

Li Fang, Ph.D.

Department of Physics, University of Central Florida

EDUCATION

Ph.D. in Physics

University of Connecticut, CT

2009

Dissertation: Strong-field induced vibrational coherence in iodine molecules.

B.S. in Applied Physics & Comprehensive Minor in Computer Science

2001

Beijing University of Technology, Beijing, China

PROFESSIONAL APPOINTMENTS & RESEARCH EXPERIENCE

Assistant Professor

Department of Physics, University of Florida

12/2019 – Present

Research Scientist

Department of Physics, The Ohio State University

10/2018 – 12/2019

Research: High Harmonic Generation in clusters/solids, ultrafast XUV laser pulse induced ionization and dynamics in clusters

Research Associate

08/2014 – 09/2018

Department of Physics, University of Texas at Austin

Research: Ultrafast XUV laser pulse induced ionization and dynamics in clusters

Visiting Scientist

08/2009 – 08/2014

SLAC National Laboratory, Menlo Park, CA

Research: X-ray induced molecular dynamics, ultrafast x-ray spectroscopy

Postdoctoral Research Associate

08/2009 – 06/2014

Department of Physics, Western Michigan University

SYNERGISTIC PROFESSIONAL EXPERIENCE

Journal reviewing:

Physical Review Letter, Physical Review A, Journal of Physics B: Atomic Molecular and Optical Physics, Journal of Chemical Physics, Journal of Electron Spectroscopy and Related Phenomena, Structural Dynamics (AIP), Optics Letters.

Conference Session Chairing:

“Time-resolved electron dynamics and attoseconds spectroscopy,” DAMOP (Division of Atomic, Molecular and Optical Physics, APS), Ft. Lauderdale, FL

05/2018

“Molecular dynamics,” DAMOP, Columbus, OH

06/2015

PUBLICATIONS

Peer-reviewed journals:

