

This article was downloaded by:

On: 21 January 2011

Access details: *Access Details: Free Access*

Publisher *Taylor & Francis*

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



International Reviews in Physical Chemistry

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713724383>

Roger E. Miller: Publications

Online publication date: 28 November 2010

To cite this Article (2006) 'Roger E. Miller: Publications', *International Reviews in Physical Chemistry*, 25: 1, 5 – 13

To link to this Article: DOI: 10.1080/01442350600709243

URL: <http://dx.doi.org/10.1080/01442350600709243>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article may be used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Roger E. Miller: Publications

- [1] R.E. Miller, A New Technique for Sub-Doppler Resolution Infrared Spectroscopy Using Molecular Beams, MSc Thesis, University of Waterloo (1977).
- [2] T.E. Gough, R.E. Miller, and G. Scoles, Infrared Spectroscopy of Molecular Beams, in: *Laser Spectroscopy III*, Springer Series in Optical Sciences 7, ed. J.L. Hall and J.L. Carlsten (1977), pp. 443–444.
- [3] T.E. Gough, R.E. Miller, and G. Scoles, Infrared Laser Spectroscopy of Molecular Beams, *Appl. Phys. Lett.* **30** (1977) 338–340.
- [4] T.E. Gough, R.E. Miller, and G. Scoles, Sub-Doppler Resolution Infrared Spectroscopy of Supersonic Molecular Beams of Nitric Oxide, *J. Mol. Spec.* **72** (1978) 124–127.
- [5] T.E. Gough, R.E. Miller, and G. Scoles, Photo-induced Vibrational Predissociation of the Van der Waals Molecule (N₂O)₂, *J. Chem. Phys.* **69** (1978) 1588–1590.
- [6] T.E. Gough, R.E. Miller, and G. Scoles, Photo-Induced Vibrational Predissociation of Van der Waals Molecules, in: *Advances in Laser Chemistry*, Springer Series in Chemical Physics 3, ed. A.H. Zewail (1978), pp. 433–436.
- [7] R.E. Miller, Infrared Laser Spectroscopy of Molecular Beams, PhD Thesis, University of Waterloo (1980).
- [8] T.E. Gough, D. Gravel, R.E. Miller, and G. Scoles, Very High-Resolution Infrared-Spectroscopy of Molecular-Beams with Color-Center Lasers, *J. Opt. Soc. Am.* **70** (1980) 665–666.
- [9] T.E. Gough, D. Gravel, and R.E. Miller, Multiple Crossing Devices for Laser-Molecular Beam Spectroscopy, *Rev. Sci. Inst.* **52** (1981) 802–803.
- [10] T.E. Gough, R.E. Miller, and G. Scoles, Sub-Doppler Resolution Infrared Molecular Beam Spectroscopy: Stark Effect Measurement of the Dipole Moment of Hydrogen Fluoride and Hydrogen Cyanide in Excited Vibrational States, *Farad. Disc. Chem. Soc.* **71** (1981) 77–85.
- [11] T.E. Gough, R.E. Miller, and G. Scoles, Infrared Spectra and Vibrational Predissociation of (CO₂)_n Clusters using Molecular Beam Techniques, *J. Phys. Chem.* **85** (1981) 4041–4046.
- [12] T.E. Gough and R.E. Miller, Infrared Laser and Mass Spectrometric Analysis of Cluster Beams: Dimer Fragmentation Due to Electron Impact, *Chem. Phys. Lett.* **87** (1982) 280–283.
- [13] C.V. Boughton, R.E. Miller, and R.O. Watts, Infrared Spectroscopy of Molecular Beams, *Aust. J. Phys.* **35** (1982) 611–621.
- [14] R.E. Miller, Infrared Laser Spectroscopy of Molecular Beams Using a Room Temperature Beam Detector: Application to the Study of Translational Freezing in Free Jet Expansions, *Rev. Sci. Inst.* **53** (1982) 1719–1723.
- [15] T.E. Gough and R.E. Miller, Rotational Relaxation of HF in a Free-Jet Expansion of Dilute HF–He Mixtures: Information Content on State-to-State Rate Constants, *J. Chem. Phys.* **78** (1983) 4486–4493.
- [16] G. Fischer, R.E. Miller, and R.O. Watts, Vibrational Predissociation of Van der Waals Clusters of Ethylene, *Chem. Phys.* **80** (1983) 147–155.
- [17] R.E. Miller, J.B. Fenn, and R.O. Watts, Rotational and Translational Distributions of HF and NH₃ Subliming from Solid NH₄F, *Chem. Phys. Lett.* **102** (1983) 33–36.
- [18] R.E. Miller, G. Fischer, and R.O. Watts, Infrared Laser Spectroscopy and Vibrational Predissociation of Van der Waals Clusters of Unsaturated Hydrocarbons, in: *Laser Spectroscopy VI*, Springer Series in Optical Sciences 40, ed. H.P. Weber and W. Luethy (1983), pp. 269–270.
- [19] R.E. Miller, R.O. Watts, and A. Ding, Vibrational Predissociation Spectra of Nitrous-Oxide Clusters, *Chem. Phys.* **83** (1984) 155–169.
- [20] G. Fischer, R.E. Miller, and R.O. Watts, Vibrational Relaxation and Predissociation in Clusters of Substituted Ethenes, *J. Phys. Chem.* **88** (1984) 1120–1129.

