

Title (en)  
HYBRID FILM TYPE SENSOR

Title (de)  
SENSOR VOM HYBRIDSCHICHTTYP

Title (fr)  
CAPTEUR DE TYPE FILM HYBRIDE

Publication  
**EP 1161678 A1 20011212 (EN)**

Application  
**EP 00978779 A 20001120**

Priority  
• US 0031660 W 20001120  
• US 44433499 A 19991119

Abstract (en)  
[origin: WO0136956A1] A miniaturized gas sensor comprises a thick-or-thin type electrodes, on a non-conductive supportive susbtrate (1), and in contact with a solid ionomer electrolyte (8), for the detection of toxic gases, i.e., carbon monoxide, and other oxidizable or reducible gases and vapors is described. The all-solid planar sensor cell has two or more film type electrodes (4, 5, 7) arranged on a non-conductive planar surface of a supportive substrate. The electrodes are discret and in intimate contact with the same solid polymer ionomer membrane. The sensor cell contains no liquid electrolyte and is operated in a constant-voltage, potentiostatic or potentiodynamic mode. A high sensitivity to a select gas or vapor is achieved by a novel three-phase contact area design for a sensing electrode which provides contact with the solid ionomer electrolyte, as well as the gas sample via diffusion openings or holes (2) that penetrate through the supportive substrate.

IPC 1-7  
**G01N 27/407**

IPC 8 full level  
**G01N 27/30** (2006.01); **G01N 27/407** (2006.01); **G01N 27/416** (2006.01); **G01N 27/49** (2006.01); **G01N 33/00** (2006.01); **G01N 27/333** (2006.01)

CPC (source: EP)  
**G01N 27/4074** (2013.01); **G01N 27/3335** (2013.01)

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**WO 0136956 A1 20010525**; **WO 0136956 A9 20020523**; AU 1620401 A 20010530; CA 2360595 A1 20010525; CA 2360595 C 20060207; CN 1195980 C 20050406; CN 1347495 A 20020501; EP 1161678 A1 20011212; EP 1161678 A4 20070221; JP 2003515131 A 20030422

DOCDB simple family (application)  
**US 0031660 W 20001120**; AU 1620401 A 20001120; CA 2360595 A 20001120; CN 00804346 A 20001120; EP 00978779 A 20001120; JP 2001538793 A 20001120