

List of publications - Hrvoje Petek

Invited Review Articles:

1. J. Zhao, B. Li, K. Onda, M. Feng, and H. Petek, "Solvated Electrons on Metal Oxide Surfaces" *Chem. Rev.* (submitted).
2. M. Kitajima, M. Hase, and H. Petek, "Real Time Observation of Fano Interference in Si" *Butsuri (Bulletin of the Physical Society of Japan)* **59**, 888-892 (2004) (in Japanese).
3. H. Petek and S. Ogawa, "Surface Femtochemistry: Observation and Quantum Control of Frustrated Desorption of Alkali Atoms from Noble Metals," *Ann. Rev. Phys. Chem.* **53**, 507 (2002).
4. H. Petek, M. J. Weida, H. Nagano, and S. Ogawa, "Surface Femtochemistry: Frustrated Desorption of Alkali Atoms from Noble Metals," Feature Article, *J. Phys. Chem.* **105**, 6767 (2001).
5. S. Ogawa, H. Nagano, and H. Petek, "Time-resolved Two-photon Photoemission Studies of Surfaces," *Nihon Butsuri Gakkai Shu*, **54**, 543 (1999) (invited; in Japanese).
6. S. Ogawa and H. Petek, "Femtosecond Two-photon Time-Resolved Photoemission Spectroscopy," *Kotai Butsuri* **33**, 199 (1998) (in Japanese).
7. S. Ogawa and H. Petek, "Two-photon Time-resolved Photoemission," *Hyoumen Kagaku* **19**, 72 (1998) (in Japanese).
8. H. Petek and S. Ogawa, "Femtosecond Time-resolved Two-Photon Photoemission Studies of Electron Dynamics in Metals," *Prog. Surf. Sci.* **56**, 239 (1997).
9. S. Ogawa and H. Petek, "Limits and Applications of Femtosecond Lasers" *Kagaku and Kogaku* **49**, 916 (1996), (invited; in Japanese).

Invited Book Chapters:

10. H. Petek, "Physical Chemistry of Photochromism - Reaction Mechanism" chapter in *Photochromism in Organic Molecules*, Kikan Kagaku Sosetsu 28, Y. Taniguchi, and M. Irie eds. (Gakkai Shuppan Center, Tokyo 1996) pp 25 – 48 (invited; in Japanese).
11. W.D. Lawrance, C.B. Moore, and H. Petek, "Understanding Molecular Dynamics Quantum-State by Quantum-State," in *Frontiers in the Chemical Sciences*, (W. Spindel and R.M. Simon, eds.), American Association for the Advancement of Science, Washington (1986).

Refereed Journal Articles:

12. K. Ishioka, M. Hase, M. Kitajima, and H. Petek, "Coherent Optical Phonon in Diamond," *Appl. Phys. Lett.* (submitted).