- [21] R.E. Miller, P.F. Vohralik, and R.O. Watts, Sub-Doppler Resolution Infrared Spectroscopy of Acetylene Dimer: A Direct Measurement of the Predissociation Lifetime, *J. Chem. Phys.* **80** (1984) 5453–5457.
- [22] R.E. Miller and R.O. Watts, Rotational Structure in the Infrared Spectra of Carbon Dioxide and Nitrous Oxide Dimers, *Chem. Phys. Lett.* **105** (1984) 409–413.
- [23] A. Ding, R.E. Miller, J. Hesslich and R.A. Cassidy, Evidence for a Phase Transition of Atomic Clusters Generated by Supersonic Expansion, in: *Symposium on Atomic and Surface Physics*, ed. F. Howorka, W. Lindinger and T.D. Maerk, Innsbruck (1984), 234–236.
- [24] R.A. Cassidy, J. Hesslich, R.E. Miller, I. Kuen and A. Ding, Intensity Fluctuations in the Size Distribution of Homogeneous Clusters Formed by Supersonic Expansion of Molecules, in: *Symposium on Atomic and Surface Physics*, ed. F. Howorka, W. Lindinger and T.D. Maerk, Innsbruck (1984) 222–227.
- [25] D.F. Coker, R.E. Miller, and R.O. Watts, The Infrared Predissociation Spectra of Water Clusters, *J. Chem. Phys.* **82** (1985) 3554–3562.
- [26] R.E. Miller and P.F. Vohralik, Resonant Rotational Energy Transfer in HF, *J. Chem. Phys.* **83** (1985) 1609–1616.
- [27] G. Fischer, R.E. Miller, P.F. Vohralik, and R.O. Watts, Molecular Beam Infrared Spectra of Dimers Formed from Acetylene, Methyl Acetylene and Ethene as a Function of Source Pressure and Concentration, *J. Chem. Phys.* **83** (1985) 1471–1477.
- [28] C.V. Boughton, R.E. Miller, and R.O. Watts, The Methane–Methane Total Differential Scattering Cross Section, *Mol. Phys.* **56** (1985) 363–374.
- [29] C.V. Boughton, R.E. Miller, P.F. Vohralik, and R.O. Watts, The Helium–Hydrogen Fluoride Differential Scattering Cross Section, *Mol. Phys.* **58** (1986) 827–848.
- [30] U. Buck, J. Kesper, R.E. Miller, A. Rudolph, and J. Vigué, Laser Bolometric Detection of Hyperfine Predissociation and Long-Lived Electronically Excited States, *Chem. Phys. Lett.* **125** (1986) 257–262.
- [31] R.E. Miller, Feature Article, Infrared Laser Photodissociation and Spectroscopy of Van der Waals Molecules, *J. Phys. Chem.* **90** (1986) 3301–3313.
- [32] R.E. Miller, P.F. Vohralik, and R.O. Watts, Total Differential Scattering Cross Sections for Hydrogen Scattered from Nitrogen and Hydrogen Fluoride, *J. Chem. Phys.* **85** (1986) 3891–3895.
- [33] Z.S. Huang, K.W. Jucks, and R.E. Miller, The Vibrational Predissociation Lifetime of the HF Dimer Upon Exciting the ‘Free-H’ Stretching Vibration, *J. Chem. Phys.* **85** (1986) 3338–3341.
- [34] Z.S. Huang, K.W. Jucks, and R.E. Miller, The Argon–Hydrogen Fluoride Binary Complex: An Example of a Long-Lived Metastable System, *J. Chem. Phys.* **85** (1986) 6905–6909.
- [35] K.W. Jucks, Z.S. Huang, and R.E. Miller, The Nitrogen–Hydrogen Fluoride Dimer: Infrared Spectroscopy and Vibrational Predissociation, *J. Chem. Phys.* **86** (1986) 1098–1103.
- [36] K.W. Jucks, Z.S. Huang, D. Dayton, R.E. Miller, and W. Lafferty, The Structure of the Carbon Dioxide Dimer from Near Infrared Spectroscopy, *J. Chem. Phys.* **86** (1987) 4341–4346.
- [37] K.W. Jucks and R.E. Miller, The Effects of Vibrational State Mixing on the Predissociation Lifetime of ν_1 Excited OC–HF, *J. Chem. Phys.* **86** (1987) 6636–6645.
- [38] G.T. Fraser, A.S. Pine, W.J. Lafferty, and R.E. Miller, Sub-Doppler Infrared Spectrum of the Carbon Dioxide Trimer, *J. Chem. Phys.* **87** (1987) 1502–1508.
- [39] Z.S. Huang and R.E. Miller, Infrared Spectroscopy and Vibrational Predissociation of C_2H_2 –HF, *J. Chem. Phys.* **86** (1987) 6059–6064.
- [40] R.E. Miller, Sub-Doppler Resolution Infrared Spectroscopy of Binary Molecular Complexes, in: *Structure and Dynamics of Weakly Bound Molecular Complexes*, NATO Science Series C, vol. 212, ed. A. Weber, Reidel, Dordrecht (1987), 131–140.
- [41] K.W. Jucks and R.E. Miller, The ν_1 Vibrational Fundamental of the Cyanogen–HF Binary Complex, *Chem. Phys. Lett.* **139** (1987) 201–206.
- [42] K.W. Jucks and R.E. Miller, Infrared Stark Spectroscopy of the Hydrogen–HF Binary Complex, *J. Chem. Phys.* **87** (1987) 5629–5633.
- [43] Z.S. Huang and R.E. Miller, Infrared Laser Spectroscopy of the Ethylene–HF and Allene–HF Binary Complexes Formed in a Molecular Beam, *J. Phys. Chem.* **92** (1988) 46–50.
- [44] Z.S. Huang and R.E. Miller, The Structure of the Nitrous Oxide Dimer from Sub Doppler Resolution Infrared Spectroscopy, *J. Chem. Phys.* **89** (1988) 5408–5416.
- [45] K.W. Jucks and R.E. Miller, Near-Infrared Spectroscopic Observation of the Linear and Cyclic Isomers of Hydrogen Cyanide Trimer, *J. Chem. Phys.* **88** (1988) 2196–2204.
- [46] K.W. Jucks and R.E. Miller, Infrared Spectroscopy of the Hydrogen Cyanide Dimer, *J. Chem. Phys.* **88** (1988) 6059–6067.
- [47] D.C. Dayton and R.E. Miller, Infrared Spectroscopy of the Bent Isomer of N_2O –HF, *Chem. Phys. Lett.* **143** (1988) 580–583.

