

Title (en)  
TIME-OF-FLIGHT MASS SPECTROMETER WITH AN ION REFLECTOR

Publication  
**EP 0208894 A3 19880921 (DE)**

Application  
**EP 86107585 A 19860604**

Priority  
DE 3524536 A 19850710

Abstract (en)  
[origin: US4731532A] The ion reflector of the time of flight mass spectrometer comprises between the decelerating electrodes (27, 28) defining the decelerating field and the reflector electrode (29) an additional focusing electrode (30). Just as the focusing electrode (30), the deceleration electrodes (28, 28) are also preferably designed as grid-less diaphragm rings. Further, the front decelerating electrode arranged at the input of the ion reflector has preferably a larger aperture diameter than the rear decelerating electrode (28). The arrangement of the decelerating and focusing electrodes and the potentials applied to them are selected to ensure that an inhomogenous electric field is generated in the area of these electrodes which has the effect of a lens and which in conjunction with the following homogenous field which extends to the reflector electrode (29) ensures not only focusing in time, but also perfect geometrical focusing of the ion beam upon the detector.

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**H01J 49/40**

IPC 8 full level  
**H01J 49/40** (2006.01)

CPC (source: EP US)  
**H01J 49/405** (2013.01 - EP US)

Citation (search report)  
• [A] DE 3423394 A1 19850605 - SHIMADZU CORP [JP]  
• [A] SOVIET PHYSICS TECHNICAL PHYSICS, Band 28, Nr. 10, Oktober 1983, Seiten 1250-1253, American Institute of Physics, New York, US; M.A. IVANOV et al.: "Mass reflectron for studying interaction between laser light and molecules in a supersonic gas jet"

Cited by  
EP0373550A3; CN103201821A; US4810883A; DE10005698B4; US4742224A; DE102018122960A1; DE102018122960B4

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