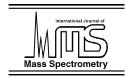
International Journal of Mass Spectrometry 223-224 (2003) 805-811



www.elsevier.com/locate/ijms

# Subject index Volume 223-224

# Accelerator mass spectrometry

Accelerator mass spectrometry of heavy long-lived radionuclides, 713

#### Acetone

Detection of gaseous oxygenated hydrocarbons in upper tropospheric and lower stratospheric aircraft borne experiments, 733

#### Acetonitrile cation

Surface collisions of the acetonitrile molecular ion: evidence for isomerization of  $CD_3CN^{\bullet+}$  to the ketenimine cation  $CD_2=C=ND^{\bullet+}$ , 279

#### Acetylene

A photoionization mass spectrometric study of acetylene and ethylene in the VUV spectral region, 67

# Activation energy

Effect of temperature on dissociative electron attachment to CCl<sub>2</sub>F<sub>2</sub>, 217

# Aeronomy

VUV and low energy electron impact study of electronic state spectroscopy of CF<sub>3</sub>I, 647

# Alkali ion emitter

Mass spectrometric study of K<sup>+</sup> + C<sub>60</sub> collisions, 695

# Aminophosphonic acids

Gas-phase complexes: noncovalent interactions and stereospecificity, 159

# Anion kinetics

A temperature-dependent selected ion flow tube study of anions reacting with  $SF_5CF_3$ , 403

### APCI-TOFMS

Evaluation of three gas chromatography and two direct mass spectrometry techniques for aroma analysis of dried red bell peppers, 55

### Aroma

Breath-by-breath analysis of banana aroma by proton transfer reaction mass spectrometry, 743

# Association

Selected ion flow tube study of NH<sub>4</sub><sup>+</sup> association and of product switching reactions with a series of organic molecules, 459

# Atmospheric pressure chemical ionization mass spectrometry (AP-CIMS)

Atmospheric pressure chemical ionization mass spectrometry for the detection of tropospheric trace gases: the influence of clustering on sensitivity and precision, 771

# Atmospheric trace gas

Sensitivity and specificity of atmospheric trace gas detection by proton-transfer-reaction mass spectrometry, 365

#### Attachment

A three-step model applied to free electron attachment to  $C_{60}$ , Buckminsterfullerene, 447

#### Banana

Breath-by-breath analysis of banana aroma by proton transfer reaction mass spectrometry, 743

#### BEB

Calculation of electron impact ionization cross sections of DNA using the Deutsch-Märk and Binary-Encounter-Bethe formalisms, 599

#### Benzene

The gas-phase chemistry of iron cations coordinated to benzene and the extended aromatic coronene, 411

# Breath-by-breath analysis

Breath-by-breath analysis of banana aroma by proton transfer reaction mass spectrometry, 743

# Buckminsterfullerene

A three-step model applied to free electron attachment to  $C_{60}$ , Buckminsterfullerene, 447

# CH₄<sup>+</sup>

Reactions between CH<sub>4</sub><sup>+</sup> and C<sub>2</sub>H<sub>5</sub>OH, 81

# Charge reversal

State selectivity in collisional electron-transfer processes involving the NO molecule, 169

### Charge transfer

The charge-excitation exchange process:  $\text{He}^+(^2S) + \text{Ar}^*(^3P) \rightarrow \text{He}^*(^{3,1}S) + \text{Ar}^+(^2P)$ , 327

# Charge-excitation exchange

The charge-excitation exchange process:  $He^+(^2S) + Ar^*(^3P) \rightarrow He^*(^{3,1}S) + Ar^+(^2P)$ , 327

# Chemical reaction

Bond-forming reactivity between CF<sub>3</sub><sup>2+</sup> and H<sub>2</sub>/D<sub>2</sub>, 547

### Chirality

Gas-phase complexes: noncovalent interactions and stereospecificity, 159

# Chlorine

Production of Cl<sup>-</sup> via dissociative electron attachment to Cl<sub>2</sub>, 661

### Chlorofluorocarbons

Reactions of H<sub>3</sub>O<sup>+</sup> with a number of bromine containing fully and partially halogenated hydrocarbons, 627

