

List of Invited Lectures

No.	Authors and Title	pp.
M1	<u>Suzuki, Toshinori</u> Chemical Dynamics Studied by Time-Resolved Photoelectron Imaging	15
M2	<u>Taylor, Mark; Muntean, Felician; McCoy, Anne; Barbera, Jack; Sanford, Todd; Rathbone, Jeff; Andrews, Django; Lineberger, W. Carl</u> Time Resolved Solvent Rearrangement Dynamics	16
M3	<u>Leone, Stephen R.; Müller, Astrid; Plenge, Jürgen; Haber, Louis; Clark, James</u> Ultrafast X-Rays: Time-Resolved Photoelectron Processes in Molecular Dissociation	17
M4	<u>Meijer, Gerard</u> Manipulation of Molecules with Electric Fields	18
M5	<u>Chou, Yung-Ching; Huang, Cheng-Liang; Ni, Chi-Kung; Kung, A. H.; Hougen, Jon T.; Chen, I-Chia</u> Rotationally Resolved Spectra of Transitions Involving Motion of the Methyl Group of Acetaldehyde in the System $\tilde{A}^1A'' - \tilde{X}^1A'$	19
M6	<u>Chervenkov, S.; Georgiev, S.; Siglow, K.; Braun, J.; Chakraborty, T.; Wang, P.; Neusser, H. J.</u> High Resolution Mass Selective UV Spectroscopy of Molecules and Clusters	20
M7	<u>Choi, Jong-Ho</u> Reaction Dynamics of Atomic Oxygen with Hydrocarbon Radicals	21
M8	<u>Troya, Diego; Schatz, George C.</u> Theoretical Studies of Reactions of Hyperthermal O(³ P)	22
T1	<u>Rowland, F. Sherwood</u> Hydrocarbons in the Atmosphere	23
T2	<u>Akimoto, Hajime</u> Atmospheric Measurements of OH and HO ₂ Radicals in a Marine Boundary Layer	25
T3	<u>Curl, Robert F.; Han, Jiaxiang; Hu, Shuiming; Brown, John; Chen, Hongbing; Thweatt, David</u> Infrared Laser Spectroscopy and Chemical Kinetics of Free Radicals	26
T4	<u>Zhu, R. S.; Xu, Z. F.; Lin, M. C.</u> <i>Ab Initio</i> Studies of Free Radical Reactions of Interest to Atmospheric Chemistry	27
T5	<u>Pollack, Ilana B.; Konen, Ian M.; Li, Eunice X. J.; Lester, Marsha I.</u> Significant OH Radical Reactions in the Atmosphere: A New View	28

W1	<i>Balaj, O. Petru; Balteanu, Iulia; Beyer, M. K.; Bondybey, Vladimir E.</i> Free Electrons: The Simplest Free Radicals of them All	29
W2	<i>Merkt, Frédéric</i> High-Resolution Photoelectron Spectroscopic Studies of Ions and Radicals	30
W3	<i>Vilesov, Andrey F.</i> Helium Droplets as a Unique Nano-Matrix for Molecules and Molecular Aggregates	31
W4	<i>Bonhommeau, D.; Viel, A.; Halberstadt, N.</i> Non-adiabatic Dynamics of Ionized Neon Clusters inside Helium Nanodroplets	32
W5	<i>Momose, Takamasa</i> Free Radicals in Quantum Crystals: A Study of Tunneling Chemical Reactions	33
R1	<i>Zhou, Jingang; Shiu, W.; Zhang, B.; Lin, Jim J.; Liu, Kopin</i> From Pair Correlation to Reactive Resonance in Polyatomic Reactions	34
R2	<i>Skodje, Rex T.</i> State-to-State-to-State Dynamics of Chemical Reactions: The Control of Detailed Collision Dynamics by Quantized Bottleneck States	35
R3	<i>Brouard, Mark</i> The Stereodynamics of Photon-Initiated Reactions	36
R4	<i>Aoiz, F. J.; Bañares, L.; Barr, J.; Torres, I.; Pino, G. A.; Amaral, G. A.</i> Photodissociation Dynamics of Polyatomic Molecules Containing Sulfur: An Experimental Study	37
R5	<i>Ni, Chi-Kung</i> Photodissociation of Simple Aromatic Molecules Studied by Multimass Ion Imaging Techniques	38
F1	<i>Kerenskaya, Galina; Schnupf, Udo; Heaven, Michael C.</i> Spectroscopy and Dynamics of NH Radical Complexes	39
F2	<i>Hutson, Jeremy M.; Soldán, Pavel</i> Molecules in Cold Atomic Gases: How do They Interact?	40
F3	<i>Steimle, Timothy C.</i> Optical Stark and Zeeman Spectroscopy of Transition Metal Containing Radicals	41
F4	<i>Hsu, Yen-Chu</i> The Bending Vibrational Levels of C ₃ -Rare-Gas Atom Complexes and C ₂ H ₂ ⁺	42
F5	<i>Maier, John P.</i> Electronic Spectra of Carbon Chains and their Relevance to Astrophysics	43