13. K. Ishioka, M. Hase, M. Kitajima, L. Wirtz, A. Rubio, and H. Petek, "Femtosecond Coherent Quasiparticle Correlations in a Nonequilibrium Plasma in Graphite," *Phys. Rev. Lett.* (submitted).
14. A. Kubo, N. Pontius, and H. Petek, "Femtosecond Imaging Microscopy of Surface Plasmon Propagation in a Silver Film," *Phys. Rev. Lett.* (submitted).
15. T. Minato, J. Zhao, Y. Sainoo, Y. Kim, H. S. Kato, M. Kawai, K. Aika, J. Yang, and H. Petek, "Correlation Between the Lattice Distortion and the Local Electronic Structure at an Oxygen Atom Vacancy Defect on the TiO₂(110) Surface," *Phys. Rev. Lett.* (submitted).
16. J. Zhao, B. Li, K. D. Jordan, J. Yang, and H. Petek, "The interplay between hydrogen bonding and electron solvation on hydrated TiO₂(110) surfaces," *Phys. Rev. B* **73**, 195309 (2006).
17. B. Li, J. Zhao, K. Onda, K. D. Jordan, J. Yang, and H. Petek, "Ultrafast Interfacial Proton-Coupled Electron Transfer," *Science* **311**, 1436 (2006).
18. F. Bisio, M. Nyvlt, J. Franta, H. Petek, and J. Kirschner, "Mechanisms for High-order Perturbative Photoemission from Metals," *Phys. Rev. Lett.* **96**, 087601 (2006).
19. A. Kubo, K. Onda, H. Petek, Z. Sun, Y.-S. Jung, and H. -K. Kim, "Femtosecond imaging of surface plasmon dynamics in a nano-structured silver film," *Nano Lett.* **5**, 1123-1127 (2005).
20. M. Nyvlt, F. Bisio, J. Franta, C. L. Gao, H. Petek, and J. Kirschner, "Surface Magnetism During Oxygen-Aided Fe Homoepitaxy," *Phys. Rev. Lett.* **95**, 127201 (2005).
21. N. Pontius, V. Sametoglu, and H. Petek, "Simulation of Two-photon Photoemission from the Bulk *sp*-Bands of Ag(111)," *Phys. Rev. B* **72**, 115105 (2005).
22. K. Onda, B. Li, and H. Petek, "Femtosecond Photoinduced Charge Transfer Dynamics on TiO₂(110) Surfaces," *Surf. Sci.* **593**, 32 (2005).
23. K. Onda, B. Li, J. Zhao, K. D. Jordan, J. Yang, and H. Petek, "Wet electrons at the H₂O/TiO₂(110) Surface," *Science* **308**, 1154 (2005).
24. K. Onda, B. Li, and H. Petek, "Two-photon Photoemission Spectroscopy of TiO₂ (110) Surfaces Modified by Defects and O₂ and H₂O Adsorbates," *Phys. Rev. B* **70**, 045415 (2004).
25. M. Hase, M. Kitajima, A. M. Constantinescu, and H. Petek, "The Birth of a Quasiparticle Observed in Time-Frequency Space," *Nature* **426**, 51 (2003).
26. S. Gao, H. Petek, J. Aizpurua, and S. P. Apell, "Coherence and Decoherence of a Localized Excitation on a Surface Localized Adatom," *Chin. Phys. Lett.* **19**, 1195 (2002).
27. S. Ogawa, H. Nagano, H. Petek, "Optical Intersubband Transitions and Femtosecond Dynamics in Ag/Fe(100) Quantum Wells," *Phys. Rev. Lett.* **88**, 116801 (2002).

28. M. J. Weida, S. Ogawa, H. Nagano, and H. Petek, "Parallel Excitation Pathways in Ultrafast Interferometric Pump-Probe Correlation Measurements of Hot Electron Lifetimes in Metals" *Appl. Phys. A* **71**, 553 (2000).
29. H. Petek, H. Nagano, M. J. Weida, and S. Ogawa, "Quantum Control of Nuclear Motion at a Metal Surface," *J. Phys. Chem.* **104**, 10234 (2000).
30. T. Tomaru and H. Petek, "Effect of Third-Order Dispersion on the Phases of Soliton-like Cr⁴⁺:YAG –Laser Pulses Characterized by the Second-Harmonic-Generation-Frequency-Resolved-Optical Gating Method," *J. Opt. Soc. Am. B.* **18**, 388 (2001).
31. M. J. Weida, S. Ogawa, and H. Petek, "Comment on "Coherence and Relaxation in Potassium-Doped Helium Droplets Studied by Femtosecond Pump-Probe Spectroscopy", *Phys. Rev. Lett.* **84**, 4509 (2000).
32. T. Tomaru and H. Petek, "Femtosecond Cr⁴⁺:YAG Laser with an L-fold Cavity and 1.2 GHz Repetition Rate," *Opt. Lett.* **25**, 584 (2000).
33. H. Petek, H. Nagano, M. J. Weida, and S. Ogawa, "Real Time Observation of Atomic Motion Above a Metal Surface," *Science* **288**, 1402 (2000).
34. M. J. Weida, S. Ogawa, H. Nagano, and H. Petek, "Ultrafast Interferometric Pump/probe Correlation Measurements in Systems with Broadened Bands or Continua," *J. Opt. Soc. Am. B* **17**, 1443 (2000).
35. H. Petek, M. J. Weida, H. Nagano, and S. Ogawa, "Electronic Relaxation of Alkali Metal Atoms on the Cu(111) Surface," *Surf. Sci.* **451**, 22 (2000).
36. B. Gumhalter and H. Petek, "Decoherence Effects in Propagation of Optically Generated Electron-hole Pairs in Image Potential States," *Surf. Sci.* **445**, 195 (2000).
37. H. Petek, M. J. Weida, H. Nagano, and S. Ogawa, "The Role of Auger Recombination in Hot Electron Excitation in Copper," *Chem. Phys.* **251**, 71 (2000).
38. H. Petek, H. Nagano, and S. Ogawa, "Hole Decoherence in d-bands of Copper," *Phys. Rev. Lett.* **83**, 832 (1999).
39. T. Sjodin, H. Petek, C. -M. Li, and H. -L. Dai, "Ultrafast Transient Grating Scattering Studies of Carrier Dynamics at a Silicon Surface," *Chem. Phys.* **251**, 205 (2000).
40. H. Petek, H. Nagano, and S. Ogawa, "Hot-electron Dynamics in Copper Revisited: The d-band Effect," *Appl. Phys. B* **68**, 369 (1999).
41. S. Ogawa, H. Nagano, and H. Petek, "Electron Dynamics of the Cs Anti-bonding State on Copper," *Appl. Phys. B* **68**, 611 (1999).
42. S. Ogawa, H. Nagano, and H. Petek, "Optical Decoherence and Quantum Beats in Cs/Cu(111)," *Surf. Sci.* **427/428**, 34 (1999).
43. T. Miyake, I. Oodake, and H. Petek, "Lateral Thermal Expansion of Cu(110) Surface Studied with Helium Atom Scattering," *Surf. Sci.* **427/428**, 39 (1999).