# C<sub>2</sub>H<sub>5</sub>OH

Reactions between CH<sub>4</sub><sup>+</sup> and C<sub>2</sub>H<sub>5</sub>OH, 81

# Chromatography

Direct mass spectrometry of complex volatile and non-volatile flavour mixtures, 179

#### Cluster

A semi-empirical concept for the calculation of electron-impact ionization cross-sections of neutral and ionized fullerenes, 1 Low energy (0–15 eV) electron stimulated reactions in single 1,2-C<sub>2</sub>F<sub>4</sub>Cl<sub>2</sub> molecules and clusters, 193

Calculations of partial electron-impact cross sections for the multiple ionization of fullerenes using a semi-empirical method, 253

The relationship between covariance and anti-covariance mapping, 355

A semi-empirical method for the calculation of cross sections for the electron-impact ionization of negatively charged fullerenes, 703

#### Cluster ions

Atmospheric pressure chemical ionization mass spectrometry for the detection of tropospheric trace gases: the influence of clustering on sensitivity and precision, 771

#### Coffee aroma

Analysing the headspace of coffee by proton-transfer-reaction mass-spectrometry, 115

#### Coffee brew

Analysing the headspace of coffee by proton-transfer-reaction mass-spectrometry, 115

# Collision

Stark mixing in Rydberg atoms by ultralow energy collisions with ions, 473

Bond-forming reactivity between CF<sub>3</sub><sup>2+</sup> and H<sub>2</sub>/D<sub>2</sub>, 547

# Column liquid chromatography

Analysis of isolectins on non-porous particles and monolithic polystyrene-divinylbenzene based stationary phases and electrospray ionization mass spectrometry, 519

# Combined ion mass and energy analyzer

Interpretation of ion distribution functions measured by a combined energy and mass analyzer, 679

### Combustion chamber

Combustion and carbonisation exhaust utilisation in electric discharge and its relation to prebiotic chemistry, 613

### Coronene

The gas-phase chemistry of iron cations coordinated to benzene and the extended aromatic coronene, 411

# Coulomb explosion

The relationship between covariance and anti-covariance mapping, 355

# Covariance mapping

The relationship between covariance and anti-covariance mapping, 355

# Cross section calculations

Calculated absolute cross section for the electron-impact ionisation of simple molecular ions, 639

# Cross-section

Effect of temperature on dissociative electron attachment to  $CCl_2F_2$ , 217

Production of Cl<sup>-</sup> via dissociative electron attachment to Cl<sub>2</sub>, 661

# Cyanogenesis

Negative-ion CIMS: analysis of volatile leaf wound compounds including HCN, 427

#### Dication

Bond-forming reactivity between CF<sub>3</sub><sup>2+</sup> and H<sub>2</sub>/D<sub>2</sub>, 547 Diffusion coefficient

Membrane introduction proton-transfer reaction mass spectrometry, 763

# Dissociative electron attachment

Temperature dependencies in dissociative electron attachment to CCl<sub>4</sub>, CCl<sub>2</sub>F<sub>2</sub>, CHCl<sub>3</sub> and CHBr<sub>3</sub>, 9

#### DM

Calculation of electron impact ionization cross sections of DNA using the Deutsch-Märk and Binary-Encounter-Bethe formalisms, 599

#### **DMSO**

Ab initio study of the interaction of dimethylsulfoxide with the ions  ${\rm Li}^+$  and  ${\rm I}^-$ , 263

# DMSO-I<sup>-</sup> complex

Ab initio study of the interaction of dimethylsulfoxide with the ions  $\text{Li}^+$  and  $\text{I}^-$ , 263

# DMSO-Li+ complex

Ab initio study of the interaction of dimethylsulfoxide with the ions  ${\rm Li}^+$  and  ${\rm I}^-$ , 263

#### DNA

Calculation of electron impact ionization cross sections of DNA using the Deutsch-Märk and Binary-Encounter-Bethe formalisms, 599

# DNA damage

Modeling of ultrasoft X-ray induced DNA damage using structured higher order DNA targets, 579

