

Title (en)

DETECTOR ARRANGEMENT AND METHOD FOR THE DETECTION OF ELECTRICAL CHARGE CARRIERS

Title (de)

ERMITTLUNGS-ANORDNUNG UND VERFAHREN ZUM ERMITTELN ELEKTRISCHER LADUNGSTRAEGER

Title (fr)

DISPOSITIF DE DÉTECTION ET PROCÉDÉ DE DÉTECTION DE PORTEURS DE CHARGES ÉLECTRIQUES

Publication

**EP 1483792 A1 20041208 (DE)**

Application

**EP 03714697 A 20030312**

Priority

- DE 0300788 W 20030312
- DE 10211359 A 20020314

Abstract (en)

[origin: WO03079454A1] The invention relates to a detector arrangement (100), a method for the detection of electrical charge carriers and use of an ONO field effect transistor for detection of an electrical charge. The detector arrangement (100) has an ONO field effect transistor embodied on and/or in a substrate (101), for the detection of electrical charge carriers, such that the electrical charge carrier (103) for detection may be introduced into the ONO field effect transistor layer sequence (102), a recording unit (104), coupled to the ONO field effect transistor, for recording an electrical signal characteristic of the amount and/or the charge carrier type for the electrical charge carrier (103) introduced into the ONO layer sequence (102) and an analytical unit for determining the amount and/or the charge carrier type of the electrical charge carrier (103) introduced into the ONO layer sequence (102) from the characteristic electrical signal.

IPC 1-7

**H01L 29/792**

IPC 8 full level

**H01L 21/822** (2006.01); **H01L 29/792** (2006.01); **H01L 21/66** (2006.01); **H01L 21/8247** (2006.01); **H01L 23/544** (2006.01); **H01L 27/04** (2006.01); **H01L 29/78** (2006.01); **H01L 29/788** (2006.01)

CPC (source: EP US)

**H01L 22/34** (2013.01 - EP US); **H01L 29/7923** (2013.01 - EP US)

Citation (search report)

See references of WO 03079454A1

Designated contracting state (EPC)

DE FR IT

DOCDB simple family (publication)

**WO 03079454 A1 20030925**; CN 100416861 C 20080903; CN 1643700 A 20050720; DE 10211359 A1 20031002; EP 1483792 A1 20041208; JP 2005524221 A 20050811; JP 4443230 B2 20100331; US 2006267122 A1 20061130; US 7709836 B2 20100504

DOCDB simple family (application)

**DE 0300788 W 20030312**; CN 03806020 A 20030312; DE 10211359 A 20020314; EP 03714697 A 20030312; JP 2003577348 A 20030312; US 50778705 A 20050509