- [48] D.C. Dayton and R.E. Miller, Mode Dependent Vibrational Predissociation in the HCN HF Binary Complex, *Chem. Phys. Lett.* **143** (1988) 181–185.
- [49] K.W. Jucks, Z.S. Huang, R.E. Miller, G.T. Fraser, A.S. Pine, and W.J. Lafferty, Structure and Vibrational Dynamics of the CO₂ Dimer from the Sub-Doppler Infrared Spectrum of the 2.7 μm Fermi Diad, *J. Chem. Phys.* **88** (1988) 2185–2195.
- [50] R.E. Miller, Nonstatistical Behavior in the Vibrational Predissociation Dynamics of Binary and Tertiary Complexes, in: *The Structure of Small Molecules and Ions*, ed. R. Naaman and Z. Vager, Plenum, New York (1988) 59–67.
- [51] R.E. Miller, The Vibrational Spectroscopy and Dynamics of Weakly Bound Neutral Complexes, *Science*. **240** (1988) 447–453.
- [52] Z.S. Huang and R.E. Miller, Sub-Doppler Resolution Infrared Spectroscopy of Water Dimer, *J. Chem. Phys.* **88** (1988) 8008–8009.
- [53] K.W. Jucks and R.E. Miller, Sub-Doppler Resolution Infrared Spectra of the Isoelectronic Pair: N₂-HCN and OC-HCN, *J. Chem. Phys.* **89** (1988) 1262–1267.
- [54] K.W. Jucks and R.E. Miller, The Intermolecular Bending Vibrations of Hydrogen Cyanide Dimer, *Chem. Phys. Lett.* **147** (1988) 137–141.
- [55] D.C. Dayton and R.E. Miller, The Lowest Frequency Bending Mode of (ν_2^1) HCN-HF from Near Infrared Spectroscopy, *Chem. Phys. Lett.* **150** (1988) 217–221.
- [56] D.C. Dayton and R.E. Miller, Gas Phase Infrared Spectroscopy of Cyclopropane-HF and Cyclopropane-HCN, *Chem. Phys. Lett.* **153** (1988) 285–290.
- [57] R.E. Miller, Mode-Specific Vibrational in Weakly Bound Binary Complexes, in: *Advances in Laser Science III*, AIP Conf. Proc. 172, ed. A.S. Tam, J.L. Gal, and W.C. Stanley (1989), pp. 365–371.
- [58] Z.S. Huang and R.E. Miller, Mode-Specific Vibrational Relaxation in the Acetylene-Hydrogen Fluoride Binary Complex, *J. Chem. Phys.* **90** (1989) 1478–1483.
- [59] Z.S. Huang and R.E. Miller, The Structure of CO₂-C₂H₂ from Near-Infrared Spectroscopy, *Chem. Phys.* **132** (1989) 185–196.
- [60] G.T. Fraser, A.S. Pine, R.D. Suenram, D.C. Dayton, and R.E. Miller, Infrared Microwave Spectroscopy of OCO-HF and SCO-HF, *J. Chem. Phys.* **90** (1989) 1330–1336.
- [61] D.C. Dayton, K.W. Jucks, and R.E. Miller, Photofragment Angular Distributions for the HF Dimer: Scalar J-J Correlations in State-to-State Photodissociation, *J. Chem. Phys.* **90** (1989) 2631–2638.
- [62] D.C. Dayton and R.E. Miller, Infrared Spectroscopy of the HCN-(HF)₂ Ternary Complex, *Chem. Phys. Lett.* **156** (1989) 578–584.
- [63] P.A. Block, K.W. Jucks, L.G. Pedersen, and R.E. Miller, The Linear and T-shaped Isomers of C₂H₂-HCN: Vibrational Dynamics from Infrared Spectroscopy of *Ab Initio* Theory, *Chem. Phys.* **189** (1989) 15–30.
- [64] Z.S. Huang and R.E. Miller, High-Resolution Near-Infrared Spectroscopy of Water Dimer, *J. Chem. Phys.* **91** (1989) 6613–6631.
- [65] R.E. Miller, Vibrationally Induced Dynamics in Hydrogen Bonded Complexes, *Acc. Chem. Res.* **23** (1989) 10–16.
- [66] P.F. Vohralik, R.E. Miller, and R.O. Watts, The Argon-Hydrogen Fluoride Differential Scattering Cross Section, *J. Chem. Phys.* **90** (1989) 2182–2191.
- [67] D.C. Dayton and R.E. Miller, Infrared Spectroscopy of the SO₂-HF and HCN-SO₂ Binary Complexes, *J. Phys. Chem.* **94** (1990) 6641–6646.
- [68] T. Dunder and R.E. Miller, Infrared Spectroscopy and Mie Scattering of Acetylene Aerosols Formed in a Low-Temperature Diffusion Cell, *J. Chem. Phys.* **93** (1990) 3693–3703.
- [69] D.C. Dayton, L.G. Pedersen, and R.E. Miller, Infrared Spectroscopy and *Ab Initio* Theory of the Structural Isomers of CO₂-HCN, *J. Chem. Phys.* **93** (1990) 4560–4570.
- [70] R.E. Miller, The Vibrational Dynamics of Hydrogen Bonded Complexes at the State-to-State Level, in: *Dynamics of Polyatomic Van der Waals Molecules*, NATO ASI Series B, vol. 227, eds. N. Halberstadt and K.C. Janda, Plenum, London, New York (1990), 33–42.
- [71] R.E. Miller, Optothermal Vibrational Spectroscopy of Molecular Complexes, in: *Advances in Molecular Vibrations and Collision Dynamics*, ed. J.M. Bowman, vol. 1A, JAI Press, Greenwich, Conn. (1991) 83–108.
- [72] D.C. Dayton, P.A. Block, and R.E. Miller, Spectroscopic Evidence for Near-Resonant Intermolecular Energy Transfer in the Vibrational Predissociation of C₂H₂-HX, C₂H₂-DX (X = Cl, Br and I) Complexes, *J. Phys. Chem.* **95** (1991) 2881–2888.
- [73] D.C. Dayton, M.D. Marshall, and R.E. Miller, The Fundamental C-H Stretching Vibration and Associated Intermolecular Bending Hot Band of SCO-HCN, *J. Chem. Phys.* **95** (1991) 785–792.
- [74] P.A. Block and R.E. Miller, Near-Infrared Spectroscopy of the HCN-HX (X = Cl, Br and I) Binary Complexes, *J. Mol. Spect.* **147** (1991) 359–369.
- [75] R.E. Miller, Infrared Laser Spectroscopy, in: *Atomic and Molecular Beam Methods*, ed. G. Scoles, Oxford University Press (1992) 192–212.

