

International Journal of Mass Spectrometry 212 (2001) 555-560



www.elsevier.com/locate/ijms

Subject index

Acylium ions

Cyclization of acylium ions with nitriles: gas-phase synthesis and characterization of 1,3,5-oxadiazinium ions, 445

Adenine

Examination of barriered and barrierless hydrogen atom abstraction reactions by organic radical cations: the cytosine radical cation, 455

Analysis of complex biological matrices

Mixture analysis by mass spectrometry: now's the time, 89

A retrospective view of mass spectrometry and natural products—sixty years of progress, with a focus on contributions by R. Graham Cooks, 65

Tandem mass spectrometric analysis of complex biological mixtures, 81

Anions

Charge-stripping of anions in the gas phase: the formation of interesting neutrals and cations, 249

Apomyoglobin ions

Gaseous apomyoglobin ion dissociation in a quadrupole ion trap: $[M + 2H]^{2+}$ $-[M + 21H]^{2++}$, 359

Atmospheric chemistry

Discovery and characterization of atmospherically relevant inorganic species by structurally diagnostic mass spectrometric techniques, 403

Benzene

Molecular desorption and secondary ion mass spectrometry, 467

Binding selectivity

Determination of alkali metal cation selectivities of dibenzo-16-crown-5 lariat ethers with ether pendant groups by using electrospray ionization quadrupole ion trap mass spectrometry, 389

Biomolecules

The role of proton affinity, acidity, and electrostatics on the stability of neutral versus ion-pair forms of molecular dimers. 287

Bond dissociation energies

Relative and absolute bond dissociation energies of sodium cation complexes determined using competitive collision-induced dissociation experiments, 301

CAD

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

Charge inversion

Charge permutation reactions in beam type mass spectrometers, 219

Charge inversion mass spectrometer (PMS/NMS)

International energy distribution in charge inversion mass spectrometry using alkali metal targets, 229

Charge-stripping

Charge permutation reactions in beam type mass spectrometers, 219

Charge-stripping of anions in the gas phase: the formation of interesting neutrals and cations, 249

Competitive ligand losses in mono- and dicationic L'FeL $^{+/2+}$ complexes (L', L = arene): structural insight and charge-state dependent reversals of branching ratios, 327

Chemical analysis

The science of chemical analysis and the technique of mass spectrometry, 1

Chromatography

Multidimensional separations of complex peptide mixtures: a combined high-performance liquid chromatography/ion mobility/time-of-flight mass spectrometry approach, 97

Cluster

A new time-of-flight gating method for analyzing kinetic energy release in Coulomb exploded clusters: application to water clusters, 273

Collision cell

Use of an ion guide collision cell to improve the analytical performance of an inductively coupled plasma time-of-flight mass spectrometer, 49

Collisional activation

Discovery and characterization of atmospherically relevant inorganic species by structurally diagnostic mass spectrometric techniques, 403

Gaseous apomyoglobin ion dissociation in a quadrupole ion trap: $[M + 2H]^{2+}$ – $[M + 21H]^{2++}$, 359

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

Collision-induced dissociation (CID)

Implementation of low-energy surface-induced dissociation (eV SID) and high-energy collision-induced dissociation (keV CID) in a linear sector-TOF hybrid tandem mass spectrometer, 535

International energy distribution in charge inversion mass spectrometry using alkali metal targets, 229

Ion trap tandem mass spectrometry of intact GTP-binding protein γ -subunits, 377

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

Column switching

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

Competitive collision-induced dissociation

Relative and absolute bond dissociation energies of sodium cation complexes determined using competitive collision-induced dissociation experiments, 301

Complex mixture analysis

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

Condensed gases

Sputtering of condensed polyatomic gases by kilo-electron-volt-energy ions, 477

Conversion device

The science of chemical analysis and the technique of mass spectrometry, 1

Coulomb explosion

A new time-of-flight gating method for analyzing kinetic energy release in Coulomb exploded clusters: application to water clusters, 273

