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Titel des Beitrags: Twin mass peak ion source for comparative mass spectrometry: Application to circular dichroism laser MS

Abstract: A pulsed ion source has been developed supplying two slightly shifted mass spectra for every single ionization pulse, e.g., by laser induced resonance enhanced multiphoton ionization (REMPI). This allows comparison of ion signals with a difference of relative intensity in the percent and sub-percent range. Such small differences may be due to small changes of gas compn. or of ionization conditions and usually are hidden by pulse to pulse fluctuations of laser pulse energy, gas d., elec. fields, ion detection, etc. With the presented twin-peak ion source, both ion signals are subject to the same fluctuations which will influence the ratio of the ion signals only marginally. This method has been applied to CD laser mass spectrometry, where relative ion signal ratios 2(I_r - I_l)/(I_r + I_l) due to ionization with right and left circularly polarized light have to be recorded in the 10-3 range and below. [on SciFinder(R)]

Stichworte: Circular dichroism Ionization Mass spectra (twin mass peak ion source for comparative mass spectrometry and application to CD laser mass spectrometry) CD laser mass spectrometry twin mass peak ion

(3-Methylcyclopentanone) Role: PEP (Physical, engineering or chemical process), PRP (Properties), PROC (Process) (twin mass peak ion source for comparative mass spectrometry and application to CD laser mass spectrometry)