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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6: G01N 21/77, 21/64 — A1

(11) International Publication Number: WO 95/33198

(43) International Publication Date: 7 December 1995 (07.12.95)

(21) International Application Number: PCT/IB95/00368

(22) International Filing Date: 17 May 1995 (17.05.95)

(30) Priority Data:
1643/94-5 — 27 May 1994 (27.05.94) — CH

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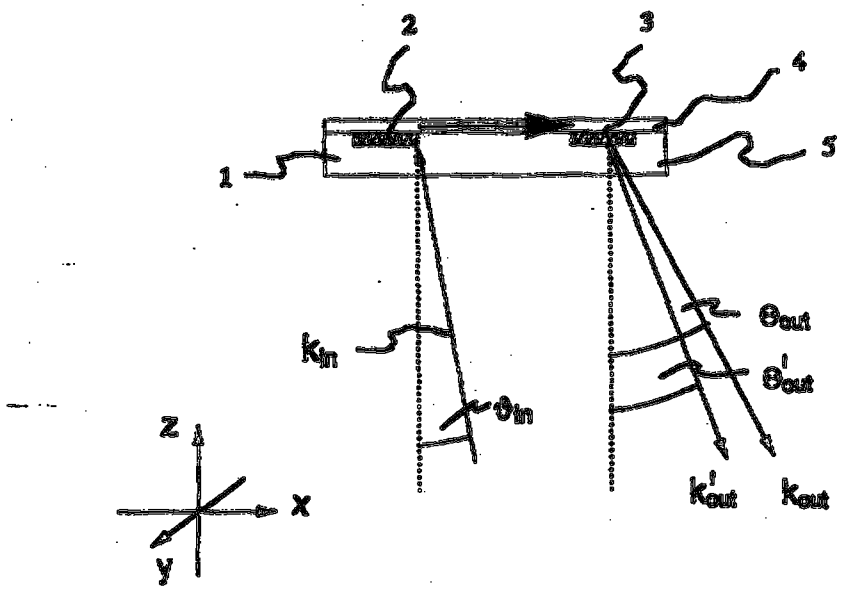
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(81) Designated States: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG), ARIPO patent (KE, MW, SD, SZ, UG).

Published
With international search report.

9612010-0

(54) Title: PROCESS FOR DETECTING EVANESCENTLY EXCITED LUMINESCENCE



(57) Abstract

The invention relates to a process for determining luminescence with a planar dielectric optical sensor platform which consists of a transparent substrate (a) to which a thin transparent waveguiding layer (b) is applied, which sensor platform is provided with a coupling grating for the input-coupling of the excitation light and the refractive index of said substrate (a) is lower than the refractive index of the waveguiding layer (b), by bringing a liquid sample as superstrate into contact with the layer (b), and measuring the luminescence produced by substances having luminescence properties in the sample, or by substances having luminescence properties immobilised on the layer (b), optoelectronically. The invention also relates to the use of the process in quantitative affinity sensing and to the use thereof for the quantitative determination of luminescent constituents in optically turbid solutions, and to a sensor platform for carrying out said process.