Counting measurements

The science of chemical analysis and the technique of mass spectrometry, $\boldsymbol{1}$

Cyclization reactions

Cyclization of acylium ions with nitriles: gas-phase synthesis and characterization of 1,3,5-oxadiazinium ions, 445

Cytosine

Examination of barriered and barrierless hydrogen atom abstraction reactions by organic radical cations: the cytosine radical cation, 455

Data processing

The crossed-beam scattering method in studies of ion-molecule reaction dynamics, 413

Desorption chemical ionization

The renaissance of desorption chemical ionization mass spectrometry: characterization of large involatile molecules and nonpolar polymers, 505

Dications

Competitive ligand losses in mono- and dicationic $L'FeL^{+/2+}$ complexes (L', L= arene): structural insight and charge-state dependent reversals of branching ratios, 327

Differentiating characteristic

The science of chemical analysis and the technique of mass spectrometry, 1

Diffusivity

Application of the numerical model describing analyte permeation through hollow fiber membranes into vacuum for determination of permeation parameters of organic compounds in a silicone membrane, 205

Direct chemical ionization

The renaissance of desorption chemical ionization mass spectrometry: characterization of large involatile molecules and nonpolar polymers, 505

Electron capture dissociation (ECD)

Tandem mass spectrometric analysis of complex biological mixtures, 81

Electron ionization

Examination of barriered and barrierless hydrogen atom abstraction reactions by organic radical cations: the cytosine radical cation, 455

Electrospray ionization (ESI)

Design of a new electrospray ion mobility mass spectrometer, 13

Determination of alkali metal cation selectivities of dibenzo-16-crown-5 lariat ethers with ether pendant groups by using electrospray ionization quadrupole ion trap mass spectrometry, 389

Gaseous apomyoglobin ion dissociation in a quadrupole ion trap: $[M+2H]^{2+}$ – $[M+21H]^{21+}$, 359

Ion trap tandem mass spectrometry of intact GTP-binding protein γ -subunits, 377

A survey of recent research activity in quadrupole ion trap mass spectrometry, 337

Elemental analysis

Use of an ion guide collision cell to improve the analytical performance of an inductively coupled plasma time-of-flight mass spectrometer, 49

Energetic ions

Sputtering of condensed polyatomic gases by kilo-electron-volt-energy ions, 477

Energy transfer

Inelastic ion-surface collisions: scattering and dissociation of low energy benzene molecular cations, 491

Ethanol-water clusters

Mass spectrometric determination of the surface compositions of ethanol-water mixtures, 267

Experimental methods

The crossed-beam scattering method in studies of ion-molecule reaction dynamics, 413

Femtosecond

A new time-of-flight gating method for analyzing kinetic energy release in Coulomb exploded clusters: application to water clusters, 273

Fluorinated self-assembled monolayers (F-SAM)

Optimization of a matrix-assisted laser desorption ionization-ion mobility-surface-induced dissociation-o-time-of-flight mass spectrometer: simultaneous acquisition of multiple correlated MS¹ and MS² spectra, 519

Fourier transfrom ion cyclotron resonance mass spectrometer

Examination of barriered and barrierless hydrogen atom abstraction reactions by organic radical cations: the cytosine radical cation, 455

Gas chromatography

Simultaneous detection of volatile, semivolatile organic compounds, and organometallic compounds in both air and water matrices by using membrane introduction mass spectrometry, 197

A survey of recent research activity in quadrupole ion trap mass spectrometry, 337

Transformations in pharmaceutical research and development, driven by innovations in multidimensional mass spectrometry-based technologies, 135

Gas phase

The role of proton affinity, acidity, and electrostatics on the stability of neutral versus ion-pair forms of molecular dimers. 287

Gaseous ions

A survey of recent research activity in quadrupole ion trap mass spectrometry, 337

