

## Publications of Tomas Baer

1. S. H. Bauer, D. Marshall, and T. Baer, "The Role of Vibrational Excitation in Hydrogen–Deuterium Exchange. Nascent Molecules at Room Temperature," *J. Am. Chem. Soc.* 87, 5514 (1965).
2. T. Baer, W. Peatman, and E. W. Schlag, "Photoionization Resonance Studies with a Steradiancy Analyzer. II. The Photoionization of  $\text{CH}_3\text{I}$ ," *Chem. Phys. Lett.* 4, 243 (1969).
3. T. Baer and S. H. Bauer, "Vibrationally Excited Methyl Chloride. II. The Reactivity of Vibrationally Hot but Translationally Cold  $\text{CH}_3\text{Cl}$ ," *J. Am. Chem. Soc.* 92, 4773 (1970).
4. T. Baer and S. H. Bauer, "Vibrationally Excited Methyl Chloride. I. The Production of  $\text{CH}_3\text{Cl}^*$ ," *J. Am. Chem. Soc.* 92, 4769 (1970).
5. T. Baer and B. P. Tsai, "Resonance Photoelectron Spectroscopy from Autoionization States in  $\text{CH}_3\text{I}$ ," *J. Electron Spectr.* 2, 25 (1973).
6. B. P. Tsai, T. Baer, and M. Horovitz, "Time of Flight Energy Analysis for Near Threshold Photoelectron Spectroscopy," *Rev. Sci. Instr.* 45, 494 (1974).
7. A. S. Werner, B. P. Tsai, and T. Baer, "A Photoionization Study of the Ionization Potentials and Fragmentation Paths of the Chlorinated Methanes and Carbon Tetrabromide," *J. Chem. Phys.* 60, 3650 (1974).
8. B. P. Tsai and T. Baer, "Analysis of Autoionizing Rydberg States in HI and  $\text{CH}_3\text{I}$ . Comments on Rydberg Electron Wave functions," *J. Chem. Phys.* 61, 047 (1974).
9. T. Baer, L. Squires, and A. S. Werner, "Collisional Dissociation of  $\text{CH}_2\text{Br}^+$  in Selected Internal Energy States," *Chem. Phys.* 6, 325 (1974).
10. T. Baer, A. S. Werner, B. P. Tsai, and S. F. Lin, "H Loss from  $\text{CH}_3\text{Cl}^+$ . Evidence for a New Electronic State in  $\text{CH}_3\text{Cl}^{+?}$ ," *J. Chem. Phys.* 61, 5468 (1974).
11. B. P. Tsai, T. Baer, A. S. Werner, and S. F. Lin, "A Photoelectron Photoion Coincidence Study of the Ionization and Fragment Appearance Potentials of Bromo- and Iodomethanes," *J. Phys. Chem.* 79, 570 (1975).
12. A. S. Werner and T. Baer, "Absolute Unimolecular Decay Rates of Energy Selected  $\text{C}_4\text{H}_6^+$  Metastable Ions," *J. Chem. Phys.* 62, 2900 (1975).
13. T. Baer, B. P. Tsai, and A. S. Werner, "Two-Component Unimolecular Decay Rates of Energy Selected Metastable Ions," *J. Chem. Phys.* 62, 2497 (1975).
14. B. P. Tsai, A. S. Werner, and T. Baer, "A Photoion-Photoelectron Coincidence (PIPECO) Study of Fragmentation Rates and Kinetic Energy Release in Energy Selected Metastable Ions," *J. Chem. Phys.* 63, 4384 (1975).
15. T. Baer, B. P. Tsai, D. Smith, and P. T. Murray, "Absolute Unimolecular Decay Rates of Energy Selected Metastable Halobenzene Ions," *J. Chem. Phys.* 64, 2460 (1976).
16. D. M. Mintz and T. Baer, "Kinetic Energy Release Distributions for the Dissociation of Internal Energy Selected  $\text{CH}_3\text{I}^+$  and  $\text{CD}_3\text{I}^+$  Ions," *J. Chem. Phys.* 65, 2407 (1976).
17. L. Squires and T. Baer, "Cross Sections for Symmetric Charge-Transfer Reactions of  $\text{Xe}^+$  and  $\text{NO}^+$  in Selected Internal and Translational Energy States," *J. Chem. Phys.* 65, 4001 (1976).
18. C. E. Klots, D. M. Mintz, and T. Baer, "Role of Angular Momentum in Unimolecular Kinetics: Kinetic Energy Release in Fragmentation of  $\text{C}_4\text{H}_6^+$ ," *J. Chem. Phys.* 66, 5100 (1977).
19. D. M. Mintz and T. Baer, "Kinetic Energy Release Distributions for the Dissociation of Internal Energy Selected Acetone Ions," *J. Mass Spectr. Ion Phys.* 25, 39 (1977).
20. T. Baer, D. Smith, B. P. Tsai, and A. S. Werner, "Absolute Unimolecular Fragmentation Rates of Energy Selected Metastable Ions: A Test of the Quasi-Equilibrium Theory," *Adv. Mass Spectrom.* 7A, 56 (1978).
21. T. Baer, P. T. Murray, and L. Squires, "Total Cross Sections for Symmetric Charge-Transfer Reactions of  $\text{O}_2^+$  in Selected Translational and Internal Energy States," *J. Chem. Phys.* 68, 4901 (1978).
22. P. M. Guyon, T. Baer, L. F. A. Ferreira, I. Nenner, A. Tabche-Fouhaile, R. Botter, and T. R. Govers, "Observation of Dissociative States of  $\text{O}_2^+$  by Threshold Photoelectron-Photoion Coincidence," *J. Phys. B. Atom. Mol. Phys.* 11, L141 (1978).
23. W. McLean, P. T. Murray, T. Baer, and R. C. Jarnagin, "Dissociative Photoionization of t-Butyllithium," *J. Chem. Phys.* 69, 2715 (1978).
24. D. Smith, T. Baer, G. D. Willett, and R. C. Ormerod, "Dissociation Rates of Internal Energy Selected Metastable  $\text{C}_8\text{H}_8^+$  Ions," *Int. J. Mass Spectrom. Ion Phys.* 30, 155 (1979).
25. P. T. Murray and T. Baer, "Observation of Vibrationally Excited Ions in Franck–Condon Gaps by Threshold Photoelectron Spectroscopy," *Int. J. Mass Spectrom. Ion Phys.* 30, 165 (1978).
26. T. Baer, "The Fate of Ions as Studied by Photoion-Photoelectron Coincidence," *J. Electron Spectr. Rel. Phenomena* 15, 225 (1979).
27. T. Baer, "State Selection by Photoion-Photoelectron Coincidence," *Gas-Phase Ion Chemistry*, M. T. Bowers Ed., Academic Press: New York, Chapter 5 (1979) pp 153–196.
28. T. Baer, P. M. Guyon, I. Nenner, A. Tabche-Fouhaile, R. Botter, L. F. A. Ferreira, and T. Govers, "Non-Franck–Condon Transitions in Resonant Autoionization of  $\text{N}_2\text{O}^+$ ," *J. Chem. Phys.* 70, 1585 (1979).
29. T. Baer, G. D. Willett, D. Smith, and J. S. Phillips, "The Dissociation Dynamics of Internal Energy Selected  $\text{C}_6\text{H}_6^+$ ," *J. Chem. Phys.* 70, 4076 (1979).
30. T. Baer, "The Gas Phase Heat of Formation of  $\text{C}_2\text{H}_5^+$  and  $\text{C}_3\text{H}_7^+$ ," *J. Am. Chem. Soc.* 102, 2482 (1980).
31. I. Nenner, P. M. Guyon, T. Baer, and T. R. Govers, "A Threshold Photoelectron-photoion Coincidence Study of the  $\text{N}_2\text{O}^+$  Dissociation Between 15 and 20.5 eV," *J. Chem. Phys.* 72, 6587 (1980).
32. J. J. Butler and T. Baer, "The Thermochemistry and Dissociation Dynamics of  $\text{C}_4\text{H}_4\text{X I}$ . Thiophene," *J. Am. Chem. Soc.* 102, 6764 (1980).

