David M. Jonas
Department of Chemistry
University of Colorado at Boulder
215 UCB, Boulder, CO 80309-0215
(303) 492-3818; e-mail: david.jonas@colorado.edu

Positions

University of Colorado at Boulder
Professor, August, 2006 - present
Associate Professor, August, 2002 - August, 2006
Assistant Professor, August, 1995 - August, 2002

University of Chicago
Postdoctoral Research Associate, 1992-1995

Education

Massachusetts Institute of Technology
Ph.D. Physical Chemistry, June 1992
thesis: "Spectroscopy of Vibrationally Hot Molecules:
Hydrogen Cyanide and Acetylene"
thesis co-supervisors: Robert W. Field and Robert J. Silbey

University of California, Berkeley
B.S. Chemistry, June 1986
A.B. Mathematics, June 1986

Awards

Journal of Chemical Physics Festschrift Issue, 2025
https://pubs.aip.org/jcp/collection/542081/David-Jonas-Festschrift

E. Bright Wilson Award in Spectroscopy, 2023
"For pioneering the field of two-dimensional femtosecond spectroscopy and for analysis of nonadiabatic dynamics within molecules, in energy transfer, and in photosynthesis."
(National Award from the American Chemical Society)

Earle K. Plyler Prize for Molecular Spectroscopy and Dynamics, 2018
"for the demonstration and development of femtosecond two-dimensional Fourier transform spectroscopy and its use in studying fast processes"
(National Award from the American Physical Society)

Fellow of the Optical Society of America, 2017

College Scholar Award, 2016
(College of Arts and Sciences, University of Colorado Boulder)

BOMEM-Michelson Award, 2015 (Coblentz Society)

Fellow of the American Association for the Advancement of Science, 2014

Ahmed Zewail Award in Ultrafast Science and Technology, 2013
"For the demonstration, development, and elucidation of the principles of femtosecond two-dimensional Fourier-transform spectroscopy, widely used for the investigation of diverse ultrafast phenomena."
(National Award from the American Chemical Society)

Who's Who in America, 2009 - present

University of Colorado Faculty Fellowship, 2009

Fellow of the American Physical Society, 2007
National Science Foundation Special Creativity Extension, 2006
Alfred P. Sloan Research Fellow, 1999-2003
David and Lucile Packard Fellow in Science and Engineering, 1996-2001
University of Colorado Junior Faculty Development Award, 1996
Camille and Henry Dreyfus New Faculty Award, 1995
National Science Foundation Postdoctoral Fellow, 1992-1994
AT&T Bell Laboratories Doctoral Scholar, 1988-1992
University of California Regents' Scholar, 1982-1986

member of the American Chemical Society (1993-present), the American Physical Society (1987-present), the Coblentz Society (2015-present), Optica – formerly the Optical Society of America (1995-present), Sigma-Xi (1991 - present), the Society for Applied Spectroscopy (2013-present), and the American Association for the Advancement of Science (2008-present).

Named Lectures

Global COE Lecturer, Department of Chemistry,
University of Tokyo, JAPAN (2009)
Bryce L. Crawford Memorial Lectureship in Chemistry,
University of Minnesota, Minneapolis, MN (2015)
W. Albert Noyes, Jr. Distinguished Visting Lectureship,
Department of Chemistry, University of Texas at Austin (2019)
Frank T. Gucker Lectureship, Department of Chemistry,
Indiana University (to be given 2026)

Teaching

Spring 2026	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
Fall 2025	Chemistry 4531 (Physical Chemistry 2)
	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
	Chemistry 4901 (Undergraduate Independent Study)
Spring 2025	Chemistry 4511 (Physical Chemistry 1)
Fall 2024	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
	Chemistry 4901 (Undergraduate Independent Study)
Spring 2024	Chemistry 4511 (Physical Chemistry 1)
Spring 2023	Chemistry 6401 (Seminar in Physical Chemistry)
Fall 2022	Chemistry 4511 (Physical Chemistry 1)
	Chemistry 6401 (Seminar in Physical Chemistry)
Spring 2022	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
Spring 2021	Chemistry 7511 (Reaction Dynamics in Condensed Phases)
Spring 2020	Chemistry 7511 (Reaction Dynamics in Condensed Phases)
Spring 2019	Chemistry 7511 (Reaction Dynamics in Condensed Phases)

Spring 2018	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
Fall, 2017	Chemistry 5501 (Advanced Physical Chemistry)
Spring, 2017	Chemistry 4901 (Undergraduate Independent Study)
Fall, 2016	Chemistry 4901 (Undergraduate Independent Study)
Spring, 2016	Chemistry 5591 (Advanced Molecular Spectroscopy)
Fall, 2015	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
Spring, 2015	Chemistry 5591 (Advanced Molecular Spectroscopy)
	Chemistry 6401 (Seminar in Physical Chemistry)
Fall, 2014	Chemistry 6401 (Seminar in Physical Chemistry)
Spring, 2014	Chemistry 4531 (Physical Chemistry 2)
Fall, 2013	Chemistry 1134 (General Chemistry Lab 2)
Fall, 2012	Chemistry 1134 (General Chemistry Lab 2)
	Chemistry 5501 (Advanced Physical Chemistry)
Spring, 2012	Chemistry 4531 (Physical Chemistry 2)
Fall, 2011	Chemistry 5501 (Advanced Physical Chemistry)
Spring, 2011	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
Fall, 2010	Chemistry 1134 (General Chemistry Lab 2)
Spring, 2009	Chemistry 5591 (Advanced Molecular Spectroscopy)
Fall, 2008	Chemistry 6411 (Advanced Physical Chemistry)
Spring, 2008	Chemistry 5591 (Advanced Molecular Spectroscopy)
Fall, 2007	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
Spring, 2007	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
Fall, 2006	Chemistry 1111 (General Chemistry I)
Spring, 2006	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
Fall, 2005	Chemistry 1111 (General Chemistry I)
	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
Spring, 2005	Chemistry 4541 (Experimental Physical Chemistry)
	Chemistry 4581 (Physical Chemistry Lab 1)
	Chemistry 4591 (Physical Chemistry Lab 2)
Fall, 2004	Chemistry 4511 (Physical Chemistry 1)
Spring, 2004	Chemistry 5591 (Advanced Molecular Spectroscopy)
Fall, 2003	Chemistry 4511 (Physical Chemistry 1)
Spring, 2003	Chemistry 5591 (Advanced Molecular Spectroscopy)
Spring, 2002	Chemistry 5591 (Advanced Molecular Spectroscopy)
Spring, 2001	Chemistry 5591 (Advanced Molecular Spectroscopy)
Fall, 2000	Chemistry 4531 (Physical Chemistry 2)

Spring, 2000	Chemistry 5591 (Advanced Molecular Spectroscopy)
Spring, 1999	Chemistry 5591 (Advanced Molecular Spectroscopy)
Fall, 1998	Chemistry 4531 (Physical Chemistry 2)
Spring, 1998	Chemistry 5591 (Advanced Molecular Spectroscopy)
Fall, 1997	Chemistry 4531 (Physical Chemistry 2)
Spring, 1997	Chemistry 5591 (Advanced Molecular Spectroscopy)
Fall, 1996	Chemistry 4541 (Physical Chemistry Laboratory)
	Chemistry 4561 (Experimental Physical Chemistry)
Fall, 1995	Chemistry 4531 (Physical Chemistry 2)

Mentoring

former students:

Brett Luther Landin,
M.S. in Physical Chemistry 6/99
(now at Ball Aerospace,
formerly at Aerospace Corporation)

Catherine Anne Tolbert,
M.S. in Physical Chemistry 12/00
(now at Dharmacon Research)

Morgan (Sarah Gallagher) Faeder,
Ph.D. in Chemical Physics 6/99
postdoc, Weizmann Institute 6/99-12/00
M.D. Univ. Pittsburgh Medical School, 2011
(now in private practice, Pittsburgh)

Allison Albrecht Ferro
Ph.D. in Chemistry, certificate in Optics, 8/01
(U. Minnesota, formerly at Zeiss, RESDEV & Lumenis)

John David Hybl
Ph.D. in Chemistry, certificate in Optics, 8/01
Winner of 2001 Teresa Fonseca memorial prize
(now at MIT Lincoln Laboratories, formerly at GE)

David Clark Green,
M.S. in Physical Chemistry, 1/02

Darcie Ann Farrow,
Ph.D. in Chemistry, certificate in Optics, 12/04
(Senior Member of Technical Staff, Sandia)

Pingrong Yu,
Ph.D. in Chemistry, 12/04 (joint with Arthur Nozik)
(now at SV Tech Ventures, formerly at Innovalight)

Amy A. E. Moore,
Ph.D. in Chemistry 8/05
(Executive Director, O.P. and W.E. Edwards Foundation,
formerly H.S. Science Teacher, Jefferson Academy)

James Edward Murphy
Ph.D. in Chemistry, 5/06 (joint with A. Nozik)
(now at General Electric, Inc.,
formerly at OSRAM Sylvania)

Jordan Corbman (joint with K. Rowlen)

Ph.D. candidate in Physical Chemistry, left program
(Sapling Learning)

Eric Ryan Smith,
Ph.D. in Chemistry, certificate in Optics, 12/07
(now at USPTO, formerly at NREL, Digital Fusion)

Katherine Gerth (joint with A. Nozik)
M.S. in Chemistry, 5/08

Michael K. Yetzbacher,
Ph.D. in Chemistry, certificate in Optics, 8/08
(now at Naval Research Laboratory)

Katherine Kitney,
Ph.D. in Chemical Physics, 5/10

Haemi Lee,
Ph.D. in Chemical Physics, 8/10
(Senior Researcher, Center for Convergence
Nanobiotechnology, Korea Research Institute of
Chemical Technology)

Aaron Midgett (joint with A. Nozik)
Ph.D. in Chemistry, 5/11
(now at Intel)

Allison Kanarr (collaboration with J. Johnson, NREL)
Ph.D. in Chemistry, 8/11
(now at Seattle Central Community College,
formerly Visiting Assistant Professor, Regis Univ.)

