

Title (en)
MASS SPECTROMETRY WITH MULTIPOLE ION GUIDES

Title (de)
MASSENSPEKTROMETRIE MIT MULTIPOLIONENLEITERN

Title (fr)
SPECTROMETRIE DE MASSE AVEC GUIDES D'IONS MULTIPOLAIRES

Publication
EP 1090412 A4 20060125 (EN)

Application
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Priority

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- US 8724698 P 19980529
- US 23594699 A 19990122

Abstract (en)

[origin: WO9962101A1] A mass spectrometer (40) is configured with individual multipole ion guides (60, 62) configured in an assembly in alignment along a common centerline (5) wherein at least a portion of each multiple ion guide (60, 62) mounted in the assembly resides in a vacuum region (72, 73) with higher background pressure. Said multiple ion guides (60, 62) configured in a higher pressure vacuum region (72, 73) are operated in mass to charge selection and ion fragmentation modes. Individual sets of RF, +/- DC and resonant frequency waveform voltage supplies provide potentials to the rods of each multiple ion guide allowing the operation of ion transmission, ion trapping, mass to charge selection and ion fragmentation functions independently in each ion guide (60, 62). The presence of background pressure maintained sufficiently high to cause ion to neutral gas collisions along a portion of each multiple ion guide linear assembly allows the conducting of Collisional Induced Dissociation (CID) fragmentation of ions by axially accelerating ions from one multiple ion guide into an adjacent ion guide, analogous to a triple quadruple ion function.

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CPC (source: EP)
H01J 49/004 (2013.01); **H01J 49/063** (2013.01); **H01J 49/4225** (2013.01)

Citation (search report)

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- [A] GB 2299446 A 19961002 - BRUKER FRANZEN ANALYTIK GMBH [DE]
- [XY] CHENG X ET AL: "Interface for a Four-Sector Mass Spectrometer with a Dual-Purpose Collision Cell: High Transmission at Low to Intermediate Energies", JOURNAL OF THE AMERICAN SOCIETY FOR MASS SPECTROMETRY, ELSEVIER SCIENCE INC, US, vol. 6, no. 3, March 1995 (1995-03-01), pages 175 - 186, XP004052030, ISSN: 1044-0305
- See references of WO 9962101A1

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