



- (51) **International Patent Classification:**
C07F 5/02 (2006.01) *C07F 5/00* (2006.01)
H01M 10/05 (2010.01)
- (21) **International Application Number:**
PCT/EP2012/002179
- (22) **International Filing Date:**
23 May 2012 (23.05.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
11004431.0 31 May 2011 (31.05.2011) 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): **IGNATYEV, Nikolai (Mykola)** [UA/DE]; Prinzenstrasse 104, 47058 Duisburg (DE). **SCHULTE, Michael** [DE/DE]; Platanenstrasse 32, 65474 Bischofsheim (DE). **KAWATA, Kentaro** [JP/JP]; 1-23-10 Kokubukita, Ebina, Kanagawa Pref. 243-0406 (JP). **GOTO, Tomohisa** [JP/JP]; 1-5-2 Nishihasimoto, Sagami-hara 252-0131 (JP). **BERNHARDT, Eduard** [DE/DE]; Strassburger Strasse 5, 42107 Wuppertal (DE). **BERNHARDT-PITCHOUGINA, Vera**

[RU/DE]; Strassburger Strasse 5, 42107 Wuppertal (DE). **WILLNER, Helge** [DE/DE]; Foehrenkamp 3, 45481 Muelheim/Ruhr (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, 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, QA, RO, RS, RU, RW, 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, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) **Title:** COMPOUNDS CONTAINING HYDRIDO-TRICYANO-BORATE ANIONS

(57) **Abstract:** The present invention relates to compounds containing hydrido-tricya-borate anions, their preparation and their use, in particular as part of electrolyte formulations for electrochemical or optoelectronic devices.