Trevor Courtney
Ph.D. in Physical Chemistry, 12/12
Principal Scientist, SAIC, Air Force Research Laboratory

William Peters
Ph.D. in Physical Chemistry, 5/13
Staff Engineer, Lockheed Martin Coherent Technologies

Robert Hill,
Ph.D. in Physics, 5/13
Staff Scientist, Los Alamos National Laboratory

Barbara Hughes (joint with A. Nozik)
Ph.D. in Materials Chemistry, 8/13
Director of Energy Storage, Forge Nano (formerly NREL)

Danielle Buckley,
Ph.D. in Physical Chemistry, 5/14
Program Manager, MacMillan Learning (formerly Sapling)

Vivek Tiwari,
Ph.D. in Chemical Physics, 5/14
Assistant Professor, Solid State Chemistry Unit,
Indian Institute of Science, Bangalore, INDIA

Austin Spencer,
Ph.D. in Physical Chemistry, 8/14
Laser Physicist, WSU/Argonne

Samuel Park
Ph.D. in Physical Chemistry, 12/15
Senior Professional Staff,
Johns Hopkins Applied Physics Laboratory
formerly Staff Scientist, Naval Research Laboratory

Dmitry Baranov,
Ph.D. in Materials Chemistry. 8/17
Biträdande Universitetslektor

(equivalent to tenure track Assistant Professor in USA)
Division of Chemical Physics,
Lund University, SWEDEN
formerly Marie Curie Fellow,
Italian Institute of Technology, Genoa

Anna Curtis
Ph.D. in Physical Chemistry, 8/18
Teaching Associate Professor,
University of North Carolina, Chapel Hill

Jisu Ryu
Ph.D. in Physical Chemistry, 12/18
Capella Space, formerly at General Atomics

Peter Foster,
Ph.D. in Physical Chemistry, 8/19
Assistant Professor, Grove City College, PA
formerly Assistant Professor, Newberry College, SC
formerly Teaching Assistant Professor, St. Olaf College

Alexa Carollo,
Ph.D. in Physical Chemistry, 8/22
NIST, Boulder, CO

Callum Douglass
Ph.D. in Physical Chemistry, 8/22
Thorlabs, Lafayette, CO

Sarang Yeola,
Ph.D. in Physics, 5/25
NIST, Boulder, CO

Alina Mateo,
Ph.D. in Chemical Physics, 5/25

thesis adviser for:

Aman Agrawal,
6th year Ph.D. candidate in Physical Chemistry

Jennifer Sormberger,
5th year Ph.D. candidate in Physical Chemistry

Kyle Tyner,
3rd year Ph.D. student in Physical Chemistry

Prokriti Saha,
2nd year Ph.D. student in Physical Chemistry

Jacob Simonpietri,
2nd year Ph.D. student in Physical Chemistry

Tyler Kenyon,
1st year Ph.D. student in Physical Chemistry

postdoctoral:

(1/25 – present) Rachel Gelfand, Physics Ph.D. 2024, University of Maryland

(5/19-10/21) Sumit Singhal, Chemistry Ph.D. 2019, Indian Institute of Technology, Kanpur

(5/15-12/16) Adriana Huerta Viga, Chemistry Ph.D. 2013, Univ. Amsterdam
Alexander von Humboldt Fellow, Goethe University, Frankfurt

(10/06-2/14) Byungmoon Cho, Chemistry Ph.D. 2003, Imperial College,
Research Professor, Korea University

(8/06-3/08) Nathan Neale, Chemistry Ph.D. 2003, U.C. Berkeley
(joint with A. Nozik)

Research Scientist, National Renewable Energy Laboratory
(1/03-8/04) Nadia Belabas, Physics Ph.D. 2003, Ecole Polytechnique
Chargé de recherche de deuxième classe (CR2)
Laboratory for Photonics and Nanostructures, CNRS
(8/00-5/03) Wei Qian, Physics Ph.D. 2000, Peking University
Research Scientist, IMRA, Ann Arbor, MI
(8/99-10/02) Anchi Yu, Chemistry Ph.D. 1999, Peking University
Associate Professor, Remin University, Beijing, China

undergraduates: Lukas Ciesielski (Toji Fellowship, Summer 2025)
Stella Cross (Chemistry 4901, Fall 2025)
Kate Seymour (Chemistry 4901, Fall 2024)
Batool Altaher (CU undergraduate Summer 2018)
Michael (Joey) Lynch (CU undergraduate, Spring, 2016 -Spring, 2017, Summa cum Laude Honors thesis)
Jared O'Reilly (CU undergraduate, Fall 2014)
Nina Finamore (Chemistry 4901, Spring 2006)
Shervin Rahimpour (UROP 2005-2006)
Richard Treglio (Chemistry 4901, Fall 2001)
Samuel Shekanena (Chemistry 4901, Spring 2001)
Yannick Christophe (University of Strasbourg, 1999-2000)
Jamie Lucia (NSF REU program, Summer 2000)
Cheryl Billstrom (NSF REU program, Summer 2001)
Sonia Shariff (NSF REU program, Summer 2002)

Service

International

Advisory Committee, International Conference on Ultrafast Phenomena, 2026
International Organizing Committee, Twelfth International Conference on Coherent Multidimensional Spectroscopy, 2026
Advisory Committee, International Conference on Ultrafast Phenomena, 2024
International Organizing Committee, Eleventh International Conference on Coherent Multidimensional Spectroscopy, 2024
International Program Committee, Nobel Symposium "Exploring complex molecular and condensed phase processes and functions by multidimensional spectroscopy from THz to X-rays", Royal Swedish Academy of Sciences, 2022
International Organizing Committee, Tenth International Conference on Coherent Multidimensional Spectroscopy, 2022
Advisory Committee, International Conference on Ultrafast Phenomena, 2020
International Organizing Committee, Tenth International Conference on Coherent Multidimensional Spectroscopy, 2020 (cancelled)
Advisory Committee, International Conference on Ultrafast Phenomena, 2018
International Organizing Committee, Ninth International Conference on Coherent Multidimensional Spectroscopy, 2018
Advisory Editorial Board, Chemical Physics Letters, 2016-present
Advisory Committee, International Conference on Ultrafast Phenomena, 2016
International Organizing Committee, Eighth International Conference on Coherent Multidimensional Spectroscopy, 2016

In-Depth Evaluation Panel, Institute for Basic Science, Korea, 2015
Advisory Committee, International Conference on Ultrafast Phenomena, 2014
International Organizing Committee, Seventh International Conference on Coherent Multidimensional Spectroscopy, 2014
Advisory Committee, International Conference on Ultrafast Phenomena, 2012
International Organizing Committee, Sixth International Conference on Coherent Multidimensional Spectroscopy, 2012
General Chair, International Conference on Ultrafast Phenomena, 2010
International Organizing Committee, Fifth International Conference on Coherent Multidimensional Spectroscopy, 2010
International Organizing Committee, Fourth International Conference on Coherent Multidimensional Spectroscopy, 2008
International Organizing Committee, Third International Conference on Coherent Multidimensional Spectroscopy, 2006
Program co-Chair, International Conference on Ultrafast Phenomena, 2006
International Organizing Committee, Second International Conference on Coherent Multidimensional Vibrational Spectroscopy, 2004
Program Committee, International Conference on Ultrafast Phenomena, 2004
Program Committee, International Conference on Ultrafast Phenomena, 2002

National

ACS National Award Selection Committee 2023 - 2025
Chair, Irving Langmuir Award Selection Committee, American Physical Society, 2022
Irving Langmuir Award Selection Committee, American Physical Society, 2020
APS March Meeting, Division of Chemical Physics, co-organized Focus Session on Electronic-Vibrational Coupling in Light Harvesting, 2019-2020
Editorial Advisory Board, Journal of Chemical Physics, 2018-2021
Member, William F. Meggers Award Committee, Optical Society of America, April, 2016 – April, 2017
Chair, William F. Meggers Award Committee, Optical Society of America, April, 2015 – April, 2016
Member-at-Large, Executive Committee, Division of Chemical Physics, American Physical Society, March 2011-March 2014
Vice-Chair, Gordon Research Conference on Electronic Spectroscopy and Dynamics, 2012
NSF Chemistry Division Proposal Review Panel, Fall, 2010
Co-Organized "Workshop on Efficient Conversion of Solar Energy to Electricity and Fuels" co-sponsored by the U.S. Department of Energy and the Colorado Renewable Energy Collaboratory, over 300 attendees, 2008
Department of Energy, Basic Energy Sciences workshop on Ultrafast Materials Science, Santa Fe, NM October 21-24, 2007
National Academy of Sciences - Virtual Congress Participant (benchmarking US research competitiveness in Chemistry), 2006
NSF Integrated Graduate Education Research and Training Panel, Spring, 2005
Program Committee, Quantum Electronics and Laser Science Conference, 2005

227th ACS Meeting, Division of Physical Chemistry, co-organized symposium on Emerging Ultrafast Spectroscopies: from Chemistry to Biophysics, 2004
National Institutes of Health Special Emphasis Panel, Spring 2002
APS March Meeting, Division of Chemical Physics, organized Focus Session on Nonlinear Spectroscopy and Molecular Choreography, 2002
NSF Chemical Research, Instrumentation, and Facilities Panel, Fall, 2000
ILS-XV Program Committee, International Laser Science Conference, 1999

interviewed about Shortest Time Interval Measured on National Public Radio ("Morning Edition", 2/26/04 at 6:00 am EST)
interviewed about 1999 Nobel Prize in Chemistry on National Public Radio, ("All Things Considered", 10/12/99 at 4:20 pm EST)

State

Co-Director, Center for Revolutionary Solar Photochemistry, a research center of the Colorado Renewable Energy Collaboratory, 2008-2015
Powerpoint presentation on national need for University of Colorado/ National Renewable Energy Laboratory Joint Institute to Steven Black, U.S. Senator Ken Salazar's Legislative Counsel handling Energy, Feb. 8, 2006. This conference call presentation was arranged at Steven Black's personal request to me after I spoke with him at Senator Salazar's Renewable Energy Summit on January 11, 2006. It required approval by the CU Provost and by CU lobbyists. The outcome was the creation of the Colorado Renewable Energy Collaboratory involving the University of Colorado, Colorado State University, Colorado School of Mines, and the National Renewable Energy Laboratory on February, 21, 2007.

