

---

**CURRICULUM VITAE**  
**MICHAEL P. MINITTI**

---

SLAC National Accelerator Laboratory  
Linac Coherent Light Source  
2575 Sand Hill Road, MS: 10  
Menlo Park, CA 94025

Email: [minitti@stanford.edu](mailto:minitti@stanford.edu)  
Mobile: (516) 383-8331  
Office: (650) 926-7427  
Fax: (650) 926-2521

---

**PROFESSIONAL PREPARATION**

Brown University	Ph.D.	Physical Chemistry	6/2006
Arizona State University	B.S.	Chemistry	12/2000
Mesa Community College	A.A.	Chemistry	5/1997

**PROFESSIONAL APPOINTMENTS**

SLAC National Accelerator Laboratory	Senior Staff Scientist	3/2018 – Present
SLAC National Accelerator Laboratory	Director, MeV-UED User Facility	12/2020 - Present
SLAC National Accelerator Laboratory	Deputy SRD Director, Laboratory Science Facilities	10/2021 - Present
SLAC National Accelerator Laboratory	LCLS Soft X-ray Department Head	6/2014 – 10/2021
SLAC National Accelerator Laboratory	Lasers in LCLS Science Department Head	5/2012 – 6/2014
SLAC National Accelerator Laboratory	Staff Scientist	3/2011 – 3/2018
Brown University	Faculty Researcher	7/2010 – 2/2011
Ryon Technologies	Research Scientist	8/2009 – 12/2010
Brown University	Postdoctoral Research Associate	9/2007 – 6/2010
Princeton University	Postdoctoral Research Associate	9/2006 – 8/2007

**PROFESSIONAL AFFILIATIONS**

American Chemical Society	2001 - Present
---------------------------	----------------

### RESEARCH INTERESTS

- Time-resolved mass and photoelectron spectroscopy via low-lying Rydberg states
- Development and application of time-resolved laser pump/hard X-ray probe scattering techniques at xFEL facilities
- Real-time determination of conformeric molecular structure via x-ray scattering and electron diffraction methods
- Design and commissioning of novel apparatus for molecular structure investigations with MeV electrons and hard X-rays

### AWARDS AND RECOGNITION

- Was awarded the [Royal Society of Chemistry 2021 Horizon Prize](#) for the development of ultrafast x-ray scattering for studying chemical dynamics and structure in photoexcited molecules (2021)
- Research on chemical dynamics with ultrafast/ultrabright X-rays was recognized by the US Department of Energy as one of their top 75 break throughs over the last 75 years (2017)  
<https://www.energy.gov/sites/default/files/2018/02/f48/75%20Breakthroughs%20National%20Labs.pdf>

### PEER REVIEWER FOR

ChemPhysChem, <https://chemistry-europe.onlinelibrary.wiley.com/journal/14397641>

Chemical Science, <http://pubs.rsc.org/en/Journals/JournalIssues/SC#>

Nature Communications, <https://www.nature.com/ncomms/>

Nature Physics, <https://www.nature.com/nphys/>

New Journal of Physics, <http://www.iopscience.iop.org/njp>

Physical Review B, <https://journals.aps.org/prb/>

Physical Review Letters, <http://journals.aps.org/prl>

Scientific Reports, <https://www.nature.com/srep/>

DOE Office of Science, AMOS Division

### PUBLICATIONS

h-index: 32; i10-index: 62; 4140 total citations as reported by Google Scholar as of 11/7/2022,

<https://scholar.google.com/citations?user=iKCsfW8AAAAJ&hl=en>

### Pending/in preparation

L. Ma, H. Yong, et al., Femtosecond X-ray Scattering of the Photoinduced Reaction Kinetics of 1,2-Dithiane, Structural Dynamics, *in preparation*

A. Odate, A. Kirrander, P.M. Weber, and M.P. Minitti, "Brighter, Faster, Stronger: Ultrafast Scattering of Free Molecules", Adv. Phys. X., *in press*

## 2022

I. Gabalski, M. Sere, et al., “Transient vibration and product formation of photoexcited CS<sub>2</sub> measured by time-resolved X-ray scattering”, *J. Chem. Phys.*, [doi.org/10.1063/5.0113079](https://doi.org/10.1063/5.0113079)