44. S. Ogawa, H. Nagano, and H. Petek, "Direct Measurement of Phase and Energy Relaxation of a Cs Anti-bonding State on Cu(111)," *Phys. Rev. Lett.* **82**, 1931 (1999).
45. T. Sjodin, H. Petek, and H. -L. Dai, "Ultrafast Carrier Dynamics in Silicon: a Two-color Transient Reflection Grating Study on a (111) Surface," *Phys. Rev. Lett.* **81**, 5664 (1998).
46. T. Miyake and H. Petek, "Atomic Hydrogen modification of Copper Surfaces Studied by Helium Atom Scattering," *Appl. Surf. Sci.* **121/122**, 138 (1997).
47. W. Nessler, S. Ogawa, H. Nagano, H. Petek, J. Shimoyama, Y. Nakayama, and K. Kishio, "Electron Dynamics in High Temperature Superconductors: A Femtosecond Time-resolved Two-Photon Photoemission Study on $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+d}$," *Phys. Rev. Lett.* **81**, 4480 (1998).
48. W. Nessler, S. Ogawa, H. Nagano, H. Petek, J. Shimoyama, and K. Kishio, "A Femtosecond time-resolved study of the energy and temperature dependence of hot-electron lifetimes in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_{8+d}$," *J. Electron. Spectrosc. and Related Phenom.*, **88-91**, 495 (1998).
49. H. Petek, A. P. Heberle, W. Nessler, H. Nagano, S. Kubota, S. Matsunami, N. Moriya, and S. Ogawa, "Optical Phase Control of Coherent Electron Dynamics in Metals," *Phys. Rev. Lett.* **79**, 4649 (1997).
50. T. Miyake, E. S. Gillman, I. Oodake, and H. Petek, "Compact He Scattering Apparatus for Surface Studies," *Jap. J. Appl. Phys.* **36**, 149 (1997).
51. T. Miyake, H. Petek, K. Takeda, and K. Hinode, "Atomic Hydrogen Enhanced Reflow of Copper," *Appl. Phys. Lett.* **70**, 1239 (1997).
52. S. Ogawa, H. Petek, and A. Heberle, "Measurement of Optical Dephasing in Cu(111) by Interferometric Two-photon Time-resolved Photoemission," *Phys. Rev. Lett.* **78**, 1339 (1997).
53. S. Ogawa, H. Nagano, and H. Petek, "Hot-electron Dynamics at Cu(100), Cu(110), and Cu(111) Surfaces: Comparison of Experiment with the Fermi Liquid Theory," *Phys. Rev. B* **55**, 10869 (1997).
54. S. Ogawa and H. Petek, "Femtosecond Dynamics of Hot-electron Relaxation in Cu(110) and Cu(100)," *Surf. Sci.* **357-358**, 585 (1996).
55. T. Miyake, E. S. Gillman, I. Oodake and H. Petek, "Electron Irradiation Effect on $\text{CaF}_2(111)$ Studied with He Atom Scattering," *Surf. Sci.* **357-358**, 155 (1996).
56. S. Ogawa and H. Petek, "Two-photon Photoemission Spectroscopy at Clean and Oxidized Cu(110) and Cu(100) Surfaces," *Surf. Sci.* **363**, 313 (1996).
57. S. Kumazaki, H. Kandori, H. Petek, K. Yoshihara, and I. Ikegami, "Rapid Equilibration of Exaction Energy Among Chlorophylls and Trap-Limited Primary Charge Separation in P700-Enriched Photosystem I Particle," *J. Phys. Chem.* **98**, 10335 (1994).

