

Peter M. Weber

Professor, Department of Chemistry
Brown University
Providence, R. I, 02912

Education:

The University of Chicago, Ph.D., December 1987 (with S. A. Rice).
Universität Karlsruhe, Germany, Diplom (Masters) in Chemistry, 1983.

Academic Appointments:

Brown University Jesse H. Metcalf Professor of Chemistry, 2022-
Dean of the Graduate School, 2010 - 2016
Chair, Department of Chemistry, 2005 -2010
Professor, since 2001
Associate Professor, 1996 – 2001
Assistant Professor 1989 - 95
University of California, Berkeley, Post-doc, with Y. T. Lee, 1988-89.

Non-academic Appointments:

Founder, Ryon Technologies, Inc., Providence, R.I. (President 2007 – 2013)

Honors & Awards:

Horizon Prize, Royal Society of Chemistry, 2021.
Visiting Erskine Fellowship, University of Canterbury, New Zealand, 2017.
Guest lecturer, Ohio State University, 'Frontiers in Spectroscopy,' Jan 29 to 31, 2003.
Dreyfus Distinguished New Faculty Grant, 1989
IBM Fellowship, 1987-1988
Swift Fellowship, 1986-1987

Research Areas:

Ultrafast time-resolved studies of molecular dynamics:
Chemical reaction dynamics and electronic relaxation phenomena
Ultrafast time-resolved x-ray diffraction
Rydberg Fingerprint Spectroscopy
Femtosecond time-resolved multi-photon ionization photoelectron spectroscopy

Memberships:

American Chemical Society
American Physical Society
Bunsen Gesellschaft (Germany)
Royal Society of Chemistry

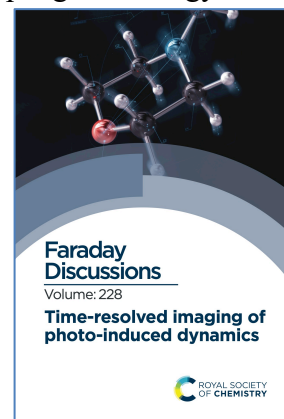
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Publications (1985 – 2022)

[Google Scholar: <https://scholar.google.com/citations?user=GQZxApYAAAAAJ&hl=en>]

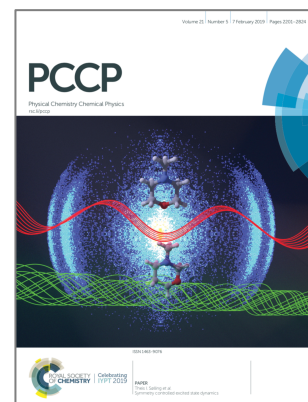
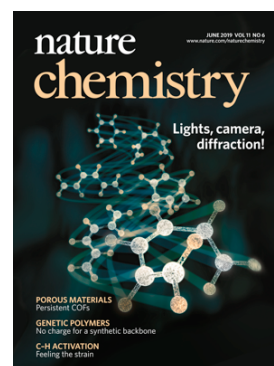
133. Asami Odate, Adam Kirrander, Peter M. Weber & Michael P. Minitti “Brighter, faster, stronger: ultrafast scattering of free molecules,” *Advances in Physics: X*, 8:1, 2126796, (2023). DOI: 10.1080/23746149.2022.2126796
132. I. Gabalski, M.A. Sere, K. Acheson, F. Allum, S. Boutet, G. Dixit, R. Forbes, J. M. Glowonia, N. Goff, K. Hegazy, A.J. Howard, M. Liang, M. Minitti, R.S. Minns, A. Natan, N. Peard, W.O. Razmus, R.J. Sension, M.R. Ware, P.M. Weber, N. Werby, T.J.A. Wolf, A. Kirrander, P. Bucksbaum “Transient vibration and product formation of photoexcited CS₂ measured by time-resolved X-ray scattering,” *J. Chem. Phys.* 157, 164305 (2022) <https://doi.org/10.1063/5.0113079>
131. “Conformational diversity of 1-phenylpiperidin-4-one in the gas phase,” Alexey V. Eroshin, Tran Dinh Phien, Peter M. Weber and Sergey A. Shlykov, *Chemical Physics Letters*, Volume 803, 139851 (2022). DOI 10.1016/j.cplett.2022.139851
130. “Spectroscopic identification of 2,3-dimethylbut-2-ene transients in 2,3-dimethylbut-2-ene flames,” X. Xu, F. Rudakov, P.M. Weber, *Appl. Phys. B*, 128:84 (2022). DOI 10.1007/s00340-022-07803-0.
129. “Chemical Analysis from a Distance: Spatially Resolved, Remote Sensing using Backward Transient Absorption,” X. Xu, F. Rudakov, P.M. Weber, *Chemical Physics Letters*, Volume 793, 139435 (2022), DOI [10.1016/j.cplett.2022.139435](https://doi.org/10.1016/j.cplett.2022.139435)
128. “Ultrafast Conformational Dynamics of Rydberg-excited N-Methyl Piperidine,” Wenpeng Du, Yan Gao, Brian Stankus, Xuan Xu, Haiwang Yong and Peter M. Weber, *Physical Chemistry Chemical Physics*, 2021, **23**, 27417 - 27427, DOI: 10.1039/D1CP04236J
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126. “Time-resolved diffraction: general discussion,” Felix Allum, Kasra Amini, Michael Ashfold, Dipanshu Bansal, Raphael Berger, Martin Centurion, Gopal Dixit, Daniel Durham, Elke Fasshauer, Joao Pedro Figueira Nunes, Ingo Fischer, Gilbert Grell, Mikhail Ivanov, Adam Kirrander, Oleg Kornilov, Christian Kuttner, Kenneth Lopata, Lingyu Ma, Varun Makhija, Andrew Maxwell, Andres Moreno Carrascosa, Adi Natan, Daniel Neumark, Stephen Pratt, Anja Röder, Daniel Rolles, Jan M. Rost, Taro Sekikawa, Mats Simmermacher, Albert Stolow, Evgenii Titov,

