

Kenneth Janda PUBLICATIONS

138. Prediction of Clathrate Structure Type and Guest Position by Molecular Mechanics, Everly B. Fleischer and Kenneth C. Janda, *Journal of Physical Chemistry A*, 117 (19), 4001-4010 (2013).
137. Ice Particle Size and Temperature Dependence of the Kinetics of Propane Clathrate Hydrate Formation, Joel J. Rivera and Kenneth C. Janda, *Journal of Physical Chemistry C*, 116 (36), 19062-19072 (2012).
136. Structure and dynamics of noble gas-halogen and noble gas ionic clusters: When theory meets experiment, J. A. Beswick, Nadine Halberstadt and Kenneth C. Janda, *Chemical Physics*, 399, 4-16 (2012).
135. A theoretical study of electronic predissociation in the NeBe₂ van der Waals molecule, Ramon Hernández-Lamonedá, Cristina Sanz-Sanz, Octavio Roncero, Jordan M. Pio, Molly A. Taylor, and Kenneth C. Janda, *Chemical Physics*, 399, 86-93 (2012).
134. Large Shift and Small Broadening of Br₂ Valence Band upon Dimer Formation with H₂O: An Ab Initio Study, R Franklin-Mergarejo, J Rubayo-Soneira, Nadine Halberstadt, Kenneth C Janda, Tahra Ayed, Margarita I. Bernal-Uruchurtu, Ramon Hernández-Lamonedá, *Journal of Physical Chemistry A*, 115 (23), 5983-5991 (2011).
133. Comparative Study of hydrogen, argon, and xenon uptake into a propane hydrate. Joanne A. Abbondondola, Everly B. Fleisher, Kenneth C. Janda, *AIChE Journal*, 56 (10), 2734-2741 (2010).
132. Real-time dissociation dynamics of Ne₂Br₂ van der Waals complex. Jordan M. Pio, Molly A. Taylor, Wytze E. van der Veer, Kenneth C. Janda, *Journal of Chemical Physics*, 133 (1), 014305 (2010).
131. A model study on the electronic predissociation of the NeBr₂ van der Waals complex. Cristina Sanz-Sanz, Octavio Roncero, Ramon Hernández-Lamonedá, K.C. Janda, *Journal of Chemical Physics*, 132 (22), 221103 (2010).
130. Competition between electronic and vibrational predissociation dynamics of the HeBr₂ and NeBr₂ van der Waals molecules. Molly A. Taylor, Jordan M. Pio, Wytze van der Veer, Kenneth C. Janda, *Journal of Chemical Physics*, 132 (10), 104309 (2010).
129. NeCl₂ and ArCl₂: Transition from Direct Vibrational Predissociation to Intramolecular Vibrational Relaxation and Electronic Nonadiabatic Effects. Craig Bieler, Kenneth C. Janda, Ramon Hernández-Lamonedá, *Journal of Physical Chemistry A*, 114 (9), 3050-3059 (2010).
128. Vibrational Bound States of the He₂Ne⁺ Cation. Jose Zuniga, Adolfo Bastida, A. Requena, Kenneth C. Janda, *Journal of Physical Chemistry A*, 113 (52), 14896-14903, (2009).

127. Structure, spectroscopy and dynamics of halogen molecules interacting with water, Margarita I. Bernal-Uruchurtu, Galina Kerenskaya and Kenneth C. Janda, *International Reviews of Physical Chemistry* 28(2), 223-265 (2009).
126. An ab Initio Calculation of the Valence Excitation Spectrum of H₂O-Cl₂: Comparison to Condensed Phase Spectra, Ricardo Franklin-Mergarejo, Jesus Rubayo-Soneira, Nadine Halberstadt, Tahra Ayed, Margarita I. Bernal-Uruchurtu, Ramon Hernández-Lamonedada and Kenneth C. Janda, *Journal of Physical Chemistry A*, 113 (26), 7563-69 (2009).
125. Toward the Efficient Production of Methane/Propane Double Hydrate, Melissa R. Prado, Yazmin Cazares, and Kenneth C. Janda, *Industrial and Engineering Chemistry Research*, 48 (11), 5160-5164 (2009).
124. On the Unusual Properties of Halogen Bonds: A Detailed ab Initio Study of X₂-(H₂O)₁₋₅ clusters (X = Cl and Br), Margarita I. Bernal-Uruchurtu, Ramon Hernández-Lamonedada, and Kenneth C. Janda, *Journal of Physical Chemistry A*, 113 (19), 5496-5505 (2009).
123. Propane Clathrate Hydrate Formation Accelerated by Xenon, Joanne A. Abbondondola, Everly B. Fleischer, and Kenneth C. Janda, *Journal of Physical Chemistry C*, 113 (11), 4717-4720 (2009).