List of Posters

Monday Evening, 26 July, 2004

No.	Authors and Title	pp.
A1-01	<u>Laperle, Christopher M.; Mann, Jennifer E.; Continetti, Robert E.</u> Three-Body Dissociation Dynamics of the Low-Lying Rydberg States of H ₃	47
A1-02	<u>Lin, Jim J.; Perri, Mark J.; Van Wyngarden, Annalise L.; Boering, Kristie A.; Lee, Yuan T.</u> Reaction Dynamics of Isotope Exchange Reaction of Singlet Oxygen Atom with Carbon Dioxide Molecule: A Crossed Molecular Beam Study	48
A1-03	<u>Tseng, Chien-Ming; Dyakov, Yuri A.; Huang, Cheng-Liang; Mebel, Alexander M.; Lin, Sheng Hsien; Lee, Yuan T.; Ni, Chi-Kung</u> Photoisomerization and Photodissociation of Aniline and 4-Methylpyridine	49
A1-04	<u>Zhou, Weidong; Yuan, Yan; Zhang, Jingsong</u> H-atom Elimination of <i>n</i> -Propyl and <i>iso</i> -Propyl Radicals: A Photodissociation Study	50
A1-05	<u>Lee, Shih-Huang; Lee, Yuan T.</u> Studies of Photodissociation Dynamics Using Selective Photoionization	51
A1-06	<u>Zhang, Bailin; Shiu, Weicheng; Lin, Jim J.; Liu, Kopin</u> Imaging the Mode-Correlation of Product Pairs: OH + CD ₄ → CD ₃ (0 ₀ ⁰ Q, 2 ₂ ⁰ Q) + HOD(v ₁ v ₂ 0)	52
A1-07	<u>Dyakov, Yuri A.; Mebel, Alexander M.; Lin, S. H.; Lee, Yuan T.; Ni, Chi-Kung</u> Photodissociation of 4-Picoline, Aniline and Pyridine: <i>Ab Initio</i> and RRKM Study	53
A1-08	<u>Lee, Yin-Yü; Dung, Tzan-Yi; Lee, Shih-Huang; Pan, Wan-Chun; Chen, I-Chia; Lin, Jr-Min; Yang, Xueming; Lee, Yuan T.</u> Isomeric Species CH ₂ SH and CH ₃ S Formation from Photodissociation of Methanethiol at 157 nm	54
A1-09	<u>Wu, Chia-Yan; Wu, Yu-Jong; Lee, Yuan-Pern</u> Photodissociation of Fluorobenzene (C ₆ H ₅ F) at 193 nm Monitored with Time-resolved Fourier-transform Infrared Emission Spectroscopy	55
A1-10	<u>Chen, Wei-Kan; Ho, Jr-Wei; Cheng, Po-Yuan</u> Ultrafast Photodissociation Dynamics of Acetone S ₂ State at 195 nm	56
A1-11	<u>Castillo, J. F.; Aoiz, F. J.; Banares, L.; Vazquez, S.; Martinez-Nuñez, E.; Fernandez-Ramos, A.</u> Quasiclassical Trajectory Studies of the F + CH ₄ Reaction Using an <i>Ab Initio</i> Potential Energy Surface Constructed by Interpolation	57

