

Title (en)

GAS SENSOR AND METHOD FOR SELECTIVELY DETECTING ACETYLENE AND ETHYLENE

Title (de)

GASSENSOR UND VERFAHREN ZUR SELEKTIVEN DETEKTION VON ACETYLEN UND ETHYLEN

Title (fr)

DÉTECTEUR DE GAZ ET PROCÉDÉ POUR LA DÉTECTION SÉLECTIVE D'ACÉTYLÈNE ET D'ÉTHYLÈNE

Publication

EP 3956655 A1 20220223 (DE)

Application

EP 20724734 A 20200415

Priority

- DE 102019002782 A 20190416
- DE 2020000078 W 20200415

Abstract (en)

[origin: WO2020211890A1] The invention relates to a gas sensor for selectively detecting and/or measuring acetylene and/or ethylene, comprising:
- a substrate; - an electrode pair; - a gas-sensitive layer, which consists of at least one metal oxide from the group ReFeO₃ and has contact with the electrode pair; - a heating element; and - a control device, characterized in that the heating element can be heated alternately to at least two different temperatures in the range of 150°C - 250°C, 200°C - 300°C or 250°C - 350°C by means of the control device. In particular, the gas-sensitive layer contains at least one metal oxide from the group LaFeO₃, SmFeO₃, EuFeO₃ or GdFeO₃. The invention also relates to a method for selectively detecting and/or measuring acetylene and/or ethylene, in which method the measurement or detection occurs at a gas-sensitive layer of metal oxide from the group ReFeO₃ alternately at at least two different temperatures. The gas sensor and the method can be used, for example, to detect gases in transformer oil and to measure the concentration of said gases, or to determine the degree of ripeness of fruits and vegetables.

IPC 8 full level

G01N 27/12 (2006.01); **G01N 33/00** (2006.01)

CPC (source: EP US)

G01N 27/123 (2013.01 - US); **G01N 27/124** (2013.01 - US); **G01N 27/125** (2013.01 - EP US); **G01N 33/0047** (2013.01 - EP US); **G01N 33/2841** (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

WO 2020211890 A1 20201022; DE 102019002782 A1 20201022; EP 3956655 A1 20220223; US 2022187232 A1 20220616

DOCDB simple family (application)

DE 2020000078 W 20200415; DE 102019002782 A 20190416; EP 20724734 A 20200415; US 202017603984 A 20200415