University

Natural Sciences Strategic Planning Committee, 2025-2026
CU Boulder Packard Fellowship Nominee Selection Committee, 2025
CU Boulder Packard Fellowship Nominee Selection Committee, 2024
CU Boulder Packard Fellowship Nominee Selection Committee, 2023
CU Boulder Packard Fellowship Nominee Selection Committee, 2022
Provost's DA-ICR Fringe Benefit Working Group, 2019-2020
RASEI Director Search Committee, 2019-2020
College Scholar Award Selection Committee, 2019-2020
CU Boulder Packard Fellowship Nominee Selection Committee, 2020
CU Boulder Packard Fellowship Nominee Selection Committee, 2019
ARPAC Internal Program Reviewer for Department of Electrical, Computer, and Energy Engineering, 2017-2018
Vice Chancellor for Research's Research Review Board, 2012 - 2016
Chair, RASEI Director Search, 2015
Executive Committee, Arts and Sciences Council, 2013 – 2015
Chair, Arts and Sciences Council Ad Hoc Committee on On-Line Instruction, 2013-2015
Chair, Chemical Physics/Physical Chemistry Seminar, 2014-2015
Executive Committee, Program in Chemical Physics, 2013-2016

Associate Vice Chancellor for Research's Committee for selection of CU Boulder Packard Fellowship nominees, 2014
Associate Vice Chancellor for Research's Committee for selection of CU Boulder Packard Fellowship nominees, 2013
Associate Vice Chancellor for Research's Committee for selection of CU Boulder Packard Fellowship nominees, 2012
Associate Vice Chancellor for Research's Committee for selection of CU Boulder Packard Fellowship nominees, 2011
Arts and Sciences Council, 2010 – 2015
College of Arts and Sciences Personnel Committee, 2010 – 2011
Associate Vice Chancellor for Research's Committee for selection of CU Boulder Packard Fellowship nominees, 2010
Fellow, Renewable and Sustainable Energy Institute, 2009 - present
Associate Vice Chancellor for Research's Committee for selection of CU Boulder Packard Fellowship nominees, 2009
Gamow Lecture Committee, 2008 - 2013
Electrical and Computer Engineering Optics Search Committee, 2008-2009
Associate Vice Chancellor for Research's Committee for selection of CU Boulder Packard Fellowship nominees, 2008
Electrical and Computer Engineering Optics Search Committee, 2006-2007
Associate Vice Chancellor for Research's Committee for selection of CU Boulder Packard Fellowship nominees, 2006
Provost's Planning Committee for Renewable and Sustainable Energy Initiative, 5/05-6/06
Energy and Environmental Security Initiative, 10/04-5/08
Optical Science and Engineering Program Executive Committee, 5/01-10/09
Optical Science and Engineering Program Chemistry Advisor, 2/01-10/09
Physical Chemistry/Chemical Physics Seminar Chair, 2001-2002
JILA Physicist/Chemical Physicist Search Committee, 2000-2001
Chemical Physics Seminar, Chair 1997-1998, Co-Chair, 1996-1997

Department

Physical Chemistry Graduate Advisor, 1/25-present
Chair, Post-Tenure Review Committee, 1/22 – 1/25
Chair, Department of Chemistry, 7/18 – 6/21
Director of Graduate Studies, 9/17-6/18
Chair, Graduate Scholastic Committee, 9/17-6/18
Chair, Theoretical Chemistry Search Committee, 7/15-9/16
RASEI/Chemistry Synthesis Search Committee, 9/14-5/15
Full Professors Committee, 9/06 - present
Adjoint Committee, 2013-2015
General Chemistry Committee, 9/04 – 5/14
Physical Chemistry Graduate Advisor, 2011-2012
Theory Search Committee, 9/08-5/09
Chair, Department of Chemistry and Biochemistry Self Study, 11/06-5/08
Associate Chair, Department of Chemistry and Biochemistry, 8/04-6/06
organized Chemistry 6411 (Advanced Topics in Physical Chemistry), 8/05

Physical Chemistry Graduate Advisor, 2003-2004
Physical Chemistry Graduate Advisor, 2000-2001
Chemistry Department Undergraduate Honors Committee, 1999-2003
organized Chemistry 6411 (Advanced Topics in Physical Chemistry), 6/99
Chemistry Department Graduate Admissions Committee 1/96-6/99
Chemistry Department Curriculum Committee, 11/96-6/98

Publications

Web of Science ResearcherID: A-7491-2008; *ORCID:* 0000-0002-1085-8161.

1) "Acetylene: Isomerization and Dissociation", Yongqin Chen, David M. Jonas, Charles E. Hamilton, Peter G. Green, J.L. Kinsey, and R.W. Field, Berichte der Bunsen-Gesellschaft fur Physikalische Chemie, 92, 329-336 (1988).

2) "Spin Statistics: an Error in Landau and Lifschitz' *Quantum Mechanics* ", David M. Jonas, J. Chem. Phys., 90, 5563-5565 (1989).

3) " High Resolution Spectroscopic Detection of Acetylene-Vinylidene Isomerization by Spectral Cross-Correlation", Yongqin Chen, David M. Jonas, J.L. Kinsey, and R.W. Field, J. Chem. Phys., 91, 3976-3987 (1989).

4) "High Resolution Vacuum Ultraviolet Fluorescence Excitation Spectrum and Predissociation of $\tilde{A}^1A''$ HCN", David M. Jonas, Xinsheng Zhao, Kaoru Yamanouchi, Peter G. Green, George W. Adamson, and R.W. Field, J. Chem. Phys., 92, 3988-3989 (1990).

5) "Stimulated Emission Pumping Studies of Acetylene $\tilde{X}^1\Sigma_g^+$ in the 11,400-15,700 cm^{-1} Region: The Onset of Mixing", Yongqin Chen, Scott Halle, David M. Jonas, James L. Kinsey, and Robert W. Field, J. Opt. Soc. Am. B, 7, 1805-1815 (1990).

6) "Vibrationally Highly Excited Acetylene as Studied by Dispersed Fluorescence and Stimulated Emission Pumping Spectroscopy: Vibrational Assignment of the Feature States", K. Yamanouchi, N. Ikeda, S. Tsuchiya, D.M. Jonas, J.K. Lundberg, G.W. Adamson, and R.W. Field, J. Chem. Phys., 95, 6330-6342 (1991).

7) "Experimental Distinction of Electric and Magnetic Transition Moments", David M. Jonas, Stephani Ann B. Solina, R.W. Field, and R.J. Silbey, J. Chem. Phys., 96, 7189-7190 (1992).

8) "High Resolution Vacuum Ultraviolet Stark Measurement of the Dipole Moment of $\tilde{A}^1A''$ HCN", David M. Jonas, Stephani Ann B. Solina, Xinsheng Zhao, Robert W. Field, and Carter Kittrell, J. Chem. Phys., 96, 7209-7217 (1992). Erratum, J. Chem. Phys., 97, 5260 (1992).

9) "Axis-switching Transitions and the Stimulated Emission Pumping Spectrum of HCN", David M. Jonas, Xueming Yang, and Alec M. Wodtke, J. Chem. Phys., 97, 2284-2298 (1992).

10) "Intramolecular Vibrational Relaxation and Forbidden Rotational Transitions in the SEP Spectrum of Acetylene", D.M. Jonas, S.A.B. Solina, B. Rajaram, R.J. Silbey, R.W. Field, K. Yamanouchi, and S. Tsuchiya, J. Chem. Phys., 97, 2813-2816 (1992).

11) "Rotationally Resolved Ultraviolet-Ultraviolet Double Resonance Study of the Nonplanar $\tilde{E}$ State of Acetylene", James K. Lundberg, David M. Jonas, Bhavani Rajaram, Yongqin Chen, and Robert W. Field, J. Chem. Phys., 97, 7180-7196 (1992).

12) "Transient Dichroism Studies of I_2 Predissociation in Solution", N.F. Scherer, L.D. Ziegler, D. Jonas, and G.R. Fleming, in *Ultrafast Phenomena VIII*, edited by J.L. Martin, A. Migus, G.A. Mourou, and A. Zewail (Springer-Verlag, New York, 1993) pp. 49-52.

13) "Femtosecond Wave Packet and Chemical Reaction Dynamics of Iodine in Solution: Tunable Probe Study of Motion Along the Reaction Coordinate", Norbert F. Scherer, David M. Jonas, and Graham R. Fleming, J. Chem. Phys., 99, 153-167 (1993).

14) "Intramolecular Vibrational Redistribution of Energy in the Stimulated Emission Pumping Spectrum of Acetylene", David M. Jonas, Stephani Ann B. Solina, Bhavani Rajaram, Robert J. Silbey, Robert W. Field, Kaoru Yamanouchi, and Soji Tsuchiya, J. Chem. Phys., 99, 7350-7370 (1993).

15) "New Schemes for Extracting Molecular Dynamics from Spectra: Case Study on Vibrationally Highly Excited Acetylene", Kaoru Yamanouchi, Jun Miyawaki, Soji Tsuchiya, David M. Jonas, and Robert W. Field, Laser Chemistry, 14, 183-190 (1994).

16) "Ground State Wavepackets in Pump-Probe Spectroscopy", D.M. Jonas, S.E. Bradforth, S.A. Passino, and G.R. Fleming, in *Proceedings of the Royal Netherlands Academy of Arts and Sciences Colloquium on Femtosecond Reaction Dynamics*, edited by D.A. Wiersma (North-Holland, Amsterdam, 1994) pp. 133-145.

17) "Vibrationally Abrupt Pulses in Pump-Probe Spectroscopy", D.M. Jonas and G.R. Fleming, in *Ultrafast Processes in Chemistry and Photobiology*, edited by M.A. El-Sayed, I. Tanaka, and Yu N. Molin (Blackwell Scientific, Oxford, 1995) pp. 225-256.

18) "Femtosecond Wavepacket Spectroscopy: Influence of Temperature, Wavelength, and Pulse Duration", David M. Jonas, Stephen E. Bradforth, Sean A. Passino, and Graham R. Fleming, J. Phys. Chem. 99, 2594-2608 (1995).

19) "Observation of Ultrafast Energy Transfer from the Accessory Bacteriochlorophylls to the Special Pair in Photosynthetic Reaction Centers", Yiwei Jia, David M. Jonas, Taiha Joo, Yutaka Nagasawa, Matthew J. Lang, and Graham R. Fleming, J. Phys. Chem. 99, 6263-6266 (1995).

20) "High Resolution Spectroscopy of Chemical Isomerization: Stimulated Emission Pumping of HCN", David M. Jonas, C.A. Rogaski, Alec M. Wodtke, and Xueming Yang, in *Spectroscopy and Molecular Dynamics by Stimulated Emission Pumping*, edited by R.W. Field and H.L. Dai (World Scientific, River Edge, NJ, 1995) pp. 513-541.

21) "Prompt Solvent-Induced Electronic Predissociation of Femtosecond Pumped Iodine: a Computational Study", M. Ben-Nun, R.D. Levine, David M. Jonas, and Graham R. Fleming, Chem. Phys. Lett. 245, 629-638 (1995).

22) "Ultrafast Energy Transfer within the Bacterial Photosynthetic Reaction Center", D.M. Jonas, M.J. Lang, Y. Nagasawa, S.E. Bradforth, S.N. Dikshit, R. Jimenez, T. Joo, and G.R. Fleming, in *The Reaction Center of Photosynthetic Bacteria: Structure and Dynamics*, edited by M.E. Michel-Beyerle (Springer-Verlag, New York, 1996) pp. 187-198.