33. G. D. Willett and T. Baer, "The Thermochemistry and Dissociation Dynamics of  $C_4H_4X$  Ions. II. Furan and 2-Buten-one," *J. Am. Chem. Soc.* **102**, 6769 (1980).
34. G. D. Willett and T. Baer, "The Thermochemistry and Dissociation Dynamics of  $C_4H_4X$  Ions. III.  $C_4H_4NH^+$ ," *J. Am. Chem. Soc.* **102**, 6774 (1980).
35. T. Baer, U. Buchler, and C. E. Klots, "Kinetic Energy Release Distributions for the Dissociation of Internal Energy Selected  $C_2H_3I^+$ ," *J. Chim. Phys.* **77**, 739 (1980).
36. T. E. Carney and T. Baer, "The Mechanism for Multiphoton Ionization of  $H_2S$ ," *J. Chem. Phys.* **75**, 4422 (1981).
37. T. Baer, "Theory and Energetics," Chapter I of *Specialist Periodical Reports on Mass Spectrometry*. The Chemical Society **6**, pp 1–58 (1981).
38. T. E. Carney and T. Baer, "Laser Wavelength Dependence of the REMPI Mass Spectrum of 2,4-Hexadiyne. Direct Evidence for Dissociation Through Ionic State," *J. Chem. Phys.* **75**, 477 (1981).
39. T. Baer and P. T. Murray, "Cross Sections for Symmetric Charge Transfer and Proton-Transfer Reactions of Internal Energy Selected  $NH_3^+$  ( $v$ )," *J. Chem. Phys.* **75**, 4477 (1981).
40. M. L. Fraser-Monteiro, L. Fraser-Monteiro, J. J. Butler, T. Baer, and J. R. Hass, "Thermochemistry and Dissociation Dynamics of State Selected  $C_4H_8O_2$  Ions. I. Dioxane," *J. Phys. Chem.* **86**, 739 (1982).
41. L. Fraser-Monteiro, M. L. Fraser-Monteiro, J. J. Butler, and T. Baer, "Thermochemistry and Dissociation Dynamics of State Selected  $C_4H_8O_2^+$  Ions. II. Ethyl Acetate," *J. Phys. Chem.* **86**, 747 (1982).
42. J. J. Butler, L. Fraser-Monteiro, M. L. Fraser-Monteiro, T. Baer, and J. R. Hass, "Thermochemistry and Dissociation Dynamics of State Selected  $C_4H_8O_2^+$  Ions. III. Butanoic Acid," *J. Phys. Chem.* **86**, 752 (1982).
43. T. Baer and T. E. Carney, "The Dissociation Dynamics of State Selected Metastable Aniline Ions by Single and Multiphoton Ionization," *J. Chem. Phys.* **76**, 1304 (1982).
44. J. J. Butler and T. Baer, "A Photoionization Study of the Heats of Formation of  $HCS^+$ ," *J. Am. Chem. Soc.* **104**, 5016 (1982).
45. T. E. Carney and T. Baer, "Translational Energies of Fragment Ions in the Multiphoton Ionization of Benzene," *J. Chem. Phys.* **76**, 5968 (1982).
46. T. Baer, A. E. DePristo, and J. J. Hermans, "Statistical Energy Partitioning in Dissociations to Several Products," *J. Chem. Phys.* **76**, 5917 (1982).
47. J. C. Miller, R. N. Compton, T. E. Carney, and T. Baer, "Photoelectron Spectrum of  $H_2S$  Following Multiphoton Ionization," *J. Chem. Phys.* **76**, 5648 (1982).
48. T. Baer and R. Kury, "Random Energy Flow in the Dissociation of Energy Selected Bromobenzene and d5 Bromobenzene Ions," *Chem. Phys. Lett.* **92**, 659 (1983).
49. P. M. Guyon, T. Baer, and I. Nenner, "Interactions between Neutral Dissociation and Ionization Continua in  $N_2O$ ," *J. Chem. Phys.* **78**, 3665 (1983).
50. W. A. Brand and T. Baer, "The Unimolecular Dissociation of Energy Selected t-butylbenzene Ions and the Effect of Thermal Energy on the Data Analysis," *Int. J. Mass Spectrom. Ion Phys.* **49**, 103 (1983).
51. J. J. Butler and T. Baer, "A Photoionization Study of Organo Sulfur Ring Compounds: Thiirane, Thietane, and Tetrahydrothiophene," *Org. Mass Spectrom.* **18**, 248 (1983).
52. W. A. Brand, T. Baer and C. E. Klots, "Kinetic Energy Release Distribution in the Fragmentation of Energy Selected Iodopropane Ions," *Chem. Phys.* **76**, 111 (1983).
53. J. J. Butler, T. Baer, and S. E. Evans, Jr., "Energetics and Structures of Organosulfur Ions.  $CH_3SSCH_3^+$ ,  $CH_3SS^+$ ,  $C_2H_5SH^+$ ," *J. Am. Chem. Soc.* **105**, 3451 (1983).
54. T. Baer, "Dissociation Dynamics of Energy Selected Ions Studied by One and Multiphoton Ionization," in *Ionic Processes in the Gas Phase*, M. A. Almoester Ferreira Ed., Reidel Publishing Co.: Amsterdam, Holland, (1983) pp 205–255.
55. T. Baer, "Dissociation Dynamics of Large Molecular Ions Studied by One Photon and Multiphoton Ionization," *Comments on Atomic and Molecular Physics*, **13**, 141 (1983).
56. T. R. Govers, P. M. Guyon, T. Baer, H. Frolich, S. K. Cole and M. Lavollee, "State Selected Ion–Molecule Reactions:  $N_2^+$  ( $X, v'$ ) and  $N_2^+$  ( $A, v'$ ) + Ar  $\rightarrow$   $N_2$  +  $Ar^+$ ," *Chem. Phys.* **87**, 373 (1984).
57. T. Baer, W. A. Brand, T. L. Bunn, and J. J. Butler, "Isomerization of Internal Energy Selected Ions," *Faraday Discuss. Chem. Soc.* **75**, 45 (1983).
58. L. Szepes and T. Baer, "Dissociation Dynamics of Energy Selected Hexamethyldisilane Ions and the Heats of Formation of  $(CH_3)_3Si^+$  and  $(CH_3)_3Si$ ," *J. Am. Chem. Soc.* **84**, 273 (1984).
59. M. Panczel and T. Baer, "A Photoelectron Photoion Coincidence (PEPICO) Study of Fragmentation Rates and Kinetic Energy Release Distributions in Nitrobenzene," *Int. J. Mass Spectrom. Ion Phys.* **58**, 43 (1984).
60. B. E. Miller and T. Baer, "Kinetic Energy Release Distributions in the Fragmentation of Energy Selected Vinyl and Ethyl Bromide Ions," *Chem. Phys.* **85**, 39 (1984).
61. M. L. Fraser-Monteiro, L. Fraser-Monteiro, J. de Wit, and T. Baer, "Dissociation Dynamics of Energy Selected Phenol Ions," *J. Phys. Chem.* **88**, 3622 (1984).
62. W. A. Brand and T. Baer, "Dissociation Dynamics of Energy selected  $C_5H_{10}^+$  Ions," *J. Am. Chem. Soc.* **106**, 3154 (1984).
63. T. Baer, "Chemical Dynamics of Energy Selected Ions," *Ann. Isr. Phys. Soc.* **6**, 549 (1984).
64. S. K. Cole, T. Baer, P. M. Guyon and T. R. Govers, "Symmetric Electron-Transfer Reactions of State Selected Ions:  $H_2^+(v=0-10)$  +  $H_2 \rightarrow H_2 + H_2^+(v')$ ," *Chem. Phys. Lett.* **109**, 285 (1984).
65. T. L. Bunn, W. S. Woodward and T. Baer, "The Design and Operation of a 12.5 ns Multichannel Scaler," *Rev. Sci. Instrum.* **55**, 1849 (1984).
66. T. Baer, "Photoelectron Photoion Coincidence," *J. Chim. Phys.* **81**, 645 (1984).
67. M. Panczel and T. Baer, "A Photoelectron-photoion Coincidence Study of Nitrobenzene Decomposition. I. Decomposition Dynamics," *Magy. Kem. Foly.* **91**, 136 (1985).
68. M. Panczel and T. Baer, "Photoelectron-photoion Coincidence Study of Nitrobenzene Decomposition. II. Thermochemistry of the Dissociation," *Magy. Kem. Foly.* **91**, 153 (1985).
69. T. Baer, "Dissociation Dynamics of Energy Selected Ions," *Adv. Chem. Phys.* **64**, 111 (1986).