# Drift tube pressure

Proton transfer reaction mass spectrometry at high drift tube pressure, 507

### Dusty plasma

Plasma-powder interaction: trends in applications and diagnostics, 313

# Electron

A three-step model applied to free electron attachment to  $C_{60}$ , Buckminsterfullerene, 447

# Electron attachment

Low energy (0–15 eV) electron stimulated reactions in single 1.2-C<sub>2</sub>F<sub>4</sub>Cl<sub>2</sub> molecules and clusters, 193

Effect of temperature on dissociative electron attachment to  $\text{CCl}_2\text{F}_2$ , 217

Production of Cl<sup>-</sup> via dissociative electron attachment to Cl<sub>2</sub>, 661 Electron attachment cross section

The ion extraction efficiency in a crossed beams experiment using a trochoidal electron monochromator, 271

# Electron energy loss

VUV and low energy electron impact study of electronic state spectroscopy of CF<sub>3</sub>I, 647

# Electron impact

A semi-empirical concept for the calculation of electron-impact ionization cross-sections of neutral and ionized fullerenes, 1

Calculations of partial electron-impact cross sections for the multiple ionization of fullerenes using a semi-empirical method, 253 Calculation of electron impact ionization cross sections of DNA using the Deutsch-Märk and Binary-Encounter-Bethe formalisms, 599

A semi-empirical method for the calculation of cross sections for the electron-impact ionization of negatively charged fullerenes, 703

#### Electron monochromator

The ion extraction efficiency in a crossed beams experiment using a trochoidal electron monochromator, 271

# Electron scattering

Low-energy electron collisions in nitrogen oxides: a comparative study, 205

# Electron transfer

Reactions between CH<sub>4</sub><sup>+</sup> and C<sub>2</sub>H<sub>5</sub>OH, 81

State selectivity in collisional electron-transfer processes involving the NO molecule, 169

Bond-forming reactivity between  $CF_3^{2+}$  and  $H_2/D_2$ , 547

# Electronic and infrared spectra

Electronic and infrared absorption spectra of NCCN<sup>+</sup>, 107

# Electron-impact ionisation

Calculated absolute cross section for the electron-impact ionisation of simple molecular ions, 639

#### Electron-molecule interactions

Temperature dependencies in dissociative electron attachment to CCl<sub>4</sub>, CCl<sub>2</sub>F<sub>2</sub>, CHCl<sub>3</sub> and CHBr<sub>3</sub>, 9

# Electrospray ionization (ESI) mass spectrometry

Analysis of isolectins on non-porous particles and monolithic polystyrene-divinylbenzene based stationary phases and electrospray ionization mass spectrometry, 519

# Endohedral

Mass spectrometric study of  $K^+ + C_{60}$  collisions, 695

# Energy transfer

Dynamics of hyperthermal energy ion–surface collisions: dissociative and non-dissociative scattering of ethanol cations from a self-assembled monolayer surface of fluorinated alkyl thiol on Au (1 1 1), 783

# ESI

An electrospray ionization—flow tube study of H/D exchange in protonated serine, 491

# Ethanol ions

Dynamics of hyperthermal energy ion–surface collisions: dissociative and non-dissociative scattering of ethanol cations from a self-assembled monolayer surface of fluorinated alkyl thiol on Au (1 1 1), 783

# Ethylene

A photoionization mass spectrometric study of acetylene and ethylene in the VUV spectral region, 67

### Excimers

Neon excimer emission from pulsed high-pressure microhollow cathode discharge plasmas, 37

### Excitation

The influence of electron impact ionisations on low frequency instabilities in a magnetised plasma, 141

# Exhaust cleaning

Combustion and carbonisation exhaust utilisation in electric discharge and its relation to prebiotic chemistry, 613

# Femtosecond laser

The relationship between covariance and anti-covariance mapping, 355

# Fertiliser

Combustion and carbonisation exhaust utilisation in electric discharge and its relation to prebiotic chemistry, 613

#### Flow tub

An electrospray ionization—flow tube study of H/D exchange in protonated serine. 491

#### Fluoranthene

Experimental evaluation of the recombination rate of cations formed from fluoranthene, 237

#### Fragmentation

Analysing the headspace of coffee by proton-transfer-reaction mass-spectrometry, 115