122. Dynamical interrogation of the hydration cage of bromine in single crystal clathrate hydrates versus water, Ilya U. Goldschleger, Galina Kerenskaya, Vahan Senekerimyan, Kenneth C. Janda and V. Ara Apkarian, *Physical Chemistry Chemical Physics* 10 7226-7232 (2008).
121. Product state resolved excitation spectroscopy of He-, Ne- and Ar-Br₂ linear isomers: Experiment and theory, Jordan Pio, Wytze E. van der Veer, Craig R. Bieler, and Kenneth C. Janda, *Journal of Chemical Physics*. 128 134311 (2008).
120. Theoretical study of the potential energy surfaces of the van der Waals H₂O-X₂⁺ (X=Cl, Br) complexes, Tahra Ayed, Ramon Hernández Lamonedada*, and Kenneth C. Janda, *Journal of Physical Chemistry A*, 112 722-727 (2008).
119. Two Dimensional H₂O-Cl₂ and H₂O-Br₂ potential surfaces: an ab initio study of ground and valence excited electronic states, Ramón Hernández-Lamonedada, Victor Hugo Uc Rosas, Margarita I. Bernal Uruchurtu, Nadine Halberstadt, and Kenneth C. Janda, *Journal of Physical Chemistry A*, 112 89-96 (2008).
118. Polymorphism in Br₂ clathrate hydrates, I. Goldschleger, G. Kerenskaya, K. C. Janda, and V. A. Apkarian, *Journal of Physical Chemistry A*, 112 787-789 (2008).
117. Spectroscopic Signatures of Halogens in Clathrate Hydrate Cages. 2. Iodine, Galena Kerenskaya, Ilya U. Goldschleger, V. Ara Apkarian, Everly Fleisher and Kenneth C. Janda, *Journal of Physical Chemistry A*, 111 10969-10976 (2007).

116. Time and frequency resolved dynamics of ArBr_2 , Jose Cabrera, Craig R. Bieler, Natalie McKinney, Wytze E. van der Veer, Jordan Pio, Octavio Roncero and Kenneth C. Janda, *Journal of Chemical Physics*. 127 164309 (2007).
115. Quasi-classical trajectories study of $(\text{NeBr}_2)^{-79}\text{Br}_2$, B) vibrational predissociation, M. L. Gonzalez-Martinez, Jesus Rubayo-Soneira, and Kenneth C. Janda, *Physical Chemistry Chemical Physics* 8 (39): 4550-4558 (2006).
114. Spectroscopic signatures of halogens in clathrate hydrate cages. 1. Bromine, Galina Kerenskaya, Ilya U. Goldschleger, V. Ara Apkarian and Kenneth C. Janda, *Journal of Physical Chemistry A*, 110 13792-13798 (2006).
113. Electron impact fragmentation of size-selected krypton clusters, Christof Steinbach, Michal Farnik, Udo Buck, Carrie A. Brindle and Kenneth C. Janda, *Journal of Physical Chemistry A*, 110 9108-9115 (2006).
112. Gas Hydrate Clathrates Experiment for High School and Undergraduate Laboratories, Melissa R. Prado, Annie Pham, Robert E. Ferazzi, Kimberly Edwards and Kenneth C. Janda, *Journal of Chemical Education*. 84 1790-1791 (2007).
111. Quenched by Ice: Transient grating measurements of vibronic dynamics in bromine-doped ice, I.U. Goldschleger, V. Senekerimyan, M. S. Krage. H. Serferyan, K. C. Janda and V. A. Apkarian, *Journal of Chemical Physics*, 124 Art. No.204507 (2006)
110. Quantum dynamics of Ne-Br_2 vibrational predissociation: The role of continuum resonances as doorway states, Alberto Garcia-Vela and Kenneth C. Janda, *Journal of Chemical Physics* 124 Art. No. 034305 (2006).
109. Asymmetrical linear structures including three-electron hemibonds or other interaction in the ABA-type triatomic cations: Ne_3^+ , $(\text{He-Ne-He})^+$, $(\text{Ar-NeAr})^+$, $(\text{Ar-O-Ar})^+$, $(\text{He-O-He})^+$ and $(\text{Ar-HeAr})^+$, X. Y. Sun, Z. R. Li, D. Wu, C. C. Sun, S. Gudowski, F. M. Tao and K. C. Janda, *Journal of Chemical Physics*, 123 Art. No 134304 (2005). 108. Electronic Excited State Mixing in NeCl_2 , Ramon Hernández-Lamonedá and Kenneth C. Janda, *Journal of Chemical Physics*, 123, Art. No. (2005)
107. Time dependent pump-probe spectra of NeBr_2 , Jose A. Cabrera, Craig R. Bieler, Benjamin C. Olbricht, Wytze van der Weer and Kenneth C. Janda, *J. Chem. Phys.* 123, Art. No. 054311 (2005).
