

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 B1 20140305 (EN)

Application
EP 99953401 A 19990529

Priority

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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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H01J 49/004 (2013.01); **H01J 49/063** (2013.01); **H01J 49/4225** (2013.01)

Citation (examination)

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WO 9962101 A1 19991202; WO 9962101 A9 20000302; AU 4326599 A 19991213; CA 2332534 A1 19991202; CA 2332534 C 20080722; CA 2626383 A1 19991202; CA 2626383 C 20110719; EP 1090412 A1 20010411; EP 1090412 A4 20060125; EP 1090412 B1 20140305; JP 2002517070 A 20020611

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