#### Freon

Effect of temperature on dissociative electron attachment to  $CCl_2F_2$ , 217

#### FT-MS

Radiative lifetime of vibrationally excited  $N_2H^+$  and  $N_2D^+$  molecular ions, 669

#### **Fullerenes**

A semi-empirical concept for the calculation of electron-impact ionization cross-sections of neutral and ionized fullerenes, 1 Calculations of partial electron-impact cross sections for the multiple ionization of fullerenes using a semi-empirical method, 253 A semi-empirical method for the calculation of cross sections for the electron-impact ionization of negatively charged fullerenes, 703

# Gas discharge

Combustion and carbonisation exhaust utilisation in electric discharge and its relation to prebiotic chemistry, 613

# Gas sampling probe

Limitations in the time resolution of quadrupole mass spectrometry using a flushed extraction probe, 301

# Gas-phase enantioselectivity

Gas-phase complexes: noncovalent interactions and stereospecificity, 159

### GC-FID

Evaluation of three gas chromatography and two direct mass spectrometry techniques for aroma analysis of dried red bell peppers, 55

Measurement of monoterpenes and related compounds by proton transfer reaction-mass spectrometry (PTR-MS), 561

### GC–MS

Evaluation of three gas chromatography and two direct mass spectrometry techniques for aroma analysis of dried red bell peppers, 55

### GC–O

Evaluation of three gas chromatography and two direct mass spectrometry techniques for aroma analysis of dried red bell peppers, 55

### Graphite

Edge plasma-relevant ion-surface collision processes, 21

# H/D exchange

An electrospray ionization—flow tube study of H/D exchange in protonated serine, 491

# Halogenated hydrocarbon

Reactions of H<sub>3</sub>O<sup>+</sup> with a number of bromine containing fully and partially halogenated hydrocarbons, 627

# Headspace

Analysing the headspace of coffee by proton-transfer-reaction mass-spectrometry, 115

#### Headspace analysis

Membrane introduction proton-transfer reaction mass spectrometry, 763

# Headspace of meat

Detection of the spoiling of meat using PTR-MS, 229

#### Heavy radionuclides

Accelerator mass spectrometry of heavy long-lived radionuclides, 713

#### High temperature flowing afterglow

A reexamination of the temperature dependence of the reaction of  $N^+$  with  $O_2,\,397$ 

# High-pressure plasmas

Neon excimer emission from pulsed high-pressure microhollow cathode discharge plasmas, 37

#### HLC

Dynamic measurements of partition coefficients using protontransfer-reaction mass spectrometry (PTR-MS), 383

#### Hollow cathode discharges

Neon excimer emission from pulsed high-pressure microhollow cathode discharge plasmas, 37

# Humidity interference

Atmospheric pressure chemical ionization mass spectrometry for the detection of tropospheric trace gases: the influence of clustering on sensitivity and precision, 771

# Hydroxide anion

Negative-ion CIMS: analysis of volatile leaf wound compounds including HCN, 427

# Inelastic collisions

Dynamics of hyperthermal energy ion–surface collisions: dissociative and non-dissociative scattering of ethanol cations from a self-assembled monolayer surface of fluorinated alkyl thiol on Au (1 1 1), 783

# Insertion threshold

Mass spectrometric study of  $K^+ + C_{60}$  collisions, 695

# Ion distribution function

Interpretation of ion distribution functions measured by a combined energy and mass analyzer, 679

# Ion extraction efficiency

The ion extraction efficiency in a crossed beams experiment using a trochoidal electron monochromator, 271

# Ion trajectory simulations

Ion optics evaluation of the plasma ion mass spectrometer (PIMS) designed for the JET tokamak, 45

# Ion vibrational relaxation

Vibrational quenching of  $NO^+(v)$  ions by Ar collisions, 757 Ionisation

The influence of electron impact ionisations on low frequency instabilities in a magnetised plasma, 141

# Ionization cross sections

A semi-empirical concept for the calculation of electron-impact

ionization cross-sections of neutral and ionized fullerenes, 1 Calculations of partial electron-impact cross sections for the multiple ionization of fullerenes using a semi-empirical method,