106. Structure and stability of Ne^+He_n : experiment and diffusion quantum Monte Carlo theory with “on the fly” electronic structure, Carrie A. Brindle, Melissa R. Prado, Kenneth C. Janda, Nadine Halberstadt and Marius Lewerenz, *J. Chem. Phys.* 123, Art. No. 064312, 2005.
105. Anharmonic Vibrational Spectroscopy Calculations for $(\text{NH}_3)(\text{HF})$ and $(\text{NH}_3)(\text{DF})$: Fundamental, Overtone, and Combination Transitions, Carrie A Brindle, Galina M. Chaban, R. Benny Gerber and Kenneth C. Janda, *J. Chem. Phys.*, 7, 945-954 (2005).

104. Potential energy surfaces for He_nNe^+ ions: ab initio and diatomics-in-molecules results, Jonghee Seong, Andreas Rohrbacher, Zhi Ru Li, Kenneth C. Janda, Fu-Ming Tao, Fernand Spiegelman and Nadine Halberstadt, *J. Chem. Phys.* **120**, 7456-7463 (2004).
103. Transition from Hydrogen Bonding to Ionization in $(\text{HCl})_n(\text{NH}_3)_n$ and $(\text{HCl})_n(\text{H}_2\text{O})_n$ Clusters: Consequences for Anharmonic Vibrational Spectroscopy, Galina M. Chaban, R. Benny Gerber and Kenneth C. Janda, *J. Phys. Chem.* **105**, 8323-8332 (2001).
102. Structure and spectroscopy of the He_2Cl_2 van der Waals cluster, Marta I. Hernández, Nadine Halberstadt, William D. Sands and Kenneth C. Janda, *J. Chem. Phys.* **113**, 7252-7267 (2000).
101. Measurement of the electronic wave function: Separated atom wave function analysis of the R -dependent hyperfine constants of the iodine monochloride **A** state, William S. Barney, Colin M. Western and Kenneth C. Janda, *J. Chem. Phys.* **113**, 7211-7223 (2000).
100. Charge Transfer and Fragmentation of Liquid Helium Droplets doped with Xenon, Thomas Ruchti, Berton E. Callicoatt and Kenneth C. Janda, *Physical Chemistry Chemical Physics* **2**, 4075-4080 (2000).
99. The Dynamics of Noble-Gas Halogen Molecules and Clusters, Andreas Rohrbacher, Nadine Halberstadt and Kenneth C. Janda, *Ann. Rev. Phys. Chem.* **51**, 405-33 (2000).
98. Rare Gas-Dihalogen Potential Energy Surfaces, Andreas Rohrbacher, Jason Williams, and Kenneth C. Janda, *Physical Chemistry Chemical Physics* **1**, 5263-5276 (1999).
97. HeNe^+ : Resolution of an apparent disagreement between experiment and theory, Jeonghee Seong, Kenneth C. Janda, Mark P. McGrath and Nadine Halberstadt, *Chemical Physics Letters* **314**, 501-507 (1999).
96. Hybrid quantum/classical simulation and kinetic study of the vibrational predissociation of $\text{Cl}_2\cdots\text{Ne}_n$ ($n=2,3$), Adolfo Bastida, Beatriz Miguel, Jose Zuñiga, Alberto Requena, Nadine Halberstadt and Kenneth C. Janda, *J. Chem. Phys.* **111**, 4577-4588 (1999).
95. A three-dimensional potential energy surface for $\text{He} + \text{Cl}_2$ (**B** $^3\Pi_{0_u^+}$): ab initio calculations and a multiproperty fit, Jason Williams, Andreas Rohrbacher, Jeonghee Seong, Neelan Marianayagam, Kenneth C. Janda, Rudolf Burcl and M. M. Szczesniak, Grzegorz Chalasinski, Slawomir M. Cybulski and Nadine Halberstadt, *J. Chem. Phys.* **111**, 997-1007 (1999).
94. A combined experimental-theoretical study of the vibrational predissociation and product rotational distributions for high vibrational levels of $\text{He}^{79}\text{Br}_2$, Andreas Rohrbacher, Thomas Ruchti, Kenneth Janda, Alexei A. Buchachenko, Marta I Hernández, Tomás Gonzales-Lezana, Pablo Villareal and G. Delgado-Barrio, *J. Chem. Phys.* **110**, 256-266 (1999).
93. The **B** - **X** Spectrum of ArCl_2 : linear and perpendicular isomers, Kenneth C. Janda, Daniela Djahandideh, Octavio Roncero and Nadine Halberstadt, *Chemical Physics* **239**, 177-186 (1998).

92. Short-time Charge Motion in He_2^+ clusters, Jeonghee Seong and Kenneth C. Janda, Nadine Halberstadt and Fernand Spiegelmann, *J. Chem. Phys.* **109**, 10873-10884 (1998).
