

Title (en)

ABRIDGED MULTIPOLE STRUCTURE FOR THE TRANSPORT, SELECTION AND TRAPPING OF IONS IN A VACUUM SYSTEM

Title (de)

VEREINFACHTE MEHRPOLIGE STRUKTUR FÜR TRANSPORT, AUSWAHL UND VERFOLGUNG VON IONEN IN EINEM VAKUUMSYSTEM

Title (fr)

STRUCTURE MULTIPÔLE SIMPLIFIÉE POUR LE TRANSPORT, LA SÉLECTION ET LE PIÉGEAGE D'IONS DANS UN SYSTÈME À VIDE

Publication

EP 2715775 B1 20170809 (EN)

Application

EP 12792062 A 20120602

Priority

- US 201113152363 A 20110603
- US 201113177780 A 20110707
- US 201113249709 A 20110930
- US 2012040620 W 20120602

Abstract (en)

[origin: WO2012167207A2] An improved trap-TOF mass spectrometer has a set of electrodes arranged to produce both a quadrupolar RF confining field and a substantially homogeneous dipole field. In operation, ions are first confined by the RF field and then, at a selected time, the RF confining field is discontinued and the dipole field is used to accelerate the ions so as to initiate a TOF MS analysis. The apparatus of the present invention may be used alone or in conjunction with other analyzers to produce mass spectra from analyte ions.

IPC 8 full level

H01J 49/40 (2006.01); **H01J 49/06** (2006.01); **H01J 49/26** (2006.01); **H01J 49/42** (2006.01)

CPC (source: EP)

H01J 49/063 (2013.01); **H01J 49/401** (2013.01); **H01J 49/403** (2013.01); **H01J 49/421** (2013.01); **H01J 49/4225** (2013.01)

Citation (examination)

- US 2002092980 A1 20020718 - PARK MELVIN A [US]
- Y. WANG| ET AL: "Exact two-dimensional quadrupole field and superposition of a homogeneous field", REVIEW OF SCIENTIFIC INSTRUMENTS, vol. 64, no. 9, 1 September 1993 (1993-09-01), pages 2585 - 2590, XP055321658, DOI: 10.1063/1-1143871

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

DOCDB simple family (publication)

WO 2012167207 A2 20121206; WO 2012167207 A3 20130131; CA 2837873 A1 20121206; CA 2837873 C 20170912; EP 2715775 A2 20140409; EP 2715775 A4 20150603; EP 2715775 B1 20170809

DOCDB simple family (application)

US 2012040620 W 20120602; CA 2837873 A 20120602; EP 12792062 A 20120602