A1-12	<u>Eskola, Arkke; Seetula, Jorma; Timonen, Raimo</u> Kinetics of the Reactions of Methyl Radical with HCl and DCl at Temperatures 188 – 500 K: Tunneling	58
A1-13	<u>Tseng, S. Y.; Huang, C. L.; Wang, T. Y.; Wang, N. S.; Xu, Z. F.; Lin, M. C.</u> Kinetics of the NCN + NO Reaction	59
A1-14	<u>Wu, Di; Wang, Bing-Qiang; Li, Zhi-Ru; Hao, Xi-Yun; Li, Ru-Jiao; Sun, Chia-Chung</u> Single-electron Hydrogen Bonds in the Methyl Radical Complexes H ₃ C··HF and H ₃ C··HCCH: an <i>ab initio</i> Study	60
A1-15	<u>Hela, P. G.; Shih, H.-T.; Cheng, C.-H.; Chen, I.-C.</u> Dynamics of Photoluminescence in Bistriphenylene	61
A1-16	<u>Chang, Chih-Wei; Diau, Eric Wei-Guang; Chang, I-Jy</u> Ultrafast Interfacial Electron Transfer Dynamics of the TiO ₂ Nanostructures Functionalized by the Ru ²⁺ Complexes	62
A1-17	<u>Hancock, G.; Morrison, M.; Saunders, M.</u> Time Resolved FTIR Emission Studies of Molecular Dynamics	63
A2-01	<u>Kato, Kaoru; Sumiyoshi, Yoshihiro; Ueno, Taketoshi; Endo, Yasuki</u> Fourier-Transform Microwave Spectroscopy of CCl and CCCCCl	64
A2-02	<u>Kobayashi, Kaori; Saito, Shuji</u> Isotope Study of the CCO Radical in its ³ Σ ⁻ Ground State by Microwave Spectroscopy	65
A2-03	<u>Lin, Chia-Shih; Chang, Wei-Zhong; Hsu, Hui-Ju; Chang, Bor-Chen</u> New Dispersed Fluorescence Spectra of Simple Halocarbenes in a Discharge Supersonic Free Jet Expansion	66
A2-04	<u>Radi, Peter P.; Tulej, Marek; Knopp, Gregor; Beaud, Paul; Gerber, Thomas</u> Double-Resonance Spectroscopy on HCO and H ₂ CO by Two-Color Resonant Four-Wave Mixing	67
A2-05	<u>Fink, E. H.; Ramsay, D. A.</u> Near Infrared Emission Spectra of HO ₂ and DO ₂	68
A2-06	<u>Evertsen, R.; Staicu, A.; van Oijen, J. A.; Dam, N. J.; de Goey, L. P. H.; ter Meulen, J. J.</u> Cavity Ring Down Spectroscopy of CH, CH ₂ , HCO and H ₂ CO in a Premixed Flat Flame at both Atmospheric and Sub-atmospheric Pressure	69
A2-07	<u>Yurchenko, Sergei N.; Carvajal, Miguel; Jensen, Per; Lin, Hai; Thiel, Walter</u> Rotation-vibration Motion of Pyramidal XY ₃ Molecules Described in the Eckart Frame: Theory and Application to NH ₃	70
A2-08	<u>Chen, Kuo-mei</u> Resonance-enhanced Multiphoton Ionization Spectroscopy of CH ₃ and CD ₃ . Two-photon Absorption Selection Rules and Rotational Line Strengths of the ν ₃ - and ν ₄ -Active Vibronic Transitions	71

