Autor(en) des Beitrags:
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Titel des Beitrags:
Progress in circular dichroism laser mass spectrometry

Abstract:
CD in ion yield has promising new potentials for chiral anal. Our progress of its development is described here. CD in ion yield is achieved by resonance-enhanced multiphoton ionization. The feasibility of CD spectroscopy and quant. detn. of CD by this method is demonstrated. Several excitation schemes have been applied using different types of lasers, which vary in wavelength and repetition rate. Progress to improve the statistical error and thus the lower limit of measurable CD is described. This is achieved by adding achiral compds. or racemic mixts. of chiral compds. to the sample gas as ref. substances and ionizing them by the same laser pulse. Therefore, in the mass spectrum of every single laser pulse, ion signals of sample and ref. species appear both being subject to the same kind of instrumental fluctuations (in particular of laser pulse energy). In another approach, a laser repetition rate of 200 Hz allowed averaging of large nos. of laser pulses. [on SciFinder(R)]

Stichworte:
(resonance-enhanced multiphoton progress in CD laser mass spectrometry) CD laser ionization REMPI mass spectrometry

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