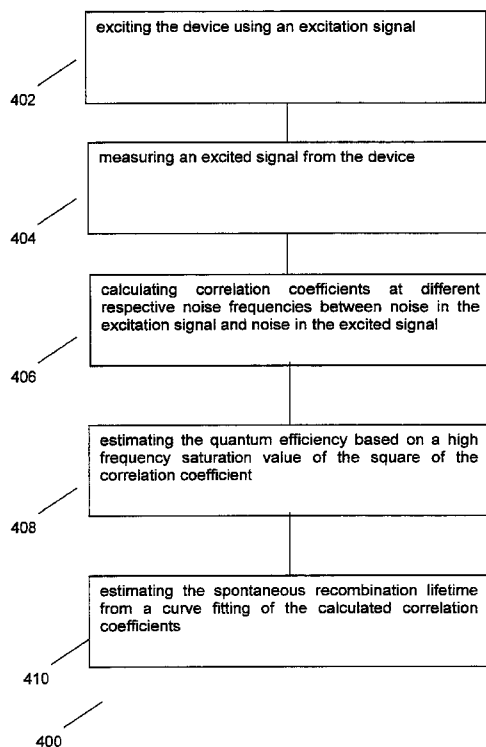




- (51) International Patent Classification:
H01L 21/66 (2006.01) *G01R 29/26* (2006.01)
- (21) International Application Number:
PCT/SG2011/000224
- (22) International Filing Date:
24 June 2011 (24.06.2011)
- (25) Filing Language: English
- (26) Publication Language: English
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- (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, 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, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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).

[Continued on next page]

- (54) Title: SYSTEM AND METHOD FOR ESTIMATING QUANTUM EFFICIENCY AND SPONTANEOUS RECOMBINATION LIFETIME



- (57) Abstract: A method and system for estimating a quantum efficiency and a spontaneous recombination lifetime of a photonic or photovoltaic device. The method comprises the steps of exciting the device using an excitation signal; measuring an excited signal from the device; calculating correlation coefficients at different respective noise frequencies between noise in the excitation signal and noise in the excited signal; estimating the quantum efficiency based on a high frequency saturation value of the square of the correlation coefficient; and estimating the spontaneous recombination lifetime from a curve fitting of the calculated correlation coefficients.



Published:

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