

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

(19) World Intellectual Property
Organization

International Bureau

(43) International Publication Date
03 September 2020 (03.09.2020)



(10) International Publication Number
WO 2020/174066 A1

(51) International Patent Classification:

C01B 32/23 (2017.01) C01B 32/192 (2017.01)

H01G 11/32 (2013.01) C01B 32/198 (2017.01)

(21) International Application Number:

PCT/EP2020/055195

(22) International Filing Date:

27 February 2020 (27.02.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

19382146.9 27 February 2019 (27.02.2019) EP

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(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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, ST, 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:

— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

Published:

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



WO 2020/174066 A1

(54) Title: REDUCED GRAPHENE OXIDE FILM COMPRISING A STACK OF RGO LAYERS AND ITS APPLICATIONS

(57) Abstract: It relates to an reduced graphene oxide (rGO) film having a total thickness from 20 nm to 5 micrometer, which comprises a stack of rGO layers comprising flakes, wherein the distance between two consecutive layers is from 0.2 to 0.7 nm, and to an electrically back-contacted conductive reduced graphene oxide (rGO) structure comprising it together with an additional conductive support on which the rGO is deposited. It also relates to a process for the preparation of the rGO film and the electrically back-contacted conductive rGO structure, and to electronic devices for detecting, receiving and/or inducing electrical signals.