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

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 August 2014 (14.08.2014)

WIPO | PCT

(10) International Publication Number
WO 2014/123436 A8

(51) International Patent Classification:
*G01N 31/22* (2006.01) *G01N 21/77* (2006.01)
*G01N 21/64* (2006.01)

(21) International Application Number:
PCT/PT2014/000007

(22) International Filing Date:
4 February 2014 (04.02.2014)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
106766 6 February 2013 (06.02.2013) PT

(71) Applicant: **INSTITUTO SUPERIOR TÉCNICO** [PT/PT]; Av. Rovisco Pais, P-1049-001 Lisboa (PT).

(72) Inventors: **FARINHA, José Paulo Sequeira**; R. Luciano Cordeiro, Nº23-6ºD, 1150-212 Lisboa (PT). **BALEIZÃO, Carlos Miguel Calisto**; R. Artur Bual, Nº5-2º Dto, 2815-727 Sobreda (PT). **ALVES, Sérgio Paulo do Carmo**; R. Prof. Lima Basto Nº95-5º, 1070-211 Lisboa (PT).

(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, BN, 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, IR, IS, JP, KE, KG, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, 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, KM, ML, MR, NE, SN, TD, TG).

**Declarations under Rule 4.17**:

— *of inventorship (Rule 4.17(iv))*

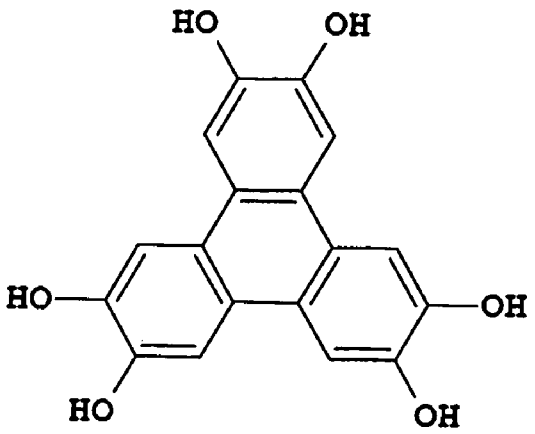
**Published**:

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

*[Continued on next page]*

(54) Title: OPTICAL SENSORS FOR BORON DETECTION BASED ON THE USE OF 2,3,6,7,10,11-HEXAHYDROXYTRIPHENYLENE OR ITS DERIVATIVES

(57) Abstract: The present invention relates generically to the use of optical sensors for the detection and quantification of boron in natural waters, waters for domestic, agricultural and industrial use, as well as domestic, agricultural and industrial effluents. More specifically, it refers to the use of 2, 3, 6, 7, 10, 11-hexahydroxytriphenylene (I) or its derivatives as optical sensors for the detection and quantification of boric acid, tetrahydroxyborate, boronic acids and boronates in aqueous media.




(I)

WO 2014/123436 A8

WO 2014/123436 A8

(48) **Date of publication of this corrected version**:
16 October 2014

(15) **Information about Correction**:
see Notice of 16 October 2014