Geometry optimization

Design, optimization and initial performance of a toroidal rf ion trap mass spectrometer, 25

Guided ion beam mass spectrometry

Relative and absolute bond dissociation energies of sodium cation complexes determined using competitive collision-induced dissociation experiments, 301

High-energy CID

Charge permutation reactions in beam type mass spectrometers, 219

Inductively coupled plasma

Use of an ion guide collision cell to improve the analytical performance of an inductively coupled plasma time-of-flight mass spectrometer, 49

Ion bombardment

Molecular desorption and secondary ion mass spectrometry, 467

Sputtering of condensed polyatomic gases by kilo-electron-volt-energy ions, 477

Ion guide

Use of an ion guide collision cell to improve the analytical performance of an inductively coupled plasma time-of-flight mass spectrometer, 49

Ion mobility spectrometry

Multidimensional separations of complex peptide mixtures: a combined high-performance liquid chromatography/ion mobility/time-of-flight mass spectrometry approach, 97

Optimization of a matrix-assisted laser desorption ionization-ion mobility-surface-induced dissociation-o-time-of-flight mass spectrometer: simultaneous acquisition of multiple correlated MS^1 and MS^2 spectra, 519

Ion scattering

The crossed-beam scattering method in studies of ion-molecule reaction dynamics, 413

Inelastic ion-surface collisions: scattering and dissociation of low energy benzene molecular cations, 491

Ion storage

Design, optimization and initial performance of a toroidal rf ion trap mass spectrometer, 25

Ion trap analyzer geometry

Design, optimization and initial performance of a toroidal rf ion trap mass spectrometer, 25

Ion/ion reactions

Gaseous apomyoglobin ion dissociation in a quadrupole ion trap: $[M + 2H]^{2+}$ – $[M + 21H]^{21+}$, 359

Ion-molecule reactions

Charge-stripping of anions in the gas phase: the formation of interesting neutrals and cations, 249

The crossed-beam scattering method in studies of ion-molecule reaction dynamics, 413

Cyclization of acylium ions with nitriles: gas-phase synthesis and characterization of 1,3,5-oxadiazinium ions, 445 Ion-pair formation

The role of proton affinity, acidity, and electrostatics on the stability of neutral versus ion-pair forms of molecular dimers, 287

Ion-surface collisions

Inelastic ion-surface collisions: scattering and dissociation of low energy benzene molecular cations, 491

Isoprenylation

Ion trap tandem mass spectrometry of intact GTP-binding protein γ -subunits, 377

Kilo-electron-volt-energy ions

Sputtering of condensed polyatomic gases by kilo-electron-volt-energy ions, 477

Kinetic energy

Discovery and characterization of atmospherically relevant inorganic species by structurally diagnostic mass spectrometric techniques, 403

Inelastic ion-surface collisions: scattering and dissociation of low energy benzene molecular cations, 491

Kinetic method

Competitive ligand losses in mono- and dicationic $L'FeL^{+/2+}$ complexes (L', L= arene): structural insight and charge-state dependent reversals of branching ratios, 327

Lariat ether

Determination of alkali metal cation selectivities of dibenzo-16-crown-5 lariat ethers with ether pendant groups by using electrospray ionization quadrupole ion trap mass spectrometry, 389

LC/MS

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

LC/MS/MS

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

Liquid chromatography

Transformations in pharmaceutical research and development, driven by innovations in multidimensional mass spectrometry-based technologies, 135

Mass spectrometry

Design of a new electrospray ion mobility mass spectrometer. 13

Discovery and characterization of atmospherically relevant inorganic species by structurally diagnostic mass spectrometric techniques, 403

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

Mixture analysis by mass spectrometry: now's the time, 89

The science of chemical analysis and the technique of mass spectrometry, 1

Simultaneous detection of volatile, semivolatile organic compounds, and organometallic compounds in both air and water matrices by using membrane introduction mass spectrometry, 197