A2-09	<i>Shayesteh, Alireza; Appadoo, Dominique R. T.; Gordon, Iouli; Bernath, Peter F.</i> The Vibration-Rotation Emission Spectra of Gaseous ZnH ₂ and ZnD ₂	72
A2-10	<i>Balfour, Walter J.; Brown, John M.; Wallace, Lloyd</i> Identification and Characterization of Two New Electronic Transitions of the FeH Radical in the Infrared	73
A2-11	<i>Ashworth, Stephen H.; Varberg, Thomas D.; Hodges, Philip J.; Brown, John M.</i> Detection of the Electronic Spectra of FeCl ₂ and CoCl ₂ in the Gas Phase	74
A2-12	<i>Merer, A. J.; Peers, J. R. D.; Rixon, S. J.</i> Free Radicals in the Reaction Products of Zr with Methane: the Electronic Spectra of ZrC and ZrCH	75
A2-13	<i>Tang, Sheunn-Jiun; Chou, Yung-Ching; Lin, Jim Jer-Min; Hsu, Yen-Chu</i> The Bending Vibrational Levels of Acetylene Cation: A Case Study of the Renner-Teller Effects with Two Degenerate Bending Vibrations	76
A2-14	<i>Yoshida, K.; Kanamori, H.</i> High Resolution Spectroscopic Studies of Vibrational States in the Triplet Potential of Acetylene	77
A2-15	<i>Lin, I-Feng; Kurniawan, Fendi; Chiang, Su-Yu</i> Experimental and Theoretical Studies on Rydberg States of H ₂ CS in the Region 130-220 nm	78
A2-16	<i>Jacox, Marilyn E.; Thompson, Warren E.</i> Infrared Spectra of Neutral and Ionic SO ₂ H ₂ Species Trapped in Solid Neon	79
A2-17	<i>Jochnowitz, Evan B.; Zhang, Xu; Nimlos, Mark R.; Varne, Mychel Elizabeth; Stanton, John F.; Ellison, G. Barney</i> Polarized IR Spectrum of Matrix-Isolated Propargyl Radicals and Detection of HC≡CH-CH ₂ OO	80
A2-18	<i>Cardenas, R.; Bates, S. A.; Robbins, D. L.; Rittby, C. M. L.; Graham, W. R. M.</i> Recent Progress in FTIR and DFT Studies on the Vibrational Spectra and Structures of Group IV Clusters	81
A2-19	<i>Delaney, Cailin; Clar, Justin; Cohen, Jodi; Abrash, Samuel A.</i> Photochemistry of HI-Allene Complexes in Argon Matrices	82
A2-20	<i>van de Meerakker, S. Y. T.; Vanhaecke, N.; Meijer, G.</i> Decelerating OH and NH Radical Beams	83
A2-21	<i>Hu, Shui-Ming; Liu, An-Wen; He, Sheng-Gui; Zheng, Jing-Jing; Lin, Hai; Zhu, Qing-Shi</i> Inter-bonds Crossing Dipole Moment and Stretching Vibrational Bands Intensities of the Group V Hydrides	84

Tuesday Evening, 27 July, 2004

No.	Authors and Title	pp.
B1-01	<u>Capozza, G.; Leonori, F.; Segoloni, E.; Balucani, N.; Stranges, D.; Volpi, G. G.; Casavecchia, P.</u> Crossed Molecular Beam Studies of <i>Radical-radical</i> Reactions: O(³ P) + C ₃ H ₅ (Allyl)	85
B1-02	<u>Balucani, N.; Capozza, G.; Segoloni, E.; Cartechini, L.; Bobbenkamp, R.; Casavecchia, P.; Bañares, L.; Aoiz, F. J.; Honvault, P.; Bussery-Honvault, B.; Launay, J.-M.</u> The Dynamics of Prototype <i>Insertion</i> Reactions: Crossed Beam Experiments versus Quantum and Quasiclassical Trajectory Scattering Calculations on <i>Ab Initio</i> Potential Energy Surfaces for C(¹ D) + H ₂ and N(² D) + H ₂	86
B1-03	<u>Lin, Ming-Fu; Dyakov, Yuri A.; Lin, Sheng-Hsien; Lee, Yuan T.; Ni, Chi-Kung</u> Photodissociation Dynamics of Pyridine and C ₆ H _x F _{6-x} (x = 1~4) at 193 nm	87
B1-04	<u>Zhou, Weidong; Yuan, Yan; Zhang, Jingsong</u> State-to-state Photodissociation Dynamics of OH Radical via the A ² Σ ⁺ State and Fine-structure Distributions of the O(³ P _J) Product	88
B1-05	<u>McCunn, L. R.; Miller, J. L.; Krisch, M. J.; Liu, Y.; Butler, L. J.; Shu, J.</u> Molecular Beam Studies of the Photolysis of 2-Chloro-2-butene and the Subsequent Dissociation of the 2-Buten-2-yl Radical	89
B1-06	<u>Shiu, Vincent W. C.; Lin, Jim J.; Liu, Kopin; Wu, Malcom; Parker, David H.</u> Threshold is More Exciting: Seeing Reactive Resonance in a Polyatomic Reaction	90
B1-07	<u>Martínez-Núñez, Emilio; Marques, Jorge M. C.; Vázquez, Saulo A.</u> Dissociation of the Methanethiol Radical Cation Induced by Collisions with Ar Atoms: An Investigation by Quasiclassical Trajectories	91
B1-08	<u>Oberhuber, Thorsten; Kesy, Uwe; Dick, Bernhard</u> The Photodissociation Dynamics of <i>t</i> -Butylnitrite Initiated by Excitation to the S ₂ Electronic State	92
B1-09	<u>Yang, Sheng-Kai; Chen, Hui-Fen; Liu, Suet-Yi; Wu, Chia-Yan; Lee, Yuan-Pern</u> Photolysis of 2-Fluorotoluene at 193 nm: Internal Energy of HF Determined with Time-resolved Fourier-transform Infrared Emission Spectroscopy	93
B1-10	<u>Cireasa, D. R.; Moise, A.; ter Meulen, J. J.</u> Inelastic State-to-state Scattering of Oriented OH by HCl	94
B1-11	<u>Castillo, J. F.; Aoiz, F. J.; Banares, L.</u> Quasiclassical Trajectory Studies of the Cl + CH ₄ Reaction Using an <i>Ab Initio</i> Potential Energy Surface Constructed by Interpolation	95