Calculation of electron impact ionization cross sections of DNA using the Deutsch-Märk and Binary-Encounter-Bethe formalisms 500

A semi-empirical method for the calculation of cross sections for the electron-impact ionization of negatively charged fullerenes, 703

#### Ion-molecule reaction

A selected ion flow tube investigation of the positive ion chemistry of a number of bromine containing fully and partially halogenated hydrocarbons, 91

Selected ion flow tube study of NH<sub>4</sub><sup>+</sup> association and of product switching reactions with a series of organic molecules, 459 The reaction of SiH<sup>+</sup> and SH<sup>+</sup> with small molecules, 539

#### Ions

Experimental evaluation of the recombination rate of cations formed from fluoranthene, 237

#### Ion-surface collisions

Dynamics of hyperthermal energy ion–surface collisions: dissociative and non-dissociative scattering of ethanol cations from a self-assembled monolayer surface of fluorinated alkyl thiol on Au (1 1 1), 783

#### Iron cation

The gas-phase chemistry of iron cations coordinated to benzene and the extended aromatic coronene, 411

# Isoforms

Analysis of isolectins on non-porous particles and monolithic polystyrene-divinylbenzene based stationary phases and electrospray ionization mass spectrometry, 519

# Isomerization

Surface collisions of the acetonitrile molecular ion: evidence for isomerization of CD<sub>3</sub>CN<sup>•+</sup> to the ketenimine cation CD<sub>2</sub>=C= ND<sup>•+</sup>, 279

# Isotope effect

Bond-forming reactivity between CF<sub>3</sub><sup>2+</sup> and H<sub>2</sub>/D<sub>2</sub>, 547

### Lecting

Analysis of isolectins on non-porous particles and monolithic polystyrene-divinylbenzene based stationary phases and electrospray ionization mass spectrometry, 519

### Ligation

The gas-phase chemistry of iron cations coordinated to benzene and the extended aromatic coronene, 411

# Low-pressure plasma

Plasma-powder interaction: trends in applications and diagnostics, 313

# Mass spectrometry

Gas-phase complexes: noncovalent interactions and stereospecificity, 159

State selectivity in collisional electron-transfer processes involving the NO molecule, 169

Low energy (0–15 eV) electron stimulated reactions in single 1,2-C<sub>2</sub>F<sub>4</sub>Cl<sub>2</sub> molecules and clusters, 193

Limitations in the time resolution of quadrupole mass spectrometry using a flushed extraction probe, 301

### Meat storage

Detection of the spoiling of meat using PTR-MS, 229

#### Membrane

Membrane introduction proton-transfer reaction mass spectrometry, 763

#### Metal atoms

Reactions of trapped ions with metal atoms:  $O_2^+ + Ni$  and  $NiN_2^+ + Ni$ , 291

#### Metal clusters

Gas-phase complexes: noncovalent interactions and stereospecificity, 159

#### Metallofullerene

Mass spectrometric study of K<sup>+</sup> + C<sub>60</sub> collisions, 695

#### Metastable atoms

The charge-excitation exchange process:  $He^+(^2S) + Ar^*(^3P) \rightarrow He^*(^{3,1}S) + Ar^+(^2P)$ , 327

#### Molecular ion structures

Selected ion flow tube study of  $\mathrm{NH_4}^+$  association and of product switching reactions with a series of organic molecules, 459

# Molecular ions

Calculated absolute cross section for the electron-impact ionisation of simple molecular ions, 639

#### Monitor ion technique

Radiative lifetime of vibrationally excited  $N_2H^+$  and  $N_2D^+$  molecular ions, 669

# Monoterpenes

Measurement of monoterpenes and related compounds by proton transfer reaction-mass spectrometry (PTR-MS), 561

# Monte Carlo simulation

Modeling of ultrasoft X-ray induced DNA damage using structured higher order DNA targets, 579

# Multiply charged ion

Edge plasma-relevant ion-surface collision processes, 21

# NCCN+

Electronic and infrared absorption spectra of NCCN+, 107  $N_2D^{\scriptscriptstyle +}$ 