70. T. Baer and J. R. Hass, "Dissociation Mechanism of Methylnitrite Ions: Evidence for the Participation of Lower Energy Isomeric Structures," *J. Phys. Chem.* **90**, 451 (1986).
71. T. Bunn, A. Richard and T. Baer, "Photodissociation of the Energy Selected Nitrobenzene Ion," *J. Chem. Phys.* **84**, 1424 (1986).
72. J. Main-Bobo, S. Olesik, W. Gase, T. Baer, A. Mommers and J. Holmes, "The Dissociation Dynamics of Energy Selected Pyrazole and Imidazole Ions," *J. Am. Chem. Soc.* **108**, 677 (1986).
73. T. Baer and P. M. Guyon, "Autoionization and Isotope Effect in the Threshold Photoelectron Spectrum of  $^{12}\text{CO}$  and  $^{13}\text{CO}_2$ ," *J. Chem. Phys.* **85**, 4765 (1986).
74. L. Szepes and T. Baer, "Investigation of  $(\text{CH}_3)_3\text{SiX}$  Type Compounds by Photoelectron-photoion Coincidence Technique," *Magy. Kem. Foly.* **92**, 297 (1986).
75. S. Olesik, T. Baer and J. C. Morrow, "Dissociation Rates of Energy Selected Dichloro and Dibromo Benzene Ions," *J. Phys. Chem.* **90**, 3563 (1986).
76. T. Bunn and T. Baer, "Photodissociation of Energy Selected  $\text{C}_4\text{H}_6^+$  Ions: Determination of Isomerization Barriers between Butyne and 1,3 Butadiene Ion Isomers," *J. Chem. Phys.* **85**, 6361 (1986).
77. S. K. Cole and A. E. DePristo, "State-to-State Differential Cross Sections from Semiclassical Energy Conserving Trajectory Calculations:  $\text{H}_2^+(\nu) + \text{H}_2(0) \rightarrow \text{H}_2(\nu'') + \text{H}_2^+(\nu')$ ," *J. Chem. Phys.* **85**, 1389 (1986).
78. P. M. Guyon, T. R. Govers and T. Baer, "State Selected Ion-Molecule Reactions," *Z. Phys. D* **4**, 89 (1986).
79. P. M. Guyon, T. Baer, S. K. Cole and T. Govers, "The Charge Transfer and Collision-induced Dissociation Cross Sections of State-selected  $\text{H}_2^+$  and  $\text{N}_2^+$  Ions," *Chem. Phys.* **119**, 145 (1988).
80. T. J. Cornish and T. Baer, "2 + 1 REMPI Spectra of Cyclic Ketones in a Cold Molecular Beam. 1. Studies of the  $\text{N} \rightarrow 3s$  Rydberg Transition in Unsubstituted Rings," *J. Am. Chem. Soc.* **109**, 6915 (1987).
81. J. D. Shao, T. Baer, J. C. Morrow, and M. L. Fraser-Monteiro, "The Dissociation Dynamics of Energy Selected Ion-dipole Complexes. 1. The cyclopropane ion-water complex [ $\text{c-C}_3\text{H}_6^+-\text{OH}_2$ ]," *J. Chem. Phys.* **87**, 5242 (1987).
82. M. C. Oliveira, T. Baer, S. Olesik, and M. A. Almoester-Ferreira, "The Dissociation Energies of Energy Selected Bromo and Iodo Butanes," *Int. J. Mass Spectrom. Ion Phys.* **82**, 299 (1988).
83. T. J. Cornish and T. Baer, "2 + 1 REMPI Spectra of Cyclic Ketones in a Cold Molecular Beam: 2. The  $\text{n} \rightarrow 3s$  Rydberg Transition of Methyl Substituted Cyclohexanones and Cyclopentanones," *J. Am. Chem. Soc.* **110**, 3099 (1988).
84. J. D. Shao, T. Baer, and D. K. Lewis, "The Dissociation Dynamics of Energy Selected Ion-Dipole Complexes. II. The Butyl Alcohol Ions," *J. Phys. Chem.* **92**, 5123 (1988).
85. T. Baer, J. C. Morrow, J. D. Shao, and S. Olesik, "The Gas Phase Heats of Formation of  $\text{C}_7\text{H}_7^+$  Isomers: The m-Tolyl, p-Tolyl and Benzyl Ions," *J. Am. Chem. Soc.* **110**, 5633 (1988).
86. T. J. Cornish and T. Baer, "An Experimental Link between the  $^{13}\text{C}$  NMR Chemical Shift of Carbonyl Carbons and the Energy Shifts of the  $\text{n} \rightarrow 3s$  Optical Transition in Cyclic Ketones," *J. Am. Chem. Soc.* **110**, 6287 (1988).