- [76] D.C. Dayton, L.G. Pedersen, and R.E. Miller, Structural Determinations for Two Isomeric Forms of $\text{N}_2\text{O}-\text{HCN}$ from Near-Infrared Spectroscopy, *J. Phys. Chem.* **96** (1992) 1087–1095.
- [77] P.A. Block, E.J. Bohac, and R.E. Miller, Spectroscopy of Pendular States: The Use of Molecular Complexes in Achieving Orientation, *Phys. Rev. Lett.* **68** (1992) 1303–1306.
- [78] E.J. Bohac, M.D. Marshall, and R.E. Miller, Initial State Effects in the Vibrational Predissociation Dynamics of Hydrogen Fluoride Dimer, *J. Chem. Phys.* **96** (1992) 6681–6695.
- [79] M.D. Marshall, E.J. Bohac, and R.E. Miller, Vector Correlations in the Vibrational Predissociation of Hydrogen Fluoride Dimer, *J. Chem. Phys.* **97** (1992) 3307–3317.
- [80] E.J. Bohac, M.D. Marshall, and R.E. Miller, The Vibrational Predissociation of $\text{Ar}-\text{CO}_2$ at the State-to-State Level: I. Vibrational Propensity Rules, *J. Chem. Phys.* **97** (1992) 4890–4900.
- [81] E.J. Bohac, M.D. Marshall, and R.E. Miller, The Vibrational Predissociation of $\text{Ar}-\text{CO}_2$ at the State-to-State Level: II. Rotational Propensity Rules and Vector Correlations, *J. Chem. Phys.* **97** (1992) 4901–4912.
- [82] P.A. Block, M.D. Marshall, L.G. Pedersen, and R.E. Miller, Wide-Amplitude Motion in the Water–Carbon Dioxide and Water–Acetylene Complexes, *J. Chem. Phys.* **96** (1992) 7321–7332.
- [83] T. Dunder, M.L. Clapp, and R.E. Miller, Infrared Spectroscopy of Homogeneously Nucleated Hydrazine Aerosols: Disordered and Crystalline Phases, *J. Geophys. Res.* **98** (1992) 1213–1221.
- [84] P.A. Block, L.G. Pedersen, and R.E. Miller, The Structure of $\text{Ar}-\text{C}_2\text{H}_4$ from High-Resolution Infrared Spectroscopy and *Ab Initio* Theory: The Twofold Barrier to C_2H_4 Internal Rotation, *J. Chem. Phys.* **98** (1993) 3754–3762.
- [85] E.J. Bohac and R.E. Miller, State-to-State Vibrational Predissociation of H_2-HF and D_2-HF : Direct Comparisons between Theory and Experiment, *J. Chem. Phys.* **98** (1993) 2604–2613.
- [86] E.J. Bohac and R.E. Miller, The *Trans*-Bending and F–F Stretching Vibrations of HF Dimer in $\nu_{\text{HF}} = 1$: The Influence of Intermolecular Vibrational Excitation on the Predissociation Dynamics, *J. Chem. Phys.* **99** (1993) 1537–1544.
- [87] R.J. Bemish, P.A. Block, L.G. Pedersen, Weitao Yang, and R.E. Miller, The $\text{Ar}-\text{C}_2\text{H}_2$ Intermolecular Potential from High-Resolution Spectroscopy and *Ab Initio* Theory: A Case for Multicenter Interactions, *J. Chem. Phys.* **99** (1993) 8585–8598.
- [88] E.J. Bohac and R.E. Miller, Intermolecular $V-V$ Energy Transfer in the Photodissociation of Weakly Bound Complexes: A New Experimental Approach, *Phys. Rev. Lett.* **71** (1993) 54–57.
- [89] M.L. Clapp and R.E. Miller, Shape Effects in the Infrared Spectrum of Ammonia Aerosols, *Icarus* **105** (1993) 529–536.
- [90] D.J. Nesbitt and R.E. Miller, The Spectroscopy of Molecular Clusters. *Physics News in 1993*, The American Institute of Physics, **3** (1994) 20–21.
- [91] M. Wu, R.J. Bemish, and R.E. Miller, Photodissociation of Molecules Oriented by DC Electric Fields: Determining Photofragment Angular Distributions, *J. Chem. Phys.* **101** (1994) 9447–9456.
- [92] R.J. Bemish, E.J. Bohac, M. Wu, and R.E. Miller, Photofragment Vibrational, Rotational and Translational Distributions for N_2-HF ($\nu = 1$), *J. Chem. Phys.* **101** (1994) 9457–9468.
- [93] P.A. Block and R.E. Miller, Infrared-Infrared Double Resonance Spectroscopy of $\text{Ar}-\text{HF}$: Intermolecular State Dependence of the Dipole Moment and Vibrational Predissociation in $\nu_{\text{HF}} = 2$, *Chem. Phys. Lett.* **226** (1994) 317–324.
- [94] R.J. Bemish, M. Wu, and R.E. Miller, Probing the Dynamics of Weakly Bound Complexes using High-resolution Laser Spectroscopy, *Farad. Disc.* **97** (1994) 57–68.
- [95] M.L. Clapp, D.R. Worsnop, and R.E. Miller, Frequency Dependent Optical Constants of Water Ice Obtained Directly from Aerosol Extinction Spectra, *J. Phys. Chem.* **99** (1995) 6317–6326.
- [96] R.E. Miller, Near Infrared Laser-Optothermal Techniques, in: *Laser Techniques in Chemistry*, ed. A.B. Meyers and T.R. Rizzo, Techniques in Chemistry Series, Vol. 23 (1995) 43–69.
- [97] L. Oudejans, R.E. Miller, and W.L. Hase, Unimolecular Processes in Weakly Bound Complexes: Correlated Product State Distributions, *Farad. Disc.* **102** (1995) 323–338.
- [98] R.E. Miller, Photodissociation of Weak Bonds: The Spectroscopy and Vibrational Dynamics of Molecular Complexes, in: *Frontiers of Chemical Dynamics*, NATO ASI Series C, vol. 470, ed. E. Yurtsever, Kluwer (1995), 21–41.
- [99] M.C. Chan, P.A. Block, and R.E. Miller, Structure of the Ethylene Dimer from Rotationally Resolved Near-Infrared Spectroscopy: A Quadruple Hydrogen Bond, *J. Chem. Phys.* **102** (1995) 3993–3999.
- [100] L. Oudejans and R.E. Miller, State-to-state Photodissociation of Oriented $\text{HF}-\text{HCl}$ Complexes: Isotopic and Isomeric Effects, *J. Phys. Chem.* **99** (1995) 13670–13679.
- [101] M. Hartmann, R.E. Miller, J.P. Toennies, and A. Vilesov, Rotationally Resolved Spectroscopy of SF_6 in Liquid Helium Cluster: A Molecular Probe of Cluster Temperature, *Phys. Rev. Lett.* **75** (1995) 1566–1569.
- [102] X. Yang, E.R.Th. Kerstel, G. Scoles, R.J. Bemish, and R.E. Miller, High Resolution Infrared Molecular Beam Spectroscopy of Cyanoacetylene Clusters, *J. Chem. Phys.* **103** (1995) 8828–8839.