91. Charge Transfer and Fragmentation of Liquid Helium Clusters that Contain One or More Neon Atoms, Thomas Ruchti, Kirk Förde, Berton E. Callicoatt, Henrik Ludwigs, and Kenneth C. Janda, *J. Chem. Phys.*, **109**, 10679-10687 (1998).
90. Fragmentation of Ionized Liquid Helium Droplets: A new interpretation, B. E. Callicoatt, K. Forde, L. F. Jung, T. Ruchti and K. C. Janda, *J. Chem. Phys.* **109**, 10195-10200 (1998).
89. Charge Localization and Fragmentation Dynamics of Ionized Helium Clusters, M. Ovchinnikov, B. L. Grigorenko, K. C. Janda and V. A. Apkarian, *J. Chem. Phys.* **108**, 9351-9361 (1998).
88. Capture and Ionization of Argon within Liquid Helium Droplets, Berton E. Callicoatt, Kirk Forde, Thomas Ruchti, Lilian Jung, Kenneth C. Janda and Nadine Halberstadt, *J. Chem. Phys.* **108**, 9371-9382 (1998).
87. The Resonant Charge Hopping Rate in Positively Charged Helium Clusters, N. Halberstadt and K. C. Janda, *Chem. Phys. Letts.* **282**, 409 (1998).
86. From the Sparse to the Statistical Limit of Intramolecular Vibrational Redistribution in Vibrational Predissociation: $ArCl_2$ as an Example, O. Roncero, D. Caloto, K. C. Janda and N. Halberstadt, *J. Chem. Phys.* **107**, 1406 (1997).
85. Differential scattering cross sections for $HeCl_2$, $NeCl_2$, and $ArCl_2$: multiproperty fits of the potential energy surfaces, Andreas Rohrbacher and Kenneth C. Janda, Laura Beneventi, Piergiorgio Casavecchia and Gian Gualberto Volpi, *J. Phys. Chem.* **101**, 6528 (1997, Y.T. Lee Issue).
84. Are rare gas Cl_2 van der Waals molecules linear or T-shaped? Jason Williams, Andreas Rohrbacher, Daniela Djahandideh, Kenneth C. Janda, Alan Jamka, Fu-Ming Tao and Nadine Halberstadt, *Mol. Phys.* **91**, 573 (1997).
83. *Ab Initio* calculations of the interaction of He with the $B^3\Pi_{0_u^+}$ state of Cl_2 as a function of the Cl_2 internuclear separation, Andreas Rohrbacher, Jason Williams, Kenneth C. Janda, Slawomir M. Cybulski, Rudolf Burcl, M. M. Szczesniak, Grzegorz Chalasinski and Nadine Halberstadt, *J. Chem. Phys.* **106**, 2685 (1997).
82. Charge transfer within He clusters, Berton Callicoatt, David D. Mar, V. A. Apkarian and Kenneth C. Janda, *J. Chem. Phys.* **105**, 7872 (1996).
81. Vibrational predissociation of $ArCl_2$: Toward the determination of the potential energy surface of the B state, Kenneth C. Janda, Octavio Roncero and Nadine Halberstadt, *J. Chem. Phys.* **105**, 5830 (1996).
80. An unusual example of angular momentum coupling: the dependence of the hyperfine constants of the A state of ICl on internuclear separation, C. M. Western, W. S. Barney, S.

- G. Clement, T. J. Slotterback and K. C. Janda, *Z. Phys. D: Atoms, Molecules and Clusters*, **36**, 273 (1996).
79. High resolution spectroscopy of the He⁷⁹Br₂ van der Waals molecule: An experimental and theoretical study, Douglas G. Jahn, William S. Barney, Jerry Cabalo, Simon G. Clement, Andreas Rohrbacher, Timothy J. Slotterback, Jason Williams, Kenneth C. Janda and Nadine Halberstadt, *J. Chem. Phys.* **104**, 3501 (1996).
78. Hyperfine analysis of the mixed **A** ³Π₁ v=28 and **X** ¹Σ₀ v=69 states of I³⁵Cl, Timothy J. Slotterback, Simon G. Clement, Kenneth C. Janda and Colin M. Western, *J. Chem. Phys.* **103**, 9125 (1995).
77. The HeCl₂ potential: Atom-Atom and *ab-initio* compared to experiment, S. S. Huang, C. R. Bieler, K. C. Janda, F.-M. Tao, W. Klemperer, P. Casavecchia, G. G. Volpi and N. Halberstadt, *J. Chem. Phys.* **102**, 8846 (1995).
76. Recombinative desorption of hydrogen from the Ge(100)-(2x1) surface: A laser-induced desorption study, Lisa B. Lewis, Jeffrey Segall and Kenneth C. Janda, *J. Chem. Phys.* **102**, 7222 (1995).