87. T. Baer, O. Dutuit, H. Mestdagh, and C. Rolando, "The Dissociation Dynamics of *n*-Butylbenzene Ion: The Competitive Production of  $m/z$  91 and 92 Fragment Ions," *J. Phys. Chem.* **92**, 5674-5679 (1988).
88. J. D. Shao and T. Baer, "The Dissociation Dynamics of Energy Selected o-Nitrotoluene Ions," *Int. J. Mass Spectrom. Ion Phys.* **86**, 357-367 (1988).
89. J. C. Morrow and T. Baer, "Ab Initio Calculations on  $\text{C}_2\text{H}_5\text{Cl}^+$  and the Loss of HCl from  $\text{C}_2\text{H}_5\text{Cl}^+$  Isomers," *J. Phys. Chem.* **92**, 6567-6571 (1988).
90. J. Steadman, S. K. Cole, and T. Baer, "Visible and UV Resonance Enhanced Multiphoton Ionization Photoelectron Spectroscopy of  $\text{H}_2\text{S}$ ," *J. Chem. Phys.* **89**, 5498-5506 (1988).
91. J. Steadman and T. Baer, "The Production and Spectroscopy of Sulfur Atoms from the Two-Photon Dissociation of  $\text{H}_2\text{S}$ ," *J. Chem. Phys.* **89**, 5507-5513 (1988).
92. T. J. Cornish, T. Baer, and L. G. Pedersen, "The  $\text{n} \rightarrow 3s$  Rydberg Transition of Jet-Cooled Tetrahydropyran, 1,4-Dioxane, and 1,4-Dioxane- $d_8$  Studied by Resonance Enhanced Multiphoton Ionization," *J. Phys. Chem.* **93**, 6064-6069 (1989).
93. J. Steadman and T. Baer, "The Production and Characterization by Resonance Enhanced Multiphoton Ionization of  $\text{H}_2(\nu=10-14)$  from Photodissociation of  $\text{H}_2\text{S}$ ," *J. Chem. Phys.* **91**, 6113-6119 (1989).
94. T. Baer, "Vacuum UV Photophysics and Photoionization Spectroscopy," *Ann. Rev. Phys. Chem.* **40**, 637-669 (1989).
95. S. Olesik, T. Baer, J. C. Morrow, J. J. Ridal, J. Buschek, and J. L. Holmes, "Dissociation Dynamics of Halotoluene Ions. Production of Tollyl, Benzyl, and Tropylium  $\text{C}_7\text{H}_7^+$  Ions," *Org. Mass Spectrom.* **24**, 1008-1016 (1989).
96. T. J. Cornish and T. Baer, "Identification of Conformational isomers of Methyl-substituted Cyclohexanone and Tetrahydropyran Frozen in a Molecular Beam," *J. Phys. Chem.* **94**, 2852-2857 (1990).
97. T. J. Cornish and T. Baer, "Differentiation of Stereoisomers using High Resolution Electronic Spectroscopy Applied to Methyl Substituted Tetrahydropyrans," *Anal. Chem.* **62**, 1623-1627 (1990).
98. J. S. Riley, T. Baer, and G. D. Marbury, "Sequential ortho effects: Characterization on novel  $[\text{M}-35]^+$  Fragment Ions in the Mass Spectra of 2-alkyl-4,6-Dinitrophenols," *J. Am. Soc. Mass Spectrom.* **2**, 69 (1991).
99. K. M. Weitzel, J. Booze, and T. Baer, "Shifts in Photoionization Fragmentation Onsets; a Direct Measure of Cooling in a Supersonic Molecular Beam," *Chem. Phys.* **150**, 263-273 (1991).
100. O. Dutuit, T. Baer, C. Metayer, and J. Lemaire, "Isotope effects in the dissociation of partially deuterated dimethyl ether ( $\text{CH}_3\text{OCD}_3$ ) ions," *Int. J. Mass Spectrom. Ion Proc.* **110**, 67-82 (1991).
101. T. Baer, K. M. Weitzel, and J. Booze, "Photoelectron Photoion Coincidence Studies of Ion Dissociation Dynamics," in *Vacuum Ultraviolet ionization and Dissociation of Molecules and Clusters*, C. Y. Ng, Ed., World Scientific, Inc.: Singapore, pp 259-96 (1991).
102. T. Baer, "The Measurement and Interpretation of Onset Energies," NATO ASI series C, # 347 249-65 (1991).

