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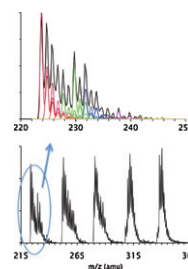
Regular articles

65–71

The relative abundances of silicon hydride clusters, Si_nH_x^- ($n = 8\text{--}12$ and $0 \leq x \leq 25$), investigated with high-resolution time-of-flight mass spectrometry

Samuel J. Peppernick, K.D. Dasitha Gunaratne, A.W. Castleman Jr.

The relative stabilities of large silicon hydride clusters are quantified by implementing an isotopic deconvolution of high-resolution time-of-flight mass spectra.

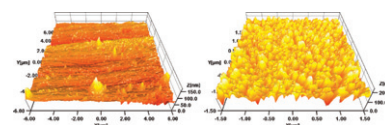


72–84

Laser desorption/ionization mass spectrometry on nanostructured semiconductor substrates: DIOS™ and QuickMass™

K.P. Law

This work investigated the physicochemical properties of the commercial DIOS™ and QuickMass™ targets, their suitability for biological mass spectrometry and the desorption/ionization mechanism.

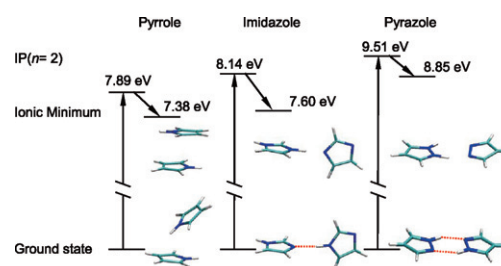


85–93

Mass spectrometry of hydrogen bonded clusters of heterocyclic molecules: Electron ionization vs. photoionization

Viktoriya Poterya, Ondřej Tkáč, Juraj Fedor, Michal Fárník, Petr Slavíček, Udo Buck

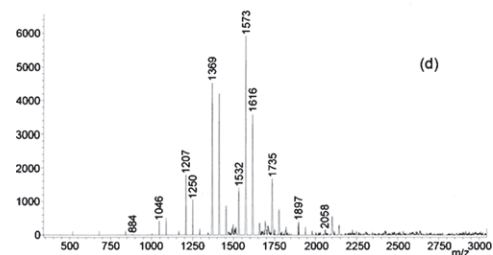
Ionization and photochemistry of clusters of small heteroaromatic ring molecules pyrrole, imidazole and pyrazole were studied in a molecular beam experiment.



94–99**Application of matrix-assisted laser desorption/ionization time-of-flight mass spectrometry (MALDI-TOF-MS) in preparation of chitosan oligosaccharides (COS) with degree of polymerization (DP) 5–12 containing well-distributed acetyl groups**

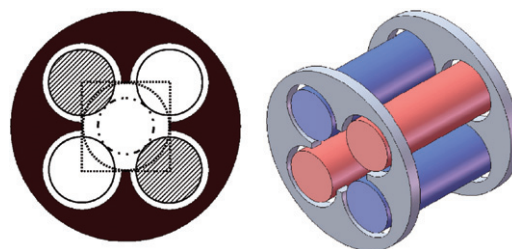
Mian Chen, Xiqiang Zhu, Zhiming Li, Xueping Guo, Peixue Ling

MALDI-TOF-MS is employed in the preparation of COS with DP 5–12, mainly 7–10, containing well-distributed acetyl groups. Fine structure is introduced in further COS study as a new drug.

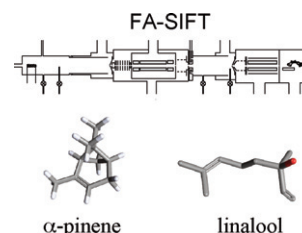
**100–105****Anharmonic contributions in real RF linear quadrupole traps**

J. Pedregosa, C. Champenois, M. Houssin, M. Knoop

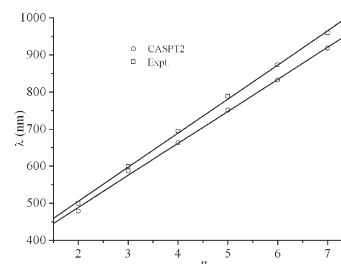
The presence of anharmonic terms in the radiofrequency potential in a radiofrequency quadrupole linear ion trap limits the total number of stored ions. In this paper, we have studied the anharmonic content of the trapping potential for different implementations of a quadrupole trap, searching for the geometry best suited for the trapping of large ion clouds. As a result of the study, an alternative geometry is proposed which represents a compromise between simplicity and quality of the trapping field.