S. Wandel, F. Boschini, et al., “Enhanced charge density wave coherence in a light-quenched, high-temperature superconductor”, *Science* **376** (6595), 860-864 (2022)

## 2021

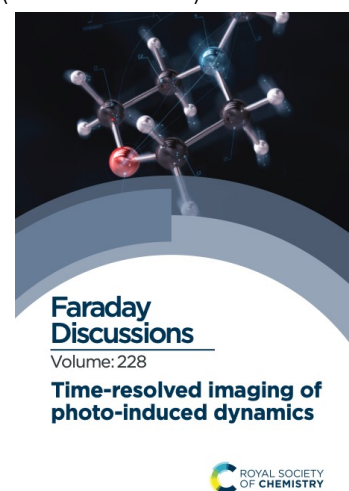
R.M. Jay, S. Eckert, et al., “Following Metal-to-Ligand Charge-Transfer Dynamics with Ligand and Spin Specificity using Femtosecond Resonant Inelastic X-ray Scattering at the Nitrogen K-Edge”, *J. Phys. Chem. Lett.*, **12**(28): 6676–6683 (2021), [doi: 10.1021/acs.jpcllett.1c01401](https://doi.org/10.1021/acs.jpcllett.1c01401)

H. Yong, X. Xu, et al., Ultrafast X-ray scattering offers a structural view of excited-state charge transfer, *Proc. Natl. Acad. Sci. USA* **118**, e2021714118 (2021) [doi: 10.1073/pnas.2021714118](https://doi.org/10.1073/pnas.2021714118)

## 2020

X. Li, L. Inhester, et al., Probing core-ionization induced molecular dynamics with ion-electron coincidence measurements using an x-ray free-electron laser, *Sci. Rep.* (2020)

H. Yong, A.M. Carrascosa, et al., Determination of Excited State Molecular Structures from Time-Resolved Gas-Phase X-Ray Scattering, *Faraday. Disc.*, **2020**, DOI: [10.1039/D0FD00118J](https://doi.org/10.1039/D0FD00118J) (COVER ARTICLE)



B.M. Stankus, H. Yong, et al., Advances in Ultrafast Gas-Phase X-ray Scattering, *J. Phys. B.*, (2020) <https://doi.org/10.1088/1361-6455/abbfea>

S. Drost, S. Zohar, et al., High-sensitivity X-ray/Optical Cross-Correlator for Next Generation Free-Electron Lasers, *Opt. Express* **28**, 23545 (2020) [doi: 10.1364/OE.398048](https://doi.org/10.1364/OE.398048)

L. Shen, S. Mack, et al., Decoupling spin-orbital correlations in a layered manganite amidst ultrafast hybridized charge-transfer band excitation, *Phys. Rev. B*, **101**, 201103 (2020), [doi: 10.1103/PhysRevB.101.201103](https://doi.org/10.1103/PhysRevB.101.201103)

L. Kjellsson, K. Nanda, et al., Resonant inelastic x-ray scattering reveals hidden local transitions of the aqueous OH radical, *Phys. Rev. Lett.* 124, 236001 (2020) doi: 10.1103/PhysRevLett.124.236001

H. Yong, J.M. Ruddock, et al., Experimental Observation of Electron Rearrangements upon Optical Excitation using Femtosecond Time-Resolved X-Ray Scattering, *Nat Commun.*, 11, 2157 (2020) [doi.org/10.1038/s41467-020-15680-4](https://doi.org/10.1038/s41467-020-15680-4)

Z.-H. Loh, G. Doumy, et al., Observation of the fastest chemical processes in the radiolysis of water, *Science*, 367, 6474, pp. 179-182, (2020) doi: [10.1126/science.aaz4740](https://doi.org/10.1126/science.aaz4740)

## 2019

S-J Lee, C.J. Titus, et al., Transition-Edge Sensor Spectroscopy at Stanford Synchrotron Radiation Lightsource Beamline 10-1, *Rev. Sci. Instrum.*, 90, 113101 (2019); doi: 10.1063/1.5119155