23) "Dynamics in Isolated Bacterial Light Harvesting Antenna (LH2) of *Rhodobacter sphaeroides* at Room Temperature", Taiha Joo, Yiwei Jia, Jaeyoung Yu, David M. Jonas, and Graham R. Fleming, J. Phys. Chem. 100, 2399-2409 (1996).

24) "Energy Transfer in the Photosynthetic Reaction Center", David M. Jonas, Matthew J. Lang, Yutaka Nagasawa, and Graham R. Fleming, in *Ultrafast Phenomena X*, edited by P.F. Barbara, J.G. Fujimoto, W.H. Knox, and W. Zinth (Springer-Verlag, New York, 1996) pp. 336-337.

25) "Pump-Probe Polarization Anisotropy Study of Femtosecond Energy Transfer within the Photosynthetic Reaction Center of *Rhodobacter sphaeroides* R26", David M. Jonas, Matthew J. Lang, Yutaka Nagasawa, Taiha Joo, and Graham R. Fleming, J. Phys. Chem. 100, 12660-12673 (1996).

26) "Detection of the Complete Electric Field of Femtosecond Four-Wave Mixing Signals", Allison W. Albrecht, Sarah M. Gallagher, John D. Hybl, Brett L. Landin, Bhavani Rajaram, and David M. Jonas, in *Laser Techniques for Condensed Phase and Biological Systems*, edited by N.F. Scherer and J.M. Hicks, Proceedings of SPIE 3273, 46-53 (1998).

27) "Heterodyne Detection of the Complete Electric Field of Femtosecond Four-Wave Mixing Signals", Sarah M. Gallagher, Allison W. Albrecht, John D. Hybl, Brett L. Landin, Bhavani Rajaram, and David M. Jonas, J. Opt. Soc. Am. B 15, 2338-2345 (1998). [DOI: 10.1364/JOSAB.15.002338]

28) "Complete Electric Field of Femtosecond Photon Echoes at Their Point of Origin", John D. Hybl, Allison W. Albrecht, Sarah M. Gallagher Faeder, and David M. Jonas, in *Ultrafast Phenomena XI*, edited by T. Elsaesser, J.G. Fujimoto, D.A. Wiersma, and W. Zinth (Springer, New York, 1998) pp. 127-129.

29) "Two-Dimensional Electronic Spectroscopy", John D. Hybl, Allison W. Albrecht, Sarah M. Gallagher Faeder, and David M. Jonas, Chem. Phys. Lett. 297, 307-313 (1998). [DOI: 10.1016/S0009-2614(98)01140-3]

30) "Two-Dimensional Electronic Correlation and Relaxation Spectra: Theory and Model Calculations" Sarah M. Gallagher Faeder, and David M. Jonas, J. Phys. Chem. A 103, 10489-10505 (1999). [DOI: 10.1021/jp9925738]

31) "Experimental Distinction between Phase Shifts and Time Delays: Implications for Femtosecond Spectroscopy and Coherent Control of Chemical Reactions", Allison W. Albrecht, John D. Hybl, Sarah M. Gallagher Faeder, and David M. Jonas, J. Chem. Phys. 111, 10934-10956 (1999); Erratum, J. Chem. Phys. 115, 5691 (2001). [DOI:10.1063/1.1398312]

32) "Time and Frequency Resolved Femtosecond Solvent Dynamics", John D. Hybl, Sarah M. Gallagher Faeder, Catherine A. Tolbert, David C. Green, and David M. Jonas, J. Lumin. 87-89, 126-129 (2000).

33) "Phase-Resolved Time-Domain Nonlinear Optical Signals" Sarah M. Gallagher Faeder and David M. Jonas, Phys. Rev. A 62, 033820 (2000). (17 pages)

34) "Time Dependent 2D Fourier Transform Spectra Reveal Femtosecond Solvation Dynamics", John D. Hybl, Allison W. Albrecht, and David M. Jonas, in *Ultrafast Phenomena XII*, edited by T. Elsaesser, S. Mukamel, M.M. Murnane, and N.F. Scherer (Springer, New York, 2000) pp. 519-521.

35) "Complete Femtosecond Free Induction Decay, Fourier Algorithm for Dispersion Relations, and Accuracy of the Rotating Wave Approximation" Allison Albrecht Ferro, John D. Hybl, and David M. Jonas, J. Chem. Phys. 114, 4649-4656 (2001). [DOI:10.1063/1.1346638]

36) "Two-dimensional spectroscopy and harmonically coupled anharmonic oscillators" Ko Okumura, David M. Jonas, and Yoshitaka Tanimura, Chem. Phys. 266, 237-250 (2001). [DOI:10.1016/S0301-0104(01)00252-X]

37) "Peakshapes in femtosecond 2D correlation spectroscopy" John D. Hybl, Yannick Christophe, and David M. Jonas, Chem. Phys. 266, 295-309 (2001). [DOI:10.1016/S0301-0104(01)00233-6]

38) "Two-Dimensional Fourier-Transform Electronic Spectroscopy", John D. Hybl, Allison Albrecht Ferro, and David M. Jonas, J. Chem. Phys. 115, 6606-6622 (2001). [DOI:10.1063/1.1398579]

39) "Pump-Probe Polarization Anisotropy Study of Doubly Degenerate Electronic Reorientation in Silicon Naphthalocyanine" Allison Albrecht Ferro, and David M. Jonas, J. Chem. Phys. 115, 6281-6284 (2001). [DOI:10.1063/1.1409352]

40) "Polar Solvation Dynamics in the Femtosecond Evolution of Two Dimensional Fourier Transform Spectra" John D. Hybl, Anchi Yu, Darcie A. Farrow, and David M. Jonas, J. Phys. Chem. A 106, 7651-7654 (2002). [DOI: 10.1021/jp026047j]

41) "Solvatochromism and Solvation Dynamics of Structurally Related Cyanine Dyes" Anchi Yu, Catherine A. Tolbert, Darcie A. Farrow, and David M. Jonas, J. Phys. Chem. A 106, 9407-9419 (2002). [DOI: 10.1021/jp0205867]

42) "Polar and non-polar solvation in the femtosecond evolution of 2D Fourier transform spectra", Anchi Yu, John D. Hybl, Darcie A. Farrow, and David M. Jonas, in *Ultrafast Phenomena XIII*, edited by R.D. Miller, M.M. Murnane, N.F. Scherer, and A.M. Weiner (Springer, New York, 2003) pp. 423-425.

43) "Femtosecond 2D Fourier transform study of electronic reorientation in silicon napthalocyanine" Wei Qian, Allison Albrecht Ferro, Richard T. Treglio, and David M. Jonas in *Ultrafast Phenomena XIII*, edited by R.D. Miller, M.M. Murnane, N.F. Scherer, and A.M. Weiner (Springer, New York, 2003) pp. 557-559.

44) "Two-Dimensional Femtosecond Spectroscopy" David M. Jonas, Annu. Rev. Phys. Chem. 54, 425-463 (2003). [DOI: 10.1146/annurev.physchem.54.011002.103907] http://physchem.annualreviews.org/cgi/reprint/54/1/425.pdf

45) "Spectral relaxation in pump-probe transients" Darcie A. Farrow, Anchi Yu, and David M. Jonas, J. Chem. Phys. 118, 9348-9356 (2003). [DOI:10.1063/1.1564058] Article selected for the Virtual Journal of Ultrafast Science (June, 2003). Erratum, J. Chem. Phys. 119, 4599 (2003). [DOI:10.1063/1.1592795]

46) "Optical Analogs of 2D NMR" David M. Jonas, Science 300, 1515-1517 (2003). [DOI: 10.1126/science.1085687] http://www.sciencemag.org/cgi/content/full/300/5625/1515

47) "Role of Cyclic Sets of Transition Dipoles in the Pump-Probe Polarization Anisotropy: Application to Square Symmetric Molecules and Chromophore Pairs" Wei Qian and David M. Jonas, J. Chem. Phys. 119, 1611-1622 (2003). [DOI: 10.1063/1.1581854] Article selected for the Virtual Journal of Ultrafast Science (August, 2003).

48) "Fourier-algorithm for four-wave mixing signals from optically dense systems with memory" Nadia Belabas and David M Jonas, Opt. Lett. 29, 1811-1813 (2004). Article selected for the Virtual Journal of Ultrafast Science (September, 2004).

49) "Multidimensional snapshots of chemical dynamics" Albert Stolow and David M. Jonas, Science 305, 1575-1577 (2004). [DOI: 10.1126/science.1103195]

50) "Three-dimensional view of signal propagation in femtosecond four-wave mixing with application to the boxcars geometry", Nadia Belabas and David M. Jonas, J. Opt. Soc. Am. B 22, 655-674 (2005). Article selected for the Virtual Journal of Ultrafast Science (April, 2005).

51) "Measurement of conical intersection dynamics by impulsive femtosecond polarization spectroscopy" Darcie A. Farrow, Wei Qian, Eric R. Smith and David M. Jonas in *Ultrafast Phenomena XIV*, edited by T. Kobayashi, T. Okada, T. Kobayashi, K. Nelson, S. De Silvestri (Springer, New York, 2005) pp.380-382.

52) "Propagation and detection distortions of four-wave mixing signals: application to 2D spectroscopy" Nadia Belabas and David M. Jonas in *Ultrafast Phenomena XIV*, edited by T. Kobayashi, T. Okada, T. Kobayashi, K. Nelson, S. De Silvestri (Springer, New York, 2005) pp.572-574.

53) "2D Correlation Analysis of the Continuum in Single Molecule Surface Enhanced Raman Spectroscopy", Amy A. Moore, Michele L. Jacobson, Nadia Belabas, Kathy L. Rowlen, David M. Jonas, J. Am. Chem. Soc. 127, 7292-7293 (2005). [DOI: 10.1021/ja043651u] Communication highlighted as an "Editors' Choice" in Science 308 p.927 (2005).

54) "Mid-Infrared Electric Field Characterization Using a Visible Charge-Coupled-Device-Based Spectrometer" Kevin J. Kubarych, Manuel Joffre, Amy Moore, Nadia Belabas, David M. Jonas, Opt. Lett. 30, 1228-1230 (2005) [DOI: 10.1364/OL.30.001228]. Article selected for the Virtual Journal of Ultrafast Science (May, 2005).