**106–112****FA-SIFT study of reactions of protonated water and ethanol clusters with α -pinene and linalool in view of their selective detection by CIMS**

F. Dhooghe, C. Amelynck, J. Rimetz-Planchon, N. Schoon, F. Vanhaecke

Ion/molecule reactions of protonated ethanol and water clusters with α -pinene and linalool have been characterized in a FA-SIFT instrument.**113–119****Theoretical studies on structures and electronic spectra of linear $\text{HC}_{2n+1}\text{H}^+$ ($n = 2-7$)**

Jinglai Zhang, Xugeng Guo, Zexing Cao

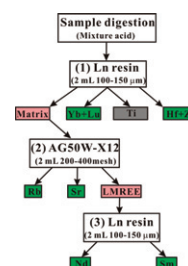
The linear size dependences of the absorption wavelengths of the origin bands for $\text{HC}_{2n+1}\text{H}^+$ ($n = 2-7$) clusters by the experiments and CASPT2 calculations.

120–126

Combined chemical separation of Lu, Hf, Rb, Sr, Sm and Nd from a single rock digest and precise and accurate isotope determinations of Lu–Hf, Rb–Sr and Sm–Nd isotope systems using Multi-Collector ICP-MS and TIMS

Yue-heng Yang, Hong-fu Zhang, Zhu-yin Chu, Lie-wen Xie, Fu-yuan Wu

A combined procedure for separating Lu, Hf, Rb, Sr, Sm and Nd from a single sample digestion is presented in this paper.

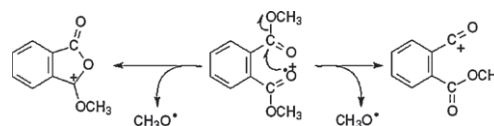


127–132

Metastable dimethyl phthalate molecular ions: Does the loss of a methoxyl radical proceed with or without anchimeric assistance?

Pascal Gerbaux, Julien De Winter, Robert Flammang, Vinh Son Nguyen, Minh Tho Nguyen

Using MS/MS/MS experiments and quantum chemical calculations, it is demonstrated that oxygen (carbonyl) methylated phthalic anhydride cations are produced when metastable dimethyl phthalate molecular ions expel a methoxyl radical. At higher internal energies, isomeric acyl ions are competitively generated.

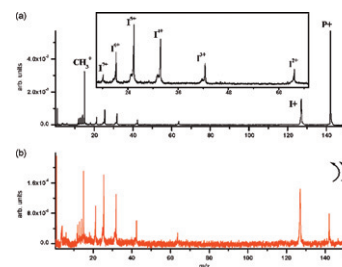


133–141

Multielectron dissociative ionization of CH₃I clusters under moderate intensity ps laser irradiation

G. Karras, C. Kosmidis

A mechanism for the observed multielectron dissociative ionization of (CH₃I)_n clusters, at moderate ps laser intensities, is proposed.



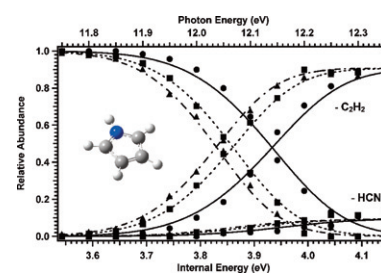
Short communications

142–144

Threshold photoelectron photoion coincidence spectroscopy sheds light on the dissociation of pyrrole and thiophene molecular ions

Emma E. Rennie, Louise Cooper, Larisa G. Shpinkova, David M.P. Holland, David A. Shaw, Paul M. Mayer

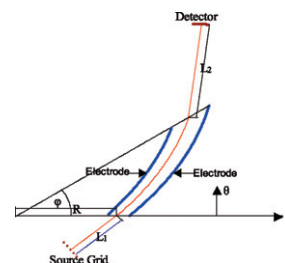
Threshold photoelectron photoion coincidence spectroscopy was employed to examine the loss of ethyne from ionized pyrrole and thiophene near their dissociation thresholds as a function of internal energy and reaction time.



145–147**The spiral main path electric deflector as a time-of-flight mass analyzer**

Damaschin Ioanoviciu

The second order flight-time properties of logarithmic spiral main path cylindrical electrostatic condensers were derived. Time-of-flight mass spectrometers including such analyzers can be used to compress wide ion packets.



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