



## Contents

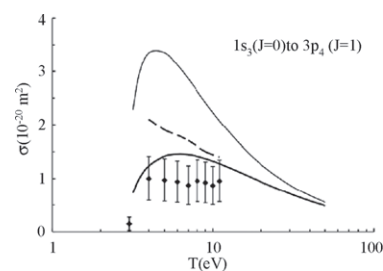
### Regular articles

59–64

#### Excitation of the $3p^55p$ levels of argon from the $3p^54s$ metastables

M. Asgar Ali, P.M. Stone

Calculations are presented of cross sections at electron impact energies from threshold to 500 eV for direct excitation of the  $3p^54s$  metastables of atomic argon.

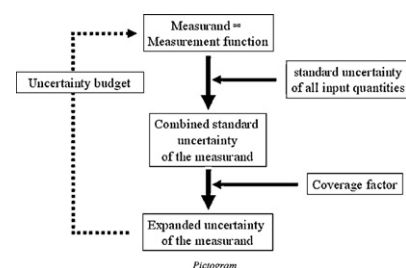


65–76

#### Implementation of Guide to the expression of Uncertainty in Measurement (GUM) to multi-collector TIMS uranium isotope ratio metrology

S. Bürger, R.M. Essex, K.J. Mathew, S. Richter, R.B. Thomas

The application of the GUM (Guide to the expression of Uncertainty in Measurement) to calculate standard uncertainties for routine uranium isotope mass spectrometry measurements for nuclear safeguards and nuclear metrology is introduced.

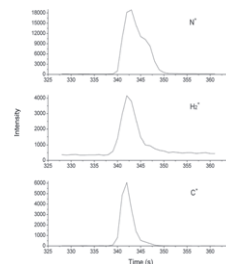


77–82

#### A novel gas analysis system for metallurgical materials based on time-of-flight mass spectrometry

Wei Gao, Zhengxu Huang, Huiqing Nian, Xuejing Shen, Peng Wang, Shaocheng Hu, Mei Li, Ping Cheng, Junguo Dong, Xin Xu, Zhen Zhou

A new analyzing system for gas analysis from metallurgical materials was developed by coupling a homemade EI-TOFMS with an inert gas fusion unit. The system can be used to analyze H, O, N and A, simultaneously and quantitatively with a detection limit at  $\mu\text{g/g}$  level.

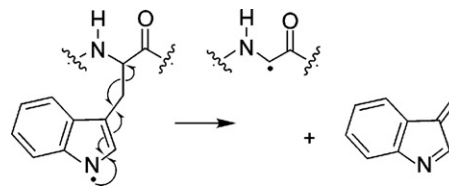


## 83–87

### Fragmentation chemistry observed in hydrogen deficient radical peptides generated from N-nitrosotryptophan residues

Eric R. Knudsen, Ryan R. Julian

The dissociation chemistry for peptides containing radical tryptophan is described. One favorable fragmentation channel is the loss of the tryptophan side chain itself.

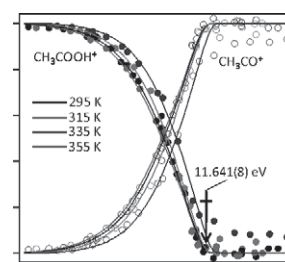


## 88–92

### Dissociation dynamics of energy-selected acetic acid ions: The gas phase heat of formation of the acetyl ion

Nicholas S. Shuman, William R. Stevens, Tomas Baer

Threshold photoelectron photoion coincidence study of the dissociation dynamics of the acetic acid ion. Acetyl ion onset is 11.641 eV, but the reaction turns non-statistical at higher energies.

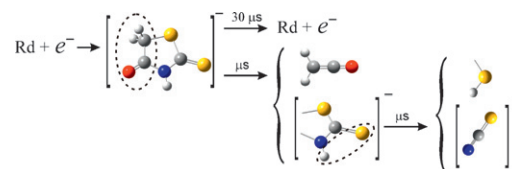


## 93–102

### Complex fragmentation pathways of rhodanine and rhodanine-3-acetic acid upon resonant capture of low-energy electrons

Stanislav A. Pshenichnyuk, Alberto Modelli

Temporary anions formed by electron attachment to gas-phase rhodanine (**Rd**) and rhodanine-3-acetic acid (**Rdaa**) follow complex dissociation including a series of slow consecutive decays associated with strong rearrangements in neutral and anionic fragments.

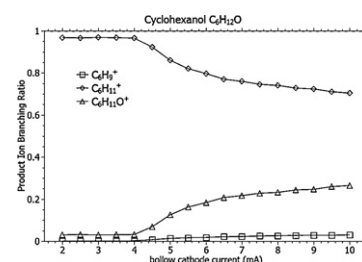


## 103–111

### Proton transfer reaction mass spectrometry investigations on the effects of reduced electric field and reagent ion internal energy on product ion branching ratios for a series of saturated alcohols

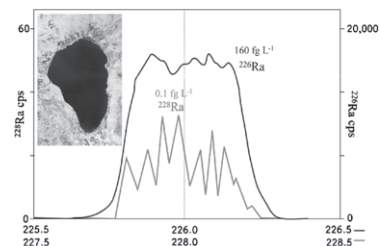
P. Brown, P. Watts, T.D. Märk, C.A. Mayhew

In this paper we report an investigation of the effects of  $E/N$  over the range of 90–140 Td and hollow cathode emission current conditions on the product ions resulting from the reactions of  $\text{H}_3\text{O}^+$  with a series of saturated alcohols using a proton transfer reaction mass spectrometer (PTR-MS).



**Short communication****112–115****High precision determination of  $^{228}\text{Ra}$  and  $^{228}\text{Ra}/^{226}\text{Ra}$  isotope ratio in natural waters by MC-ICPMS**

Galit Sharabi, Boaz Lazar, Yehoshua Kolodny, Nataliya Teplyakov, Ludwik Halicz

Ion signal of  $^{228}\text{Ra}$  and  $^{226}\text{Ra}$  in Lake Kinneret (The Sea of Galilee), northern Israel measured by MCICPMS. Upper left corner: Areal photo of the lake.

The Publisher encourage the submission of articles in electronic form thus saving time and avoiding rekeying errors.  
Please refer to the online version of the Guide for Authors at <http://www.elsevier.com/locate/maspec>



Full text of this journal is available, on-line from **ScienceDirect**. Visit [www.sciencedirect.com](http://www.sciencedirect.com) for more information.