Radiative lifetime of vibrationally excited  $N_2H^+$  and  $N_2D^+$  molecular ions, 669

# Negative ions

Low energy (0–15 eV) electron stimulated reactions in single 1,2-C<sub>2</sub>F<sub>4</sub>Cl<sub>2</sub> molecules and clusters, 193

# Negative-ion chemical-ionization

Negative-ion CIMS: analysis of volatile leaf wound compounds including HCN, 427

# Neutralization-reionization

State selectivity in collisional electron-transfer processes involving the NO molecule, 169

### N<sub>2</sub>H<sup>+</sup>

Radiative lifetime of vibrationally excited  $N_2H^{\scriptscriptstyle +}$  and  $N_2D^{\scriptscriptstyle +}$  molecular ions, 669

# Nitrogen monoxide

State selectivity in collisional electron-transfer processes involving the NO molecule, 169

#### Nitrogen oxide

Low-energy electron collisions in nitrogen oxides: a comparative study, 205

# $NO^+(v)$

Vibrational quenching of  $NO^+(v)$  ions by Ar collisions, 757

### Non-elastic scattering

Vibrational relaxation in  $H_2 + H_2$ : full-dimensional quantum dynamical study, 335

#### Non-linear interaction

The influence of electron impact ionisations on low frequency instabilities in a magnetised plasma, 141

# Non-porous and monolithic polystyrene-divinylbenzene

Analysis of isolectins on non-porous particles and monolithic polystyrene-divinylbenzene based stationary phases and electrospray ionization mass spectrometry, 519

### Non-volatile mixture

Direct mass spectrometry of complex volatile and non-volatile flavour mixtures, 179

#### On-line analysis

Analysing the headspace of coffee by proton-transfer-reaction mass-spectrometry, 115

# Oxygenated hydrocarbons

Detection of gaseous oxygenated hydrocarbons in upper tropospheric and lower stratospheric aircraft borne experiments, 733 Ozone

The ion extraction efficiency in a crossed beams experiment using a trochoidal electron monochromator, 271

# Partition coefficients

Analysing the headspace of coffee by proton-transfer-reaction mass-spectrometry, 115

### Pasteurisation

Fingerprinting mass spectrometry by PTR-MS: heat treatment vs. pressure treatment of red orange juice—a case study, 343

# PEPICO

Reactions between CH<sub>4</sub><sup>+</sup> and C<sub>2</sub>H<sub>5</sub>OH, 81

### Perfluorocarbons

Reactions of H<sub>3</sub>O<sup>+</sup> with a number of bromine containing fully and partially halogenated hydrocarbons, 627

# Photoionization

A photoionization mass spectrometric study of acetylene and ethylene in the VUV spectral region, 67

# Plasma instabilities

The influence of electron impact ionisations on low frequency instabilities in a magnetised plasma, 141

# Plasma mass spectrometry

Ion optics evaluation of the plasma ion mass spectrometer (PIMS) designed for the JET tokamak, 45

# Plasma-particle interaction

Plasma-powder interaction: trends in applications and diagnostics, 313

# Plasma-surface interaction

Edge plasma-relevant ion-surface collision processes, 21 Positive ion chemistry

A selected ion flow tube investigation of the positive ion chemistry of a number of bromine containing fully and partially halogenated hydrocarbons, 91

# Potential energy surface

Electronic and infrared absorption spectra of NCCN $^+$ , 107 Vibrational relaxation in  $H_2+H_2$ : full-dimensional quantum dynamical study, 335

#### Proton transfer

Reactions between CH<sub>4</sub><sup>+</sup> and C<sub>2</sub>H<sub>5</sub>OH, 81

Proton transfer reaction-mass spectrometry, PTR-MS

Analysing the headspace of coffee by proton-transfer-reaction mass-spectrometry, 115

Fingerprinting mass spectrometry by PTR-MS: heat treatment vs. pressure treatment of red orange juice—a case study, 343 Sensitivity and specificity of atmospheric trace gas detection by proton-transfer-reaction mass spectrometry, 365

Dynamic measurements of partition coefficients using protontransfer-reaction mass spectrometry (PTR-MS), 383

