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Contents

Regular articles

77-84

Ion-molecule reactions facilitate the identification and differentiation of primary, secondary and tertiary amino functionalities in protonated monofunctional analytes in mass spectrometry

Mingkun Fu, Ryan J. Eismin, Penggao Duan, Sen Li, Hilkka I. Kenttämaa

Differentiation of a protonated primary and tertiary amine (M) based on their reactions with hexamethylphosphoramide (HMPA).



85-90

Flowing afterglow studies of the electron recombination of protonated cyanides (RCN)H⁺ and their proton-bound dimer ions (RCN)₂H⁺ where R is H, CH₃, and CH₃CH₂

J.L. McLain, C.D. Molek, D. Osborne Jr., N.G. Adams

This plot indicates very clearly that selecting the appropriate [HCN] is necessary for obtaining accurate α_e 's. The designated regions are where H₃⁺, HCNH⁺ and (HCN)₂H⁺ control the loss of electrons in a flowing afterglow.



91-98

Tandem mass spectrometry and multiple reaction monitoring using an atmospheric pressure chemical ionization triple quadrupole mass spectrometer for product identification in atmospherically important reactions

Janeen Auld, Donald R. Hastie

The ability to use an APCI-MS/MS system to monitor target \rightarrow fragment ion pairs for the separation of isobaric ions and to provide direct experimental insight into product formation is shown for the hydroxyl radical initiated oxidation of β -pinene.



99-107

Determination of polar 1H-benzotriazoles and benzothiazoles in water by solid-phase extraction and liquid chromatography LTQ FT Orbitrap mass spectrometry

Jan A. van Leerdam, Ariadne C. Hogenboom, Margaretha M.E. van der Kooi, Pim de Voogt

With high resolution LC–MS, six out of ten polar benzotriazoles and benzothiazoles are detected in Dutch drinking water samples in concentration levels up to $0.2~\mu$ g/L.

108–111

The effect of relative humidity on the detection of pyrrole by PTR-MS for OH reactivity measurements

V. Sinha, T.G. Custer, T. Kluepfel, J. Williams

Sensitivity dependence of PTR-MS for pyrrole detection in dry and humid air is reported for the new application of OH reactivity measurements in ambient air.





112–122

Composite field approximations for ion traps with apertures on electrodes

Madhurima Chattopadhyay, Neeraj Kumar Verma, Atanu K. Mohanty

This paper presents analytical formulae for the contribution of apertures (holes/slits) to the field inside ion traps in terms of aperture size.



Cross-section of an ion trap with apertures.



Bismuth carbide cluster ions produced by a gas aggregation source

Y. Yamada, T. Nakagawa

Bismuth carbide cluster ions, $Bi_nC_{2n}^*$ (n = 3–11), were produced using a gas aggregation source. Reactions of neutral Bi clusters with hydrocarbon gases followed by laser ionization can produce $Bi_nC_{2n}^*$ in a gas phase.



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128-132

Mass spectrometric study of cutaneous volatiles by secondary electrospray ionization

Pablo Martínez-Lozano

We compare the volatile fingerprint from the hands of two subjects by secondary electrospray ionization-mass spectrometry.



133-140

Low-energy electron-induced chemistry of condensed-phase hexamethyldisiloxane: Initiating dissociative process and subsequent reactions

I. Ipolyi, E. Burean, T. Hamann, M. Cingel, S. Matejcik, P. Swiderek

Electron-induced reactions in condensed hexamethyldisiloxane are investigated with the aim of unravelling the mechanisms of cross-linking reactions of siloxanes under electron exposure.



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