

# (12) International Application Status Report

**Received at International Bureau:** 03 December 2019 (03.12.2019)

**Information valid as of:** 20 February 2020 (20.02.2020)

**Report generated on:** 20 September 2020 (20.09.2020)

**(10) Publication number:**

WO2020/109664

**(43) Publication date:**

04 June 2020 (04.06.2020)

**(26) Publication language:**

English (EN)

**(21) Application Number:**

PCT/FI2019/050849

**(22) Filing Date:**

28 November 2019 (28.11.2019)

**(25) Filing language:**

English (EN)

**(31) Priority number(s):**

1819524.8 (GB)

**(31) Priority date(s):**

30 November 2018 (30.11.2018)

**(31) Priority status:**

Priority document received (in compliance with PCT Rule 17.1)

**(51) International Patent Classification:**

**H01L 31/105** (2006.01); **H01L 31/0224** (2006.01); **H01L 31/112** (2006.01); **H01L 51/42** (2006.01); **H01L 51/44** (2006.01); **H01L 27/144** (2006.01)

**(71) Applicant(s):**

EMBERION OY [FI/FI]; Metsänneidonkuja 8 02130 Espoo (FI) *(for all designated states)*

**(72) Inventor(s):**

BESSONOV, Alexander; 83 New Street Cambridge CB1 2QT (GB)

ALLEN, Mark; 7 Chervil Way Great Cambourne Cambridge CB23 6BA (GB)

**(74) Agent(s):**

BOCO IP OY AB; Itämerenkatu 5 00180 Helsinki (FI)

**(54) Title (EN):** P-I-N PHOTODETECTOR

**(54) Title (FR):** PHOTODÉTECTEUR P-I-N

**(57) Abstract:**

**(EN):** A photodetector which comprises a measurement layer (15) and at least a first photoactive layer (11) which covers the measurement layer (15). The measurement layer (15) may be a transistor channel or a charge accumulation electrode. The conductivity type of the measurement layer is n-type, p-type or ambipolar and the first photoactive layer (11) exhibits intrinsic semiconductivity.

**(FR):** La présente invention concerne un photodétecteur qui comprend une couche de mesure (15) et au moins une première couche photoactive (11) qui recouvre la couche de mesure (15). La couche de mesure (15) peut être un canal de transistor ou une électrode d'accumulation de charge. Le type de conductivité de la couche de mesure est de type n, de type p ou ambipolaire et la première couche photoactive (11) présente une semi-conductivité intrinsèque.

**International search report:**

Received at International Bureau: 10 February 2020 (10.02.2020) [FI]

**International Report on Patentability (IPRP) Chapter II of the PCT:**

Not available

**(81) Designated States:**

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, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

European Patent Office (EPO) : 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

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW

Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, RU, TJ, TM