

Title (en)

ELECTROCHEMICAL GAS SENSOR WITH REDUCED CROSS-SENSITIVITY

Title (de)

ELEKTROCHEMISCHER GASENSOR MIT REDUZIERTER QUEREMPFINDLICHKEIT

Title (fr)

DETECTEUR DE GAZ ELECTROCHIMIQUE A SENSIBILITE CROISEE REDUITE

Publication

**EP 0721583 A1 19960717 (DE)**

Application

**EP 95924150 A 19950719**

Priority

- CH 9500166 W 19950719
- CH 241694 A 19940802

Abstract (en)

[origin: WO9604550A1] With the aid of a selective membrane (5a), a significant and lasting reduction in the cross-sensitivity of electrochemical gas sensors (7) to interfering gases (18) can be achieved by electrocatalytic means. A suitable catalyst (5b) is chosen to eliminate particular interfering gases (18) and applied to a gas-permeable membrane (8) in such a way that these gases are converted to products to which the measurement electrode (11a) reacts to a reduced degree or not at all, while the gas which is to be detected must not, if possible, be able to react so that it can react fully at the measurement electrode (11a). Such selective membranes (5a) can advantageously be combined with membrane electrodes. Unlike conventional adsorption and chemical adsorption filters, the catalytically operating membranes (5a) remain permanently active and do not become depleted even with concentrations well above maximum workplace concentrations. Electrochemical gas sensors fitted with selective membranes (5a) of this type work with conventional evaluation electronics (in the simplest case with an ammeter (22) connected to the measurement electrode (11a) and to a counter-electrode (12)) and do not require complex electronic compensation systems.

IPC 1-7

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IPC 8 full level

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CPC (source: EP)

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