A survey of recent research activity in quadrupole ion trap mass spectrometry, 337

Transformations in pharmaceutical research and development, driven by innovations in multidimensional mass spectrometry-based technologies, 135

Matrix-assisted laser desorption ionization (MALDI)

Optimization of a matrix-assisted laser desorption ionization-ion mobility-surface-induced dissociation-o-time-of-flight mass spectrometer: simultaneous acquisition of multiple correlated MS^1 and MS^2 spectra, 519

Measurement

The science of chemical analysis and the technique of mass spectrometry, 1

Metal complexation

Determination of alkali metal cation selectivities of dibenzo-16-crown-5 lariat ethers with ether pendant groups by using electrospray ionization quadrupole ion trap mass spectrometry, 389

Metal-arene complexes

Competitive ligand losses in mono- and dicationic $L'FeL^{+/2+}$ complexes (L', L= arene): structural insight and charge-state dependent reversals of branching ratios, 327

Microscale characterization

Microscale detection of polychlorinated biphenyls using two-step laser mass spectrometry, 41

Mixture analysis

Transformations in pharmaceutical research and development, driven by innovations in multidimensional mass spectrometry-based technologies, 135

Molecular desorption

 $\label{eq:molecular desorption and secondary ion mass spectrometry, 467$

Molecular dynamics

Molecular desorption and secondary ion mass spectrometry, 467

Molecular receptors

The renaissance of desorption chemical ionization mass spectrometry: characterization of large involatile molecules and nonpolar polymers, 505

MS/MS

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

Multidimensional separations

Multidimensional separations of complex peptide mixtures: a combined high-performance liquid chromatography/ion mobility/time-of-flight mass spectrometry approach, 97

Nanospray

Ion trap tandem mass spectrometry of intact GTP-binding protein γ -subunits, 377

Natural energy-decomposition analysis (NEDA)

The role of proton affinity, acidity, and electrostatics on the stability of neutral versus ion-pair forms of molecular dimers, 287

Natural products

A retrospective view of mass spectrometry and natural products—sixty years of progress, with a focus on contributions by R. Graham Cooks, 65

Neutralization reionization

Charge-stripping of anions in the gas phase: the formation of interesting neutrals and cations, 249

Discovery and characterization of atmospherically relevant inorganic species by structurally diagnostic mass spectrometric techniques, 403

Nitriles

Cyclization of acylium ions with nitriles: gas-phase synthesis and characterization of 1,3,5-oxadiazinium ions, 445

Nonlinear fields

Design, optimization and initial performance of a toroidal rf ion trap mass spectrometer, 25

Organometallic compounds

The renaissance of desorption chemical ionization mass spectrometry: characterization of large involatile molecules and nonpolar polymers, 505

Peak overlap

The science of chemical analysis and the technique of mass spectrometry, 1

Peak trapping

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

Pentaquadrupole tandem mass spectrometry

Cyclization of acylium ions with nitriles: gas-phase synthesis and characterization of 1,3,5-oxadiazinium ions, 445

Permeation parameters

Application of the numerical model describing analyte permeation through hollow fiber membranes into vacuum for determination of permeation parameters of organic compounds in a silicone membrane, 205

Pharmaceuticals

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

Transformations in pharmaceutical research and development, driven by innovations in multidimensional mass spectrometry-based technologies, 135

Polychlorinated biphenyls

Microscale detection of polychlorinated biphenyls using two-step laser mass spectrometry, 41

Polymers

The renaissance of desorption chemical ionization mass spectrometry: characterization of large involatile molecules and nonpolar polymers, 505

Proteomics

Multidimensional separations of complex peptide mixtures: a combined high-performance liquid chromatography/ion mobility/time-of-flight mass spectrometry approach, 97