- [47] R. Obaid, K. Schnorr, T. Wolf, T. Takanashi, N. Kling, K. Kooser, K. Nagaya, S. Wada, **L. Fang**, S. Augustin, D. You, E. Campbell, H. Fukuzawa, C. Schulz, K. Ueda, P. Lablanquie, T. Pfeifer, E. Kukk, and N. Berrah "Photo-ionization and fragmentation of $\text{Sc}_3\text{N}@C_{80}$ following excitation above the Sc K-edge," *J. Chem. Phys.* **151** 104308 (2019).
- [46] N. Berrah, A. Sanchez-Gonzalez, Z. Jurek, R. Obaid, H. Xiong, R. J. Squibb, T. Osipov, A. Lutman, **L. Fang**, T. Barillot, J. D. Bozek, J. Cryan, T. Wolf, D. Rolles, R. Coffee, K. Schnorr, S. Augustin, H. Fukuzawa, K. Motomura, N. Niebuhr, M. Guehr, L. J. Frasinski, R. Feifel, C-P. Schulz, K. Toyota, S.-K. Son, K. Ueda, T. Pfeifer, J.P. Marangos and R. Santra, "X-ray multiphoton ionization of molecules: Femtosecond-resolved observation of delayed fragmentation and evaporation of neutral atoms," *Nature Physics* (published, 2019. doi: 10.1038/s41567-019-0665-7).
- [45] R. Kupfer, H. J. Quevedo, H. L. Smith, T. N. Ha, A. Yandow, G. Tiwari, C. G. Richmond, **L. Fang**, and B. M. Hegelich, "Plasma Emission Characteristics in Laser Induced Breakdown Spectroscopy of Silicon with Mid-Infrared, Multi-Millijoule, Nanosecond Laser Pulses from a Ho:YLF Excitation Source," *Applied Optics* **58** 4592 (2019).
- [44] R. Kupfer, H. J. Quevedo, H. L. Smith, L. A. Lisi, G. Tiwari, C. G. Richmond, B. B. Bowers, **L. Fang**, and B. M. Hegelich, "Cascade Random-Quasi-Phase-Matched Harmonic Generation in Polycrystalline ZnSe," *J. Appl. Phys.* **124** 243102 (2018).
- [43] **L. Fang**, H. Xiong, E. Kukk, V. S. Petrovic, and N. Berrah, "X-ray initiated photodissociation of the glycine molecule," *Phys. Rev. A* **98** 053408 (2018).
- [42] H. Xiong, **L. Fang**, T. Osipov, N. G. Kling, T. J. A. Wolf, E. Sistrunk, R. Obaid, M. Gühr, N. Berrah, "Fragmentation of endohedral fullerene $\text{Ho}_3\text{N}@C_{80}$ in an intense femtosecond near-infrared laser field," *Phys. Rev. A* **97** 023419 (2018).
- [41] **L. Fang**, H. Xiong, E. Kukk, and N. Berrah, "X-ray pump-probe investigation of charge and dissociation dynamics in methyl iodine molecule," *Applied Sciences* **7(5)** 529 (2017).
- [40] H. Xiong, R. Obaid, **L. Fang**, C. Bomme, U. Ablikim, V. Petrovic, C. E. Liekhus-Schmaltz, H. Li, R. C. Bilodeau, T. Wolf, D. Rolles, T. Osipov and N. Berrah, "X-ray induced ionization and fragmentation dynamics of endohedral fullerene $\text{Sc}_3\text{N}@C_{80}$ investigated using ion-ion coincidence technique," *Phys. Rev. A* **96** 033408 (2017).
- [39] H. Xiong, B. Mignolet, **L. Fang**, T. Osipov, T. J. A. Wolf, E. Sistrunk, M. Gühr, F. Remacle and N. Berrah, "The role of super-atom molecular orbitals in doped fullerenes in a femtosecond intense laser field," *Scientific Reports (Nature)*, **7** 121 (2017).
- [38] N. Berrah, **L. Fang**, B. F. Murphy, E. Kukk, T. Y. Osipov, R. Coffee, K. R. Ferguson, H. Xiong, J. Castagna, V. S. Petrovic, S. C. Montero and J. D. Bozek, "Two mirror x-ray pulse split and delay instrument for femtosecond time resolved investigations at the LCLS free electron laser facility," *Optics Express* **24** 11768 (2016).
- [37] A. Sanchez-Gonzalez, T. R. Barillot, R. J. Squibb, P. Kolorenč, M. Agaker, V. Averbukh, M. J. Bearpark, C. Bostedt, J. D. Bozek, S. Bruce, S. Carron Montero, R. N. Coffee, B. Cooper, J. P. Cryan, M. Dong, J. H. D. Eland, **L. Fang**, H. Fukuzawa, M. Guehr, M. Ilchen, A. S. Johnsson, C. Liekhus-S, A. Marinelli, T. Maxwell, K. Motomura, M. Mucke, A. Natan, T. Osipov, C. Östlin, M. Pernpointner, V. S. Petrovic, M. A. Robb, C. Sathe, E. R. Simpson, J. G. Underwood, M. Vacher, D. J. Walke, T. J. A. Wolf, V. Zhaunerchyk, J.-E. Rubensson, N. Berrah, P. H. Bucksbaum, K. Ueda, R. Feife, L. J. Frasinski and J. P. Marangos, "Auger electron and photoabsorption spectra of glycine in the vicinity of the oxygen K-edge measured with an X-FEL," *J. Phys. B: At. Mol. Opt. Phys.* **48** 234004 (2015).