Proton transfer reaction mass spectrometry at high drift tube pressure, 507

Trace gas monitoring at the Mauna Loa Baseline Observatory using Proton-Transfer Reaction Mass Spectrometry, 527

Measurement of monoterpenes and related compounds by proton transfer reaction-mass spectrometry (PTR-MS), 561

Membrane introduction proton-transfer reaction mass spectrometry, 763

#### PTR-MS

Evaluation of three gas chromatography and two direct mass spectrometry techniques for aroma analysis of dried red bell peppers, 55

Breath-by-breath analysis of banana aroma by proton transfer reaction mass spectrometry, 743

# PTR-MS mass spectrometry

Detection of the spoiling of meat using PTR-MS, 229

# Pyridine clusters

The relationship between covariance and anti-covariance mapping, 355

# Pyrolysis

Combustion and carbonisation exhaust utilisation in electric discharge and its relation to prebiotic chemistry, 613

# Radiative lifetimes

Radiative lifetime of vibrationally excited N<sub>2</sub>H<sup>+</sup> and N<sub>2</sub>D<sup>+</sup> molecular ions, 669

# Rate coefficients

Selected ion flow tube study of NH<sub>4</sub><sup>+</sup> association and of product switching reactions with a series of organic molecules, 459

### Rate constant

A reexamination of the temperature dependence of the reaction of  $N^+$  with  $O_2$ , 397

# Reaction rate coefficient

The reaction of SiH<sup>+</sup> and SH<sup>+</sup> with small molecules, 539 Recombination

Experimental evaluation of the recombination rate of cations formed from fluoranthene, 237

# Red orange juice

Fingerprinting mass spectrometry by PTR-MS: heat treatment vs. pressure treatment of red orange juice—a case study, 343

# Resonances

Low energy (0–15 eV) electron stimulated reactions in single 1,2-C<sub>2</sub>F<sub>4</sub>Cl<sub>2</sub> molecules and clusters, 193

# Ring electrode trap

Reactions of trapped ions with metal atoms:  $O_2^+ + Ni$  and  $NiN_2^+ + Ni$ , 291

#### Rydberg atoms

Stark mixing in Rydberg atoms by ultralow energy collisions with ions, 473

# Scattering

Dynamics of hyperthermal energy ion–surface collisions: dissociative and non-dissociative scattering of ethanol cations from a self-assembled monolayer surface of fluorinated alkyl thiol on Au (1 1 1), 783

# Selected ion flow drift tube

Vibrational quenching of  $NO^+(\nu)$  ions by Ar collisions, 757

# Selected ion flow tube

A reexamination of the temperature dependence of the reaction of  $N^+$  with  $O_2$ , 397

Negative-ion CIMS: analysis of volatile leaf wound compounds including HCN, 427

# Self-assembled monolayer surface

Dynamics of hyperthermal energy ion–surface collisions: dissociative and non-dissociative scattering of ethanol cations from a self-assembled monolayer surface of fluorinated alkyl thiol on Au (1 1 1), 783

# SH<sup>+</sup>

The reaction of SiH<sup>+</sup> and SH<sup>+</sup> with small molecules, 539 Sidebands

The influence of electron impact ionisations on low frequency instabilities in a magnetised plasma, 141

### SIFT

A selected ion flow tube investigation of the positive ion chemistry of a number of bromine containing fully and partially halogenated hydrocarbons, 91

A temperature-dependent selected ion flow tube study of anions reacting with  $SF_5CF_3$ , 403

Selected ion flow tube study of  $\mathrm{NH_4}^+$  association and of product switching reactions with a series of organic molecules, 459

# SiH+

The reaction of SiH<sup>+</sup> and SH<sup>+</sup> with small molecules, 539

# Site-specific rate constants

An electrospray ionization—flow tube study of H/D exchange in protonated serine,  $491\,$ 

# Solvation effects

Low energy (0-15 eV) electron stimulated reactions in single 1,2-C<sub>2</sub>F<sub>4</sub>Cl<sub>2</sub> molecules and clusters, 193

# Spectroscopy

VUV and low energy electron impact study of electronic state spectroscopy of CF<sub>3</sub>I, 647

