

Title (en)

Method and device for producing a bipolar ion atmosphere using electrical barrier layer discharge

Title (de)

Verfahren und Vorrichtung zur Erzeugung einer bipolaren Ionenatmosphäre mittels elektrischer Sperrschichtentladung

Title (fr)

Procédé et dispositif de production d'une atmosphère ionique bipolaire à l'aide d'une décharge de couche de blocage électrique

Publication

**EP 2251086 A3 20140305 (DE)**

Application

**EP 10004911 A 20100510**

Priority

DE 102009021631 A 20090516

Abstract (en)

[origin: EP2251086A2] The method involves activating an electric surface discharge at a wall of a central channel that is flowed-through by a gaseous medium by application of variable high-voltage to an excitation electrode (2), such that ions are produced in the gaseous medium under field-free conditions. The electrode is separated from a wall electrode (4) and a flow channel (5) by a dielectric (1), and voltage impulse is applied to the excitation electrode, where passages are formed between the wall electrode and the dielectric. An independent claim is also included for a device for neutralization of gas-carried particles or for generation of bipolar ion atmosphere for an ion mobility spectroscopy.

IPC 8 full level

**B03C 3/38** (2006.01); **B03C 3/06** (2006.01)

CPC (source: EP US)

**B03C 3/38** (2013.01 - EP US); **B03C 3/06** (2013.01 - EP US)

Citation (search report)

- [X1] EP 1944406 A1 20080716 - TNO [NL]
- [X1] US 4210949 A 19800701 - MASUDA SENICHI [JP]
- [AD] DE 10348217 A1 20050525 - BTU COTTBUS [DE]
- [AD] DE 102007042436 B3 20090319 - BTU COTTBUS [DE]
- [A] DE 4400827 C1 19950420 - GUTSCH ANDREAS DIPL ING [DE]
- [A] DE 19633368 A1 19980226 - KOESTER VOLKWIN [DE], et al
- [A] DE 3235874 A1 19830601 - MASUDA SENICHI

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 SE SI SK SM TR

Designated extension state (EPC)

BA ME RS

DOCDB simple family (publication)

**EP 2251086 A2 20101117; EP 2251086 A3 20140305; DE 102009021631 B3 20101202; US 2010290171 A1 20101118**

DOCDB simple family (application)

**EP 10004911 A 20100510; DE 102009021631 A 20090516; US 78135910 A 20100517**