- [103] R.J. Bemish, P.A. Block, L.G. Pedersen, and R.E. Miller, The Ethylene–Carbon Dioxide Complex: A Double Internal Rotor, *J. Chem. Phys.* **103** (1995) 7788–7795.
- [104] L.J. Richwine, M.L. Clapp, and R.E. Miller, Complex Refractive Indices in the Infrared of Nitric Acid Trihydrate Aerosols, *Geophys. Res. Lett.* **22** (1995) 2625–2628.
- [105] M. Hartmann, R.E. Miller, J.P. Toennies, and A. Vilesov, High-Resolution Molecular Spectroscopy of Van der Waals Clusters in Liquid Helium Droplets, *Science*. **272** (1996) 1631–1634.
- [106] T.W. Francisco, N. Camillone III, and R.E. Miller, Rotationally Inelastic Scattering of C_2H_2 from LiF (100): Translational Energy Dependence, *Phys. Rev. Lett.* **77** (1996) 1402–1405.
- [107] R.J. Bemish, W.M. Rhee, L.G. Pedersen, and R.E. Miller, The Structure and Intermolecular Dynamics of the Nitrous Oxide–Ethylene Complex: Experiment and *Ab Initio* Theory, *J. Chem. Phys.* **104** (1996) 4411–4418.
- [108] A.P. Milce, D.E. Heard, R.E. Miller, and B.J. Orr, Rovibrational Spectroscopy of the C_2H_2 –Ar Van der Waals Complex, using a Fluorescence-Depletion Infrared Ultraviolet Double Resonance Technique, *Chem. Phys. Lett.* **250** (1996) 95–103.
- [109] R.J. Bemish, M.C. Chan, and R.E. Miller, Molecular Control using DC Electric Fields: Quenching of the Tunneling in HF Dimer, *Chem. Phys. Lett.* **251** (1996) 182–188.
- [110] Z. Bačić and R.E. Miller, Molecular Clusters: Structure and Dynamics of Weakly Bound Systems, *J. Phys. Chem. (Centennial Issue)* **100** (1996) 12945–12959.
- [111] L. Oudejans, D. Olson, and R.E. Miller, The Infrared Spectroscopy and Dynamics of OCO–HCl and SCO–HCl: An Example of Mode Specific Intermolecular Energy Transfer, *J. Chem. Phys.* **105** (1996) 8515–8522.
- [112] K. Nauta, L. Oudejans, and R.E. Miller, Extreme Metastability in Ar–HCl ($v=1$) and Ar–DF ($v=1$), *J. Chem. Phys.* **105** (1996) 10410–10415.
- [113] M.L. Clapp and R.E. Miller, Complex Refractive Indices of Crystalline Hydrazine from Aerosol Extinction Spectra, *Icarus* **123** (1996) 396–403.
- [114] R.J. Bemish, R.E. Miller, X. Yang, and G. Scoles, The Argon–Diacetylene Complex: An Example of Distributed Interactions and Transferable Potentials, *J. Chem. Phys.* **105** (1996) 10171–10177.
- [115] R.E. Miller, Weakly Bound Molecular Complexes as Model Systems for Understanding Chemical Reactions, in: *Chemical Reactions in Clusters*, ed. E.R. Bernstein, Oxford (1996) 40–63.
- [116] M.L. Clapp, R.F. Niedziela, L.J. Richwine, T. Dransfield, R.E. Miller, and D.R. Worsnop, Infrared Spectroscopy of Sulfuric Acid/Water Aerosols: Freezing Characteristics, *J. Geophys. Res.: Atmospheres* **102** (1997) 8899–8907.
- [117] A. Glebov, R.E. Miller, and J.P. Toennies, Two Phases of Acetylene Adsorbed on NaCl (001) Studied by High-Resolution Helium Atom Scattering, *J. Chem. Phys.* **106** (1997) 6499–6506.
- [118] L. Oudejans and R.E. Miller, Dissociation Dynamics of Oriented DF–HF and HF–DF Complexes: Evidence for Direct and Indirect Dissociation, *J. Phys. Chem. A*. **101** (1997) 7582–7592.
- [119] R.J. Bemish and R.E. Miller, Near Infrared Laser Spectroscopy of the Ar– C_2HD Complex: Fermi Resonance Assisted Vibrational Predissociation, *Chem. Phys. Lett.* **281** (1997) 272–280.
- [120] L. Pedersen and R.E. Miller, The Structure of Nitrous Oxide Tetramer from Near Infrared Laser Spectroscopy, *Chem. Phys. Lett.* **275** (1997) 307–313.
- [121] L. Pedersen and R.E. Miller, The Infrared Spectrum and Structure of the Nitrous Oxide Trimer, *J. Chem. Phys.* **108** (1998) 436–443.
- [122] S. Picaud, P.N.M. Hoang, C. Giradet, A. Glebov, R.E. Miller, and J.P. Toennies, Phonon–Libron Dynamics of Acetylene Adsorbed on NaCl(001), *Phys. Rev. B* **57** (1998) 10090–10099.
- [123] A.C. Wight and R.E. Miller, Rainbow Scattering of Methane From LiF (100): Probing the Corrugation and Anisotropy of the Gas-Surface Potential, *J. Chem. Phys.* **109** (1998) 1976–1982.
- [124] R.E. Miller, Pendular State Spectroscopy in Photodissociation Experiments of Hydrogen Bonded Complexes, in: *Laser Techniques for State-Selected and State-to-State Chemistry I*, ed. J.W. Hepburn, R.E. Continetti, and M.A. Johnson, Proc. SPIE 3271 (1998) 151–163.
- [125] R.F. Niedziela, R.E. Miller, and D.R. Worsnop, Temperature and Frequency-Dependent Optical Constants for Nitric Acid Dihydrate from Aerosol Spectroscopy, *J. Phys. Chem. A* **102** (1998) 6477–6484.
- [126] R.F. Niedziela, M.L. Norman, R.E. Miller, and D.R. Worsnop, Temperature- and Composition-Dependent Infrared Optical Constants for Sulfuric Acid, *Geophys. Res. Lett.* **25** (1998) 4477–4480.
- [127] L. Oudejans and R.E. Miller, Intermolecular V – V Energy Transfer in the Photodissociation of CO_2 –HF ($v=1$), *J. Chem. Phys.* **109** (1998) 3474–3484.
- [128] A.C. Wight and R.E. Miller, Vibrational Quenching of Acetylene Scattered from LiF (001): Trapping-Desorption versus Direct Scattering, *J. Chem. Phys.* **109** (1998) 8626–8634.
- [129] R.J. Bemish, L. Oudejans, R.E. Miller, R. Moszynski, T.G.A. Heijmen, T. Korona, P.E.S. Wormer, and A. van der Avoird, Infrared Spectroscopy and *Ab Initio* Potential Energy Surface for Ne– C_2H_2 and Ne– C_2HD Complexes, *J. Chem. Phys.* **109** (1998) 8968–8979.