55) "Response functions for dimers and square symmetric molecules in four-wave mixing experiments with polarized light" Eric Ryan Smith, Darcie A. Farrow, and David M. Jonas, J. Chem. Phys. 123, 044102 (2005) (12 pages) [DOI:10.1063/1.1953531]. Article selected for the Virtual Journal of Ultrafast Science (September, 2005). Publisher's Note, J. Chem. Phys. 123, 179902 (2005) [DOI:10.1063/1.2090187]. Erratum, J. Chem. Phys. 128, 109902 (2008) [DOI:10.1063/1.2837465].

56) "Propagation, beam geometry, and detection distortions of peak shapes in two-dimensional Fourier transform spectra" Michael K. Yetzbacher, Nadia Belabas, Katherine A. Kitney, and David M. Jonas, J. Chem. Phys. 126, 044511 (2007) (19 pages) [DOI:10.1063/1.2426337]. Article selected for the Virtual Journal of Ultrafast Science (February, 2007).

57) "Dispersion Relations in Two-Dimensional Spectroscopy" Katherine A. Kitney, Michael K. Yetzbacher, Alison A. Ferro, and David M. Jonas, Springer Series in Chemical Physics 88, 395 (2007).

58) " Propagation, beam geometry, and detection distortions of peak shapes in two-dimensional Fourier transform spectroscopy" Michael K. Yetzbacher, Katherine A. Kitney, Nadia Belabas, and David M. Jonas, Springer Series in Chemical Physics 88, 338 (2007).

59) "*Ultrafast Phenomena XV*", Paul Corkum, David Jonas, Dwayne Miller, and Andrew M. Weiner (editors), 871 pages, (Springer, New York, 2007) [ISBN: 3540687793].

60) "Polarized Pump-Probe Measurements of Electronic Motion via a Conical Intersection" Darcie A. Farrow, Wei Qian, Eric R. Smith, Allison A. Ferro, and David M. Jonas, J. Chem. Phys. 128, 144510 (2008). (22 pages) [DOI: 10.1063/1.2837471]
Article highlighted as an "Editors' Choice" in Science 320 p.426 (2008).

61) "The polarization anisotropy of vibrational quantum beats in resonant pump-probe experiments: diagrammatic calculations for square symmetric molecules"
Darcie A. Farrow, Eric R. Smith, Wei Qian, and David M. Jonas, J. Chem. Phys. 129, 174509 (2008). (20 pages)

62) "Femtosecond Electronic Dynamics via a Conical Funnel" Eric Ryan Smith, William K. Peters, and David M. Jonas, Springer Series in Chemical Physics 92, 385-387 (2009).

63) "Propagation and beam geometry effects on 2D Fourier transform spectra of multi-level systems" Byungmoon Cho, Michael K. Yetzbacher, Katherine A. Kitney, Eric R. Smith, and David M. Jonas, Springer Series in Chemical Physics 92, 424-426 (2009).

64) “Femtosecond Spectral Interferometry with Attosecond Accuracy by Correction for Spectrometer Resolution Asymmetry” Michael K. Yetzbacher, Trevor L. Courtney, William K. Peters, and David M. Jonas, Springer Series in Chemical Physics 92, 905-907 (2009).

65) “Preface to the Robert W. Field Festschrift” David M. Jonas and Patrick H. Vaccaro, J. Phys. Chem. A 113, 13043–13044 (2009) [DOI: 10.1021/jp909321b]

66) "Propagation and beam geometry effects on two-dimensional Fourier transform spectra of multi-level systems" Byungmoon Cho, Michael K. Yetzbacher, Katherine A. Kitney, and David M. Jonas, J. Phys. Chem. A 113, 13287–13299 (2009) [DOI: 10.1021/jp904504z].

67) "Spectral Restoration for Femtosecond Spectral Interferometry with Attosecond Accuracy" Michael K. Yetzbacher, Trevor L. Courtney, William K. Peters, Katherine K. Kitney, Eric Ryan Smith, and David M. Jonas, J. Opt. Soc. Am. B 27, 1104-1117 (2010) [DOI:10.1364/JOSAB.27.001104]. (forthcoming posting April 29, 2010 at http://www.opticsinfobase.org/josab/upcomingissue.cfm). Article selected for the Virtual Journal of Ultrafast Science (June, 2010).

68) “Bulklike Hot Carrier Dynamics in Lead Sulfide Quantum Dots” Byungmoon Cho, William K. Peters, Robert J. Hill, Trevor L. Courtney, and David M. Jonas, Nano Letters, 10, 2498–2505 (2010) [DOI: 10.1021/nl1010349]. (ASAP posting June 15, 2010 at http://pubs.acs.org/journal/nalefd).

69) “*Ultrafast Phenomena XVII*”, Majed Chergui, David M. Jonas, Eberhard Riedle, Robert W. Schoenlein, and Antoinette J. Taylor (editors) 915 pages (Oxford University Press, New York, 2011) [ISBN 978-0-19-976837-0]

70) “Hot Carrier Dynamics in Lead Sulfide Nanocrystals” Byungmoon Cho, William K. Peters, Robert J. Hill, Trevor L. Courtney, and David M. Jonas, in “Ultrafast Phenomena XVII” Edited by Majed Chergui, David M. Jonas, Eberhard Riedle, Robert W. Schoenlein, and Antoinette J. Taylor (Oxford University Press, 2011) pp. 266-268.

71) “Band Filling Dynamics and Auger Recombination in Lead Sulfide Nanocrystals” William K. Peters, Byungmoon Cho, Robert J. Hill, Trevor L. Courtney, and David M. Jonas, in “Ultrafast Phenomena XVII” Edited by Majed Chergui, David M. Jonas, Eberhard Riedle, Robert W. Schoenlein, and Antoinette J. Taylor (Oxford University Press, 2011) pp. 275-277.

72) “Alignment, Vibronic Level Splitting, and Coherent Coupling Effects on the Pump-Probe Polarization Anisotropy” Eric R. Smith and David M. Jonas, J. Phys. Chem. A, 115, 4101-4113 (2011) [DOI: 10.1021/jp201928s].

73) “Femtosecond Pump-Probe Polarization Spectroscopy of Vibronic Dynamics at Conical Intersections and Funnels” William K. Peters, Eric R. Smith, and David M. Jonas, in “Conical Intersections: Theory, Computation, and Experiment” Edited by David R. Yarkony, Horst Köppel, and Wolfgang Domcke (World Scientific, New Jersey, 2011) pp. 715-745.

74) "Electronic resonance with anticorrelated pigment vibrations drives photosynthetic energy transfer outside the adiabatic framework" Vivek Tiwari, William K. Peters, and David M. Jonas, Proc. Nat. Acad. Sci. USA 110, 1203-1208 (2013). [DOI: 10.1073/pnas.1211157110] *PNAS Early Edition*, Dec. 24, 2012. Highlighted on the cover ("Vibrations in photosynthetic energy transfer"), by This Week in PNAS ("Pigment vibrations drive photosynthetic energy transfer" p. 1139), by a Commentary ("Beatings in electronic 2D spectroscopy suggest another role of vibrations in photosynthetic light harvesting" Tõnu Pullerits, Donatas Zigmantas, and Villy Sundström pp. 1148-1149), and as an Editor's Choice in *Science* ["Keeping Pigments in Sync" Science 339, 491 (2013)].

75) "Absolute femtosecond measurements of Auger recombination dynamics in lead sulfide quantum dots" B. Cho, W. K. Peters, V. Tiwari, A. P. Spencer, D. Baranov, R. J. Hill and D. M. Jonas, EPJ Web of Conferences 41, 04035 (2013).
http://dx.doi.org/10.1051/epjconf/20134104035

76) "A New Mechanism for Photosynthetic Energy Transfer" Vivek Tiwari, William K. Peters, and David M. Jonas, EPJ Web of Conferences 41, 08020 (2013).
http://dx.doi.org/10.1051/epjconf/20134108020

77) "Pulse Propagation Effects in Optical 2D Fourier-Transform Spectroscopy: Experiment" Hebin Li, Austin P. Spencer, Andrew Kortyna, Galan Moody, David M. Jonas, Steven T. Cundiff, J. Phys. Chem. A 117, 6279-6287 (2013). (Article ASAP 4/30/2013). [DOI: 10.1021/jp4007872]

78) "Simultaneous All – Optical Determination of Molecular Concentration and Extinction Coefficient" Byungmoon Cho, Vivek Tiwari, and David M. Jonas, Anal. Chem. 85, 5514-5521 (2013). (Article ASAP 5/10/2013). [DOI:10.1021/ac400656r]

79) "Absolute Measurement of Femtosecond Pump-Probe Signal Strength", Byungmoon Cho, Vivek Tiwari, Robert J. Hill, William K. Peters, Trevor L. Courtney, Austin P. Spencer, and David M. Jonas, J. Phys. Chem. A 117, 6332-6345 (2013) (Article ASAP 5/28/2013). [DOI: 10.1021/jp4019662]

80) "Lightweight hollow rooftop mirrors for stabilized interferometry" Robert J. Hill, Trevor L. Courtney, Samuel D. Park, and David M. Jonas, Opt. Eng. 52, 105103 (2013). (5 pages) [DOI: 10.1117/1.OE.52.10.105103]

81) "Enhanced Interferometric Detection in 2D Spectroscopy with a Sagnac Interferometer" Trevor L. Courtney, Samuel D. Park, Robert J. Hill, Byungmoon Cho, and David M. Jonas, Opt. Lett. 39, 513-516 (2014). Early Posting on OpticsInfoBase, December 16, 2013.

82) "Energy Transfer: Vibronic Coherence Unveiled" Vivek Tiwari, William K. Peters, and David M. Jonas, Nature Chemistry 6, 173-175 (2014). [doi:10.1038/nchem.1881]

83) “Two-dimensional Fourier Transform Electronic Spectroscopy at a Conical Intersection” Katherine A. Kitney-Hayes, Allison A. Ferro, Vivek Tiwari, and David M. Jonas, J. Chem. Phys. 140, 124312 (2014). [doi: 10.1063/1.4867996]

84) “Sagnac Interferometer for Two-Dimensional Spectroscopy in the Pump-Probe Geometry” Samuel D. Park, Trevor L. Courtney, Dmitry Baranov, Byungmoon Cho and David M. Jonas in “Ultrafast Phenomena XIX (Springer Proceedings in Physics, vol. 162)” Edited by Steven Cundiff, Louis DiMauro, Regina de Vivie-Riedle, Makoto Kuwata-Gonokami, and Kaoru Yamanouchi, (Springer International, New York, 2015) pp. 428-431. [DOI: 10.1007/978-3-319-13242-6]

85) “Pulse propagation effects in optical 2D Fourier-transform spectroscopy: Theory” Austin P. Spencer, Hebin Li, Steven T. Cundiff, and David M. Jonas, J. Phys. Chem. A. 119, 3936–3960 (2015). [DOI: 10.1021/acs.jpca.5b00001] (Article ASAP 4/16/2015)

86) “The Initial Pump-Probe Polarization Anisotropy of Colloidal PbS Quantum Dots” Samuel D. Park, Dmitry Baranov, Jisu Ryu, and David M. Jonas, in “OSA Technical Digest (online): Ultrafast Phenomena 2016” Edited by Giulio Cerullo, Louis DiMauro, Makoto Kuwata-Gonokami, and Jennifer Ogilvie, (Optical Society of America, Washington DC, 2016) art. UW4A.23 [ISBN: 978-1-943580-18-7] DOI: 10.1364/UP.2016.UW4A.23 (online 10/18/2016).