103. J. A. Booze, K. M. Weitzel, and T. Baer, "The Rates of HCl Loss from Energy Selected Ethylchloride Ions: A Case of Tunneling through an H-atom Transfer Barrier," *J. Chem. Phys.* **94**, 3649–3656 (1991).
104. K. M. Weitzel, J. A. Booze, and T. Baer, "TPEPICO Study of the Ethane Loss from Energy Selected n-Pentane Ions Cooled in a Supersonic Expansion," *Int. J. Mass Spectrom. Ion Proc.* **107**, 301–317 (1991).
105. K. M. Weitzel, J. A. Booze, and T. Baer, "The Metastable Formation of di-ethylchloronium Ions from Ethylchloride Dimers in a seeded Molecular Beam," *Z. Phys. D.* **18**, 383–389 (1991).
106. J. Riley and T. Baer, "Dissociation Dynamics of Phenetole Cations by Photoelectron Photoion Coincidence," *J. Am. Soc. Mass Spectrom.* **2**, 464–469 (1991).
107. J. W. Driscoll, T. Baer, and T. J. Cornish, "The Analysis of Conformations of Substituted Cyclic Ketones by Multiphoton Ionization," *J. Mol. Struct.* **249**, 95–107 (1991).
108. J. A. Booze and T. Baer, "Ab initio Study of  $C_3H_8O^+$  Ions," *J. Phys. Chem.* **96**, 5710–5715 (1992).
109. J. A. Booze and T. Baer, "Dissociation dynamics of Energy Selected  $CH_3CH_2CH_2OH^+$  and  $CD_3CH_2CH_2OH^+$  Ions," *J. Phys. Chem.* **96**, 5715–5719 (1992).
110. J. A. Booze and T. Baer, "On the Determination of Cluster Properties by Ionization Techniques," *J. Chem. Phys.* **96**, 5541–5543 (1992).
111. J. W. Driscoll and T. Baer, "2-Methyl Effects in the Rydberg Spectra of Methyl Substituted Cyclohexanones," *Anal. Chem.* **64**, 2604–2609 (1992).
112. T. Baer, "Reactions of State Selected Ions Studied with Vacuum-UV Radiation," *AIP Conf. Proc.* **258**, 3–17 (1992).
113. T. N. Feinberg, T. Baer, and L. M. Duffy, "IR Photodissociation and CID Study of Ethene Cluster Ions," *J. Phys. Chem.* **96**, 9162–9168 (1992).
114. J. A. Booze and T. Baer, "The Photoionization and Dissociation Dynamics of Energy Selected Acetylene Dimers, Trimers, and Tetramers," *J. Chem. Phys.* **98**, 186–200 (1993).
115. J. R. Riley and T. Baer, "Unimolecular Decay of Energy Selected Dimethylformamide Cations: A Combined Molecular Orbital and RRKM Analysis," *J. Phys. Chem.* **97**, 385–390 (1993).
116. J. A. Booze, M. Schweinsberg, and T. Baer, "Transition State Structures and Angular Momentum Effects in the Dissociation Dynamics of Energy Selected  $C_4H_8^+$  Ions," *J. Chem. Phys.* **99**, 4441–4454 (1993).
117. T. H. Osterheld, T. Baer, and J. I. Brauman, "Infrared Multiple Photon Dissociation of Nitrobenzene Radical Cation. A Paradigm for Competitive Reactions," *J. Am. Chem. Soc.* **115**, 6284–6289 (1993).
118. T. Baer, "Reactions of State Selected Ions Studied with VUV Radiation" Conference Proceedings # 258 *Synchrotron Radiation and Dynamic Phenomena*, A. Beswick Ed., American Institute of Physics: New York, pp 3–17 (1992).
119. T. Baer, J. A. Booze, and J. R. Riley, "Nondissociative one-photon ionization of clusters – Is it Possible?" in *Laser Techniques for State Selected and State-to-State Chemistry*, C. Y. Ng, Ed., *Proc. SPIE 1858*, 158–163 (1993).
120. J. W. Keister, J. S. Riley, and T. Baer, "The t-butyl Ion Heat of Formation and the Isobutene Proton Affinity," *J. Am. Chem. Soc.* **115**, 12613–12614 (1993).
121. M. A. Almoester Ferreira, B. J. Costa Cabral, M. C. Oliveira, and T. Baer, "Dissociation Mechanisms of Energy-selected Chlorobutane ions: Experiment and Theory," *Org. Mass Spectrom.* **28**, 1229–1237 (1993).
122. T. Baer and J. A. Booze, "Long Lived Ion Complexes" in *Advances in Classical Trajectory Methods*, W. Hase Ed., JAI Press: London, (1994) Vol 2, pp 1–42.
123. J. S. Riley and T. Baer, "Kinetic Energy Analysis in Time of Flight Mass Spectrometry - Application of TOF Methods to Clusters and Pyrolysis Studies in Supersonic Expansions," *Int. J. Mass Spectrom. Ion Proc.* **131**, 295–305 (1994).
124. D. Schroder, D. Sulzle, O. Dutuit, T. Baer, and H. Schwarz, "Further insight in the surprisingly complex unimolecular fragmentations of the methyl nitrite radical cation," *J. Am. Chem. Soc.* **116**, 6395–6400 (1994).
125. J. A. Booze, T. N. Feinberg, J. W. Keister, and T. Baer, "The Dissociative Ionization of Ethylene Dimers, Trimers and Tetramers Studied by Photoelectron Photoion Coincidence," *J. Chem. Phys.* **100**, 4294–4299 (1994).
126. Z. X. Ma, C. L. Liao, C. Y. Ng, Y. S. Cheung, W. K. Li, and T. Baer, "Experimental and Theoretical Studies of Isomeric  $CH_3S_2$  and  $CH_3S_2^+$ ," *J. Chem. Phys.* **100**, 4870–4876 (1994).
127. D. R. Nesselrodt and T. Baer, "Cyclic Ketone Mixture Analysis Using 2+1 Resonance Enhanced Multiphoton Ionization Mass Spectrometry," *Anal. Chem.* **66**, 2497–2504 (1994).
128. L. M. Duffy, T. N. Feinberg, and T. Baer, "Infrared Vibrational Photodissociation Spectra of  $Ar_2^+$  Ions," *J. Chem. Phys.* **101**, 2793–2799 (1994).
129. D. R. Nesselrodt, A. R. Potts, and T. Baer, "Observation of Ethyl Substituted Cyclohexanone and Cyclopentanone Rotamers Using Resonance Enhanced Multiphoton Ionization Spectroscopy," *J. Phys. Chem.* **99**, 4458–4465 (1995).
130. A. R. Potts, D. R. Nesselrodt, T. Baer, J. W. Driscoll, and J. P. Bays "The 3s Rydberg Spectra of Methyl Substituted Cyclopentanones," *J. Phys. Chem.* **99**, 12090–12098 (1995).
131. T. Baer and P. M. Guyon, "An Historical Introduction to Threshold Photoionization" in *High-Resolution Ion Spectroscopy* T. Baer, C. Y. Ng, and I. Powis Eds, Wiley & Sons: New York, (1995) pp 1–16.
132. T. Baer, "Recent Progress and Future Trends in Ion Dissociation Dynamics" in *Advances in Mass Spectrometry – Vol. 13* I. Cornides, Gy. Horvath, and K. Vekey Eds., John Wiley & Sons: Chichester, England (1995), pp 313–332.
133. D. R. Nesselrodt, A. R. Potts, and T. Baer, "Stereochemical Analysis of Methyl Substituted Cyclohexanes Using 2+1 Resonance Enhanced Multiphoton Ionization Spectroscopy," *Anal. Chem.* **67**, 4322–4329 (1995).
134. L. M. Duffy, J. W. Keister, and T. Baer, "Isomerization and Dissociation in Competition - The Pentene Ion Story," *J. Phys. Chem.* **99**, 17862–17871 (1995).
135. D. R. Nesselrodt and T. Baer, 2+1 Resonance Enhanced Multiphoton Ionization Spectroscopy as a Tool for Stereochemical and Conformational Analysis of Substituted Five- and Six-Membered Rings," *J. Mol. Struct.* **377**, 201–218 (1996).