58. H. Petek, A.J. Bell, Y. S. Choi, K. Yoshihara, B. A. Tounge, and R.L. Christensen, "One- and Two-photon Fluorescence Excitation Spectra of the 2^1A_g States of Linear Tetraenes in Free Jet Expansions," *J. Chem. Phys.* **102**, 4726 (1995).
59. Y. S. Choi, T.-S. Kim, H. Petek, K. Yoshihara, and R.L. Christensen, "Evidence for Quantization of the Transition State for *cis-trans* Isomerization," *J. Chem. Phys.* **100**, 9269 (1994).
60. P. B. Bisht, H. Petek, and K. Yoshihara, "Excited State Keto-enol Tautomerization in Salicylic Acid: A Supersonic Free Jet Study," *J. Chem. Phys.* **103**, 5290 (1995).
61. H. Petek, A. J. Bell, Y. S. Choi, K. Yoshihara, B. A. Tounge, and R.L. Christensen "The 2^1A_g State of *all-trans*-1,3,5,7-Octatetraene in Free Jet Expansions," *J. Chem. Phys.* **98**, 3777 (1993).
62. P. B. Bisht, H. Petek, and K. Yoshihara, "Exciplex Formation in van der Waals Complexes of Naphthalene-Triethyl Amine in a Supersonic Jet," *Chem. Phys. Lett.* **213**, 75 (1993).
63. H. Sekiya, M. Habu, H. Ujita, T. Tsuji, A. Mori, H. Takeshita, Y. Nishimura, H. Petek, and K. Yoshihara, "Dual Fluorescence and Excited-State Intramolecular Proton Transfer in Jet-cooled 3,4-Benzotropolone," *Chem. Phys. Lett.* **215**, 641 (1993).
64. H. Petek, A. J. Bell, R.L. Christensen, and K. Yoshihara, "Fluorescence Excitation Spectra of the S_1 States of Isolated Trienes," *J. Chem. Phys.* , **96**, 2412 (1992).
65. R. Howell, D. Phillips, H. Petek, and K. Yoshihara, "Fluorescence of Jet-cooled Dimethylaminobenzonitrile, it's Aggregates and Solvated Complexes" *Chem. Phys.* **188**, 303 (1994).
66. H. Petek, A. J. Bell, K. Yoshihara, and R. Christensen, "Spectroscopic and Dynamical Studies of the S_1 and S_2 States of Decatetraene in Supersonic Molecular Beams," *J. Chem. Phys.* **95**, 4739 (1991).
67. R. Howell, H. Petek, D. Phillips, and K. Yoshihara, "An Investigation of the Fluorescence Behavior of 4-(*N,N*) Dimethylaminobenzonitrile Cooled in a Supersonic Jet," *Chem. Phys. Lett.* **183**, 249 (1991).
68. J. H. Frederick, Y. Fujiwara, J. H. Penn, K. Yoshihara, and H. Petek, "Models for Stilbene Photoisomerization: The Experimental and Theoretical Studies of the Excited State Dynamics of 1,2-Diphenylcycloalkenes," *J. Phys. Chem.* **95**, 2845 (1991)
69. H. Petek, Y. Fujiwara, K. Yoshihara, and J. G. Frey, "Isomerization of *cis*-Stilbene in Rare Gas Clusters. Direct Measurements of *trans*-Stilbene Formation Rates on Picosecond Time Scale," *J. Opt. Soc. Am. B* **7**, 1540 (1990).
70. H. Petek, D.J. Nesbitt, J.C. Owrutsky, C.S. Gudeman, X. Yang, D.O. Harris, C.B. Moore, and R.J. Saykally, "A Study of the Structure and Dynamics of the Hydronium Ion by High Resolution Infrared Laser Spectroscopy. III. The ν_3 Band of D_3O^+ ," *J. Chem. Phys.* **92**, 3257 (1990).