75. Hyperfine measurements in the **X** and **B** electronic states of I^{35,37}Cl: Probing the ionic character of the chemical bond, T. J. Slotterback, S. G. Clement, K. C. Janda and C. M. Western, *J. Chem. Phys.* **101**, 7221 (1994).
74. Vibrational predissociation dynamics of the He⁷⁹Br₂ van der Waals molecule near the **B** state dissociation limit: Binding energies, lifetimes, and implications for the rare gas-halogen potential, Douglas G. Jahn, Simon G. Clement and Kenneth C. Janda, *J. Chem. Phys.* **101**, 283 (1994).
73. Photo-excitation and Decay of Weakly Bound Complexes: the Ar-Cl₂ Case, Nadine Halberstadt, Kenneth C. Janda and Octavio Roncero, *Laser Techniques for State-Selected and State-to-State Chemistry*, Cheuk-Yiu Ng, Ed., *Proceedings of the SPIE* **1858**, 274 (1993).
72. Coherence Effects between Intramolecular Vibrational Relaxation and Dissociation in Triatomic van der Waals Systems, O. Roncero, P. Villarreal, G. Delgado-Barrio, N. Halberstadt and K. C. Janda, *J. Chem. Phys.* **99**, 1035 (1993).
71. Variation of the Electronic Wavefunction with Internuclear Separation: High-Resolution Spectroscopy of the **A** ³Π₁ State of I³⁵Cl Near the Dissociation Limit, C. M. Western, T. J. Slotterback, J. R. Johnson, D. W. Pratt and K. C. Janda, *J. Chem. Phys.* **98**, 1826 (1993).
70. The HeCl₂ Potential: A combined scattering-spectroscopic study, L. Beneventi, P. Casavecchia, G. G. Volpi, C. R. Bieler and K. C. Janda, *J. Chem. Phys.* **98**, 178 (1993).
69. Vibrational predissociation of the Ar-Cl₂ van der Waals complex: The small molecule limit for intramolecular vibrational redistribution, N. Halberstadt, S. Serna, O. Roncero and K. C. Janda, *J. Chem. Phys.* **97**, 341 (1992).

68. Intramolecular Vibrational Relaxation in a Triatomic van der Waals Molecule: ArCl_2 , N. Halberstadt, J. A. Beswick, O. Roncero and K. C. Janda, *J. Chem. Phys.* **96**, 2404 (1992).
67. Calculation of the Si-H Bond Energies for the Monohydride Phase of Si (100), P. Nachtigal, K. D. Jordan and K. C. Janda, *J. Chem. Phys.* **95**, 8652 (1991).
66. The Xe- Cl_2 Conundrum: van der Waals Complex or Linear Molecule? M. Proserpio, R. Hoffman and K. C. Janda, *J. Am. Chem. Soc.* **113**, 7184 (1991).
65. Spectroscopy and Dynamics of He_2Cl_2 : A Quantum Liquid Cluster? W. D. Sands, C. R. Bieler and K. C. Janda, *J. Chem. Phys.* **95**, 729 (1991).
64. The Rate Law and Activation Energy of Isotope Mixing Between Chemisorbed CO Molecules on a K Promoted Ni(111) Surface, K. Sinniah, W. D. Sands, J. T. Yates, Jr. and K. C. Janda, *J. Am. Chem. Soc.* **113**, 3684 (1991).
63. Characterization of the KrCl_2 and XeCl_2 van der Waals Isomers, C. R. Bieler, K. E. Spence and K. C. Janda, *J. Phys. Chem.* **95**, 5058 (1991).
62. Isotope Mixing between Chemisorbed CO Molecules on a K Promoted Ni(111) Surface: An LITD Study, K. Sinniah, W. D. Sands, J. Hrbek, J. T. Yates, Jr. and K. C. Janda, *Surf. Sci.* **243**, L67 (1991).
61. Dynamics of Polyatomic van der Waals Complexes, N. Halberstadt and K. C. Janda, Editors, NATO ASI Series **227**, Plenum, New York, 1990.
60. Ar_2Cl_2 and Ar_3Cl_2 : Structure, Bond Energy and Dissociation Dynamics, C. R. Bieler, D. D. Evard and K. C. Janda, *J. Phys. Chem.* **94**, 7452 (1990).
59. LIF and MODR Spectra of the $\text{ICl A}\leftarrow\text{X}$, $19\leftarrow\text{O}$ Vibronic Band: Measurement of the Cl Atom Hyperfine Structure, J. R. Johnson, T. J. Slotterback, D. W. Pratt, K. C. Janda and C. M. Western, *J. Phys. Chem.* **90**, 5661 (1990).
58. Adsorption and Decomposition of Chemisorbed Propylene on the Si(100) - (2x1) Surface: A Laser Induced Desorption Study, in Laser Photoionization and Desorption Surface Analysis Techniques, N. S. Nogar, Ed., K. Sinniah, M. G. Sherman, J. T. Yates, Jr. and K. C. Janda, *Proceedings of the S.P.I.E.* **1208**, 63 (1990).