136. E. Soh, P. M. Mayer, and T. Baer "The Unimolecular chemistry of ionized 1- and 2-butanethiol," *Int. J. Mass Spectrom. Ion Proc.* **160**, 63–71 (1997).
137. P. M. Mayer and T. Baer "Isomerization and Dissociation in Competition. The Two-Component Decay Rates of Energy Selected Trimethylborate Ions," *J. Phys. Chem.* **100**, 14949–14957 (1996).
138. P. B. Armentrout and T. Baer "Gas-Phase Ion Dynamics and Chemistry," *J. Phys. Chem.* **100**, 12866–12877 (1996).
139. A. R. Potts and T. Baer "Spectroscopic Gas Phase Determination of  $\Delta H^\circ$  [axial/equatorial] for 3-methyl Cyclohexanone," *J. Chem. Phys.* **105**, 7605–12 (1996).
140. T. Baer "The Calculation of Unimolecular Decay Rates with RRKM and ab initio methods," in *The Structure, Energetics, and Dynamics of Organic Ions* T. Baer, C. Y. Ng, and I. Powis, Eds., Wiley Series in Ion Chemistry and Physics, Wiley: New York, (1996) Chapter 3, p 125–166.
141. P. M. Mayer and T. Baer, "The Heat of Formation of  $\text{CISO}^+$ ," *Chem. Phys. Lett.* **261**, 155–159 (1996).
142. P. M. Mayer and T. Baer, "A Photoionization Study of Vibrational Cooling in Molecular Beams," *Int. J. Mass Spectrom. Ion Proc.* **156**, 133–140 (1996).
143. T. Baer and P. M. Mayer, "Statistical RRKM/QET Calculations in Mass Spectrometry," *J. Am. Soc. Mass Spectrom.* **8**, 103–115 (1997).
144. J. W. Keister, T. Baer, M. Evans, C. Y. Ng, C.-W. Hsu, "Methyl Loss Kinetics of Energy-Selected 1,3-Butadiene and Methylcyclopropene Cations," *J. Phys. Chem.* **101**, 1866–1872 (1997).
145. P. M. Mayer, J. W. Keister, T. Baer, M. Evans, C. Y. Ng, and C.-W. Hsu, "The Dimethylamine Dimer Ion Is an Ion-Radical Complex: A Combined TPEPCIO, Variational RRKM and ab initio MO study of the Fragmentation of Ionized Dimers of Dimethylamine," *J. Phys. Chem.* **101**, 1270–1276 (1997).
146. O. Mazzyar, P. M. Mayer, and T. Baer, "Isomerization and Dissociation in Competition: The two-component dissociation rates of methyl acetate ions," *Int. J. Mass Spectrom. Ion Proc.* **167/168**, 389–402 (1999).
147. T. Baer, O. A. Mazzyar, J. W. Keister, and P. M. Mayer, "Isomerization and Dissociation in Competition – The two-component dissociation dynamics of energy selected  $\text{C}_3\text{H}_6\text{O}_2^+$  Isomers," *Ber. Bunsen-Ges. Phys. Chem.* **101**, 478–483 (1997).
148. A. R. Potts and T. Baer, "Conformational Enthalpies,  $\Delta H[\text{ax/eq}]$  of 3- and 4-methyl cyclohexanone," *J. Mol. Structure (Theochem)* **419**, 11–18 (1997).
149. A. R. Potts and T. Baer, "Spectroscopic determination of  $\Delta H_E$  for axial/equatorial and ethyl rotor conformations in 4-methyl and 4-ethyl cyclohexanone cooled in a supersonic jet," *J. Chem. Phys.* **108**, 869–875 (1998).
150. A. R. Potts and T. Baer, "Conformational and Energetic Analysis of Saturated Organic Ring Compounds by 2 + 1 Resonance-Enhanced Multiphoton Ionization (REMPI) Spectroscopy," *J. Phys. Chem. A* (Feature Article) **101**, 8970–8978 (1997).
151. J. W. Keister, P. Tomperi, and T. Baer, "Ethyl loss kinetics of tetraethylsilane ions studied by TPEPCIO," *Int. J. Mass Spectrom. Ion Proc.* **171**, 243–252 (1997).
152. J. W. Keister, T. Baer, R. Thissen, C. Alcaraz, O. Dutuit, H. Audier, and V. Troude, "Proton tunneling in the loss of hydrogen bromide from energy selected gas-phase 2-bromobutane cations," *J. Phys. Chem. A* **102**, 1090–1097 (1998).
153. O. A. Mazzyar and T. Baer, "Isomerization and Dissociation in Competition: the two-component dissociation rates of the energy selected methyl formate ions," *J. Phys. Chem. A* **102**, 1682–1690 (1998).
154. J. W. Keister, P. Tomperi, and T. Baer, "Thermochemistry of gaseous ethylsilane cations," *J. Am. Soc. Mass Spectrom.* **9**, 597–605 (1998).
155. O. A. Mazzyar and T. Baer, "Theoretical and experimental studies of unimolecular dissociation of phosphorus tribromide ions," *Chem. Phys. Lett.* **288**, 327–332 (1998).
156. O. A. Mazzyar and T. Baer, "Ethene loss kinetics of methyl 2-methyl butanoate ions studied by TPEPCIO: The enol ion of methyl propionate heat of formation," *J. Am. Soc. Mass Spectrom.* **10**, 200–208 (1999).
157. O. A. Mazzyar and T. Baer, "Isomerization and dissociation in competition: The two-component dissociation rates of methyl propionate ions," *J. Phys. Chem.* **103**, 1221–1227 (1999).
158. A. Zelenyuk, J. Cabalo, T. Baer, and R. E. Miller, "Mass spectrometry of liquid aniline aerosol particles by IR/UV laser irradiation," *Anal. Chem.* **71**, 1802–1808 (1999).
159. T. Baer, R. Lafleur, and O. A. Mazzyar, "The role of ion dissociation dynamics in the study of ion and neutral thermochemistry," in *Energetics of Stable Molecules and Reactive Intermediates*, M. E. Minas da Piedade Ed., Kluwer Academic Publishers: Norwell, MA, (1999) pp 303–322.
160. J. Cabalo, A. Zelenyuk, T. Baer, and R. E. Miller, "Two-color laser induced evaporation dynamics of liquid aerosols probed by time-of-flight mass spectrometry," *Aerosol Sci. Technol.* **33**, 3–19 (2000).
161. G. K. Jarvis, K. M. Weitzel, M. Malow, T. Baer, Y. Song, and C. Y. Ng, "High-resolution pulsed field ionization photoelectron-photoion coincidence spectroscopy using synchrotron radiation," *Rev. Sci. Instrum.* **70**, 3892–3906 (1999).
162. K. M. Weitzel, M. Malow, G. K. Jarvis, T. Baer, Y. Song, and C. Y. Ng, "High-resolution pulsed field ionization photoelectron-photoion coincidence study of  $\text{CH}_4$ : Accurate 0K dissociation threshold for  $\text{CH}_3^+$ ," *J. Chem. Phys.* **111**, 8267–8270 (1999).
163. G. K. Jarvis, K. M. Weitzel, M. Malow, T. Baer, Y. Song, and C. Y. Ng, "High-resolution pulsed field ionization photoelectron photoion coincidence study of  $\text{C}_2\text{H}_2$ : Accurate 0 K dissociation threshold of  $\text{C}_2\text{H}^+$ ," *Phys. Chem. Chem. Phys.* **1**, 5259–5262 (1999).
164. T. Baer, Y. Song, C. Y. Ng, J. Liu, and W. Chen, "The heat of formation of  $2\text{-C}_3\text{H}_7^+$  and proton affinity of  $\text{C}_3\text{H}_6$  determined by pulsed field ionization – photoelectron photoion coincidence spectroscopy," *J. Phys. Chem. A* **104**, 1959–1964 (2000).
165. D. Kim and T. Baer, "Conformational Study of 3-Methyltetrahydropyran by (2+1) Resonance-Enhanced Multiphoton Ionization Spectroscopy," *J. Phys. Chem. A* **104**, 509–513 (2000).