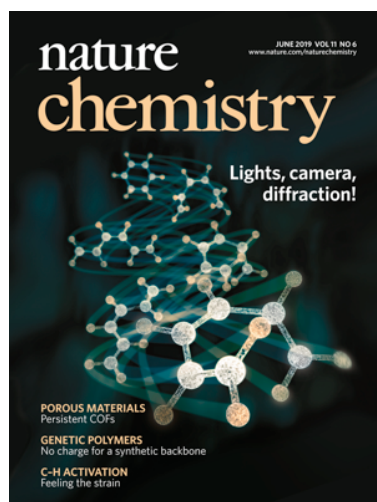
H. Yong, J.M. Ruddock, et al., Scattering off Molecules far from Equilibrium, *J. Chem. Phys.*, 151, 8 (2019); doi: [10.1063/1.5111979](https://doi.org/10.1063/1.5111979)

J.M. Ruddock, H. Yong, et al., A deep-UV Trigger for Ground-State Ring-Opening Dynamics of 1,3-Cyclohexadiene, *Sci. Adv.* 5, eaax6625 (2019).

B.M Stankus, H. Yong, et al., Femtosecond Molecular Movie Reveals Vibrational Coherence and Dephasing, *Nature Chem.*, (2019) doi: ([10.1038/s41557-019-0291-0](https://doi.org/10.1038/s41557-019-0291-0))

T. J. A. Wolf, J. Yang, et al., [Imaging the ring opening reaction of 1,3-cyclohexadiene with MeV ultrafast electron diffraction](https://doi.org/10.1051/epjconf/201920507006), *Eur. Phys. J. Web Conf.* **205**, 07006 (2019) doi: 10.1051/epjconf/201920507006

T.A. Wolf, D.M. Sanchez, et al., Imaging the Ultrafast Photoinduced Ring Opening of Cyclohexadiene by Electron Diffraction, *Nature Chem.*, 11, pp 504–509 (2019) doi: ([10.1038/s41557-019-0252-7](https://doi.org/10.1038/s41557-019-0252-7)) (COVER ARTICLE)



J.M. Ruddock, B.M. Stankus, et al., Simplicity beneath Complexity: Counting Molecular Electrons Reveals Transients in Photodissociation Reactions, *Angew. Chem. Int. Ed.*, (2019) doi.org/10.1002/anie.201902228

S. Droste, L. Shen, et al., [High-sensitivity X-ray Optical Cross-Correlator for Next Generation Free-Electron Lasers](#), *CLEO Science and Innovations 2019*, SF3I.7 (2019) doi: 10.1364/CLEO\_SI.2019.SF3I.7

S.-J. Lee, C. J. Titus, et al., [Soft X-ray spectroscopy with transition-edge sensors at Stanford Synchrotron Radiation Lightsource beamline 10-1](#), *Rev. Sci. Instrum.* **90**, 113101 (2019) doi: 10.1063/1.5119155

## **2018**

H. Yong, N. Zotev, et al., Determining Orientations of Optical Transition Dipole Moments using Ultrafast X-Ray Scattering, *J. Phys. Chem. Lett.*, **9**, pp 6556-6562 (2018), doi: 10.1021/acs.jpcclett.8b02773

R.M. Jay, J. Norell, et al., Disentangling Transient Charge Density and Metal–Ligand Covalency in Photoexcited Ferricyanide with Femtosecond Resonant Inelastic Soft X-ray Scattering, *J. Phys. Chem. Lett.* **9**, pp 3538 (2018) doi: 10.1021/acs.jpcclett.8b01429

S. Wandel, F. Boschini, et al., [Probing Charge Density Wave Dynamics in Superconducting YBCO via Ultrafast X-Ray Scattering](#), *CLEO QELS\_Fundamental Science 2018*, FM1F.7 (2018) doi: 10.1364/CLEO\_QELS.2018.FM1F.7

Q. Y. van den Berg, E. V. Fernandez-Tello, T. Burian, et al., Clocking femtosecond collisional dynamics via resonant x-ray spectroscopy, *Phys. Rev. Lett.*, **120**, 055002

R. Obaid, C. Buth, et al., LCLS in - photon out: fluorescence measurement of neon using soft x-rays, *J. Phys. B: At. Mol. Opt. Phys.* **51** 034003 (2018)