71. H. Petek, D.J. Nesbitt, D.C. Darwin, P.R. Ogilby, C.B. Moore, and D.A. Ramsay, "The Infrared Spectrum of Singlet Methylene: Analysis of the Coriolis and Spin-Orbit Perturbations," *J. Chem. Phys.* **91**, 6566 (1989).
72. H. Petek, Y. Fujiwara, D. Kim, and K. Yoshihara, "Fluorescence Excitation Spectroscopy of Supersonically Cooled *cis*-Stilbene," *J. Am. Chem. Soc.* **110**, 6269 (1988).
73. H. Petek and K. Yoshihara, "Photochemical Timing. Application to Intramolecular Vibrational Redistribution in *trans*-Stilbene," *J. Chem. Phys.* **87**, 1458 (1987).
74. H. Petek, D.J. Nesbitt, C.B. Moore, F.W. Birss, and D.A. Ramsay, "Visible Absorption and Magnetic Rotation Spectroscopy of $^1\text{CH}_2$: The Determination of the $^1\text{A}_1$ State Structure and Analysis of Singlet-Triplet Coupling," *J. Chem. Phys.* **86**, 1172 (1987).
75. H. Petek, D.J. Nesbitt, D.C. Darwin, and C.B. Moore, "Visible Absorption and Magnetic Rotation Spectroscopy, of $^1\text{CH}_2$: The Analysis of the $^1\text{A}_1$ State," *J. Chem. Phys.* **86**, 1167 (1987).
76. D.J. Nesbitt, H. Petek, M.F. Foltz, S.V. Filseth, D.J. Bamford, and C.B. Moore, "Photofragmentation Dynamics of Ketene at 308 nm: Nascent Vibrational and Rotational State Distributions of CO Product by Vacuum UV Laser-Induced Fluorescence," *J. Chem. Phys.* **83**, 223 (1985).
77. W.D. Lawrance, C.B. Moore, and H. Petek, "Understanding Molecular Dynamics Quantum-State by Quantum-State," *Science* **227**, 895 (1985).
78. D.J. Nesbitt, H. Petek, C.S. Gudeman, C.B. Moore, and R.J. Saykally, "A Study of the ν_1 Fundamental and Bend-excited Hot Band of DNN^+ by Velocity Modulation Absorption Spectroscopy with an Infrared Difference Frequency Laser," *J. Chem. Phys.* **83**, 5281 (1984).
79. H. Petek, D.J. Nesbitt, P.R. Ogilby, and C.B. Moore, "Infrared Flash Kinetic Spectroscopy: The ν_1 and ν_3 Spectra of Singlet Methylene," *J. Phys. Chem.* **83**, 5367 (1983).
80. A.O. Langford, H. Petek, and C.B. Moore, "Collisional Removal of $^1\text{CH}_2$ ($^1\text{A}_1$): Absolute Rate Constants for Atomic and Molecular Collision Partners at 295 K," *J. Chem. Phys.* **78**, 6650 (1983).

Refereed Conference Proceedings:

81. K. Onda, B. Li, and H. Petek, "Surface Femtochemistry: Photocatalytic Reaction Dynamics of Methanol/TiO₂(110)," in *Ultrafast Phenomena XIV*. T. Kobayashi, T. Okada, T. Kobayashi, K. Nelson, and S. De Silvestri eds., Springer-Verlag, Berlin (2005) pp 416-418.
82. A. Kubo, K. Onda, H. Petek, Z. Sun, Y.-S. Jung, and H. -K. Kim, "Imaging of Localized Silver Plasmon Dynamics with sub-fs Time and Nano-meter Spatial Resolution," in *Ultrafast Phenomena XIV*. T. Kobayashi, T. Okada, T. Kobayashi,