87) “Bandgap Inhomogeneity of a PbSe Quantum Dot Ensemble from Two-Dimensional Spectroscopy and Comparison to Size Inhomogeneity from Electron Microscopy” Samuel D. Park, Dmitry Baranov, Jisu Ryu, Byungmoon Cho, Avik Halder, Sönke Seifert, Stefan Vajda, and David M. Jonas, Nano Lett. 17, 762–771 (2017). [DOI: 10.1021/acs.nanolett.6b03874] (Article ASAP 1/3/2017)

88) “Interferometrically stable, enclosed, spinning sample cell for spectroscopic experiments on air-sensitive samples” Dmitry Baranov, Robert J. Hill, Jisu Ryu, Samuel D. Park, Adriana Huerta-Viga, Alexa R. Carollo, and David M. Jonas, Rev. Sci. Instrum. 88, 014101 (2017). [DOI: 10.1063/1.4973666]

89) “Utilizing Coherence to Enhance Function in Chemical and Biophysical Systems” Gregory D. Scholes, Graham R. Fleming, Lin X. Chen, Alán Aspuru-Guzik, Andreas Buchleitner, David F. Coker, Gregory S. Engel, Rienk van Grondelle, Akihito Ishizaki, David M. Jonas, Jeff S. Lundeen, James K. McCusker, Shaul Mukamel, Jennifer P. Ogilvie, Alexandra Olaya-Castro, Mark A. Ratner, Frank C. Spano, K. Birgitta Whaley, Xiaoyang Zhu, Nature 543, 647-656 (2017). [DOI: 10.1038/nature21425]

90) “Nonadiabatic Eigenfunctions Can Have Conical Nodes", Peter W. Foster, William K. Peters, and David M. Jonas, Chem. Phys. Lett. 683, 268-275 (2017). [DOI: 10.1016/j.cplett.2017.02.016] (Ahmed Zewail Commemoration Issue - published online Feb. 9, 2017)

91) "Sample Exchange by Beam Scanning with Applications to Noncollinear Pump-Probe Spectroscopy at Kilohertz Repetition Rates" Austin P. Spencer, Robert J. Hill, William K. Peters, Dmitry Baranov, Adriana Huerta-Viga, Alexa R. Carollo, Anna C. Curtis and David M. Jonas, Rev. Sci. Instrum. 88, 064101 (2017). [DOI: 10.1063/1.4986628]

92) "Nonadiabatic Eigenfunctions Can Have Amplitude, Signed Conical Nodes, or Signed Higher Order Nodes at a Conical Intersection with Circular Symmetry" Peter W. Foster and David M. Jonas, J. Phys. Chem. A 121, 7401-7413 (2017). [DOI: 10.1021/acs.jpca.7b07140] (Article ASAP 9/26/2017); Correction, J. Phys. Chem. A 123, 1273 (2019). [DOI: 10.1021/acs.jpca.9b00380] (article ASAP Feb. 4, 2019).

93) "Electronic Energy Transfer through Nonadiabatic Vibrational-Electronic Resonance. I: Theory for a Dimer" Vivek Tiwari, William K. Peters, and David M. Jonas, J. Chem. Phys. 147, 154308 (2017). [DOI: 10.1063/1.5005835]

94) "Nodeless Vibrational Amplitudes and Quantum Nonadiabatic Dynamics in the Nested Funnel for a Pseudo Jahn-Teller Molecule or Homodimer" William K. Peters, Vivek Tiwari, and David M. Jonas, J. Chem. Phys. 147, 194306 (2017). [DOI: 10.1063/1.5009762]

95) "Electronic Energy Transfer through Nonadiabatic Vibrational-Electronic Resonance. II: 1D Spectra for a Dimer" Vivek Tiwari and David M. Jonas, J. Chem. Phys. 148, 084308 (2018) [DOI: 10.1063/1.5003193]; Publisher's Note, J. Chem. Phys. 148, 119901 (2018). [DOI: 10.1063/1.5027497].

96) "Tribute to Veronica Vaida" D. James Donaldson, Joseph S. Francisco, Vicki H. Grassian, Russell J. Hemley, David M. Jonas, Kenneth R. Leopold, Nancy E. Levinger, J. Phys. Chem. A 122, 1157-1158 (2018). [DOI: 10.1021/acs.jpca.7b11829]

97) "Vibrational and Nonadiabatic Coherence in 2D Electronic Spectroscopy, the Jahn-Teller Effect, and Energy Transfer" David M. Jonas, Annu. Rev. Phys. Chem. 69, 327-352 (2018) [DOI: 10.1146/annurev-physchem-052516-050602] http://www.annualreviews.org/eprint/QWF9rbpcABjcf6GRFiRV/full/10.1146/annurev-physchem-052516-050602

98) "Carrier Dynamics and Interactions for Bulklike Photoexcitation of Colloidal Indium Arsenide Quantum Dots" Austin P. Spencer, William K. Peters, Nathan R. Neale, David M. Jonas, J. Phys. Chem. C 123, 848–858 (2019) [DOI: 10.1021/acs.jpcc.8b09671] (Just Accepted MS online Dec. 10, 2018; Article ASAP Jan. 2, 2019)

99) "Nonadiabatic conical nodes are near but not at an elliptical conical intersection" Peter W. Foster and David M. Jonas, Chem. Phys. 520, 108-121 (2019) [DOI: 10.1016/j.chemphys.2019.01.004] (in press online Jan. 10, 2019)

100) “Purification of Oleylamine for Materials Synthesis and Spectroscopic Diagnostics for *trans* Isomers” Dmitry Baranov, Michael J. Lynch, Anna C. Curtis, Alexa R. Carollo, Callum R. Douglass, Alina M. Mateo-Tejada, and David M. Jonas, Chem. Mater. 31, 1223-1230 (2019). (Article ASAP Feb. 4, 2019) [DOI: 10.1021/acs.chemmater.8b04198] ranked #2 in the top 20 article reads, February 2019

101) “Relations between absorption, emission, and excited state chemical potentials from nanocrystal 2D spectra” Jisu Ryu, Dmitry Baranov, Samuel D. Park, Iva Rreza, Jonathan S. Owen, and David M. Jonas, Science Advances 7, eabf4741 (2021). [DOI: 10.1126/sciadv.abf4741]

102) “Femtosecond 2DFT Spectroscopy Resolves Disorder to Reveal Reactive Dynamics, Even Under the Quantum Zero-Point”, David M. Jonas, in “Nobel Symposium NS173: Exploring complex molecular and condensed phase processes and functions by multidimensional spectroscopy from THz to X-rays” Edited by Tönu Pullerits, Maria Abrahamson, Bo Albinson, Johan Mauritson, Villy Sundström, and Donatas Zigmantas (Media-Tryck, Lund, 2022).

103) “Design rules for narrow luminescence from semiconductors made in solution” Hao A. Nguyen, Grant Dixon, Florence Y. Dou, Shaun Gallagher, Stephen Gibbs, Dylan M. Ladd, Emanuele Marino, Justin C. Ondry, James P. Shanahan, Eugenia S. Vasileiadou, Stephen Barlow, Daniel R. Gamelin, David S. Ginger, David M. Jonas, Mercouri G. Kanatzidis, Seth R. Marder, Daniel Morton, Christopher B. Murray, Jonathan S. Owen, Dmitri V. Talapin, Michael F. Toney, and Brandi M. Cossairt, Chemical Reviews 123, 7890-7952 (2023). [DOI: 10.1021/acs.chemrev.3c00097]

104) “Generalized Einstein Relations between Absorption and Emission Spectra at Thermodynamic Equilibrium” Jisu Ryu, Sarang Yeola, and David M. Jonas, arXiv:2405.13742 preprint posted 5/23/2024 at https://arxiv.org/abs/2405.13742, Proceedings of the National Academy of Sciences of the USA 121, e2410280121 (2024). [DOI 10.1073/pnas.2410280121]

105) “Generalized Einstein Relations between Absorption and Emission Spectra in the Electric Dipole Approximation” Jisu Ryu and David M. Jonas, J. Chem. Phys. (submitted)

106) “Optical Lineshape Models and the Generalized Einstein Relations between Absorption and Emission” Aman Agrawal, Jisu Ryu, and David M. Jonas (in preparation)

107) "Static and dynamic ligand coverage effects on PbS quantum dots revealed by 2D excitation-emission matrices", Aman Agrawal, Yuzuka Karube, Jonathan S. Owen, and David M. Jonas (In preparation)

108) "Thermodynamic Relationships Between Absorption and Emission Spectra Near Interfaces", Jennifer L. Sormberger, Sarang Yeola and David M. Jonas (in preparation).