166. R. D. Laflaur, B. Sztaray, and T. Baer "A photoelectron-photoion coincidence study of the  $\text{ICH}_2\text{CN}$  ion dissociation: The Thermochemistry of  $\bullet\text{CH}_2\text{CN}$ ,  $^+\text{CH}_2\text{CN}$ , and  $\text{ICH}_2\text{CN}$ ," *J. Phys. Chem. A* 104, 1450–1455 (2000).
167. T. Baer, Y. Song, J. Liu, W. Chen, and C. Y. Ng, "Pulsed field ionization – photoelectron photoion coincidence spectroscopy with synchrotron radiation: The heat of formation of the  $\text{C}_2\text{H}_5^+$  ion," *Disk. Faraday Soc.* 115, 137–145 (2000).
168. D. Kim and T. Baer, "Gas-phase measurement of  $\Delta\text{H}^\circ$  between axial and equatorial conformations of 3-methylcyclopentanone," *Chem. Phys.* 256, 251–258 (2000).
169. T. Baer and A. R. Potts, "Nonstatistical chemical reactions: the isomerization over low barriers in methyl and ethyl cyclohexanones," *J. Phys. Chem. A* 104, 9397–9404 (2000).
170. B. Sztaray and T. Baer, "The dissociation dynamics and thermochemistry of energy selected  $\text{CpCo}(\text{CO})_2^+$  ions," *J. Am. Chem. Soc.* 122, 9219–9226 (2000).
171. T. Baer, "Ion dissociation dynamics and thermochemistry by photoelectron photoion coincidence (PEPICO) spectroscopy," *Int. J. Mass Spectrom.* 200, 443–457 (2000).
172. Y. Li, B. Sztaray, and T. Baer, "The dissociation kinetics of energy selected  $\text{CpMn}(\text{CO})_3^+$  ions studied by threshold photoelectron photoion coincidence spectroscopy," *J. Am. Chem. Soc.* 123, 9388–9396 (2001).
173. E. Woods, III, G. D. Smith, Y. Dessiaterik, T. Baer, and R. E. Miller, "Quantitative detection of aromatic compounds in single aerosol particle mass spectrometry," *Anal. Chem.* 73, 2317–2322 (2001).
174. K.-M. Weitzel, G. Jarvis, M. Malow, Y. T. Baer, Song, and C. Y. Ng, "Observation of Accurate Ion Dissociation Thresholds in Pulsed Field Ionization Photoelectron Studies," *Phys. Rev. Lett.* 86, 3526–3529 (2001).
175. E. Woods, III, Y. Dessiaterik, R. E. Miller, and T. Baer, "Dynamics in the early stages of decomposition of liquid nitromethane and nitromethane-diethylamine mixtures," *J. Phys. Chem. A* 105, 8273–8280 (2001).
176. E. Woods, III, G. D. Smith, R. E. Miller, and T. Baer, "Depth-profiling of heterogeneously mixed aerosol particles using single particle mass spectrometry," *Anal. Chem.* 74, 1642–1649 (2002).
177. Y. Li and T. Baer, "Threshold photoelectron-photoion coincidence spectroscopy: Dissociation of the 1-chloroadamantane ion and the heat of formation of the 1-adamantyl cation," *J. Phys. Chem. A* 106, 272–278 (2002).
178. F. Qi, L. Sheng, M. Ahmed, D. S. Peterka, and T. Baer, "Exclusive production of excited-state sulfur ( $^1\text{D}$ ) from 193 nm photolysis of thietane," *Chem. Phys. Lett.* 357, 204–208 (2002).
179. Y. Li, J. E. McGrady, and T. Baer, "Metal-benzene and metal-CO bond energies in neutral and ionic  $\text{C}_6\text{H}_6\text{Cr}(\text{CO})_3$  studied by threshold photoelectron photoion coincidence spectroscopy and DFT theory," *J. Am. Chem. Soc.* 124, 4487–4494 (2002).
180. T. Baer, "Photoelectron spectroscopy, threshold photoelectron spectroscopy, and pulsed field ionization, Encyclopedia of Mass Spectrometry," P. B. Armentrout, Ed., Elsevier: Amsterdam, 1, 235–241 (2003) Chapter 4.
181. T. Baer, "Measuring fragment ion appearance energies by photoionization methods, Encyclopedia of Mass Spectrometry," P. B. Armentrout, Ed., Elsevier: Amsterdam, 1, 381–390 (2002) Chapter 5.
182. Y. Li and T. Baer, "Neutral and ionic bond energies in  $(\text{C}_6\text{H}_6)_2\text{Cr}$  studied by threshold photoelectron photoion coincidence spectroscopy," *J. Phys. Chem. A* 106, 9820–9826 (2002).
183. T. Baer and Y. Li, "Threshold photoelectron spectroscopy with velocity focusing: An ideal match for coincidence studies," *Int. J. Mass Spectrom.* 219, 381–389 (2002).
184. C. Sykes, E. Woods, III, G. D. Smith, T. Baer, and R. E. Miller, "Thermal Vaporization – Vacuum Ultraviolet Laser Ionization Time-of-Flight Mass Spectrometry of Single Aerosol Particles," *Anal. Chem.* 74, 2048–2052 (2002).
185. Y. Li, B. Sztaray, and T. Baer, "The dissociation kinetics of energy selected  $\text{Cp}_2\text{Mn}^+$  ions studied by threshold photoelectron photoion coincidence spectroscopy," *J. Am. Chem. Soc.* 124, 5843–5849, (2002).
186. G. D. Smith, E. Woods, III, C. D. Hauser, T. Baer, and R. E. Miller, "Reactive uptake of ozone by oleic acid aerosol particles: Application of single particle mass spectrometry to heterogeneous reaction kinetics," *J. Phys. Chem. A* 106, 8085–8095 (2002).
187. B. Sztaray, L. Szepes, and T. Baer, "Neutral Cobalt–Carbonyl Bond Energy By Combining Threshold Photoelectron Photoion Coincidence Spectroscopy with He(I) Photoelectron Spectroscopy," *J. Phys. Chem. A* 107, 9486–9490 (2003).
188. Y. Li and T. Baer, "Theoretical studies on the isomerization and dissociation of the acrolein ions," *Int. J. Mass Spectrom.* 218, 19–37 (2002).
189. Y. Li and T. Baer, "The Dissociation Dynamics and Thermochemistry of the Acrolein Ion Studied by Threshold Photoelectron-Photoion Coincidence Spectroscopy," *Int. J. Mass Spectrom.* 218, 37–48 (2002).
190. Y. Li and T. Baer, "Dissociation dynamics of ethylene glycol ions studied by photoelectron photoion coincidence," *J. Phys. Chem. A* 106, 8658–8666 (2002).
191. B. Sztaray and T. Baer, "Consecutive and parallel dissociation of energy selected  $\text{Co}(\text{CO})_3\text{NO}^+$  ions," *J. Phys. Chem. A* 106, 8046–8053 (2002).
192. E. Woods, III, R. E. Miller, and T. Baer, "The internal energy of neutral ethylene glycol molecules created in the laser vaporization of aerosol particles," *J. Phys. Chem. A* 107, 2119–2125 (2003).
193. G. D. Smith, E. Woods, III, T. Baer, and R. E. Miller, "Aerosol uptake described by numerical solution of the diffusion-reaction equations in the particle," *J. Phys. Chem. A* 107, 9582–9587 (2003).
194. B. Sztaray and T. Baer, "The suppression of hot electron in threshold photoelectron photoion coincidence spectroscopy using velocity focusing optics," *Rev. Sci. Instrum.* 74, 3763–3768 (2003).
195. X. M. Qian, T. Zhang, C. Chang, P. Wang, C. Y. Ng, Y.-H. Chiu, D. J. Levandier, S. Miller, R. A. Dressler, T. Baer, and D. S. Peterka, "High-resolution state-selected ion–molecule reaction studies using pulsed field ionization photoelectron-secondary ion coincidence method," *Rev. Sci. Instrum.* 74, 4096–4109 (2003).