- [130] L. Oudejans and R.E. Miller, Mode Dependence of the State-to-State Vibrational Dynamics of HCN–HF, *Chem. Phys.* **239** (1998) 345–356.
- [131] E.W. Schlag, R. Weinkauff, and R.E. Miller, Preface: Molecular Clusters, *Chem. Phys.* **239** (1998) vii–viii.
- [132] D.T. Moore, L. Oudejans, and R.E. Miller, Pendular State Spectroscopy of an Asymmetric Top: Parallel and Perpendicular Bands of Acetylene–HF, *J. Chem. Phys.* **110** (1999) 197–208.
- [133] L. Oudejans, D.T. Moore, and R.E. Miller, State-to-State Vibrational Predissociation Dynamics of the Acetylene–HF–Complex, *J. Chem. Phys.* **110** (1999) 209–219 and 7109.
- [134] A. Zelenyuk, J. Cabalo, T. Baer, and R.E. Miller, Mass Spectrometry of Liquid Aniline Aerosol Particles by IR/UV Laser Irradiation, *Analyt. Chem.* **71** (1999) 1802–1808.
- [135] T.G.A. Heijmen, P.E.S. Wormer, A. van der Avoird, R.E. Miller, and R. Moszynski, The Rotational and Vibrational Dynamics of Argon–Methane: I. A Theoretical Study, *J. Chem. Phys.* **110** (1999) 5639–5650.
- [136] T.G.A. Heijmen, P.E.S. Wormer, A. van der Avoird, R.E. Miller, and R. Moszynski, The Rotational and Vibrational Dynamics of Argon–Methane: II. Experiment and Comparison with Theory, *J. Chem. Phys.* **110** (1999) 5651–5657.
- [137] K. Nauta and R.E. Miller, Non-Equilibrium Self-Assembly of Long Chains of Polar Molecules in Superfluid Helium, *Science* **283** (1999) 1895–1897.
- [138] R.F. Niedziela, M.L. Norman, C.L. DeForest, and R.E. Miller, A Temperature- and Composition-Dependent Study, of H₂SO₄ Aerosol Optical Constants Using Fourier Transform and Tunable Diode Laser Infrared Spectroscopy, *J. Phys. Chem. A* **103** (1999) 8030–8040.
- [139] K. Nauta and R.E. Miller, Stark Spectroscopy of Polar Molecules Solvated in Liquid Helium Droplets, *Phys. Rev. Lett.* **82** (1999) 4480–4483.
- [140] L. Oudejans and R.E. Miller, State-to-State Vibrational Predissociation Dynamics of the Acetylene–HCl Complex, *J. Phys. Chem.* **103** (1999) 4791–4797.
- [141] L. Oudejans and R.E. Miller, The Tunneling Dynamics of OC–H₂O Probed by Infrared Laser Spectroscopy, *Chem. Phys. Lett.* **306** (1999) 214–218.
- [142] K. Nauta, D.T. Moore, and R.E. Miller, Molecular Orientation in Superfluid Liquid Helium Droplets: High Resolution Infrared Spectroscopy as a Probe of Solvent–Solute Interactions, *Farad. Disc.* **113** (1999) 261–278.
- [143] K. Nauta and R.E. Miller, Solvent Mediated Vibrational Relaxation: Superfluid Helium Droplet Spectroscopy of HCN Dimer, *J. Chem. Phys.* **111** (1999) 3426–3433.
- [144] A.C. Wight, M. Penno, and R.E. Miller, Sequential Vibrational Relaxation of Polyatomic Molecules at Surfaces: C₂HD and C₂H₂ Scattered from LiF (001), *J. Chem. Phys.* **111** (1999) 8622–8627.
- [145] M.L. Norman, J. Qian, R.E. Miller, and D.R. Worsnop, Infrared Complex Refractive Indices of Supercooled Liquid HNO₃/H₂O Aerosols, *J. Geophys. Res.* **104** (1999) No. D23, 30571–30584.
- [146] L. Oudejans and R.E. Miller, The Strengths and Weaknesses of Hydrogen Bonded Complexes, in: *Recent Theoretical and Experimental Advances in Hydrogen Bonded Clusters*, NATO ASI Series C, vol. 561, ed. S.S. Xantheas, Kluwer, Dordrecht (2000), 249–266.
- [147] 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 Science Technol.* **33** (2000) 3–19.
- [148] K. Nauta and R.E. Miller, Formation of the Cyclic Water Hexamer in Liquid Helium: The Smallest Piece of Ice, *Science* **287** (2000) 293–295.
- [149] K. Nauta, R.E. Miller, G.T. Fraser, and W.J. Lafferty, The Infrared Spectrum and Internal Rotation Barrier in HF–BF₃, *Chem. Phys. Lett.* **322** (2000) 401–406.
- [150] C. Callegari, I. Reinhard, K.K. Lehmann, G. Scoles, K. Nauta, and R.E. Miller, Finite Size Effects and Rotational Relaxation in Superfluid Helium Nanodroplets: Microwave-Infrared Double-Resonance Spectroscopy of Cyanoacetylene, *J. Chem. Phys.* **113** (2000) 4636–4646.
- [151] L. Oudejans and R.E. Miller, Photodissociation of Cyclic HF Complexes: Pentamer through Heptamer, *J. Chem. Phys.* **113** (2000) 971–978.
- [152] K. Nauta and R.E. Miller, Metastable Vibrationally Excited HF ($\nu=1$) in Helium Droplets, *J. Chem. Phys.* **113** (2000) 9466–9469.
- [153] L. Oudejans and R.E. Miller, The State-To-State Predissociation Dynamics of OC–HF upon HF Stretch Excitation, *J. Chem. Phys.* **113** (2000) 4581–4587.
- [154] K. Nauta and R.E. Miller, The Hydrogen Fluoride Dimer in Liquid Helium: A Prototype System for Studying Solvent Effects on Hydrogen Bonding, *J. Chem. Phys.* **113** (2000) 10158–10168.
- [155] I. Hunig, L. Oudejans, and R.E. Miller, Infrared Optothermal Spectroscopy of N₂[–] and OC–DCCH: The C–H Stretching Region, *J. Mol. Spec.* **204** (2000) 148–152.
- [156] K. Nauta and R.E. Miller, The Spectroscopy of Molecules and Unique Clusters in Superfluid Helium Droplets, in: *Atomic and Molecular Beams. The State of the Art 2000*, ed. R. Campargue, Springer (2001) 775–792.