109) “Electronic Energy Transfer Through Non-Adiabatic Vibrational-Electronic Resonance. III. 2D electronic spectra of a dimer” Vivek Tiwari, Aman Agrawal, and David M. Jonas (in preparation)

110) “On Fluctuation Theorems of Statistical Mechanics and the Generalized Einstein Relations between Absorption and Emission Spectra” Sarang Yeola and David M. Jonas (in preparation)

111) “Connecting Einstein Coefficient Spectra to Experimental Measurements” Callum R. Douglass, Aman Agrawal, and David M. Jonas (in preparation)

Talks

1) "From Spectroscopic Order Towards Quantum Chaos: Stimulated Emission Pumping of Acetylene", Modern Optics and Spectroscopy Seminar, MIT, Cambridge, MA, October 29, 1991

2) "Solvent-induced Predissociation of I_2 in Hexane", International Symposium in honor of Professor Soji Tsuchiya, University of Tokyo, Tokyo, Japan, August 21, 1993

3) "Solvent-induced Predissociation of I_2 in Hexane", Symposium on Quantum Tunneling in the Condensed Phase, 206th ACS National Meeting, Chicago, IL, August, 27, 1993

4) "Vibrational Forces Exerted by Short Optical Pulses", Symposium on Comparison of Cluster and Condensed Phase Chemistry, 207th ACS National Meeting, San Diego, CA, March 13, 1994

5) "Femtosecond Spectroscopic Studies of Iodine Predissociation in Solution and Energy Transfer in Photosynthesis", Physical Chemistry Colloquium, Colorado State University, Fort Collins, CO, October 26, 1995

6) "Femtosecond Energy Transfer in Photosynthetic Reaction Centers", 13th Rocky Mountain Regional ACS Meeting, Lakewood, CO, June 10, 1996

7) "Femtosecond Energy Transfer in Photosynthetic Reaction Centers", Symposium on Biophysical Chemistry, 212th ACS National Meeting, Orlando, FL, August 26, 1996

8) "Energy Transfer within Photosynthetic Reaction Centers and Antennas", Photosynthesis and Biophotonics Seminar, Photosynthesis Center, Arizona State University, Phoenix, AZ, January 30, 1997

9) "Detection of the Complete Electric Field of Femtosecond Four-Wave Mixing Signals", Symposium on Laser Techniques for Condensed Phase and Biological Systems, Photonics West Conference, International Society for Optical Engineering, San Jose, CA, January 29,1998

10) "Complete Electric Field of Photon Echoes at Their Point of Origin", Symposium on Ultrafast Coherence Spectroscopy, Optical Society of America Annual Meeting, Baltimore, MD,
October 9, 1998

11) "Measuring Optical Electric Fields, 2D Electronic Spectroscopy, and Solvent Reorganization Dynamics", Center for Optics and Physical Chemistry Joint Seminar, University of Oregon, Eugene, OR, November 16, 1998

12) "Solvent Reorganization Dynamics and Electronic Dephasing in Two-Dimensional Electronic Spectra", Fifth Symposium on Molecular Reaction Dynamics in Condensed Matter,

Newport Beach, CA, February 11, 1999

13) "Two-Dimensional Fourier Transform Electronic Spectroscopy", Symposium on Liquid State Dynamics, American Physical Society Centennial Meeting, Atlanta, GA, March 26, 1999

14) "2-D Fourier-transform electronic spectroscopy of aggregates", Symposium on Chromophore Aggregates, 218th ACS National Meeting, New Orleans, LA, August 22, 1999

15) "Watching Solvents Rearrange on a Femtosecond Timescale with Two-Dimensional Fourier-Transform Spectroscopy", International Conference on Luminescence and Optical Spectroscopy of Condensed Matter, Osaka, Japan, August 26, 1999 (INVITED TALK)

16) "Study of Femtosecond Solvent Reorganization with Optical Two-Dimensional Fourier Transform Spectroscopy" Symposium on Ultrafast Lasers In Chemistry, 15th Interdisciplinary Laser Science Conference, San Jose, CA, September 30, 1999 (talk given by John Hybl)

17) interviewed by David Kestenbaum about 1999 Nobel Prize in Chemistry on "All Things Considered", broadcast on National Public Radio at 4:00 pm EST, October 12, 1999 www.npr.org/programs/all-things-considered/1999/10/12/12941526/?showDate=1999-10-12

18) "Using 2D Fourier transform spectroscopy to probe femtosecond polar solvation and decoherence" Physical Chemistry Seminar, University of Illinois at Urbana-Champaign, October 20, 1999

19) "Probing the Solvent Coordinate with Femtosecond 2D Fourier-Transform Spectroscopy" Physical and Theoretical Chemistry Seminar, University of Southern California, Los Angeles, CA, November 1, 1999

20) "Two-Dimensional Fourier Transform Electronic Correlation and Relaxation Spectroscopy" Symposium on Two-Dimensional Vibrational Spectroscopy, March 2000 Meeting, American Physical Society, Minneapolis, MN, March 21, 2000 (INVITED)

21) "2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?" Chemistry Department Seminar, Kansas State University, March 30, 2000

22) "Using femtosecond 2D Fourier transform spectroscopy to probe polar solvation and electronic decoherence" Analytical, Physical, and Theoretical Chemistry Seminar, University of Texas at Austin, April 6, 2000

23) "2D FT Spectroscopy: Single Molecule Spectroscopy on a Femtosecond Timescale?" Modern Optics and Spectroscopy Seminar, MIT, Cambridge, MA, May 16, 2000

24) "Time dependent 2D Fourier transform spectra reveal femtosecond solvent dynamics" 12th International Conference on Ultrafast Phenomena, July 12, 2000

25) “Two-Dimensional Fourier Transform Spectra: Frequency Domain Pictures of Time Domain Spectroscopy” Gordon Research Conference on Molecular Electronic Spectroscopy, August 3, 2000 (INVITED)

26) “Femtosecond photon echoes and wavepacket reversibility in solution”, Symposium on Liquid Dynamics, 220th ACS National Meeting, Washington, DC, August 23, 2000

27) “Two-Dimensional Fourier Transform Spectroscopy with Femtosecond Lasers” Analytical Sciences Seminar, Department of Chemistry, University of Wisconsin, Madison, WI, October 5, 2000

28) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Princeton American Chemical Society Seminar, Princeton University, Princeton, NJ, October 30, 2000

29) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Physical Chemistry Seminar, Stanford University, Stanford, CA, November 20, 2000

30) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Physical Chemistry Seminar, University of California, Santa Barbara, CA, November 21, 2000

31) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Special Seminar, Columbia University, New York, NY, February 12, 2001

32) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Physical Chemistry Seminar, Yale University, New Haven CT, February 13, 2001

33) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Physical Chemistry Seminar, University of California, Los Angeles, CA, March 5, 2001

34) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Physical Chemistry Seminar, University of California, Irvine, CA, March 6, 2001

35) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Departmental Chemistry Colloquium, University of California, Riverside, CA, March 7, 2001

36) “Inertial solvation in femtosecond 2D spectra” Symposium on Condensed Phase Multidimensional Spectroscopies, March 2001 Meeting, American Physical Society, Seattle, WA, March 12, 2001 (talk given by John Hybl)

37) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Steacie Institute for Molecular Science, National Research Council, Ottawa, Ontario, CANADA, April 10, 2001

38) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?”, Photonics Research Ontario Seminar, University of Toronto, Toronto, Ontario, CANADA, April 11, 2001

39) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?”, Physical Chemistry Seminar, Colorado State University, Fort Collins, CO, May 3, 2001

40) “Two-Dimensional Fourier Transform Electronic Spectroscopy”, Symposium on Two-Dimensional Vibrational Spectroscopy, Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies, Detroit, MI, Oct. 11, 2001 (INVITED)

41) “Exploring local solvent environments and degenerate electronic motion with electronic analogs of 2D NMR”, Massachusetts Institute of Technology, Physical Chemistry Seminar, Nov. 27, 2001

42) “Exploring local solvent environments and degenerate electronic motion with electronic analogs of 2D NMR”, Princeton University, Physical Chemistry Seminar, Nov. 28, 2001

43) “Exploring local solvent environments and degenerate electronic motion with electronic analogs of 2D NMR”, University of Pennsylvania, Physical Chemistry Seminar, Nov. 29, 2001

44) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Chemistry Department Seminar, University of Montana, Missoula, MT, March 4, 2002

45) “Disentangling polar and non-polar solvation with 2D spectra” Session on Two Dimensional Nonlinear Spectroscopy, March 2002 Meeting, American Physical Society, Indianapolis, IN, March 18, 2002

46) “Degenerate electronic reorientation in square molecules” Session on Vibronic Chemistry in the Gas Phase of Multiple Potential Energy Surfaces, March 2002 Meeting, American Physical Society, Indianapolis, IN, March 21, 2002

47) “Polar and non-polar solvation in the femtosecond evolution of 2D Fourier transform spectra” 13th International Conference on Ultrafast Phenomena, Vancouver, BC, Canada, May 13, 2002

48) “Femtosecond 2D Fourier transform study of electronic reorientation in silicon napthalocyanine” 13th International Conference on Ultrafast Phenomena, Vancouver, BC, Canada, May 15, 2002

49) “Femtosecond Two-Dimensional Fourier Transform Spectroscopy” Symposium on Two-dimensional Laser Spectroscopy, Laser Science XVIII, October 2, 2002 (INVITED)

50) “Vibrational Dynamics in 2D Electronic Spectra” Symposium on Vibrational Spectroscopy, Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies, Providence, RI, October 14, 2002 (INVITED)

51) “Coherent Multiple Dipole Excitation and Reorientation in 2D spectroscopy” Coblentz Award Symposium, Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies, Providence, RI, October 14, 2002 (INVITED)

52) “Role of Vibrations in Two-Dimensional Electronic Spectroscopy” International Symposium on 2D Vibrational Spectroscopy, Seoul, South Korea, October 22, 2002 (INVITED)

53) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?” Physical Chemistry Seminar, Northwestern University, Evanston, IL, November 15, 2002

54) “2D electronic spectroscopy: What can we learn from optical analogs of 2D NMR?”, Ecole Polytechnique, FRANCE, Nov. 18, 2002

55) "Electronic Wavefunction Reorientation Revealed by Femtosecond 2D Spectra" Symposium on Frontiers of Ultrafast Dynamics in Complex Systems, American Physical Society March Meeting, March 5, 2003 (INVITED)

56) “Two-Dimensional Femtosecond Spectroscopy: Optical Analogs of 2D NMR”, Analytical and Physical Chemistry Seminar, Department of Chemistry, University of Delaware, Newark, DE, April 30, 2003

57) “Femtosecond and 2D Fourier Transform Experiments on Jahn-Teller Dynamics” Physical Chemistry Seminar, University of Wisconsin, Madison, WI, Nov. 4, 2003

58) “Femtosecond Two-Dimensional Fourier Transform Spectroscopy: Maximizing Time and Frequency Resolution to Reveal Dynamics in Disordered Materials” Time and Frequency Division Seminar, NIST, Boulder, CO, Dec. 2, 2003

59) interviewed by Jonathan Hamilton about the Shortest Time Interval Measured on “Morning Edition”, broadcast on National Public Radio at 6:00 am EST, February 26, 2004 http://www.npr.org/programs/morning-edition/2004/02/26/13061323/?showDate=2004-02-26

60) “Femtosecond and 2D Fourier Transform Experiments on Jahn-Teller Dynamics” Symposium on Mixed Quantum, Classical and Semiclassical Dynamics, 227th ACS National Meeting, Anaheim, CA, March 31, 2004 (INVITED)

61) “Measurement of conical intersection dynamics by impulsive femtosecond polarization spectroscopy”, 14th International Conference on Ultrafast Phenomena, Niigata, Japan, July 28, 2004

62) “Femtosecond 1D and 2D FT experiments on vibrational and electronic motions at a conical intersection” Second International Conference on Coherent Multidimensional Vibrational Spectroscopy, Madison, WI, August 16, 2004 (INVITED)

63) “Femtosecond 1D and 2D Fourier transform spectroscopy of vibrational and electronic motions” symposium on Coherent Two-Dimensional Vibrational Spectroscopy, 31st Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS), Portland OR, October 5, 2004 (INVITED)

64) “Femtosecond 1-D and 2-D Fourier transform spectroscopy of vibrational and electronic motions” Laser Science XX, Rochester, NY, October 11, 2004 (INVITED)

65) “Watching electrons move through a conical intersection”, Physical Chemistry Seminar, University of California, San Diego, CA, February 8, 2005

66) “Watching electrons move through a conical intersection”, General Chemistry Seminar, Cornell University, Ithaca, NY, February 24, 2005

67) “Watching electrons move through a conical intersection”, Telluride Summer Workshop on "Nonlinear ultrafast spectroscopy in fluids", Telluride, CO, June 30, 2005 (INVITED).