B1-12	<i>Pimentel, André S.; Nesbitt, Fred L.; Payne, Walter A.; Cody, Regina J.</i> Planetary Chemistry of C ₂ H ₅ Radicals: Rate Constant for the CH ₃ + C ₂ H ₅ Reaction at Low Temperatures and Pressures	96
B1-13	<i>Chou, Sheng-Lung; Lee, Yuan-Pern; Lin, Ming-Chang</i> Experimental Studies of the Rate Coefficients of the Reaction O(³ P) + CH ₃ OH at High Temperatures	97
B1-14	<i>Li, Zhi-Ru; Wu, Di; Li, Ru-Jiao; Hao, Xi-Yun; Wang, Bing-Qiang; Sun, Chia-Chung</i> Electron Donor-Acceptor Bonds in the Methyl Radical Complexes H ₃ C-BH ₃ , H ₃ C-AlH ₃ and H ₃ C-BF ₃ : an <i>ab initio</i> Study	98
B1-15	<i>Liu, Kuan Lin; Cheng, Chao Han; Tang, Kuo-Chun; Chen, I-Chia</i> Rapid Intersystem Crossing in Highly Phosphorescent Iridium Complexes	99
B1-16	<i>Luo, Liyang; Chiang, Chia-Chen; Diau, Eric Wei-Guang; Lin, Ching-Yao</i> Ultrafast Electron Transfer and Energy Transfer Dynamics of Porphyrin- TiO ₂ Nanostructures	100
B1-17	<i>Yin, Hong-Ming; Sun, Ju-Long; Cong, Shu-Lin; Han, Ke-Li; He, Guo-Zhong</i> The Internal Energy Distribution and Alignment Properties of the CH ₃ O (X) Fragment by the Photodissociation of CH ₃ ONO at 355 nm	101
B2-01	<i>Suma, Kohsuke; Sumiyoshi, Yoshihiro; Endo, Yasuki</i> Fourier-transform Microwave Spectroscopy and FTMW-millimeter-wave Double Resonance Spectroscopy of XOO (X = Cl, Br) Radicals	102
B2-02	<i>Han, Huei-Lin; Chu, Li-Kang; Lee, Yuan-Pern</i> Detection of Infrared Absorption of Gaseous ClCS Using Time-resolved Fourier-transform Spectroscopy	103
B2-03	<i>Fan, Haiyan; Ionescu, Ionela; Annesley, Chris; Xin, Ju; Reid, Scott A.</i> On the Renner-Teller Effect and Barriers to Linearity and Dissociation in HCF(¹ A")	104
B2-04	<i>Colin, Reginald; Liu, Ching-Ping; Lee, Yuan-Pern</i> Detection of Predissociated Levels of the SO B ³ Σ ⁻ State using Degenerate Four-wave Mixing Spectroscopy	105
B2-05	<i>Elliott, N. L.; Fitzpatrick, J. A. J.; Chekhlov, O. V.; Ashworth, S. H.; Western, C. M.</i> Electronic Structure from High Resolution Spectroscopy	106
B2-06	<i>Dagdigian, Paul J.; Nizamov, Boris; Teslja, Alexey</i> Cavity Ring-Down Spectroscopy of Polyatomic Transient Intermediates: H ₂ CN and H ₂ CNH	107
B2-07	<i>Pollack, Ilana B.; Konen, Ian M.; Li, Eunice X. J.; Lester, Marsha I.</i> Significant OH Radical Reactions in the Atmosphere: A New View	108

