

Title (en)
COMPACT MASS SPECTROMETER

Title (de)
KOMPAKTES MASSENSPEKTROMETER

Title (fr)
SPECTROMÈTRE DE MASSE COMPACT

Publication
EP 2939255 B1 20210310 (EN)

Application
EP 12813735 A 20121231

Priority
US 2012072328 W 20121231

Abstract (en)
[origin: WO2014105089A1] Mass spectrometers and methods for measuring information about samples using mass spectrometry are disclosed. The mass spectrometers include an ion source, an ion trap, an ion detector, and a gas pressure regulation system, where during operation of the mass spectrometers, the gas pressure regulation system is configured to maintain a gas pressure of between 100 mTorr and 100 Torr in at least two of the ion source, the ion trap, and the ion detector, and the ion detector is configured to detect ions generated by the ion source according to a mass-to-charge ratio of the ions.

IPC 8 full level
H01J 49/24 (2006.01); **H01J 49/00** (2006.01)

CPC (source: CN EP)
H01J 49/0013 (2013.01 - CN EP); **H01J 49/24** (2013.01 - CN EP)

Citation (examination)
• WILLIAM B WHITTEN ET AL: "Miniature Ion Traps and Arrays for High Pressure Mass Spectrometry", H01J49/424, 12 October 2005 (2005-10-12), XP055078521, Retrieved from the Internet <URL:http://www.hems-workshop.org/5thWS/Talks/Thursday/7_WBW.EMS.pdf> [retrieved on 20130910]
• DARLING R B ET AL: "Micromachined Faraday cup array using deep reactive ion etching", SENSORS AND ACTUATORS A: PHYSICAL, ELSEVIER BV, NL, vol. 95, no. 2-3, 1 January 2002 (2002-01-01), pages 84 - 93, XP004377879, ISSN: 0924-4247, DOI: 10.1016/S0924-4247(01)00718-X
• "Introduction to mass spectrometry : instrumentation, applications, and strategies for data interpretation", 1 January 2007, WILEY, Chichester [u.a], ISBN: 978-0-470-51634-8, article J THROCK WATSON ET AL: "John Wiley & Sons, Ltd INTRODUCTION TO MASS SPECTROMETRY", pages: 53 - 172, XP055389637

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 2014105089 A1 20140703; CN 105009250 A 20151028; CN 105009250 B 20180109; CN 107946166 A 20180420;
CN 107946166 B 20200218; CN 111243938 A 20200605; CN 111243938 B 20230623; CN 116864367 A 20231010; EP 2939255 A1 20151104;
EP 2939255 B1 20210310; JP 2016510477 A 20160407; JP 6183929 B2 20170823

DOCDB simple family (application)
US 2012072328 W 20121231; CN 201280078246 A 20121231; CN 201711304468 A 20121231; CN 202010069903 A 20121231;
CN 202310656854 A 20121231; EP 12813735 A 20121231; JP 2015550371 A 20121231