## **2017**

C. Titus, M. L. Baker, et al., L-Edge Spectroscopy of Dilute, Radiation-Sensitive Systems Using a Transition-Edge-Sensor Array, *J. Chem. Phys.* **147**, 214201 (2017), doi: 10.1063/1.5000755

J. LaRue, O. Krejčí, et al., Real-Time Elucidation of Catalytic Pathways in CO Hydrogenation on Ru, *J. Phys. Chem. Lett.*, **8** (16), pp 3820–3825 (2017)

M.C. Langner, S. Roy, et al., Nonlinear Ultrafast Spin Scattering in the Skyrmion Phase of  $\text{Cu}_2\text{OSeO}_3$ , *Phys. Rev. Lett.*, **119** (10), 107204 (2017)

T. R. Preston, S. M. Vinko, et al., Measurements of the K-shell Opacity of a Solid-Density Magnesium Plasma Heated by an X-ray Free Electron Laser, *Phys. Rev. Lett.*, **119** (8), 085001 (2017)

M. Kubin, J. Kern, et al., Soft X-ray Absorption Spectroscopy of Metalloproteins and High-Valent Metal-Complexes at Room Temperature Using Free-Electron Lasers, *Structural Dynamics* **4**, 054307 (2017); <https://doi.org/10.1063/1.4986627>

R.W. Schoenlein, S. Boutet, M.P. Minitti and A.M. Dunne, The Linac Coherent Light Source: Recent Developments and Future Plans, *Appl. Sci.*, **7**, 850; (2017) doi:10.3390/app7080850

R.W. Schoenlein, A. Aquila, et al., New Science Opportunities and Experimental Approaches Enabled by High Repetition Rate Soft X-ray Lasers, In "X-Ray Free Electron Lasers: Applications in Materials, Chemistry and Biology", (2017), doi.org/10.1039/9781782624097

W. S. Lee, Y. F. Kung, et al., Nonequilibrium lattice-driven dynamics of stripes in nickelates using time-resolved x-ray scattering, *Phys. Rev. B* 95, 121105, (2017)

S. Eckert, J. Norell, et al., Ultrafast Independent N– H and N– C Bond Deformation Investigated with Resonant Inelastic X-Ray Scattering, *Angew. Chem. Int. Ed.*, (2017), doi:10.1002/anie.201700239

## **2016**

P. Decleva, A.J. Orr-Ewing, et al., Structural dynamics: general discussion, *Faraday Discuss.*, 194, (2016) doi: 10.1039/C6FD90072K

C.J. Milne, P.M. Weber, et al., Attosecond processes and X-ray spectroscopy: general discussion, *Faraday Discuss.*, 194 (2016) doi: 10.1039/C6FD90071B

A.J. Orr-Ewing, O. Kornilov, et al., Vibrational and condensed phase dynamics: general discussion, *Faraday Discuss.*, 194 (2016) doi: 10.1039/c6fd90073a

A.J. Orr-Ewing, J.R.R. Verlet, et al., Electronic and non-adiabatic dynamics: general discussion, phase dynamics: general discussion, *Faraday Discuss.*, 194 (2016) doi: 10.1039/C6FD90070D

J.M. Glowia, A. Natan, et al., Self-referenced coherent diffraction x-ray movie of Angstrom- and femtosecond-scale atomic motion, *Phys. Rev. Lett.*, 117, 153003 (2016)

M. Beye, H. Öberg, et al., Chemical Bond Activation Observed with an X-ray Laser, *J. Phys. Chem. Lett.*, 7 (18) (2016)

B. Stankus, J.M. Budarz, et al., Femtosecond Photodissociation Dynamics of Di-Iodobenzene by Gas-Phase X-ray Scattering and Photoelectron Spectroscopy, *Faraday Disc.*, (194), 525-536 (2016) doi: [10.1039/C6FD00135A](https://doi.org/10.1039/C6FD00135A)

O. Krupin, G.L. Dakovski, et al., Ultrafast Dynamics of Localized Magnetic Moments in the Unconventional Mott Insulator Sr<sub>2</sub>IrO<sub>4</sub>, *J. Phys: Cond. Mat.*, 28, 32 (2016) doi: 10.1088/0953-8984/28/32/32LT01