B2-08	<i>Muramoto, Yasuhiko; Ishikawa, Haruki; Mikami, Naohiko</i> First Observation of the \tilde{B} (1A_1) State of SiH ₂ and SiD ₂ Radicals by the OODR Spectroscopy	109
B2-09	<i>Bernath, P.; Bauschlicher, C. W.; Dulick, M.; Ram, R. S.; Burrows, A.</i> Metal Hydrides in Astronomy	110
B2-10	<i>O'Brien, Leah C.; Hardimon, Sarah</i> Fourier Transform Spectroscopy of Gold Oxide, AuO	111
B2-11	<i>Balfour, Walter J.; Li, Runhua; Jensen, Roy H.; Shephard, Scott A.; Adam, Allan G.</i> The First Observation of the Rhodium Monofluoride Molecule Jet-cooled Laser Spectroscopic Studies	112
B2-12	<i>Miller, Terry A.</i> Spectroscopy of Free Radicals in Hydrocarbon Oxidation	113
B2-13	<i>Chou, Yung-Ching; Chen, I-Chia; Hougen, Jon T.</i> Anomalous Splittings of Torsional Sublevels Induced by the Aldehyde Inversion Motion in the S_1 State of Acetaldehyde	114
B2-14	<i>Lee, P. C.; Yang, J. C.; Nee, J. B.</i> Absorption Spectra of O ₂ and NO in 105-200 nm Wavelength Region Measured by using a Supersonic Jet	115
B2-15	<i>Willitsch, Stefan; Innocenti, Fabrizio; Dyke, John M.; Merkt, Frédéric</i> Rovibronic Energy Level Structure of the Two Lowest Electronic States of the Ozone Cation	116
B2-16	<i>Lo, Wen-Jui; Chen, Hui-Fen; Chou, Po-Han; Lee, Yuan-Pern</i> Isomers of OCS ₂ : IR Absorption Spectra of OSCS in Solid Argon	117
B2-17	<i>Zhang, Xu; Kato, Shuji; Bierbaum, Veronica M.; Ellison, G. Barney</i> Gas-Phase Reactions of Organic Radicals and Diradicals with Ions	118
B2-18	<i>Larsson, M.; McCall, B. J.; Huneycutt, A. J.; Saykally, R. J.; Geballe, T. R.; Djurić, N.; Dunn, G. H.; Semaniak, J.; Novotny, O.; Al-Khalili, A.; Ehlerding, A.; Hellberg, F.; Kalhour, S.; Neau, A.; Paál, A.; Thomas, R.; Österdahl, F.</i> H ₃ ⁺ Dissociative Recombination and the Cosmic-Ray Ionisation Rate towards ζ Persei	119
B2-19	<i>Oguchi, T.; Hattori, T.; Matsui, H.</i> The Reaction Mechanism of O(¹ D) with Ethylene: the Product Yield Measurements of OH, CH ₂ CHO and H atom	120
B2-20	<i>Geppert, W. D.; Thomas, R.; Ehlerding, A.; Hellberg, F.; Österdahl, F.; Millar, T. J.; Semaniak, J.; af Ugglas, M.; Djuric, N.; Larsson, M.</i> Dissociative Recombination of Astrophysically Important Isoelectronic Ions	121
B2-21	<i>Peterka, Darcy S.; Kim, Jeong Hyun; Wang, Chia C.; Ahmed, Musahid; Neumark, Daniel M.</i> Photoelectron Spectroscopy of Nitric Oxide Doped in Helium Droplets	122