- Jean Christophe Tremblay, Peter M. Weber, Haiwang Yong and Linda Young, *Faraday Discuss.*, 2021, **228**, 161 - 190, DOI: 10.1039/d1fd90023d.
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121. “Strong-field induced fragmentation and isomerization of toluene probed by ultrafast femtosecond electron diffraction and mass spectrometry,” Yanwei Xiong, Kurtis Borne, Andrés Moreno Carrascosa, Sajib Kumar Saha, Kyle J. Wilkin, Mengqi Yang, Surjendu Bhattacharyya, Keyu Chen, Wenpeng Du, Lingyu Ma, Nathan Marshall, J. Pedro F. Nunes, Shashank Pathak, Zane Phelps, Xuan Xu, Haiwang Yong, Kenneth Lopata, Peter M. Weber, Artem Rudenko, Daniel Rolles, Martin Centurion, *Faraday Discussions*, 2021, **228**, 39 – 59. DOI: 10.1039/D0FD00118J.
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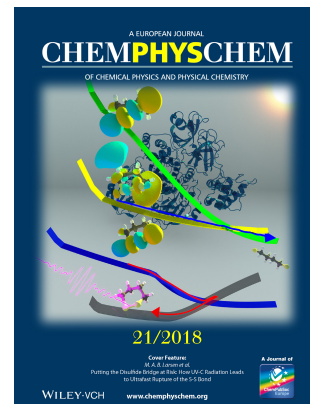


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- Nora Berrah, Edwin Kukk, Robin Santra, Alfred Müller, Danielle Dowek, Robert Lucchese and Bill McCurdy, Paola Bolognesi, Lorenzo Avaldi, Till Jahnke, Markus S. Schöffler, Reinhard Dörner, Yann Mairesse, Laurent Nahon, Olga Smirnova, Thomas Schlathölter, Eleanor E. B. Campbell, Jan-Michael Rost, Michael Meyer and Kazuo A. Tanaka, *J. Phys. B: At. Mol. Opt. Phys.* **52**, 171001 (2019). [10.1088/1361-6455/ab26d7](https://doi.org/10.1088/1361-6455/ab26d7)
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109. “The photochemical ring-opening of 1,3-cyclohexadiene imaged by ultrafast electron diffraction” T. J. A. Wolf, D. M. Sanchez, J. Yang, R. M. Parrish, J. P. F. Nunes, M. Centurion, R. Coffee, J. P. Cryan, M. Gühr, K. Hegazy, A. Kirrander, R. K. Li, J. Ruddock, X. Shen, T. Veccione, S. P. Weathersby, P. M. Weber, K. Wilkin, H. Yong, Q. Zheng, X.J. Wang, M. P. Minitti, T. J. Martínez. *Nature Chemistry*, **11**, 504–509 (2019), <https://doi.org/10.1038/s41557-019-0252-7>
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106. “Symmetry controlled excited state dynamics” Max D.J. Waters, Anders B. Skov, Martin A.B. Larsen, Christian M. Clausen, Peter M. Weber and Theis I. Sølling, *Phys.Chem.Chem.Phys.*, **2019**, **21**, 2283. (Cover) DOI: [10.1039/C8CP05950K](https://doi.org/10.1039/C8CP05950K).
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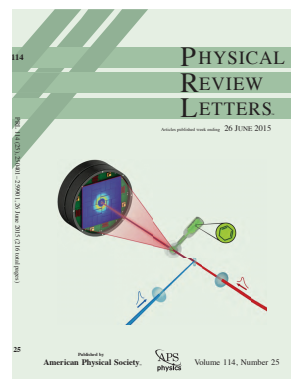


- Nikola Zotev, Brian Stankus, Jennifer M. Ruddock, Darren Bellshaw, Sébastien Boutet, Thomas J. Lane, Mengning Liang, Sergio Carbajo, Joseph S. Robinson, Wenpeng Du, Nathan Goff, Yu Chang, Jason E. Koglin, Max D.J. Waters, Theis I. Sølling, Michael P. Minitti, Adam Kirrander and Peter M. Weber, *J. Phys. Chem. Lett.* **2018**, 9, 22, 6556-6562, DOI:10.1021/acs.jpcllett.8b02773
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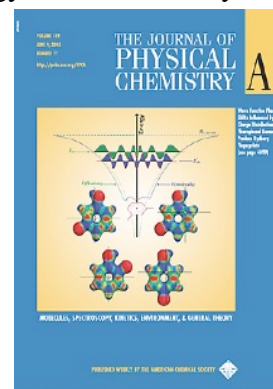
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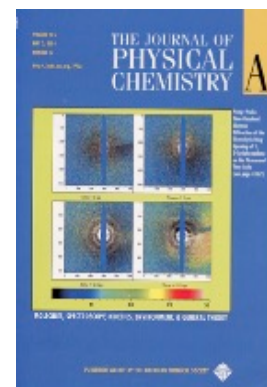
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