- [157] L. Oudejans and R.E. Miller, Photofragment Translational Spectroscopy of Weakly Bound Complexes: Probing the Inter-Fragment Correlated Final State Distributions, *Ann. Rev. Phys. Chem.* **52** (2001) 607–637.
- [158] K. Nauta and R.E. Miller, Vibrational Relaxation of Ne, Ar, Kr–HF ($v=1$) Binary Complexes in Helium Nanodroplets, *J. Chem. Phys.* **115** (2001) 4508–4514.
- [159] 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, *Analyt. Chem.* **73** (2001) 2317–2322.
- [160] K. Nauta, D.T. Moore, P.L. Stiles, and R.E. Miller, Probing the Structure of Metal Cluster-adsorbate Systems Using High-resolution Infrared Spectroscopy, *Science* **292** (2001) 481–484.
- [161] K. Nauta and R.E. Miller, Infrared Spectroscopy and Structures of $\text{Ar}_n\text{-HF}$ in Liquid Helium Nanodroplets, *J. Chem. Phys.* **115** (2001) 10138–10145.
- [162] D.T. Moore, M. Ishiguro, L. Oudejans, and R.E. Miller, High Resolution Infrared Spectroscopy and *Ab Initio* Calculations of $\text{HCN-H}_2/\text{D}_2$ Binary Complexes, *J. Chem. Phys.* **115** (2001) 5137–5143.
- [163] D.T. Moore, M. Ishiguro, and R.E. Miller, Binary Complexes of HCN with H_2 , HD and D_2 Formed in Helium Nanodroplets, *J. Chem. Phys.* **115** (2001) 5144–5154.
- [164] K. Nauta and R.E. Miller, The Vibrational and Rotational Dynamics of Acetylene Solvated in Superfluid Helium Nanodroplets, *J. Chem. Phys.* **115** (2001) 8384–8392.
- [165] K. Nauta and R.E. Miller, Rotational and Vibrational Dynamics of CO_2 and N_2O in Helium Nanodroplets, *J. Chem. Phys.* **115** (2001) 10254–10260.
- [166] K. Nauta and R.E. Miller, Rotational and Vibrational Dynamics of Methane in Helium Nanodroplets, *Chem. Phys. Lett.* **350** (2001) 225–232.
- [167] K. Nauta and R.E. Miller, The Formation of Linear and T-shaped Isomers of Acetylene–Hydrogen Cyanide Complexes in Helium Nanodroplets, *Chem. Phys. Lett.* **346** (2001) 129–134.
- [168] R.E. Miller, Comparative Studies of Cluster Dynamics in the Gas and Condensed Phases, *Farad. Disc.* **118** (2001) 1–17.
- [169] E. Woods III, Y. Dessiaterik, T. Baer, and R.E. Miller, Dynamics in the Early Stages of Decomposition in Liquid Nitromethane and Nitromethane–Diethylamine Mixtures, *J. Phys. Chem. A* **105** (2001) 8273–8280.
- [170] 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, *Analyt. Chem.* **73** (2001) 2317–2322.
- [171] F. Madeja, P. Markwick, M. Havenith, and R.E. Miller, Rotationally Resolved Infrared Spectroscopy of $\text{h}_2\text{-}$ and $\text{d}_1\text{-Formic Acid Monomer}$ in Liquid He Droplets, *J. Chem. Phys.* **116** (2002) 2870–2878.
- [172] M.L. Norman, D.R. Worsnop, and R.E. Miller, Ternary $\text{H}_2\text{SO}_4/\text{HNO}_3/\text{H}_2\text{O}$ Optical Constants I: New Measurements from Aerosol Spectroscopy under Stratospheric Conditions, *J. Phys. Chem. A* **106** (2002) 6075–6083.
- [173] E. Woods III, G.D. Smith, R.E. Miller, and T. Baer, Depth Profiling of Internally-Mixed Aerosol Particles using Single-Particle Mass Spectrometry, *Analyt. Chem.* **74** (2002) 1642–1649.
- [174] J. Kupper, J.M. Merritt, and R.E. Miller, Free Radicals in Superfluid Liquid Helium Nanodroplets: A Clean Pyrolysis Source for the Production of Propargyl Radical, *J. Chem. Phys.* **117** (2002) 647–652.
- [175] C.J. Burnham, S.S. Xantheas, M.A. Miller, B.E. Applegate, and R.E. Miller, The Formation of Cyclic Water Complexes by Sequential Ring Insertion: Experiment and Theory, *J. Chem. Phys.* **117** (2002) 1109–1122.
- [176] D.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, *Analyt. Chem.* **74** (2002) 2048–2052.
- [177] K. Nauta and R.E. Miller, The Rotational Dynamics of $\text{N}_2\text{-HF}$ and OC-HF in Helium Nanodroplets, *J. Chem. Phys.* **117** (2002) 4846–4852.
- [178] C.L. DeForest, J. Qian, and R.E. Miller, Time-Resolved Studies of the Interactions Between Pulsed Lasers and Aerosols, *J. App. Opt.* **41** (2002) 5804–5813.
- [179] C.L. DeForest, J. Qian, and R.E. Miller, Composition Determination of Multi-Component Organic Aerosols By On-line FT-IR Spectroscopy, *Appl. Spectrosc.* **56** (2002) 1429–1435.
- [180] G.D. Smith, E. Woods III, C.L. DeForest, 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.* **106** (2002) 8085–8095.
- [181] F. Dong and R.E. Miller, Vibrational Transition Moment Directions for Determining the Structure of Isolated Biomolecules, *Science* **298** (2002) 1227–1230.
- [182] P.L. Stiles, D.T. Moore, and R.E. Miller, Infrared Spectroscopy of the Isomers of Magnesium–HCN formed in Helium Nanodroplets: Comparisons with *Ab Initio* Calculations, *J. Chem. Phys.* **118** (2003) 7873–7881.