Wednesday Afternoon, 28 July, 2004

No.	Authors and Title	pp.
C1-01	<i>Capozza, G.; Leonori, F.; Segoloni, E.; Volpi, G. G.; Casavecchia, P.</i> Dynamics of HCCO and CH ₂ Radical Formation from the Reaction O(³ P) + C ₂ H ₂ in Crossed Beams using <i>Soft</i> Electron Impact Ionization for Product Detection	123
C1-02	<i>Capozza, G.; Segoloni, E.; Volpi, G. G.; Casavecchia, P.</i> Towards the "Universal" Product Detection in Crossed Beam Reactive Scattering Experiments using <i>Soft</i> Electron Impact Ionization: Dynamics of Vynoxy, Acetyl, Methyl, Formyl, and Methylene Radicals and Ketene Formation from the Reaction O(³ P) + C ₂ H ₄	124
C1-03	<i>Liu, Chen-Lin; Hsu, Hsu Chen; Ni, Chi-Kung</i> Photodissociation of I ₂ ⁺ Studied by Velocity Map Imaging	125
C1-04	<i>Higashiyama, Tomohiko; Ishida, Masayuki; Honma, Kenji</i> Dynamics of Reaction, Y(² D _{3/2, 5/2) + O₂(X³Σ⁻_g) → YO(A²Π) + O(³P_J), Studied by Crossed Beam-chemiluminescence Technique}	126
C1-05	<i>Miller, J. L.; McCunn, L. R.; Krisch, M. J.; Butler, L. J.; Shu, J.</i> Molecular Beam Studies of the Dissociation and Isomerization of Radical Isomers: The Influence of the Electronic Wavefunction in the Dissociation Dynamics of Vinyoxy Radicals	127
C1-06	<i>Chang, Chushuan; Luo, Chu-Yung; Liu, Kopin</i> Mode- and State-selected Photodissociation of OCS ⁺ by Time-sliced Velocity Mapping Image Technique	128
C1-07	<i>Martínez-Núñez, Emilio; Vázquez, Saulo A.</i> Quasiclassical Trajectory Study of the 193 nm Photodissociation of CF ₂ CHCl	129
C1-08	<i>Fujimura, Yo; Tamada, Hisashi; Imai, Yoshiyuki; Mitsutani, Kazuya; Kajimoto, Okitsugu</i> Reinvestigation of O(¹ D)+H ₂ O Reaction: Examination of the Contribution of Excited States	130
C1-09	<i>Bahou, Mohammed; Lee, Yuan-Pern</i> Photodissociation Dynamics Investigated with a Pulsed Slit-jet and Time-resolved Fourier-transform Spectroscopy	131
C1-10	<i>Lee, Sheng-Jui; Chen, I-Chia</i> <i>Ab Initio</i> Studies for Dissociation Pathway and Isomerization of Crotonaldehyde	132
C1-11	<i>Ho, Jr-Wei; Yang, Chia-Ming; Lai, Ta-Jen; Cheng, Po-Yuan</i> The Use of Ultrafast Photodissociation as a Probe for Studies of Electronic Energy Transfer Dynamics	133

C1-12	<i>Oum, Kawon; Sekiguchi, Kentaro; Luther, Klaus</i> The Role of Radical-Molecule Complexes in the Recombination Kinetics of Benzyl Radicals	134
C1-13	<i>Alam, M. S.; Rao, B. S. M.; Janata, E.</i> Reactions of $\cdot\text{OH}$ and $\text{H}\cdot$ with Aliphatic Alcohols: A Pulse Radiolysis Study	135
C1-14	<i>Cheng, Mu-Jeng; Chu, San-Yan</i> Substituent Effect on Structure and Bonding of Bertrand Diradical $(\text{X}_2\text{P})_2(\text{BY})_2$	136
C1-15	<i>Guss, Joseph; Kable, Scott</i> Characterisation of the $\text{CCl}_2 \tilde{A}$ State	137
C1-16	<i>Kumae, Takashi; Arakawa, Hatsuko</i> Assessment of Training Effects on Levels of Serum Total Anti-oxidative Activity in Matured Rats using Luminol-dependent Chemiluminescence	138
C1-17	<i>Dong, Feng; Whitney, Erin; Zolot, Alex; Deskevich, Mike; Nesbitt, David J.</i> High Resolution Spectroscopy and Reaction Dynamics of Free Radicals	139
C2-01	<i>Katoh, Kaoru; Sumiyoshi, Yoshihiro; Endo, Yasuki; Hirota, Eizi</i> FTMW and FTMW-MMW Double Resonance Spectroscopy of the CH_3OO Radical	140
C2-02	<i>Juances-Marcos, Juan Carlos; Althorpe, Stuart C.</i> Geometric Phase and the Hydrogen-Exchange Reaction	141
C2-03	<i>Fan, Haiyan; Ionescu, Ionela; Annesley, Chris; Xin, Ju; Reid, Scott A.</i> Polarization Quantum Beat Spectroscopy of $\text{HCF}(\tilde{A}^1\text{A}^-)$: ^{19}F and ^1H Hyperfine Structure, Zeeman Effect, and Singlet-triplet Interactions	142
C2-04	<i>Liu, Ching-Ping; Reid, Scott A.; Lee, Yuan-Pern</i> Two-color Resonant Four-wave Mixing Spectroscopy of Highly Predissociated Levels in the $\tilde{A}^2\text{A}_1$ State of CH_3S	143
C2-05	<i>Ahmed, K.; Balint-Kurti, G. G.; Western, C. M.</i> Exploring the Potential Energy Surfaces of C_3	144
C2-06	<i>Zhang, Guiqiu; Chen, Kan-Sen; Merer, Anthony J.; Hsu, Yen-Chu; Chen, Wei-Jan; Sadasivan, Shaji; Liao, Yean-An; Kung, A. H.</i> Perturbations in the $\tilde{A}^1\Pi_u, 000$ Level of C_3	145
C2-07	<i>Marshall, Mark D.; Greenslade, Margaret E.; Davey, James B.; Lester, Marsha L.</i> Partial Quenching of Orbital Angular Momentum in the OH-Acetylene Complex	146
C2-08	<i>Fujii, Asuka; Miyazaki, Mitsuhiko; Ebata, Takayuki; Mikami, Naohiko</i> Infrared Spectroscopy of Large-sized Protonated Water Cluster Cations: Development of the 3-Dimensional Hydrogen Bond Network with Cluster Size	147
C2-09	<i>Luh, Wei-Tzou</i> Electronically-excited Singlet States of LiH	148
C2-10	<i>O'Brien, Leah C.; O'Brien, James J.</i> Intracavity Laser Spectroscopy of NiH	149