# Stark mixing

Stark mixing in Rydberg atoms by ultralow energy collisions with ions, 473

# Structured target

Modeling of ultrasoft X-ray induced DNA damage using structured higher order DNA targets, 579

# Surface reactions

Surface collisions of the acetonitrile molecular ion: evidence for isomerization of CD<sub>3</sub>CN<sup>•+</sup> to the ketenimine cation CD<sub>2</sub>=C=ND<sup>•+</sup>, 279

#### Surface-induced dissociation

Dynamics of hyperthermal energy ion–surface collisions: dissociative and non-dissociative scattering of ethanol cations from a self-assembled monolayer surface of fluorinated alkyl thiol on Au (1 1 1), 783

# Switching reactions

Selected ion flow tube study of NH<sub>4</sub><sup>+</sup> association and of product switching reactions with a series of organic molecules, 459

#### Synchrotron radiation

VUV and low energy electron impact study of electronic state spectroscopy of CF<sub>3</sub>I, 647

# Tandem mass spectrometry

Surface collisions of the acetonitrile molecular ion: evidence for isomerization of  $CD_3CN^{\bullet+}$  to the ketenimine cation  $CD_2=C=ND^{\bullet+}$ , 279

# Temperature dependence

Effect of temperature on dissociative electron attachment to  $CCl_2F_2$ , 217

#### Temperature dependencies

Temperature dependencies in dissociative electron attachment to  $CCl_4$ ,  $CCl_2F_2$ ,  $CHCl_3$  and  $CHBr_3$ , 9

### Time resolution

Limitations in the time resolution of quadrupole mass spectrometry using a flushed extraction probe, 301

# Time-of-flight mass spectrometer

The relationship between covariance and anti-covariance mapping, 355

# Tokamak plasma

Ion optics evaluation of the plasma ion mass spectrometer (PIMS) designed for the JET tokamak, 45

### Total ion current

Interpretation of ion distribution functions measured by a combined energy and mass analyzer, 679

# Trace gas monitoring

Trace gas monitoring at the Mauna Loa Baseline Observatory using Proton-Transfer Reaction Mass Spectrometry, 527

### Trapped ions

Reactions of trapped ions with metal atoms:  $O_2^+ + Ni$  and  $NiN_2^+ + Ni,\, 291$ 

# Trifluoromethyl sulfurpentafluoride

A temperature-dependent selected ion flow tube study of anions reacting with SF<sub>5</sub>CF<sub>3</sub>, 403

#### Trochoidal mass spectrometer

Ion optics evaluation of the plasma ion mass spectrometer (PIMS) designed for the JET tokamak, 45

# Tropospheric chemistry

Atmospheric pressure chemical ionization mass spectrometry for the detection of tropospheric trace gases: the influence of clustering on sensitivity and precision, 771

#### UT

Detection of gaseous oxygenated hydrocarbons in upper tropospheric and lower stratospheric aircraft borne experiments, 733

# UVX irradiation

Modeling of ultrasoft X-ray induced DNA damage using structured higher order DNA targets, 579

#### **VERA**

Accelerator mass spectrometry of heavy long-lived radionuclides, 713

#### Vibrational relaxation

Vibrational relaxation in  $H_2 + H_2$ : full-dimensional quantum dynamical study, 335

#### Volatile mixture

Direct mass spectrometry of complex volatile and non-volatile flavour mixtures, 179

# Volatile organic compounds

Detection of the spoiling of meat using PTR-MS, 229

Fingerprinting mass spectrometry by PTR-MS: heat treatment vs. pressure treatment of red orange juice—a case study, 343

Sensitivity and specificity of atmospheric trace gas detection by proton-transfer-reaction mass spectrometry, 365

Dynamic measurements of partition coefficients using protontransfer-reaction mass spectrometry (PTR-MS), 383

Negative-ion CIMS: analysis of volatile leaf wound compounds including HCN, 427

Trace gas monitoring at the Mauna Loa Baseline Observatory using Proton-Transfer Reaction Mass Spectrometry, 527

# VUV absorption

VUV and low energy electron impact study of electronic state spectroscopy of CF<sub>3</sub>I, 647