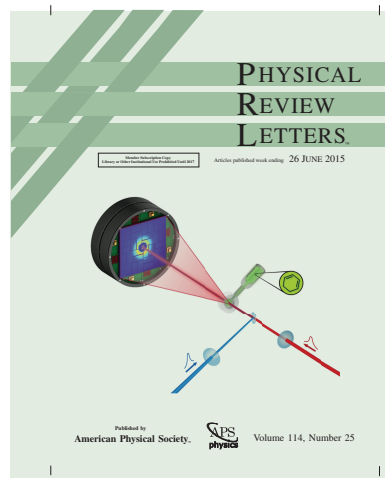
J.M. Budarz, M.P. Minitti, et al., Observation of femtosecond gas dynamics via pump-probe x-ray scattering, *J. Phys. B: At. Mol. Opt. Phys.* 49 034001 (2016) doi: 10.1088/0953-4075/49/3/034001

B. Vodungbo, B. Tudu, et al., Indirect excitation of ultrafast demagnetization, *Scientific Reports* 6, 18970 (2016)

## **2015**

J. A. Johnson, T. Kubacka, et al., Magnetic Order Dynamics in Optically Excited Multiferroic TbMnO<sub>3</sub>, *Phys. Rev. B.*, 92, 18 (2015)

M.P. Minitti, J.M. Budarz, et al., Imaging molecular motion: Femtosecond x-ray scattering of an electrocyclic chemical reaction, *Phys. Rev. Lett.*, 114, 255501 (2015) (**COVER ARTICLE**)



M. C. Langner, S. Zhou, et al. Ultrafast x-ray and optical signatures of phase competition and separation underlying the photoinduced metallic phase in  $\text{Pr}_{1-x}\text{Ca}_x\text{MnO}_3$ , *Phys. Rev. B.*, 92, 15 (2015)

M. Först, A.D. Caviglia, et al., Spatially-resolved ultrafast magnetic dynamics launched at a complex oxide hetero-interface, *Nat. Mater.*, 14 883 (2015)

H. Xin, J. LaRue, et al., Strong influence of coadsorbate interaction on CO desorption dynamics on Ru(0001) probed by ultrafast x-ray spectroscopy and ab initio simulations, *Phys. Rev. Lett.*, 114, 156101 (2015)

J.J. Turner, G.L. Dakovski, et al., Combining THz laser excitation with resonant soft X-ray scattering at the Linac Coherent Light Source, *J. Synchrotron Rad.*, 22, 621 (2015)

M.P. Minitti, J.S. Robinson, et al., Optical laser systems at the Linac Coherent Light Source, *J. Synchrotron Rad.*, 22, 526 (2015)

G.L. Dakovski, P. Heimann, et al., The Soft X-Ray instrument at the Linac Coherent Light Source, *J. Synchrotron Rad.*, 22, 498 (2015)

K. R. Ferguson, M. Bucher, et al., The Atomic, Molecular, & Optical Science Instrument at the Linac Coherent Light Source, *J. Synchrotron Rad.* 22, 492 (2015)

S. Eckert, M. Beye, et al., Principles of femtosecond X-ray / optical cross-correlation with X-ray induced transient optical reflectivity in solids, *App. Phys. Lett.*, 106, 061104 (2015)

N. Bergeard, S. Schaffert, et al., Irreversible transformation of ferromagnetic ordered stripe domains in single-shot infrared-pump/resonant-x-ray-scattering-probe experiments, *Phys. Rev. B.*, 91, 054416 (2015)

H. Öström, H. Öberg, et al., Probing the Transition State Region in Catalytic CO Oxidation on Ru, *Science*, 347, 978 (2015)

## 2014

R. Mankowsky, A. Subedi, et al., Nonlinear lattice dynamics as a basis for enhanced superconductivity in  $\text{YBa}_2\text{Cu}_3\text{O}_{6.5}$ , *Nature*, 516, 71-73 (2014)