C2-11	<i>Jakubek, Zygmunt J.; Nakhate, Sanjay; Simard, Benoit; Zachwieja, Mirek</i> Spectroscopy of Si+NH ₃ and Si-PH ₃ Reaction Products: Rovibronic Structure of the Ground Electronic States of SiNSi and PH ₂	150
C2-12	<i>Varberg, Thomas D.; Le Roy, Robert J.</i> Isotope Dependence and Born-Oppenheimer Breakdown in Mid- and Far-Infrared Spectra of Cadmium Hydride	151
C2-13	<i>Baek, Dae Youl; Wang, Jinguo; Doi, Atsushi; Kasahara, Shunji; Baba, Masaaki; Katô, Hajime</i> Doppler-free Two-photon Excitation Spectroscopy and the Zeeman Effect of the 1 ₀ ¹ 4 ₀ ¹ Band of the S ₁ ¹ B _{2u} ←S ₀ ¹ A _{1g} Transition of Benzene-d ₆	152
C2-14	<i>Huang, Cheng-Liang; Liu, Chen-Lin; Ni, Chi-Kung; Hougen, Jon T.</i> Electronic Spectra of Molecules with Two C _{3v} Internal Rotors: Torsional Analysis of the A ¹ A _u – X ¹ A _g LIF Spectrum of Biacetyl	153
C2-15	<i>Willitsch, Stefan; Dyke, John M.; Merkt, Frédéric</i> Rotationally Resolved Photoelectron Spectrum of NH ₂ and ND ₂ : Rovibrational Energy Level Structure of the $\tilde{a}^+ \ ^1A_1$ and $\tilde{X}^+ \ ^3B_1$ States	154
C2-16	<i>Wu, Yu-Jong; Chou, Chun-Pang; Lee, Yuan-Pern</i> Isomers of CNO ₂ : Infrared Absorption of ONCO in Solid Neon	155
C2-17	<i>Chou, Chun-Pang; Wu, Yu-Jong; Lee, Yuan-Pern</i> IR Spectroscopy of Ge(NO) and Ge(NO) ₂ Isolated in Solid Argon	156
C2-18	<i>Ehlerding, A.; Geppert, W.; Zhaunerchyk, V.; Hellberg, F.; Thomas, R.; Arnold, S. T.; Viggiano, A. A.; Semaniak, J.; Österdahl, F.; af Ugglas, M.; Larsson, M.</i> Dissociative Recombination of Hydrocarbon Ions	157
C2-19	<i>Thomas, R. D.; Ehlerding, A.; Geppert, W.; Hellberg, F.; Larsson, M.; Rosen, S.; Zhaunerchyk, V.; Bahati, E.; Bannister, M. E.; Vane, C. R.; Petrignani, A.; van der Zande, W. J.; Andersson, P.; Pettersson, J. B. C.</i> The Effect of Bonding on the Fragmentation of Small Systems	158
C2-20	<i>Hu, Qichi; Hepburn, John</i> Dynamics and Spectroscopy of Threshold Photoion-Pair Formation	159
C2-21	<i>Chen, Chun-Cing; Wu, Hsing-Chen; Tseng, Chien-Ming; Yang, Yi-Han; Chen, Yit-Tsong;</i> One- and Two-photon Excitation Vibronic Spectra of 2-methylallyl Radical at 4.6-5.6 V	160