

Title (en)

QUADRUPOLE WITH APPLIED SIGNAL HAVING OFF-RESONANCE FREQUENCY

Title (de)

QUADRUPOLE MIT EINEM VON DER RESONANZFREQUENZ ABWEICHENDEN ANGELEGTEN SIGNAL

Title (fr)

QUADRIPOLE A SIGNAL APPLIQUE DE FREQUENCE HORS RESONANCE

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Application

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Abstract (en)

[origin: WO9500237A1] A mass spectrometry method in which a combined field (comprising a trapping field and supplemental field) is established and at least one parameter of the combined field is changed to excite ions trapped in the combined field sequentially (such as for detection). The supplemental field is a periodically varying field having an off-resonance frequency, in the sense that the supplemental field frequency nearly matches (but differs from) a frequency of motion of an ion stably trapped by the trapping field alone. Sequential ion excitation in accordance with the invention can rapidly excite each ion to a degree sufficient for a desired purpose but insufficient for ejection from the trap. The amplitude of the supplemental field is kept sufficiently high to excite ions (via an off-resonance excitation mechanism) before they undergo resonant excitation.

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