Title (en)

Microengineered nanospray electrode system

Title (de)

Mikromechanisches Nano-Elektrodensystem

Title (fr)

Système de nano-électrodes micro-mécanique

Publication

EP 1746631 A3 20090225 (EN)

Application

EP 06117211 A 20060714

Priority

- GB 0514843 A 20050720
- GB 0519439 A 20050923

Abstract (en)

[origin: EP1746631A2] This invention provides a method of aligning a nanospray capillary needle (107), a set of electrodes (111), and a capillary input to a mass spectrometer (106). The electrode system is formed using microengineering technologies, as an assembly of two separate chips. Each chip is formed on an insulating plastic substrate. The first chip carries mechanical alignment features (110) for the capillary electrospray needle and the API mass spectrometer input, together with a set of partial electrodes. The second chip carries a set of partial electrodes. The complete electrode system is formed when the chips are assembled in a stacked configuration, and consists of an einzel lens capable of initiating a Taylor cone and separating ions from neutrals by focusing.

IPC 8 full level

H01J 49/16 (2006.01)

CPC (source: EP)

H01J 49/0018 (2013.01); **H01J 49/067** (2013.01); **H01J 49/165** (2013.01)

Citation (search report)

- [A] US 5386115 A 19950131 - FREIDHOFF CARL B [US], et al
- [A] WO 0015321 A1 20000323 - ADVANCED BIOANALYTICAL SERVICE [US], et al
- [A] NIESSEN W M A: "Advances in instrumentation in liquid chromatography-mass spectrometry and related liquid-introduction techniques", JOURNAL OF CHROMATOGRAPHY, ELSEVIER SCIENCE PUBLISHERS B.V. AMSTERDAM, NL, vol. 794, no. 1-2, 23 January 1998 (1998-01-23), pages 407 - 435, XP004115410, ISSN: 0021-9673

Cited by

EP2512638A4

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK RS

DOCDB simple family (publication)

EP 1746631 A2 20070124; **EP 1746631 A3 20090225**; **EP 1746631 B1 20130619**; CA 2552086 A1 20070120; CA 2552086 C 20140909; JP 2007027131 A 20070201; JP 5265095 B2 20130814

DOCDB simple family (application)

EP 06117211 A 20060714; CA 2552086 A 20060714; JP 2006197964 A 20060720