

Title (en)  
ALIGNED PARTICLE BASED SENSOR ELEMENTS

Title (de)  
AUF IN LINIEN GEBRACHTEN PARTIKELN BASIETER SENSOR

Title (fr)  
ELEMENTS DETECTEURS BASES SUR DES PARTICULES ALIGNES

Publication  
**EP 1141690 A4 20020807 (EN)**

Application  
**EP 99965062 A 19991130**

Priority  
• US 9928282 W 19991130  
• US 20199998 A 19981201

Abstract (en)  
[origin: WO0033062A1] The present invention relates to a sensor array for detecting an analyte in a fluid, comprising first and second sensors formed by chemically sensitive resistors, wherein the first sensor comprises a region of aligned conductive material; or where each of the sensors comprises alternating regions of nonconductive regions and aligned conductive regions with each resistor providing an electrical path through both the nonconductive region and the aligned conductive region, while each sensor manifests a different electrical resistance during contact with sample fluids having different analyte concentrations via the monitoring arrangement of having the sensors electrically connected to an electrical measuring apparatus. The aligned conductive particle material is aligned by exposure to either of an electric, magnetic, optical, photo-electric, electromagnetic or mechanical field, which serves to improve signal to noise ratio of vapor sensors allowing Lower Detection Limits for vapors being sensed. Such Lower Detection Limits allow for identification of lower concentrations of hazardous material and is advantageous in medical applications, such as detection of disease states in a patient.

IPC 1-7  
**G01N 27/26**; **G01N 27/12**

IPC 8 full level  
**G01N 27/12** (2006.01); **G01N 33/00** (2006.01)

CPC (source: EP)  
**G01N 33/0031** (2013.01)

Citation (search report)  
• [X] US 5238729 A 19930824 - DEBE MARK K [US]  
• [X] EP 0306183 A2 19890308 - JUNKOSHA CO LTD [JP]  
• [X] US 4581204 A 19860408 - VOIT HELMUT [DE]  
• [X] DE 19718584 C1 19981119 - FRAUNHOFER GES FORSCHUNG [DE]  
• [X] WO 9723777 A1 19970703 - CAPTEUR SENSORS & ANALYSERS [GB], et al  
• See references of WO 0033062A1

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**WO 0033062 A1 20000608**; **WO 0033062 A8 20000921**; **WO 0033062 A9 20001207**; AU 3105900 A 20000619; EP 1141690 A1 20011010; EP 1141690 A4 20020807

DOCDB simple family (application)  
**US 9928282 W 19991130**; AU 3105900 A 19991130; EP 99965062 A 19991130