- [36] N. Berrah and **L. Fang**, “Chemical analysis: Double core-hole spectroscopy with free-electron lasers”, *J. of Electron. Spectrosc. and Rela. Phenom.* **204** 284 (2015).
- [35] M. Mucke, V. Zhaunerchyk, L. J. Frasinski, R. J. Squibb, M. Siano, J. H. D Eland, P. Linusson, P. Salén, P. v d Meulen, R. D. Thomas, M. Larsson, L. Foucar, J. Ullrich, K. Motomura, S. Mondal, K. Ueda, T. Osipov, **L. Fang**, B. F. Murphy, N. Berrah, C. Bostedt, J. D. Bozek, S. Schorb, M. Messerschmidt, J. M. Glowonia, J P Cryan, R. N. Coffee, O. Takahashi, S Wada, M. N. Piancastelli, R Richter, K. C. Prince and R. Feifel, “Covariance mapping of two-photon double core hole states in C₂H₂ and C₂H₆ produced by an X-ray free electron laser,” *New Journal of Physics* **17** 073002 (2015).
- [34] B. F. Murphy, T. Osipov, Z. Jurek, **L. Fang**, S.-K. Son, L. Avaldi, P. Bolognesi, C. Bostedt, J. Bozek, R. Coffee, J. Eland, M. Guehr, J. Farrell, R. Feifel, L. Frasinski, J. Glowonia, D. T. Ha, K. Hoffmann, E. Kukk, B. McFarland, C. Miron, M. Mucke, R. Squibb, K. Ueda, R. Santra, and N. Berrah, “Bucky ball explosion by intense femtosecond x-ray pulses: a model system for complex molecules,” *Nature Communications* **5** 4281 (2014).
- [33] **L. Fang**, T. Osipov, B. F. Murphy, A. Rudenko, D. Rolles, V. Petrovic, C. Bostedt, J. D. Bozek, P. H. Bucksbaum, N. Berrah, *Review*: “Probing ultrafast electronic and molecular dynamics with free electron lasers,” *J. Phys. B: At. Mol. Opt. Phys.* **47** 124006 (2014).
- [32] N. Berrah, **L. Fang**, T. Osipov, Z. Jurek, B. F. Murphy, and R. Santra, “Emerging photon technologies for probing ultrafast molecular dynamics,” *Faraday Discuss.* **171** 471(2014).
- [31] B. K. McFarland, J. P. Farrell, S. Miyabe, F. Tarantelli, A. Aguilar, N. Berrah, C. Bostedt, J. Bozek, P.H. Bucksbaum¹, J. C. Castagna, R. Coffee, J. Cryan, **L. Fang**, R. Feifel, K. Gaffney, J. Glowonia, T. Martinez, M. Mucke, B. Murphy, A. Natan, T. Osipov, V. Petrovic, S. Schorb, Th. Schultz, L. Spector, M. Swiggers, I. Tenney, S. Wang, W. White, J. White and M. Gühr, “Delayed ultrafast x-ray Auger probing (DUXAP) of nucleobase ultraviolet photoprotection,” *Nature Communications* **5** 4235 (2014).
- [30] L. J. Frasinski, V. Zhaunerchyk, M. Mucke, R.J. Squibb, M. Siano, J. H .D. Eland, P. Linusson, P. v.d. Meulen, P. Salén, R.D. Thomas, M. Larsson, L. Foucar, J. Ullrich, K. Motomura, S. Mondal, K. Ueda, T. Osipov, **L. Fang**, B. F. Murphy, N. Berrah, C. Bostedt, J.D.Bozek, S. Schorb, M. Messerschmidt, J. M. Glowonia, J. P. Cryan, R. Coffee, O. Takahashi, S. Wada, M. N. Piancastelli, R. Richter, K. C. Prince and R. Feifel, “Dynamics of hollow atom formation in intense x-ray pulses mapped by partial covariance,” *Phys. Rev. Lett.* **111** 073002 (2013).
- [29] C. Bostedt, J. D. Bozek, P. H. Bucksbaum, R. N. Coffee, J. B. Hastings, Z. Huang, R. W. Lee, S. Schorb, J. N. Corlett, P. Denes, P. Emma, R. W. Falcone, R. W. Schoenlein, G. Doumy, E. P. Kanter, B. Kraessig, S. Southworth, L. Young, **L. Fang**, M. Hoener, N. Berrah, C. Roedig, and L. F. DiMauro, “Ultra-fast and ultra-intense x-ray sciences: first results from the Linac Coherent Light Source free-electron laser,” *J. Phys. B: At. Mol. Opt. Phys.* **46** 164003 (2013).
- [28] V. Zhaunerchyk, M. Mucke, P. Salén, P. v.d. Meulen, M. Kaminska, R. J. Squipp, L. J. Frasinski, M. Siano, J. H. D. Eland, P. Linusson, R. D. Thomas, M. Larsson, L. Foucar, J. Ullrich, K. Motomura, S. Mondal, K. Ueda, T. Osipov, **L. Fang**, B. F. Murphy, N. Berrah, C. Bostedt, J. D. Bozek, S. Schorb, M. Messerschmidt, J. M. Glowonia, J. P. Cryan, R. N. Coffee, O. Takahashi, S. Wada, M. N. Piancastelli, R. Richter, K. C. Prince, and R. Feifel, “Using covariance mapping to investigate the dynamics of multi-photon ionization processes of Ne atoms exposed to X-FEL pulses,” *J. Phys. B: At. Mol. Opt. Phys.* **46** 164034 (2013).
- [27] T. Osipov, **L. Fang**, B. Murphy, F. Tarantelli, E. R. Hosler, E. Kukk, J. D. Bozek, C. Bostedt, E. P. Kanter and N. Berrah, “Fragmentation of SF₆ induced by multiphoton ionization with intense x-ray free electron laser pulses,” *J. Phys. B: At. Mol. Opt. Phys.* **46** 164032 (2013).
- [26] M. Larsson, P Salén, P. van der Meulen, H. T. Schmidt, R. D. Thomas, R. Feifel, M. N. Piancastelli, **L. Fang**, B. Murphy, T. Osipov, N. Berrah, E. Kukk, K. Ueda, J. D. Bozek, C. Bostedt, S. Wada, R. Richter, V. Feyer and K. C. Prince, “Double core-hole formation in small

