

Title (en)
DEVICE AND MASS ANALYSIS OF MOLECULES USING UV OR VISIBLE LASER BEAM PHOTODISSOCIATION

Title (de)
VORRICHTUNG UND MASSEANALYSE VON MOLEKÜLEN UNTER VERWENDUNG VON UV-PHOTODISSOZIATION ODER PHOTODISSOZIATION MIT SICHTBAREM LASERSTRAHL

Title (fr)
DISPOSITIF ET ANALYSE EN MASSE DE MOLECULES METTANT EN OEUVRE UNE PHOTODISSOCIATION PAR FAISCEAU LASER UV OU VISIBLE

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EP 1829082 A1 20070905 (FR)

Application
EP 05849269 A 20051215

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Abstract (en)
[origin: WO2006064132A1] The invention concerns a device (I) for mass analysis of molecules comprising a quadripole ion trap (1) provided with an input (2) for injecting molecules in ionized form to be analyzed and an output (3) for ejecting ions to be detected, including a system of electrodes (4) enabling a three-dimensional quadripole field to be generated, capable of trapping the molecules in ionized form to be analyzed, based on their mass over charge ratio (m/z) in a trapping volume (5), said trap (1) being coupled to a UV or visible laser beam (L) dissociating the molecules to be analyzed. The invention is characterized in that the laser beam (L) is introduced into the trap, without passing through an optical fiber via an opening (13) provided in one of the electrodes, different from the input (2) and the output (3) and sealed by a porthole allowing through the laser beam, the dimension of the porthole (14) being selected so that the laser beam covers the entire trapping volume. The invention also concerns a mass analysis method, with laser beam dissociation.

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CPC (source: EP US)
G01N 27/64 (2013.01 - EP US); **H01J 49/0059** (2013.01 - EP US); **H01J 49/424** (2013.01 - EP US)

Citation (search report)
See references of WO 2006064132A1

Citation (examination)
ROLLAND D ET AL: "Resonance enhanced multiphoton dissociation of polycyclic aromatic hydrocarbons cations in an RF ion trap", CHEMICAL PHYSICS LETTERS, NORTH-HOLLAND, AMSTERDAM, vol. 373, 1 January 2003 (2003-01-01), pages 292 - 298, XP003021476, ISSN: 0009-2614

Citation (third parties)
Third party :
ROLLAND D. ET AL.: "Resonance enhanced multiphoton dissociation of polycyclic aromatic hydrocarbons cations in an RF ion trap", CHEM. PHYS. LETT., vol. 373, 2003, pages 292 - 298, XP003021476

Cited by
EP2555225A1; WO2013021124A1

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