M. Först, A. Frano, et al., Femtosecond x-rays link melting of charge-density wave correlations and light-enhanced coherent transport in  $\text{YBa}_2\text{Cu}_3\text{O}_{6.6}$ , *Phys. Rev. B.*, 90, 184514 (2014)

O. Vendrell, J. Küpper, et al., Chemical reaction dynamics I and electron dynamics in molecules: general discussion, *Faraday Disc.*, 171 (1) 145 (2014)

M.P. Minitti, J.M. Budarz, et al., Towards structural femtosecond chemical dynamics: Imaging chemistry in space and time, *Faraday Disc.*, 171 (1) 81 (2014)

X. Cheng, Y. Zhang et al., Ultrafast Structural Dynamics in Rydberg Excited N,N,N',N'-Tetramethylethylenediamine: Conformation Dependent Electron Lone Pair Interaction and Charge Delocalization, *Chem. Sci.*, 5 (11), 4394 (2014)

K.R. Siefermann, C.D. Pemmaraju, et al., Atomic scale perspective of ultrafast charge transfer at a dye-semiconductor interface, *J. Phys. Chem. Lett.*, 5 (15), 2753 (2014)

M. Först, R.I. Tobey, et al., Melting of charge stripes in vibrationally driven  $\text{La}_{1.875}\text{Ba}_{0.125}\text{CuO}_4$ : Assessing the respective roles of electronic and lattice order in frustrated superconductors, *Phys. Rev. Lett.*, 112, 157002 (2014)

T. Kubacka, J.A. Johnson, et al., Direct view of spin dynamics in a large magnitude coherent electromagnon, *Science*, 343, 1333 (2014)

## 2013

A.D. Caviglia, M. Först, et al., Photo-induced melting of magnetic order in the correlated electron insulator  $\text{NdNiO}_3$ , *Phys. Rev. B.*, 88, 220401 (2013)

R. Mitzner, J. Rehanek, et al., L-Edge X-ray Absorption Spectroscopy of Dilute Systems Relevant to Metalloproteins Using an X-ray Free-Electron Laser, *J. Phys. Chem. Lett.*, 4, 3641 (2013)

A. Shavorskiy, A. Cordones, et al., Time-Resolved X-Ray Photoelectron Spectroscopy Techniques for Real-Time Studies of Interfacial Charge Transfer Dynamics, *Proceedings of the International Conference on the Application of Accelerators in Research and Industry*, Vol: 1525, pp: 475-479 (2013)

## 2012

M.P. Minitti, Y. Zhang, M. Rosenberg, R.Y. Brogaard, S. Deb, T.I. Sølling and P.M. Weber, Far-UV photochemical bond cleavage of Amyl Nitrite: Bypassing a repulsive surface, *J. Phys. Chem. A.*, 116, 810 (2012)



## 2011

C.C. Bühler, M.P. Minitti, S. Deb, J. Bao and P.M. Weber, Ultrafast dynamics of 1,3-Cyclohexadiene in highly excited states, *J. Atom., Molec., Opt. Phys.*, doi: 10.1155/2011/637593 (2011)

S. Deb, M.P. Minitti and P.M. Weber, Structural dynamics and energy flow in Rydberg-excited clusters of N,N-Dimethylisopropylamine, *J. Chem. Phys.*, 135, 044319 (2011)

S. Deb, B. Bayes, M.P. Minitti and P.M. Weber, Structural dynamics in floppy systems: Ultrafast conformeric motions in Rydberg-excited molecules, *J. Phys. Chem. A.*, 115, 1804 (2011)

J. Bao, M.P. Minitti and P.M. Weber, Ring-closing and dehydrogenation reactions of highly excited cis-Stilbene: Ultrafast spectroscopy and structural dynamics, *J. Phys. Chem A.*, 115, 1508 (2011)

## 2010

J.C. Bush, M.P. Minitti and P.M. Weber, Dissociative energy flow, vibrational energy redistribution and conformeric structural dynamics in bifunctional amine model systems, *J. Phys Chem. A.*, 114, 11078 (2010)

M. Rosenberg, M.P. Minitti, N. Rusteika, C.Z. Bisgaard, S. Deb, P.M. Weber and T.I. Sølling, Probing the lifetimes of internally excited amyl nitrite cations, *J. Phys. Chem. A.*, 114, 7021 (2010)