- molecules at the LCLS free electron laser,” *J. Phys. B: At. Mol. Opt. Phys.* **46** 164030 (2013).
- [25] **L. Fang**, T. Osipov, B. Murphy, F. Tarantelli, E. Kukk, J.P. Cryan, M. Glowonia, P.H. Bucksbaum, R.N. Coffee, M. Chen, C. Buth and N. Berrah, “Multiphoton ionization as a clock to reveal molecular dynamics with intense short X-FEL pulses,” *Phys. Rev. Lett.* **109** 263001 (2012).
- [24] B. F. Murphy, **L. Fang**, M. H. Chen, J. D. Bozek, E. Kukk, E. P. Kanter, M. Messerschmidt, T. Osipov, and N. Berrah, “Multiphoton L-shell ionization of H₂S using intense x-ray pulses from the LCLS free electron laser,” *Phys. Rev. A* **86** 053423 (2012).
- [23] C. Buth, J. Liu, M. H. Chen, J. P. Cryan, L. Fang, J. M. Glowonia, M. Hoener, R. N. Coffee, and N. Berrah, “Ultrafast absorption of intense x-rays by nitrogen molecules,” *J. Chem. Phys.* **136** 214310 (2012).
- [22] V. S. Petrović, M. Siano, J. L. White, N. Berrah, C. Bostedt, J. D. Bozek, D. Broege, M. Chalfin, R. N. Coffee, J. Cryan, **L. Fang**, J. P. Farrell, L. J. Frasinski, J. M. Glowonia, M. Güehr, M. Hoener, D. M. P. Holland, J. Kim, J. P. Marangos, Todd Martinez, B. K. McFarland, R. S. Minns, S. Miyabe, S. Schorb, R. J. Sension, L. S. Spector, R. Squibb, H. Tao, J. G. Underwood, and P. H. Bucksbaum, “Transient x-ray fragmentation: Probing a prototypical photoinduced ring opening,” *Phys. Rev. Lett.* **108** 253006 (2012).
- [21] J. P. Cryan, J. M. Glowonia, J. Andreasson, A. Belkacem, N. Berrah, C. I. Blaga, C. Bostedt, J. Bozek, N.A. Cherepkov, L. F. DiMauro, **L. Fang**, O. Gessner, M. Güehr, J. Hajdu, M. P. Hertlein, M. Hoener, O. Kornilov, J. P. Marangos, A. M. March, B. K. McFarland, H. Merdji, M. Messerschmidt, V. S. Petrović, C. Raman, D. Ray, D. A. Reis, S. K. Semenov, M. Trigo, J. L. White, W. White, L. Young, P. H. Bucksbaum and R. N. Coffee, “Molecular frame Auger electron energy spectrum from N₂,” *J. Phys. B: At. Mol. Opt. Phys.* **45** 055601 (2012).
- [20] P. Salén, P. v.d. Meulen, H. T. Schmidt, R. D. Thomas, M. Larsson, R. Feifel, M. N. Piancastelli, **L. Fang**, B. Murphy, T. Osipov, N. Berrah, E. Kukk, K. Ueda, J. D. Bozek, C. Bostedt, S. Wada, R. Richter, V. Feyer, K. C. Prince, “X-ray FEL-induced two-site double core-hole formation for chemical analysis,” *Phys. Rev. Lett.* **108** 153003 (2012).
- [19] E. P. Kanter, B. Krässig, Y. Li, A. M. March, P. Ho, N. Rohringer, R. Santra, S. H. Southworth, L. F. DiMauro, G. Doumy, C. A. Roedig, N. Berrah, **L. Fang**, M. Hoener, P. H. Bucksbaum, S. Ghimire, D. A. Reis, J. D. Bozek, C. Bostedt, M. Messerschmidt, and L. Young, “Unveiling and driving hidden resonances with high-fluence, high-intensity x-ray pulses,” *Phys. Rev. Lett.* **107** 233001 (2011).
- [18] H. Chen, **L. Fang**, V. Tagliamonti, and G. N. Gibson, “Angle-resolved and internuclear-separation-resolved measurements of the ionization rate of the B state of I₂ by strong laser fields,” *Phys. Rev. A* **84** 043427 (2011).
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- [16] G. Doumy, C. Roedig, S.-K. Son, C. I. Blaga, A. D. DiChiara, R. Santra, N. Berrah, C. Bostedt, J. D. Bozek, P. H. Bucksbaum, J. P. Cryan, **L. Fang**, S. Ghimire, J. M. Glowonia, M. Hoener, E. P. Kanter, B. Krässig, M. Kuebel, M. Messerschmidt, G. G. Paulus, D. A. Reis, N. Rohringer, L. Young, P. Agostini, and L. F. DiMauro, “Nonlinear atomic response to intense ultrashort x-rays,” *Phys. Rev. Lett.* **106** 083002 (2011).
- [15] **L. Fang**, M. Hoener, O. Gessner, F. Tarantelli, S. T. Pratt, O. Kornilov, C. Buth, M. Güehr, E. Kanter, C. Bostedt, J. D. Bozek, P. H. Bucksbaum, M. Chen, R. Coffee, J. Cryan, L. DiMauro, M. Glowonia, E. Kukk, S.R. Leone and N. Berrah, “Double core-hole production in N₂: Beating the Auger clock,” *Phys. Rev. Lett.* **105** 083005 (2010).

