



(51) International Patent Classification:

H05B 33/04 (2006.01) **B32B 27/02** (2006.01)
C09K 11/00 (2006.01) **H05B 33/14** (2006.01)
H05B 33/20 (2006.01)

(21) International Application Number:

PCT/SG2009/000132

(22) International Filing Date:

8 April 2009 (08.04.2009)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/043,534 9 April 2008 (09.04.2008) US

(71) Applicant (*for all designated States except US*): **AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH** [SG/SG]; 1 Fusionopolis Way #20-10, Connexis, Singapore 138632 (SG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **RAMADAS, Senthil Kumar** [SG/SG]; Institute of Materials Research and Engineering, 3 Research Link, Singapore 117602 (SG). **CHUA, Soo Jin** [MY/SG]; Institute of Materials Research and Engineering, 3 Research Link, Singapore 117602 (SG). **KE, Lin Karen** [SG/SG]; Institute of Materials Research and Engineering, 3 Research Link, Singapore 117602 (SG).

(74) Agent: **SCHIWECK, Wolfram**; Viering, Jentschura & Partner LLP, P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).

(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, 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, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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, 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: MULTILAYER FILM FOR ENCAPSULATING OXYGEN AND/OR MOISTURE SENSITIVE ELECTRONIC DEVICES

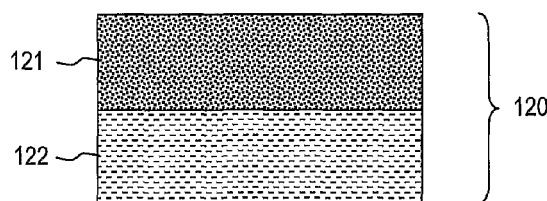


FIG. 2A

(57) Abstract: The present invention refers to a multilayer barrier film capable of encapsulating a moisture and/or oxygen sensitive electronic or optoelectronic device, the barrier film comprises at least one nanostructured layer comprising reactive nanoparticles capable of interacting with moisture and/or oxygen, the reactive nanoparticles being distributed within a polymeric binder, and at least one ultraviolet light neutralizing layer comprising a material capable of absorbing ultraviolet light, thereby limiting the transmission of ultraviolet light through the barrier film.