

Title (en)  
TANDEM QUADRUPOLE MASS SPECTROMETER SYSTEM

Publication  
**EP 0023826 B1 19840307 (EN)**

Application  
**EP 80302635 A 19800801**

Priority  
CA 333327 A 19790803

Abstract (en)  
[origin: EP0023826A1] A tandem quadrupole mass spectrometer system having first 10, second 14 and third 12 quadrupole sections close coupled in series with one another. AC voltages are applied to the centre section and conventional AC and DC voltages are applied to the two end sections. The AC applied to all three sections is synchronized in frequency. The AC phase shift between each section is of magnitude between 0 and 0.1 cycles in absolute value, preferably between 0 and 0.03 cycles in absolute value, and in the preferred embodiment the AC phase shift between each section is essentially zero. The sections are spaced apart longitudinally by a very short distance not exceeding  $r$ , the radius of the inscribed circle within the quadrupole rods. In this way ion losses between the sections are minimized, resulting in increased sensitivity.

IPC 1-7  
**H01J 49/42**; B01D 59/44

IPC 8 full level  
**H01J 49/42** (2006.01)

CPC (source: EP)  
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Cited by  
USRE40632E; US4535236A

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CH DE FR GB LI

DOCDB simple family (publication)  
**EP 0023826 A1 19810211**; **EP 0023826 B1 19840307**; CA 1134957 A 19821102; DE 3066835 D1 19840412

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