- [14] M. Hoener, **L. Fang**, O. Kornilov, O. Gessner, S.T. Pratt, M. Güehr, E. Kanter, C. Blaga, C. Bostedt, J. D. Bozek, P. H. Bucksbaum, C. Buth, M. Chen, R. Coffee, J. Cryan, L. DiMauro, M. Glowia, E. Hosler, E. Kukk, S. R. Leone, B. McFarland, M. Messerschmidt, B. Murphy, V. Petrovic, D. Rolles, and N. Berrah, "Ultraintense x-ray induced ionization, dissociation, and frustrated absorption in molecule nitrogen," *Phys. Rev. Lett.* **104** 253002 (2010).
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- [12] J. M. Glowia, J. Cryan, J. Andreasson, A. Belkacem, N. Berrah, C. I. Blaga, C. Bostedt, J. Bozek, L. F. DiMauro, **L. Fang**, J. Frisch, O. Gessner, M. Gühr, J. Hajdu, M. P. Hertlein, M. Hoener, G. Huang, O. Kornilov, J. P. Marangos, A. M. March, B. K. McFarland, H. Merdji, V. S. Petrovic, C. Raman, D. Ray, D. A. Reis, M. Trigo, J. L. White, W. White, R. Wilcox, L. Young, R. N. Coffee, and P. H. Bucksbaum, "Time-resolved pump-probe experiments at the LCLS," *Optics Express* **18** 17620 (2010).
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- [10] N. Berrah, J. Bozek, J.T. Costello, S. Düsterer, **L. Fang**, J. Feldhaus, H. Fukuzawa, M. Hoener, Y.H. Jiang, P. Johnsson, E.T. Kennedy, M. Meyer, R. Moshhammer, P. Radcliffe, M. Richter, A. Rouzée, A. Rudenko, A. A. Sorokin, K. Tiedtke, K. Ueda, J. Ullrich, and M. J.J. Vrakking, "Non-linear processes in the interaction of atoms and molecules with intense EUV and x-ray fields from SASE free electron lasers (FELs)," *J. Modern Optics* **57** 1015 (2010).
- [9] **L. Fang** and G. N. Gibson, "Wavelength-dependent study of trapping molecules in an excited electronic state of I_2^{2+} with short laser pulses," *Phys. Rev. A* **81** 033410 (2010).
- [8] G. N. Gibson and **L. Fang**, "Dissipative control in thermal ensembles using tunneling ionization," *Laser Physics* **19** 1554 Special invited issue (2009).
- [7] "Comparison of R-dependent ionization and bondsoftening as mechanisms of creating vibrational coherence in hot molecules," **L. Fang** and G. N. Gibson, *Phys. Rev. A (Rapid)* **78** 051402 (2008).
- [6] **L. Fang** and G. N. Gibson, "Study of vibrational wavepackets in hot I_2 molecules with ultrafast laser pulses," *Revista Mexicana de Física (Brazil)* **S 56(2)** 79 (2008).
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- [3] "Direct femtosecond laser excitation of the 2p state of H by a resonant seven-photon transition in H_2^+ ," G. N. Gibson, **L. Fang**, and B. Moser, *Phys. Rev. A (Rapid)* **74** 041401(R) (2006).
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Conference papers:

- [10] **L. Fang**, Z. Jurek, T. Osipov, B. F. Murphy, R. Santra and N. Berrah, "Investigating dynamics of

- complex system irradiated by intense x-ray free electron laser pulses,” *Journal of Physics: Conference Series* **601** 012006 (2015).
- [9] N. Berrah, **L. Fang**, T. Osipov, B. Murphy, C. Bostedt and J.D. Bozek, “Multiphoton ionization and fragmentation of molecules with the LCLS x-ray FEL,” *J. Electron. Spectrosc. Relat. Phenom.* **196** 34 (2013).
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- [7] B. K. McFarland, N Berrah, C. Bostedt, J. Bozek, P. H. Bucksbaum, J. C. Castagna, R. N. Coffee, J. P. Cryan, **L. Fang**, J. P. Farrell, R. Feifel, K. J. Gaffney, J. M. Glowina, T. J. Martinez, S. Miyabe, M. Mucke, B. Murphy, A. Natan, T. Osipov, V. S. Petrović, S. Schorb, Th. Schultz, L. S. Spector, M. Swiggers, F. Tarantelli, I. Tenney, S. Wang, J. L. White, W. White, and M Gühr, “Experimental strategies for optical pump – soft x-ray probe experiments at the LCLS,” *Journal of Physics: Conference Series* **488** 012015 (2014).
- [6] B. K. McFarland, J. P. Farrell, N. Berrah, C. Bostedt, J. Bozek, P.H. Bucksbaum, R. N. Coffee, J. Cryan, **L. Fang**, R. Feifel, K. Gaffney, J. Glowina, T. Martinez, M. Mucke, B. Murphy, S. Miyabe, A. Natan, T. Osipov, V. Petrovic, S. Schorb, Th. Schultz, L. Spector, F. Tarantelli, I. Tenney, S. Wang, W. White, J. White, M. Gühr, “Probing Nucleobase Photoprotection with soft x-rays,” *EDP Web of Conferences* **41** 07004 (2013).
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- [4] B. F. Murphy, **L. Fang**, T. Y. Osipov, M. Hoener, and N. Berrah, “Intense x-ray FEL-molecule physics: Highly charged ions,” *Am Inst Phys: Conference Proceedings* **1438** 249 (2012).
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Books:

L. Fang, E. Kukk, J. D. Bozek, and N. Berrah, Chapter: “Ultrafast X-ray pump-probe investigation of molecular dynamics with free electron laser pulses,” *Advances in Optics: Reviews Vol. 2*, S. Y. Yurish (Ed.), IFSA Publishing, Barcelona, Spain (2017). ISBN:978-84-697-9437-1. e-ISBN: 978-84-697-9438-8.

G. N. Gibson, **L. Fang**, and B. Moser, Chapter: “Vibrational and electronic excitation of molecules by short-pulse strong laser fields,” *Progress in Ultrafast Intense Laser Science V*, K. Yamanouchi (Ed.), Springer, Berlin (2008). ISBN: 978-3-642-03824-2. e-ISBN: 978-3-642-03825-9.

PRESENTATIONS

Invited talks:

- 20th International Symposium on Correlation, Polarization and Ionization in Atomic and Molecular Collisions (ICPEAC Satellite conference)**, Metz, France 8/2019
 “Investigation of molecular fragmentation subsequent to photoionization by synchrotron radiation at core-level”
- Department of Physics, Western Michigan University** 11/2018
 “Imaging photoinduced particle fragmentation: Mass spectroscopy using x-ray sources and tabletop ultrafast lasers”
- Department of Physics, University of Connecticut** 09/2015
 “Photoionization of midsize systems with free electron laser and XUV laser pulses”
- ICPEAC (International Conference on Photonic Electronic and Atomic Collisions) (e, 2e) symposium**, San Sebastian, Spain 08/2015
 “Photoionization induced fragmentation of glycine molecule and endohedral fullerene Ho₃N@C₈₀ molecule”
- DAMOP**, Madison, WI 06/2014
 “Molecular processes driven by high-intensity x-rays”
- Gordon conference (Multiphoton processes)**, Mount Holyoke College, South Hadley, MA 06/2012
 “Sequential investigation of double core holes with intense free electron laser pulses”
- DOE Office of Science Graduate fellowship research meeting**, Argonne National Lab, Argonne, IL 08/2010
 “Non-linear processes in the molecules using the world first hard x-ray FEL”

Contributed talks (presenter):