57. Hydrogen desorption from the Monohydride Phase on Si(100), K. Sinniah, M. G. Sherman, L. B. Lewis, W. H. Weinberg, J. T. Yates, Jr. and K. C. Janda, *J. Chem. Phys.* **92**, 5700 (1990).
56. XeCl_2 ; A van der Waals Molecule, C. R. Bieler and K. C. Janda, *J. Am. Chem. Soc.* **112**, 2033 (1990).
55. Rotation Rainbows, Quantum Interference, Intramolecular Vibrational Relaxation and Chemical Reactions: All in Rare Gas-Halogen van der Waals Molecules, C. R. Bieler and K. C. Janda in Atomic and Molecular Clusters, E. R. Bernstein, Ed. Elsevier, Amsterdam, 1990, pages 455-506.

54. New Mechanism for Hydrogen Desorption from Covalent Surfaces: The Monohydride Phase on Si(100), K. Sinniah, M. G. Sherman, L. B. Lewis, W. H. Weinberg, J. T. Yates, Jr. and K. C. Janda, *Phys. Rev. Lett.* **62**, 567 (1989).
53. The Structure and Dissociation Dynamics of the Ne_2Cl_2 , S. R. Hair, J. I. Cline, C. R. Bieler and K. C. Janda, *J. Chem. Phys.* **90**, 2935 (1989).
52. Product State Distributions for the Vibrational Predissociation of NeCl_2 , J. I. Cline, N. Sivakumar, D. D. Evard, C. R. Bieler, B. P. Reid, N. Halberstadt and K. C. Janda, *J. Chem. Phys.* **90**, 2606 (1989).
51. The Gas Phase "Matrix Isolation" Spectroscopy of CH_3F , F. G. Celii and K. C. Janda, *Z. Phys. D: Atoms, Molecules and Clusters*, **10**, 347 (1988).
50. A Quantum Mechanical Treatment of Vibrational Mixing in Ethylene Dimer and Rare Gas-Ethylene Complexes, S. R. Hair, J. A. Beswick and K. C. Janda, *J. Chem. Phys.* **89**, 3970 (1988).
49. The Vibrational Predissociation Dynamics of ArCl_2 : Intramolecular Vibrational Relaxation in a Triatomic van der Waals Molecules? D. D. Evard, C. R. Bieler, J. I. Cline, N. Sivakumar and K. C. Janda, *J. Chem. Phys.* **89**, 2829 (1988).
48. Vibrational Predissociation Dynamics of HeCl_2 , Experiment and Theory, J. I. Cline, D. D. Evard, B. P. Reid, N. Sivakumar, K. C. Janda and N. Halberstadt, *J. Chem. Phys.* **89**, 3535 (1988).
47. Predissociation Dynamics of $\text{He}^{79}\text{Br}_2$ and $\text{Ne}^{79}\text{Br}_2$; Test of Product State Propensity Rules, N. Sivakumar, J. I. Cline, C. R. Bieler and K. C. Janda, *Chem. Phys. Lett.* **147**, 561 (1988).
46. The Structure and Bond Energy of ArCl_2 , D. D. Evard, J. I. Cline and K. C. Janda, *J. Chem. Phys.* **88**, 5433 (1988).
45. The UV Laser-Induced Photochemistry of $\text{Fe}(\text{CO})_5$ on Single Crystal Surfaces in Ultra-High Vacuum, F. G. Celii, P. M. Whitmore and K. C. Janda, *J. Phys. Chem.* **92**, 1604 (1988).
44. Vibrational and Rotational Wavefunctions for the Triatomic van der Waals Molecules HeCl_2 , NeCl_2 , and ArCl_2 , B. P. Reid, K. C. Janda and N. Halberstadt, *J. Phys. Chem.* **92**, 587 (1988).
43. Three Dimensional Quantum Mechanical Study of NeCl_2 Vibrational Predissociation, N. Halberstadt, J. A. Beswick and K. C. Janda, *J. Chem. Phys.* **87**, 3966 (1987).
42. State-to-State Measurements of the Vibrational Predissociation of HeCl_2 , J. I. Cline, N. Sivakumar, D. D. Evard and K. C. Janda, *Phys. Rev.* **A36**, 1944 (1987).
41. Observation of UV Induced Photochemistry of $\text{Fe}(\text{CO})_5$ Adsorbed on the $\text{Ag}(110)$ Surface, F. G. Celii and K. C. Janda, *Chem. Phys. Lett.* **138**, 257 (1987).

40. Direct Measurement of the Vibrational Predissociation Lifetime of NeBr_2 in the Ground State, N. Sivakumar, D. D. Evard, J. I. Cline and K. C. Janda, *Chem. Phys. Lett.* **137**, 403 (1987).
