

Title (en)

ULTRASOUND CONVERTER ARRAY FOR APPLICATIONS IN GASEOUS MEDIA

Title (de)

ULTRASCHALLWANDLER-ARRAY FÜR ANWENDUNGEN IN GASFÖRMIGEN MEDIEN

Title (fr)

BATTERIE DE CONVERTISSEURS ULTRASONIQUES POUR APPLICATIONS DANS DES FLUIDES GAZEUX

Publication

EP 2144715 A1 20100120 (DE)

Application

EP 08748715 A 20080328

Priority

- DE 2008000540 W 20080328
- DE 102007021392 A 20070504

Abstract (en)

[origin: WO2008135004A1] The invention relates to an ultrasound converter array having at least one layer (1) made of a piezoelectrically active, cellular electret material between a first (2) and a second electrode structure (4). The first electrode structure (2) is formed of a plurality of independently addressable electrode elements (3), by means of which, in connection with the corresponding second electrode structure (4), the local thickness mode vibrations of the layer (1) or of pores in the layer (1) can be generated and/or detected using frequencies in the ultrasonic range. The proposed ultrasound converter array can be used advantageously for applications in gaseous media, is simple to produce, and allows phase-controlled operation for directed ultrasonic emission and directed ultrasonic reception.

IPC 8 full level

B06B 1/06 (2006.01)

CPC (source: EP)

B06B 1/0692 (2013.01)

Citation (search report)

See references of WO 2008135004A1

Citation (examination)

- LEKKALA J ET AL: "EMFi - New Electret Material for Sensors and Actuators", ELECTRETS, 1999. ISE 10. PROCEEDINGS. 10TH INTERNATIONAL SYMPOSIUM ON ATHENS, GREECE 22-24 SEPT. 1999, PISCATAWAY, NJ, USA,IEEE, US, 22 September 1999 (1999-09-22), pages 743 - 746, XP010376652, ISBN: 978-0-7803-5025-0, DOI: 10.1109/ISE.1999.832151
- SESSLER G M ET AL: "Electromechanical Response of Cellular Electret Films", ELECTRETS, 1999. ISE 10. PROCEEDINGS. 10TH INTERNATIONAL SYMPOSIUM ON ATHENS, GREECE 22-24 SEPT. 1999, PISCATAWAY, NJ, USA,IEEE, US, 22 September 1999 (1999-09-22), pages 261 - 264, XP010376538, ISBN: 978-0-7803-5025-0, DOI: 10.1109/ISE.1999.832037

Designated contracting state (EPC)

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

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

WO 2008135004 A1 20081113; DE 112008001734 A5 20100415; EP 2144715 A1 20100120

DOCDB simple family (application)

DE 2008000540 W 20080328; DE 112008001734 T 20080328; EP 08748715 A 20080328