J.C. Bush, M.P. Minitti and P.M. Weber, Ultrafast formation of an intramolecular cation-pi bond, *J. Photochem. Photobiol. A: Chem.*, 213, 70 (2010)

## 2007

M.P. Minitti and P.M. Weber, Time-resolved conformational dynamics in hydrocarbon chains, *Phys. Rev. Lett.*, 98, 253004 (2007)

## 2006

M.P. Minitti, J.D. Cardoza and P.M. Weber, Rydberg Fingerprint Spectroscopy of hot molecules: Structural dispersion in flexible hydrocarbons, *J. Phys. Chem. A.*, 110, 10212 (2006)

J.L. Gosselin, M.P. Minitti, F. Rudakov, T.I. Sølling and P.M. Weber, Energy flow and fragmentation dynamics of N,N – Dimethyl-isopropyl amine, *J. Phys. Chem. A.*, 110, 4251 (2006)

M.P. Minitti, J.L. Gosselin, T.I. Sølling and P.M. Weber, The ultrafast photofragmentation pathway of N,N-Dimethylisopropylamine, *FemtoChemistry VII*, Eds. A. W. Castleman Jr. & M. L. Kimble, Elsevier (2006) p. 44 – 48.

A.V. Komissarov, M.P. Minitti, A.G. Suits and G.E. Hall, Correlated product distributions from ketene dissociation measured by DC slice ion imaging, *J. Chem. Phys.*, 124, 14303 (2006)

## 2003

D. Townsend, M.P. Minitti and A.G. Suits, Direct current slice imaging, *Rev. Sci. Instrum.*, 74, 2530 (2003)

### RESEARCH TALKS (15 INVITED, 6 CONTRIBUTED)

Brown University Chemistry Alumni Speaker Series, March 2, 2020, Providence, RI, "Lights! Camera! Chemistry! How Molecular Movies are Produced" (Invited)

2019 Atomic, Molecular and Optical Sciences Research PI Meeting, October 28-30, 2019, Gaithersburg, MD., "TBD" (Invited)

256<sup>th</sup> ACS National Meeting, August 18-24, 2018, Boston, MA., "Exploring molecular reaction dynamics by ultrafast time-resolved gas phase X-ray scattering" (Invited)

Ultrafast Imaging of Photochemical Dynamics, Faraday Discussion, August 31 – September 2, 2016, Edinburgh, UK, "Femtosecond Photodissociation Dynamics of 1,4-Diiodobenzene by Gas-Phase X-Ray Scattering and Photoelectron Spectroscopy" (Invited)

American Physical Society Annual March Meeting, March 14-18, 2016, Baltimore, MD, "Advancing the molecular movie: Femtosecond X-ray scattering of an electrocyclic chemical reaction" (Invited)

LCLS/SSRL Annual Users' Meeting, SLAC National Accelerator Laboratory, October 7-10, 2015, Menlo Park, CA, "The ultrasmall on the ultrafast: Advancing molecular movies" (Invited)

SLAC Public Lecture Series, SLAC National Accelerator Laboratory, September 29, 2015, Menlo Park CA, "Now Playing: Molecular Movies" (Invited)

Banff Meeting on Structural Dynamics, February 15-18, 2015, Banff, Alberta, Canada, "Imaging Chemistry in Space and Time: Femtosecond X-Ray Scattering of the Ring Opening in 1,3-Cyclohexadiene" (Invited)

Emerging Photon Technologies for Chemical Dynamics, Faraday Discussion 171, July 9-11, 2014, Sheffield, UK, "Femtosecond Chemical Dynamics: Imaging Chemistry in Space and Time" (Contributed)

SLAC Photon Science Seminar, March 19, 2014, Menlo Park CA, "Imaging Molecular Motions in Space and Time: Ultrafast X-Ray Diffraction of Electrocyclic Chemistry at the LCLS" (Invited)

Banff Meeting on Structural Dynamics, February 19-22, 2012, Banff, Alberta, Canada, "Femtosecond Domain Structural Dynamics of Highly Excited 1,3-Cyclohexadiene" (Contributed)