196. T. Baer and B. Sztaray, "The statistical theory for unimolecular decay of organic and organometallic ions," volume 5, *Encyclopedia of Mass Spectrometry*, Elsevier: Amsterdam, (2003) in press.
197. Y. Dessiaterik, T. G. Nguyen, T. Baer, and R. E. Miller, "IR vaporization mass spectrometry of aerosol particles with ionic solutions: The problem of ion-ion recombination," *J. Phys. Chem. A* 107, 11245–11252 (2003).
198. W. K. Lewis, B. E. Applegate, J. Sztáray, B. Sztáray, T. Baer, R. J. Bemish, and R. E. Miller, "Electron impact ionization in helium nanodroplets: Controlled fragmentation by active cooling of molecular ions," *J. Am. Chem. Soc.* 126, 11283–11292 (2004).
199. E. A. Fogleman, H. Koizumi, J. Kercher, B. Sztaray, and T. Baer, "The Heats of Formation of the Acetyl radical and Ion obtained by Threshold Photoelectron Photoion Coincidence," *J. Phys. Chem. A* 108, 5288–5294 (2004).
200. H. Koizumi and T. Baer, "The heats of formation of *tert*-butyl isocyanide and other alkyl isocyanides by photoelectron photoion coincidence spectroscopy," *J. Phys. Chem. A* 108, 5956–5961 (2004).
201. A. Bodi, J. P. Kercher, T. Baer, and B. Sztáray "On the Parallel Mechanism of the Dissociation of Energy-Selected P(CH<sub>3</sub>)<sub>3</sub><sup>+</sup> Ions," *J. Phys. Chem. B* submitted (2004).
202. A. Brooks, K.-C. Lau, C. Y. Ng, and T. Baer, "The C<sub>3</sub>H<sub>7</sub><sup>+</sup> Appearance Energy from 2-Iodopropane and 2-Chloropropane Studied by Threshold Photoelectron Photoion Coincidence," *Eur. J. Mass Spectrom.*, submitted (2004).

#### Book

T. Baer and W. L. Hase, "*Unimolecular Reaction Dynamics: Theory and Experiments*," Oxford University Press: New York, (1996).

#### Edited Books

C. Y. Ng, I. Powis, and T. Baer Eds, Wiley Series: Ion Chemistry and Physics.

Cluster Ions (1993).

Unimolecular and Bimolecular Reaction Dynamics (1994).

High-Resolution Laser Photoionization and Photoelectron Studies (1995).

The Structure, Energetics, and Dynamics of Organic Ions (1996).

Large Ions: Their Vaporization, Detection, and Structural Analysis (1996).