

Title (en)

Mass Spectrometer comprising an Ion Mobility Spectrometer and a Mass Filter

Title (de)

Massenspektrometer mit Ionenmobilitätspektrometer und Massenfilter

Title (fr)

Spectromètre de masse comprenant un spectromètre à mobilité ionique et un filtre de masse

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Application

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Abstract (en)

A mass spectrometer is disclosed wherein ions having a particular desired charge state are selected by operating an ion mobility spectrometer 4 in combination with a quadrupole mass filter 5. Precursor ions are fragmented or reacted to form product ions in a collision cell ion trap 6 and sent back upstream to an upstream ion trap 2. The fragment or product ions are then passed through the ion mobility spectrometer 4 wherein they become temporally separated according to their ion mobility. Fragment or product ions are then re-trapped in the collision cell ion trap 6 before being released therefrom in packets. A pusher electrode 8 of a time of flight mass analyser is energised a predetermined period of time after a packet of ions is released from the collision cell ion trap 6. Accordingly, it is possible to select multiply charged precursor ions from a background of singly charged ions, fragment them, and mass analyse the fragment ions with a near 100% duty cycle across the whole mass range.

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CPC (source: EP)

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Citation (applicant)

WO 0207185 A1 20020124 - ADVANCED RES & TECH INST [US], et al

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