8-c,d,e,f,g]carbazole polymers, methods and materials for their preparation, their use as semiconductors in organic electronic (OE) devices, and to OE devices comprising these polymers.



WO 2011/018144 A2