39. Structure and Dynamics of the Rare-Gas-Halogen van der Waals Molecules: Product State Distributions for Vibrational Predissociation of NeBr_2 , J. I. Cline, D. D. Evard, B. P. Reid, N. Sivakumar, F. Thommen and K. C. Janda, Structure and Dynamics of Weakly Bound Molecular Complexes, A. Weber, Ed., Reidel (1987), pp. 553-580.
38. Product State Distributions for the Photodissociation of NeCl_2 , J. I. Cline, N. Sivakumar, D. D. Evard and K. C. Janda, *J. Chem. Phys.* **86**, 1636 (1987).
37. Molecular Beam-Laser Spectroscopy of the NeCl_2 van der Waals Molecule, D. D. Evard, F. Thommen, J. I. Cline and K. C. Janda, *J. Phys. Chem.* **91**, 2508 (1987).
36. Bakeout Controller for the Use of Helium Closed-Cycle Refrigerators in UHV Applications, F. G. Celii, P. M. Whitmore and K. C. Janda, *J. Vac. Sci. Tech.* **A4**, 1939 (1986).
35. Vibrational Spectroscopy, Photochemistry and Photophysics of Molecular Clusters, F. G. Celii and K. C. Janda, *Chemical Reviews* **86**, 507 (1986).
34. Rotational Resolution of the NeCl_2 , B-X, 9-1 Transition, D. D. Evard, F. Thommen and K. C. Janda, *J. Chem. Phys.* **84**, 3630 (1986).
33. The Laser Induced Fluorescence Spectrum of the HeCl_2 van der Waals Molecule, J. I. Cline, D. D. Evard, F. Thommen and K. C. Janda, *J. Chem. Phys.* **84**, 1165 (1986).
32. Rotational Resolution of the NeBr_2 B-X 10-0 Transitions, F. Thommen, D. D. Evard and K. C. Janda, *J. Chem. Phys.* **82**, 5295 (1985).
31. Predissociation of Polyatomic van der Waals Molecules, K. C. Janda, *Adv. in Chem. Phys.* **60**, 201 (1985).
30. Photodissociation of van der Waals Molecules: Do Angular Momentum Constraints Determine Decay Rates? M. P. Casassa, C. M. Western and K. C. Janda, American Chemical Society Symposium Series **263**, Resonances in Electron-Molecules Scattering, van der Waals Complexes, and Reactive Chemical Dynamics, D. G. Truhlar, Ed., pp. 305-319 (1984).
29. Free Jet-Laser Excitation Fluorescence Spectroscopy of Complexes Between Ne and Br_2 , B. A. Swartz, D. E. Brinza, C. M. Western and K. C. Janda, *J. Chem. Phys.* **88**, 6272 (1984).
28. Molecular Beam-Laser Spectroscopy of Ne-Cl_2 : Observation of a Metastable Vibrationally Excited van der Waals Molecule, D. E. Brinza, C. M. Western, D. D. Evard, F. Thommen, B. A. Swartz and K. C. Janda, *J. Phys. Chem.* **88**, 2004, (1984).
27. Infrared Photodissociation of the Hindered Internal Rotors $\text{Ne:C}_2\text{H}_4$ and $\text{Ar:C}_2\text{H}_4$, C. M. Western, M. P. Casassa and K. C. Janda, *J. Chem. Phys.* **80**, 4781 (1984).

26. Effects of Inhomogeneity in the Infrared Photodissociation Spectra of $(C_2H_4)_2$, $C_2H_4:HF$ and $C_2H_4:HCl$, M. P. Casassa, C. M. Western and K. C. Janda, *J. Chem. Phys.* **81**, 4950 (1984).
25. Trapping Desorption Scattering of Argon from Pt(111), J. E. Hurst, Jr., L. Wharton, K. C. Janda and D. J. Auerbach, *J. Chem. Phys.* **83**, 1376 (1985).
24. Laser-Induced Fluorescence Excitation Spectra of $NeCl_2$: Evidence For a Long-Lived Vibrationally Excited van der Waals Molecule, D. E. Brinza, B. A. Swartz, C. M. Western and K. C. Janda, *J. Chem. Phys.* **79**, 3 (1983).
23. Infrared Photodissociation of Hydrogen-Bonded Clusters: $C_2H_4:HF$ and $C_2H_2:HCl$, M. P. Casassa, C. M. Western, F. G. Celii and K. C. Janda, *J. Chem. Phys.* **79**, 3227 (1983).
22. Photodesorption of Weakly Bound Molecules, F. G. Celii, M. P. Casassa and K. C. Janda, *Surf. Sci.* **141**, 169 (1984).