SLAC National Accelerator Laboratory, LCLS Directorate, December 7, 2010, Menlo Park, CA, "Time-resolved Rydberg Fingerprint Spectroscopy: Molecular structure investigations using bound electrons" (Invited)

Sandia National Laboratory, Combustion Research Facility, May 4, 2010, Livermore, CA, "Molecular structure and dynamics in extended molecular systems as seen through Rydberg states" (Invited)

Argonne National Laboratory, X-Ray Sciences Division, March 11, 2010, Lemont, IL, "Molecular structure and dynamics in extended molecular systems as seen through Rydberg states" (Invited)

MIT Lincoln Laboratory, Homeland Protection and Tactical Systems Division, February 3, 2010, Lexington, MA, "Structural dispersion and molecular recognition in extended molecular systems probed with bound electrons" (Invited)

Argonne National Laboratory, X-Ray Sciences Division, January 12, 2010, Lemont, IL, "Structural dynamics in extended molecular systems probed with bound electrons" (Invited)

Lawrence Berkeley National Laboratory, Chemical Sciences Division, October 23, 2009, Berkeley, CA, "Time-resolved measurements of structural dispersion in extended molecular systems" (Invited)

238<sup>th</sup> ACS National Meeting, August 16-20, 2009, Washington, D.C., "Conformer dynamics in vibrationally hot tertiary amines probed with ultrafast Rydberg fingerprint spectroscopy" (Contributed)

University of Copenhagen, DK-2100 Copenhagen, Denmark, June 30, 2009: "Energy Flow and Structural Dynamics of N,N,N',N' – Tetramethyl-1,2-ethanediamine at High Temperatures Observed by Ultrafast Rydberg Fingerprint Spectroscopy" (Invited)

63<sup>rd</sup> annual Ohio State University International Symposium on Molecular Spectroscopy, June 17, 2008, Columbus, Ohio, "Rydberg States: Stealthy Spies of Molecular Structure" (Contributed)

Brookhaven National Laboratory, Chemistry Department, July 20, 2007, "Structural Dispersion in Hot Molecules: Applications of Rydberg Fingerprint Spectroscopy" (Contributed)

60<sup>th</sup> annual Ohio State University International Symposium on Molecular Spectroscopy, June 21, 2005, Columbus, Ohio, "Ultrafast Dynamics in Rydberg States of Aliphatic Amines" (Contributed)

#### **RESEARCH POSTER PRESENTATIONS**

M.P. Minitti, S. Deb, J. Bao, B. Bayes and P.M. Weber, "Conformeric Transformations and Cluster Dynamics in Energized Tertiary Amines", Femtochemistry IX, Peking University, August 8-13, 2009, Beijing, China

M.P. Minitti, J.L. Gosselin and P.M. Weber, "Ultrafast Dynamics in Rydberg States of Tertiary Amines", Femtochemistry VII, Washington D.C., July 17-22, 2005

M.P. Minitti, D. Townsend and A.G. Suits, "Spectroscopy Using Direct Current (DC) Slice Imaging", Symposium on Chemical Physics, Waterloo, ON, Canada, October 31-November 2, 2003

M.P. Minitti, D. Townsend and A.G. Suits, "Ion Pair Imaging Spectroscopy (IPIS) with DC slice imaging", 225<sup>th</sup> ACS National Meeting, New Orleans, LA, March 23-27, 2003

## REFERENCES

Prof. Peter M. Weber	Brown University	<a href="mailto:Peter_Weber@brown.edu">Peter_Weber@brown.edu</a>	(401) 863-3767
Dr. William E. White	SLAC National Accelerator Laboratory	<a href="mailto:wewhite@slac.stanford.edu">wewhite@slac.stanford.edu</a>	(650) 926-2290
Dr. Alan R. Fry	SLAC National Accelerator Laboratory	<a href="mailto:alanfry@slac.stanford.edu">alanfry@slac.stanford.edu</a>	(650) 926-7422
Prof. Michael Dunne	SLAC National Accelerator Laboratory	<a href="mailto:mdunne@slac.stanford.edu">mdunne@slac.stanford.edu</a>	(650) 926-2940