- DAMOP**, Columbus, OH 06/2015
 L. Fang, H. Xiong, N. Berrah, T. Osipov and V Petrovic, “Core-hole decay induced fragmentation of glycine molecule.”
- Intense Field, Short Wavelength Atomic and Molecular Processes 2**, Xi'an China 06/2013
 L. Fang, T. Osipov, B. Murphy, F. Tarantelli, E. Kukk, J.P. Cryan, J. Glowonia, P.H. Bucksbaum, R.N. Coffee, M. Chen, C. Buth, and N. Berrah, “Molecular dynamics induced by intense x-ray FEL pulses.”
- DAMOP**, Atlanta, GA USA 06/2011
 L. Fang, B. Murphy, T. Osipov, N. Berrah, E. Kukk, M. Tashiro, M. Ehara, K. Ueda, K. C. Prince, R. Richter, R. Feifel, P. Salen, P. v d Meulen, H. Schmidt, R. D. Thomas, M. Larsson, “Study of double core holes in CO molecules created by intense short free electron laser pulses.”
- CLEO/QELS**, San Jose, CA 05/2010
 L. Fang, M. Hoener, M. Guehr, C. Blaga, C. Bostedt, J. D. Bozek, P. Bucksbaum, C. Buth, R. Coffee, J. Cryan, L. DiMauro, O. Gessner, J. Glowonia, E. Hosler, E. P. Kanter, O. Kornilov, E. Kukk, S. Leone, B. K. McFarlan, B. Murphy, S. T. Pratt, D. Rolles and N. Berrah, “Nonlinear processes in N₂ using LCLS short x-ray pulses.”
- CLEO/QELS**, Baltimore, MD 05/2009
 L. Fang and G. N. Gibson, “Wavelength-dependent study of trapping molecules in an excited electronic state of I₂²⁺.”

CLEO/QELS, San Jose, CA 05/2008
L. Fang and G. N. Gibson, "Strong-field induced vibrational coherence in the ground electronic state of hot I₂."

Ultrafast and Ultrasmall PASI Workshop, Buzios, Brazil 04/2008
L. Fang and G. N. Gibson, "Study of vibrational wavepackets in hot iodine molecules with ultrafast laser pulses"

DAMOP, Calgary, Canada 06/2007
L. Fang and G. N. Gibson, "Investigating excited electronic states of I₂⁺ and I₂²⁺ produced by strong-field ionization using vibrational wave packets."

DAMOP, Knoxville, TN USA 05/2006
L. Fang and G. N. Gibson, "Observation of enhanced excitation of I₂²⁺ by strong laser fields."

Posters (presenter):

ICPEAC, Toledo, Spain 07/2015
L. Fang, H. Xiong, T. Osipov, V. S. Petrovic and N. Berrah, "X-ray photoionization induced fragmentation of glycine molecule."

ICPEAC, Toledo, Spain 07/2015
H. Xiong, B. Murphy, L. Fang, T. Osipov, E. Kukuk, V. Petrovic, H. Li, E. Sistrunk, R. Squibb, R. Feifel, K. Ferguson, J. Krzywinski, S. Montero, M. Guehr, C. Bostedt, P. Bucksbaum, N. Berrah, "Femtosecond x-ray induced fragmentation of Ho₃N@C₈₀."

Vacuum Ultraviolet and X-ray Physics (VUVX), Hefei, China 07/2013
L. Fang, T. Osipov, B. Murphy, F. Tarantelli, E. Kukuk, J.P. Cryan, J. Glowonia, P.H. Bucksbaum, R.N. Coffee, M. Chen, C. Buth, and N. Berrah, "Investigating molecular dynamics with an intrinsic multiple pump-probe mechanism by x-ray-FEL."

SPIE Optics and photonics, San Diego, CA 08/2012
L. Fang, T. Osipov, B. Murphy, F. Tarantelli, E. Kukuk, J.P. Cryan, M. Glowonia, P.H. Bucksbaum, R.N. Coffee, M. Chen, C. Buth and N. Berrah, "Following dissociating N₂ molecules by probing them with femtosecond-range XFEL pulses."

DAMOP, Atlanta, GA 06/2011
L. Fang, B. Murphy, T. Osipov, P. Juranic, N. Berrah, E. Kukuk, M. Tashiro, M. Ehara, K. Ueda, K. C. Prince, R. Richter, R. Feifel, P. Salen, P. v d Meulen, H. Schmidt, R. D. Thomas and M. Larsson, "Creating double core hole two sites in N₂ molecules using the Linac Coherent Light Source."

Multiphoton Processes - Gordon Conference, Tilton, NH 06/2008
L. Fang and G. N. Gibson, "Comparison of Lochfrass and bondsoftening as mechanisms of creating vibrational coherence in hot molecules."