- K. Nelson, and S. De Silvestri eds., Springer-Verlag, Berlin (2005) pp 645-649 (invited).
83. M. Kitajima, M. Hase, A. M. Constantinescu, and H. Petek, "Ultrafast Dynamics of Coherent Electron-phonon Interaction in Silicon," in *Ultrafast Phenomena XIV*. T. Kobayashi, T. Okada, T. Kobayashi, K. Nelson, and S. De Silvestri eds., Springer-Verlag, Berlin (2005) pp 242-244.
 84. M. J. Weida, S. Ogawa, H. Nagano, and H. Petek, "Analysis of Hot Electron Cascades in Copper," in *Ultrafast Phenomena XII*. M. Murnane, N. Scherer, and S. Mukamel Eds. Springer-Verlag, Berlin (2000) pp 416-418.
 85. S. Ogawa, H. Nagano, and H. Petek, "Decoherence and Control of Electrons at a Metal Surface," in *Quantum Coherence and Decoherence*, ISQM 5 Proceedings, edited by K. Fujikawa and Y. A. Ono, (Elsevier, Amsterdam 1999) pp 277.
 86. H. Petek, H. Nagano, and S. Ogawa, "Direct Measurement of the Valence Band Decoherence in Copper," in *Ultrafast Phenomena XI*. T. Elsaesser, J. G. Fujimoto, D. A. Wiersma, and W. Zinth Eds. Springer-Verlag, Berlin (1998) pp 325-329.
 87. H. Petek, H. Nagano, W. Nessler, S. Ogawa, and A. P. Heberle, "Optical Phase Control of Coherent Electron Dynamics in Copper," *SPIE Proceedings* **3272**, 221 (1998).
 88. T. Sjodin, H. -L. Dai, and H. Petek, "Ultrafast Carrier Dynamics near a Si Surface: A Reflective Transient Grating Study," *SPIE Proceedings* **3272**, 238 (1998).
 89. T. Miyake, H. Petek, K. Takeda, and K. Hinode, "Effects of Atomic Hydrogen on Cu Reflow Process," in *Stress Induced Phenomena in Metallization*, AIP Conference Proceedings 418, H. Okabayashi, S. Shingubara, and P. Ho eds. p. 419 (1997).
 90. S. Ogawa and H. Petek, "Hot-electron Dynamics at Cu Surfaces." in *Ultrafast Phenomena X*. P. F. Barbara, J. G. Fujimoto, W. H. Knox, and W. Zinth eds. Springer-Verlag, Berlin (1996) pp 450-451.
 91. S. Ogawa and H. Petek, "Dephasing and Population Relaxation of Hot-electrons at Metal Surfaces," in *Quantum Coherence and Decoherence*, ISQM 5 Proceedings, edited by K. Fujikawa and Y. A. Ono, (Elsevier, Amsterdam 1996) pp 203 - 206.
 92. S. Ogawa and H. Petek, "Femtosecond Dynamics of Hot-electrons at Clean Cu(110) and Cu(100) Surfaces," *SPIE Proceedings* **2547**, 73 (1995).
 93. P. B. Bisht, H. B. Tripathi, D. D. Pant, H. Petek, and K. Yoshihara, "Excited State Intramolecular Proton Transfer Studies in Salicylic Acid at Cryogenic Temperatures and Under Supersonic Free Jet," *Workshop on Advanced Laser Spectroscopy*, proceedings, Kampur 1995.
 94. H. Petek, T. Miyake, S. Ogawa, H. Kajiyama, and S. Yamamoto, "He Diffraction Studies of Adsorbates on Metal Surfaces," *SPIE Proceedings* **2125**, 242 (1994).

95. H. Petek, A. J. Bell, R.L. Christensen, and K. Yoshihara, "Vibrational Spectroscopy and Picosecond Dynamics of gaseous trienes and Tetraenes in S_1 and S_2 Electronic States," *SPIE Proceedings* **1638**, 345 (1992).
96. K. Yoshihara, H. Petek, Y. Fujiwara, J.H. Penn, and J.H. Frederick, "Vibrational Mode Dynamics of Photocyclization in *cis*-Stilbene and It's Related Compounds," in *Time Resolved Spectroscopy V*. H. Takahashi ed., Springer-Verlag, Berlin (1992) 194.
97. H. Petek, A.J. Bell, H. Kandori, K. Yoshihara, and R.L. Christensen, "Spectroscopy and Dynamics of a Model Polyene Decatetraene: a Study of Non-radiative Pathways in S_1 and S_2 States Under Isolated Conditions," in *Time Resolved Spectroscopy V*. H. Takahashi ed., Springer-Verlag, Berlin (1992) 198.
98. H. Petek and K. Yoshihara, Y. Fujiwara, and J.G. Frey, "Isomerization of *cis*-Stilbene in Ar and Kr Clusters. Direct Measurements of *trans*-Stilbene Formation Rates on Picosecond Time Scale." in *Ultrafast Phenomena VII*. C. B. Harris, E. P. Ippen, G. A. Mourou, and A. H. Zewail eds. Springer-Verlag, Berlin (1990) pp 444-446.
99. H. Petek and K. Yoshihara, "Investigation of Ultrafast Radiationless Processes in Isolated Molecules," in *Proceedings of the 5-th International Symposium on Ultrafast Phenomena in Spectroscopy*, Z. Rudzikas, A. Piskarkas, and R. Baltramiejunas, eds., World Scientific, Singapore, (1988) pp 339-350.