Title (en)

METHODS FOR PRODUCING AN ARRANGEMENT COMPRISING A PLURALITY OF LAYERS ON THE BASE OF A SEMICONDUCTOR SUBSTRATE, MULTI-LAYER ARRANGEMENT, AND BIOSENSOR

Title (de)

VERFAHREN ZUM HERSTELLEN EINER ANORDNUNG MIT MEHREREN SCHICHTEN AUF BASIS EINES HALBLEITERSUBSTRATS, MEHRSCHICHTANORDNUNG UND BIOSENSOR

Title (fr)

PROCEDE DE FABRICATION D'UN SYSTEME A PLUSIEURS COUCHES SUR LA BASE D'UN SUBSTRAT SEMI-CONDUCTEUR, SYSTEME A PLUSIEURS COUCHES ET BIOCAPTEUR

Publication

EP 1646658 A1 20060419 (DE)

Application

EP 04762434 A 20040721

Priority

- DE 2004001584 W 20040721
- DE 10334097 A 20030725
- DE 10334096 A 20030725

Abstract (en)

[origin: WO2005012362A1] The invention relates to mehtods for producing an arrangement comprising a plurality of layers, whereby an organic layer is formed on a surface of a semiconductor substrate, under the influence of irradiated light, by applying a medium containing an organic substance to the surface of the semiconductor substrate, and deposition of the organic substance. A difference in potential is created between the semiconductor substrate and the medium during the deposition of the organic substance, by applying an electrical voltage. The invention also relates to a biosensor comprising an arrangement of a plurality of layers, and to a method for measuring properties of a test constituent using the biosensor. The arrangement of a plurality of layers comprises a semiconductor substrate layer and a layer which is arranged adjacent to the semiconductor substrate layer and contains a biologically active constituent. An interaction section is formed in active communication with the layer containing the biologically active constituent, and a test substance containing a test constituent for interacting with the biologically active constituent can be introduced into said section. Furthermore, said arrangement is provided with at least one connection electrode that is electroconductively connected to the interaction section, and another connection electrode that is electroconductively connected to the semiconductor substrate layer. The at least one connection electrode and the other connection electrode form connection means for coupling to an electric circuit such that an electrical measuring quantity can be obtained between the at least one connection electrode and the other connection electrode, over the arrangement of the plurality of layers and the interaction section, said measuring quantity being able to be modified as a result of the interaction of the test constituent with the biologically active constituent.

IPC 1-7

C07K 17/14; H01L 31/00; C12Q 1/68; G01N 33/48

IPC 8 full level

C07K 17/14 (2006.01); **G01N 27/12** (2006.01); H01L 51/00 (2006.01); H01L 51/30 (2006.01); H01L 51/40 (2006.01)

CPC (source: EP US)

C07K 17/14 (2013.01 - EP US); **G01N 27/126** (2013.01 - EP US); H10K 71/10 (2023.02 - EP US); H10K 85/649 (2023.02 - EP US)

Citation (search report)

See references of WO 2005012362A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

WO 2005012362 A1 20050210; EP 1646658 A1 20060419; US 2006222565 A1 20061005

DOCDB simple family (application)

DE 2004001584 W 20040721; EP 04762434 A 20040721; US 33868606 A 20060125