21. Direct Inelastic Scattering and Trapping Desorption Scattering of N_2 and CH_4 from Pt(111), K. C. Janda, J. E. Hurst, J. Cowin and L. Wharton, *Surf. Sci.* **130**, 395 (1983).
20. Direct Inelastic Scattering of Ar from Pt(111), J. E. Hurst, L. Wharton, K. C. Janda and D. J. Auerbach, *J. Chem. Phys.* **78**, 1559 (1983).
19. Photodissociation and Photodesorption Line Shapes, M. P. Casassa, F. G. Celii and K. C. Janda, *J. Chem. Phys.* **76**, 5295-5302 (1982).
18. IR Photolysis of $ArBCl_3$, M. P. Casassa, D. S. Bomse and K. C. Janda, *J. Phys. Chem.* **85**, 2623 (1981).
17. Infrared Photodissociation of van der Waals Molecules Containing Ethylene, M. P. Casassa, D. S. Bomse and K. C. Janda, *J. Chem. Phys.* **74**, 5044-5056 (1981).
16. Infrared Photochemistry of Ethylene Clusters, M. P. Casassa, D. S. Bomse, J. L. Beauchamp and K. C. Janda, *J. Chem. Phys.* **72**, 6805 (1980).
15. Direct Inelastic and Trapping-Desorption Scattering of N_2 from Polycrystalline W: Elementary Steps in the Chemisorption of Nitrogen, K. C. Janda, J. E. Hurst, C. A. Becker, J. P. Cowin, L. Wharton and D. J. Auerbach, *Surf. Sci.* **93**, 270-286 (1980).
14. Direct Measurement of Velocity Distributions in Argon Beam-Tungsten Surface Scattering, K. C. Janda, J. E. Hurst, C. A. Becker, J. P. Cowin, D. J. Auerbach and L. Wharton, *J. Chem. Phys.* **72**, 2403-2410 (1980).
13. Observation of Direct Inelastic Scattering in the Presence of Trapping-Desorption Scattering: Xe on Pt(111), J. E. Hurst, C. A. Becker, J. P. Cowin, K. C. Janda, L. Wharton and D. J. Auerbach, *Phys. Rev. Letts.* **43**, 1175-1177 (1979).
12. The Microwave Spectrum of Argon Methyl Chloride, J. M. Steed, L. S. Bernstein, T. A. Dixon, K. C. Janda and W. Klemperer, *J. Chem. Phys.* **71**, 4189-4191 (1979).

11. Energy Accommodation and Condensation of Argon and Nitrogen on Tungsten, C. W. Becker, D. J. Auerbach, J. Cowin, K. C. Janda, L. Wharton and J. Hurst, Rarefield Gas Dynamics Eleventh Symposium (R. Campargue, Ed.), Vol. II, Paris, 1979.
10. Synthesis, Microwave Spectrum and Structure of BF_3CO , BF_3N_2 and BF_3Ar , K. C. Janda, J. M. Steed, L. Bernstein, S. E. Novick and W. Klemperer, *J. Am. Chem. Soc.* **100**, 8074-8079 (1978).
9. Hydrogen Bonding: The Structure of HF-HCl, K. C. Janda, J. M. Steed, S. E. Novick, and W. Klemperer, *J. Chem. Phys.* **67**, 5162 (1977).
8. HFCIF Structure and Bonding, S. E. Novick, K. C. Janda and W. Klemperer, *J. Chem. Phys.* **65**, 5115 (1976),
7. Centrifugal Distortion in ArHCl, S. E. Novick, K. C. Janda, S. L. Holmgren, M. Waldman and W. Klemperer, *J. Chem. Phys.* **65**, 1114 (1976).
6. Measurement of the Sign of the Dipole Moment of ClF, K. C. Janda, W. Klemperer and S. E. Novick, *J. Chem. Phys.* **64**, 2698 (1976).
5. Structure and Bonding of KrClF; Intermolecular Force Fields in van der Waals Molecules, S. E. Novick, S. J. Harris, K. C. Janda and W. Klemperer, *Can. J. Phys.* **53**, 2007 (1975).
4. Benzene Dimer: A Polar Molecule, K. C. Janda, J. C. Hemminger, J. S. Winn, S. E. Novick, S. J. Harris and W. Klemperer, *J. Chem. Phys.* **63**, 1419 (1975).
3. Intermolecular Potential Between an Atom and a Linear Molecule: The Structure of ArOCS, S. J. Harris, K. C. Janda, S. E. Novick and W. Klemperer, *J. Chem. Phys.* **63**, 881 (1975).
2. Energy Transfer from Single Vibronic Levels of Benzene, K. C. Janda, K. Koert and F. S. Wettack, *J. Photochem.* **1**, 345 (1973).
1. Steric Hindrance in the Transfer of Singlet Electronic Energy, Kenneth C. Janda and F. S. Wettack, *J. Am. Chem. Soc.* **94**, 305 (1972).