- [183] 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** (2003) 9582–9587.
- [184] 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** (2003) 2119–2125.
- [185] G.E. Douberly and R.E. Miller, The Growth of HF Polymers in Helium Nanodroplets: Probing the Barriers to Ring Insertion, *J. Phys. Chem. B* **107** (2003) 4500–4507.
- [186] P.L. Stiles, K. Nauta, and R.E. Miller, Dipole Moments of Molecules Solvated in Helium Nanodroplets, *Phys. Rev. Lett.* **90** (2003) 135301–135304.
- [187] D.T. Moore and R.E. Miller, Dynamics of Hydrogen–HF Complexes in Helium Nanodroplets, *J. Chem. Phys.* **118** (2003) 9629–9636.
- [188] D.T. Moore and R.E. Miller, Size Dependent Dynamics of a Quantum Solvent: Laser Spectroscopy of HCN–(HD)_n Grown in Helium Nanodroplets, *J. Chem. Phys.* **119** (2003) 4713–4721.
- [189] G.E. Douberly, K. Nauta, and R.E. Miller, The Infrared Spectrum of Acetylene–HF in Helium Nanodroplets, *Chem. Phys.* **377** (2003) 384–390.
- [190] D.T. Moore and R.E. Miller, Solvation of HF by Molecular Hydrogen: Helium Nanodroplet Vibrational Spectroscopy, *J. Phys. Chem. A* **107** (2003) 10805–10812.
- [191] Y. Dessiaterik, T. 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** (2003) 11245–11252.
- [192] K. Nauta and R.E. Miller, Infrared Laser Spectroscopy of Diacetylene and Cyclopropane in Helium Nanodroplets, *J. Mol. Spect.* **223** (2004) 10805–10812.
- [193] D.T. Moore and R.E. Miller, Rotationally Resolved Infrared Laser Spectroscopy of (H₂)_n–HF and (D₂)_n–HF ($n=2-6$) in Helium Nanodroplets, *J. Phys. Chem. A* **108** (2004) 1930–1937.
- [194] P.L. Stiles, D.T. Moore, and R.E. Miller, Structures of HCN–Mg_n ($n=2-5$) Complexes from Rotationally Resolved Vibrational Spectroscopy and *Ab Initio* Theory, *J. Chem. Phys.* **121** (2004) 3130–3142.
- [195] W.K. Lewis, B.E. Applegate, J. Sztaray, B. Sztaray, T. Baer, R.J. Bemish, and R.E. Miller, Electron Impact Ionization in Helium Nanodroplets: Controlling Fragmentation by Active Cooling of Molecular Ions, *J. Am. Chem. Soc.* **126** (2004) 11283–11292.
- [196] F. Dong and R.E. Miller, Laser Spectroscopy of Cyanoacetylene–Mg_n Complexes in Helium Nanodroplets: Multiple Isomers, *J. Phys. Chem. A* **108** (2004) 2181–2191.
- [197] F. Madeja, M. Havenith, K. Nauta, and R.E. Miller, J. Chocholousova, and P. Hobza, Polar Isomer of Formic Acid Dimer Formed in Helium Nano-Droplets, *J. Chem. Phys.* **120** (2004) 10554–10560.
- [198] D.T. Moore and R.E. Miller, Structure of the Acetylene–Magnesium Binary Complex from Infrared Laser Spectroscopy in Helium Nanodroplets, *J. Phys. Chem. A* **108** (2004) 9908–9915.
- [199] C.M. Lindsay, W.K. Lewis, and R.E. Miller, Note: Confirmation of the Metastability of HF ($\nu=1$) in Helium Nanodroplets, *J. Chem. Phys.* **121** (2004) 6095–6096.
- [200] J.M. Merritt, G.E. Douberly, and R.E. Miller, Infrared–Infrared Double Resonance Spectroscopy of Cyanoacetylene in Helium Nanodroplets, *J. Chem. Phys.* **121** (2004) 1309–1316.
- [201] G.W.M. Vissers, L. Oudejans, R.E. Miller, G.C. Groenenboom, and A. van der Avoird, Vibrational Predissociation in the HCl Dimer, *J. Chem. Phys.* **120** (2004) 9487–9498.
- [202] M.Y. Choi, F. Dong, and R.E. Miller, Multiple Tautomers of Cytosine Identified and Characterized by Infrared Laser Spectroscopy in Helium Nanodroplets: Probing Structure using Vibrational Transition Moment Angles, *Phil. Trans. Roy. Soc. A* **363** (2005) 393–413.
- [203] G.E. Douberly and R.E. Miller, The Isomers of HF–HCN formed in Helium Nanodroplets: Infrared Spectroscopy and *Ab Initio* Calculations, *J. Chem. Phys.* **122** (2005) 024306/1–8.
- [204] J.M. Merritt, J. Kupper, and R.E. Miller, Entrance Channel X–HF (X=C1, Br, and I) Complexes Studied by High-Resolution Infrared Laser Spectroscopy in Helium Nanodroplets, *Phys. Chem. Chem. Phys.* **7** (2005) 67–78.
- [205] C.M. Lindsay and R.E. Miller, Rotational and Vibrational Dynamics of Ethylene in Helium Nanodroplets, *J. Chem. Phys.* **122** (2005) 104306/1–9.
- [206] G.E. Douberly, J.M. Merritt, and R.E. Miller, Infrared–Infrared Double Resonance Spectroscopy in Helium Nanodroplets: Photo-Induced Isomerization, *Phys. Chem. Chem. Phys.* **7** (2005) 463–468.
- [207] W.K. Lewis, C.M. Lindsay, R.J. Bemish, and R.E. Miller, Probing Charge Transfer Processes in Helium Nanodroplets by Optically Selected Mass Spectrometry (OSMS): Charge Steering by Long-Range Interactions, *J. Am. Chem. Soc.* **127** (2005) 7235–7242.
- [208] M.Y. Choi and R.E. Miller, Multiple Isomers of Uracil–Water Complexes: Infrared Spectroscopy in Helium Nanodroplets, *Phys. Chem. Chem. Phys.* **7** (2005) 3565–3573.
- [209] W.K. Lewis, R.J. Bemish, and R.E. Miller, Fragmentation of HCN in Optically Selected Mass Spectrometry: Non-Thermal Ion Cooling in Helium Nanodroplets, *J. Chem. Phys.* **123** (2005) 141103/1–4.

- [210] E.R. Mysak, Y.N. Dessiaterik, C.J. McKinney, R.E. Miller, and T. Baer, Design of a Timing Circuit for Random Laser Triggering on Aerosol Particles, *Rev. Sci. Instrum.* **77** (2006) 013301/1–6.
- [211] Y.N. Dessiaterik, T. Baer, and R.E. Miller, Laser Ablation of Imidazolium Based Ionic Liquids, *J. Phys. Chem. A* **110** (2006) 1500–1505.
- [212] W.K. Lewis and R.E. Miller, Infrared Spectroscopy of HCN-Salt Complexes Formed in Liquid-Helium Nanodroplets, *J. Chem. Phys.* **124** (2006) 064301/1–8.
- [213] J.M. Merritt, S. Rudić, and R.E. Miller, Infrared Laser Spectroscopy of CH₃-HF in Helium Nanodroplets: The Exit-Channel Complex of the F+CH₄ Reaction, *J. Chem. Phys.* **124** (2006) 084301/1–12.
- [214] S. Rudić, J.M. Merritt, and R.E. Miller, Infrared Laser Spectroscopy of the CH₃-HCN Radical Complex Stabilized in Helium Nanodroplets, *J. Chem. Phys.* **124** (2006) 104305/1–8.
- [215] C.M. Lindsay, G.E. Douberly, and R.E. Miller, Rotational and Vibrational Dynamics of H₂O and HDO in Helium Nanodroplets, *J. Mol. Struct.* **786** (2006) 96–104.
- [216] P.L. Stiles and R.E. Miller, High-Resolution Infrared Spectroscopy of HCN-Zn_n (*n*=1–4) Clusters: Structure Determination and Comparisons with Theory. Submitted to *J. Phys. Chem. B*.
- [217] M.Y. Choi and R.E. Miller, Four Tautomers of Isolated Guanine from Infrared Laser Spectroscopy in Helium Nanodroplets. Submitted to *J. Am. Chem. Soc.*
- [218] M.Y. Choi, G.E. Douberly, T.M. Falconer, W.K. Lewis, C.M. Lindsay, J.M. Merritt, P.L. Stiles, and R.E. Miller, Infrared Spectroscopy of Helium Nanodroplets: Novel Methods for Physics and Chemistry, *Int. Rev. Phys. Chem.* **25** (2006) 15–75.