Tandem mass spectrometric analysis of complex biological mixtures, 81

Proton transfer

The role of proton affinity, acidity, and electrostatics on the stability of neutral versus ion-pair forms of molecular dimers, 287

Quadrupole ion trap

Charge permutation reactions in beam type mass spectrometers, 219

Determination of alkali metal cation selectivities of dibenzo-16-crown-5 lariat ethers with ether pendant groups by using electrospray ionization quadrupole ion trap mass spectrometry, 389

Gaseous apomyoglobin ion dissociation in a quadrupole ion trap: $[M + 2H]^{2+}$ – $[M + 21H]^{21+}$, 359

A survey of recent research activity in quadrupole ion trap mass spectrometry, 337

Radical cations

Examination of barriered and barrierless hydrogen atom abstraction reactions by organic radical cations: the cytosine radical cation, 455

Rf ion trap

Design, optimization and initial performance of a toroidal rf ion trap mass spectrometer, 25

Sector

Charge permutation reactions in beam type mass spectrometers, 219

Semivolatile organic compounds

Simultaneous detection of volatile, semivolatile organic compounds, and organometallic compounds in both air and water matrices by using membrane introduction mass spectrometry, 197

SIMS

Molecular desorption and secondary ion mass spectrometry, 467

Simulations

Design, optimization and initial performance of a toroidal rf ion trap mass spectrometer, 25

Sodium complexes

Relative and absolute bond dissociation energies of sodium cation complexes determined using competitive collision-induced dissociation experiments, 301

Surface composition

Mass spectrometric determination of the surface compositions of ethanol-water mixtures, 267

Surface-induced dissociation (SID)

Charge permutation reactions in beam type mass spectrometers, 219

Implementation of low-energy surface-induced dissociation (eV SID) and high-energy collision-induced dissociation (keV CID) in a linear sector-TOF hybrid tandem mass spectrometer, 535

Inelastic ion-surface collisions: scattering and dissociation of low energy benzene molecular cations, 491

Optimization of a matrix-assisted laser desorption ionization-ion mobility-surface-induced dissociation-o-time-of-flight mass spectrometer: simultaneous acquisition of multiple correlated MS^1 and MS^2 spectra, 519

Tandem mass spectrometry

Implementation of low-energy surface-induced dissociation (eV SID) and high-energy collision-induced dissociation (keV CID) in a linear sector-TOF hybrid tandem mass spectrometer, 535

International energy distribution in charge inversion mass spectrometry using alkali metal targets, 229

Mass spectrometric analysis of complex mixtures then and now: the impact of linking liquid chromatography and mass spectrometry, 111

A retrospective view of mass spectrometry and natural products—sixty years of progress, with a focus on contributions by R. Graham Cooks, 65

Tandem mass spectrometric analysis of complex biological mixtures, 81

Time-of-flight (TOF)

Implementation of low-energy surface-induced dissociation (eV SID) and high-energy collision-induced dissociation (keV CID) in a linear sector-TOF hybrid tandem mass spectrometer, 535

Mass spectrometric determination of the surface compositions of ethanol-water mixtures, 267

A new time-of-flight gating method for analyzing kinetic energy release in Coulomb exploded clusters: application to water clusters, 273

Optimization of a matrix-assisted laser desorption ionization-ion mobility-surface-induced dissociation-o-time-of-flight mass spectrometer: simultaneous acquisition of multiple correlated MS^1 and MS^2 spectra, 519

Use of an ion guide collision cell to improve the analytical performance of an inductively coupled plasma time-of-flight mass spectrometer, 49

Two-step laser mass spectrometry

Microscale detection of polychlorinated biphenyls using two-step laser mass spectrometry, 41

Volatile organic compounds

Simultaneous detection of volatile, semivolatile organic compounds, and organometallic compounds in both air and water matrices by using membrane introduction mass spectrometry, 197

Water

A new time-of-flight gating method for analyzing kinetic energy release in Coulomb exploded clusters: application to water clusters. 273