

Title (en)
SPECTROMETER PROVIDED WITH PULSED ION SOURCE AND TRANSMISSION DEVICE TO DAMP ION MOTION AND METHOD OF USE

Title (de)
SPEKTROMETER MIT GEPULSTER IONENQUELLE, KOPPLUNGSVORRICHTUNG ZUR DÄMPFUNG DER IONENBEWEGUNG, UND METHODE ZUR VERWENDUNG DERSELBEN

Title (fr)
SPECTROMETRE A SOURCE IONIQUE A IMPULSIONS ET APPAREIL DE TRANSMISSION VISANT A AMORTIR LA MOBILITE IONIQUE, ET PROCEDE D'UTILISATION

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Application
EP 99900849 A 19990125

Priority
• CA 9900034 W 19990125
• CA 2227806 A 19980123

Abstract (en)
[origin: WO9938185A3] A method and apparatus are provided for providing an ion transmission device or interface between an ion source and a spectrometer. The ion transmission device can include a multipole rod set and includes a damping gas, to damp spatial and energy spreads of ions generated by a pulsed ion source. The multipole rod set has the effect of guiding the ions along an ion path, so that they can be directed into the inlet of a mass spectrometer. The invention has particular application to MALDI (matrix-assisted laser desorption/ionization) ion sources, which produce a small supersonic jet of matrix molecules and ions, which is substantially non-directional, and can have ions travelling in all available directions from the source and having a wide range of energy spreads. The ion transmission device can have a number of effects, including: substantially spreading out the generated ions along an ion axis to generate a quasi-continuous beam; reducing the energy spread of ions emitted from the source; and at least partially suppressing unwanted fragmentation of analyte ions. Consequently, a number of pulses of ions can be delivered to the time-of-flight or other spectrometer, for each cycle of the ion generation.

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