68) "Promoting effective advising and mentoring", Summer Convening, Carnegie Initiative on the Doctorate, Carnegie Foundation for the Advancement of Teaching, Palo Alto, CA, September 12, 2005.

69) “Propagation distortions and dispersion relations in 2D FT spectroscopy” Third International Conference on Coherent Multidimensional Spectroscopy, Rigi Kulm, SWITZERLAND, May 28, 2006 (INVITED)

70) "Absorptive Propagation Effects in Femtosecond Four-Wave-Mixing" XVth International Conference on Ulltrafast Phenomena, Pacific Grove, California, July 31, 2006 (talk given by Michael Yetzbacher)

71) "Watching electronic motion through a conical intersection" symposium on Frontiers in Molecular Dynamics: Experiment and Theory, American Chemical Society National Meeting, San Francisco, California, September 10, 2006 (INVITED)

72) "Two-dimensional spectroscopy and fast electronic processes" workshop on New Scientific Opportunities with VUV and Soft X-Ray Free Electron Lasers, Synchrotron Radiation Center, University of Wisconsin, Madison, October 18, 2006 (INVITED)

73) "Watching electronic move through a conical intersection" 54th Annual Western Spectroscopy Association Conference, Pacific Grove, California, February 1, 2007 (talk given by E. Ryan Smith)

74) "Watching the electronic motions driven by a conical intersection" Session on Non-adiabatic Molecular Dynamics and Control at Conical Intersections, American Physical Society March Meeting, Denver, Colorado, March 7, 2007 (INVITED)

75) "Electronic motions in two-dimensional Fourier transform spectroscopy" 7th Pacific Rim Conference on Lasers and Electro-Optics (CLEO Pacific Rim 2007), Seoul, South Korea, August 30, 2007 (INVITED).

76) "Watching Electrons Move at Conical Intersections" Chemistry Departmental Seminar, Duke University, Durham, NC, October 2, 2007.

77) "Propagation and detection distortions in coherent two-dimensional Fourier transform spectroscopy" Symposium on Coherent 2D Spectroscopy, 34th Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS), Memphis, Tennessee, October 15, 2007 (INVITED).

78) "Femtosecond Electronic Dynamics via a Conical Funnel" XVIth International Conference on Ultrafast Phenomena, Stresa, Italy, June 10, 2008.

79) “Femtosecond Dynamics and Multidimensional Spectroscopy” Workshop on Efficient Conversion of Solar Energy to Electricity and Fuels (co-sponsored by the Colorado Renewable Energy Collaboratory and the US Department of Energy) University of Colorado, Boulder, CO Aug. 15, 2008 (INVITED).

80) "Causality and Phase in Two-Dimensional Spectroscopy" Fourth International Conference on Coherent Multidimensional Spectroscopy, Kyoto, JAPAN, September 30, 2008 (INVITED).

81) Global COE Lecturer, Department of Chemistry, University of Tokyo, JAPAN, January 5-7, 2009 (a series of three 90-minute lectures on Two-Dimensional Femtosecond Spectroscopy).

82) “Coupled Vibrational and Electronic Dynamics at Conical Intersections and Funnels” Chemistry and Materials Physics Department, Advanced Science Institute, RIKEN, Wako, JAPAN, January 6, 2009.

83) “Coupled Vibrational and Electronic Dynamics at Conical Intersections and Funnels” Departmental Seminar, Department of Chemistry, University of Tokyo, JAPAN, January 8, 2009.

84) “Coupled Vibrational and Electronic Dynamics at Conical Intersections and Funnels” Department of Applied Physics and Chemistry, Tokyo University of Electro-Communications, JAPAN, January 9, 2009.

85) “Femtosecond Dynamics, Multidimensional Spectroscopy, and Harvesting Sunlight” Department of Physics, Colorado State University, Fort Collins, CO, March 9, 2009.

86) “Nonadiabatic Dynamics at Conical Funnels and in Quantum Dots” Department of Chemistry, University of North Carolina, Chapel Hill, NC, April 6, 2009.

87) “Nonadiabatic Electronic Dynamics at Conical Funnels and in Quantum Dots” Physical Chemistry Seminar, Department of Chemistry, University of Washington, Seattle, WA, June 3, 2009.

88) “Watching Electrons at Conical Intersections and Funnels” Ohio State Symposium on Molecular Spectroscopy, June 24, 2009 (INVITED).

89) “Nonadiabatic electronic dynamics at conical funnels and in quantum dots” Gordon Research Conference on Molecular Photochemistry, July 9, 2009 (INVITED).

90) “Electronic Dynamics via Conical Funnels and Intersections” Gordon Research Conference on Molecular Electronic Spectroscopy, July 24, 2009 (INVITED).

91) “Revolutionary Photoconversion” Renewable Energy Speaker Series: Cutting Edge Technologies, Brownstein, Hyatt, Farber, Schreck, LLP, Denver, August 12, 2009

92) “Auger recombination dynamics in lead sulfide quantum dots” Symposium on “The Physical Chemistry of Photon to Fuel Conversion” 238th American Chemical Society National Meeting, Washington, DC, August 18, 2009 (talk given by Byungmoon Cho).

93) “Non-adiabatic dynamics in quantum dots” Symposium on “Chemical Reaction Dynamics in Gaseous and Condensed Phases”, 238th American Chemical Society National Meeting, Washington, DC, August 20, 2009 (INVITED).

94) “2D Spectroscopy at a Conical Intersection” Symposium on Coherent 2D Spectroscopy, 36th Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS), Louisville, Kentucky, October 19, 2009 (INVITED).

95) “Frontiers in Two-Dimensional Femtosecond Spectroscopy” Symposium Celebrating 50 Years of the Laser, 239th American Chemical Society National Meeting, San Francisco, March 24, 2010 (INVITED)

96) “Hot Carrier Dynamics in Semiconductor Nanocrystals” James Franck Institute Seminar, University of Chicago, April 20, 2010

97) “Auger recombination dynamics in lead sulfide quantum dots” XVIIth International Conference on Ultrafast Phenomena, Snowmass, CO, July 19, 2010 (talk given by Byungmoon Cho).

98) “2D spectroscopy at a conical intersection” 5th International Conference on Multidimensional Spectroscopy, Minneapolis, August 20, 2010 (INVITED).

99) “Hot Carrier Dynamics in Semiconductor Nanocrystals” Chemical Physics Colloquium, University of Colorado, Boulder, CO Physical Chemistry Seminar, October 1, 2010

100) “Hot Carrier Dynamics in Semiconductor Nanocrystals” Physical Chemistry Seminar, University of Rochester, Rochester, NY, October 11, 2010.

101) “Femtosecond electronic motion via conical intersections and funnels” Exploratory Workshop on Nontrivial Quantum Effects in Biomolecular Systems, Capri, ITALY, Oct. 18, 2010 (INVITED).

102) “2D Spectroscopy at a Conical Intersection” ICFO seminar, Institut Ciències Fotòniques (ICFO, the Institute of Photonic Sciences), Barcelona, SPAIN, Oct. 22, 2010.

103) “Femtosecond Electronic Motion Through Conical Funnels” Symposium on Excited-State Dynamics: Theory and Experiment, 242nd American Chemical Society National Meeting, Denver, August 30, 2011 (INVITED).

104) “2D Electronic Spectroscopy in the Infrared” Symposium on Coherent 2D Spectroscopy, 38th Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS), Reno, NV, October 4, 2011 (INVITED).

105) “Hot Carrier Dynamics in Semiconductor Nanocrystals”, Physical Chemistry Seminar, Purdue University, Lafayette, IN, November 2, 2011

106) “Two-Dimensional Fourier Transform Electronic Spectroscopy” Plyler Award Session Honoring Andrei Tokmakoff, American Physical Society March Meeting, February 29, 2012 (INVITED).

107) “Carrier Interactions in Quantum Dots” Symposium on Solar Energy Conversion and Utilization for Fuels and Energy Production, 243rd American Chemical Society National Meeting, San Diego, March 25, 2012 (INVITED).

108) "Watching Coherent Electronic Motion Through Conical Funnels and the Vibrational Aftermath in 2D Femtosecond Spectroscopy" Physical Chemistry Seminar, University of California, Berkeley, CA, April 3, 2012

109) “Quantum Dots, Nanoscience and the Future of Photovoltaics (Forum)”, American Solar Energy Society World Renewable Energy Forum, Denver, CO, May 17, 2012

110) “Anti-Correlated Intramolecular Vibrations Promote Electronic Energy Transfer in Photosynthesis” 4th Quantum Effects in Biological Systems Workshop (QuEBS 2012), University of California, Berkeley, June 6, 2012 (talk given by Vivek Tiwari).

111) “A New Mechanism for Photosynthetic Energy Transfer,” XVIIIth International Conference on Ultrafast Phenomena, Lausanne, SWITZERLAND, July 12, 2012 (POSTDEADLINE)

112) “Non-adiabatic dynamics of anti-correlated intramolecular vibrations promote electronic energy transfer in photosynthesis” 6th International Conference on Coherent Multidimensional Spectroscopy (CMDS 2012), Berlin, GERMANY, July 17, 2012

113) “Electronic Resonance with Anti-Correlated Intramolecular Vibrations Drives Photosynthetic Energy Transfer outside the Adiabatic Framework”, Gordon Research Conference on Electronic Spectroscopy and Dynamics, Bates College, Lewiston, Maine, July 22-27, 2012 (poster)

114) “Electronic Resonance with Anticorrelated Pigment Vibrations Drives Photosynthetic Energy Transfer outside the Adiabatic Framework” Workshop on Coherent Energy Transport in Photosynthesis, Nanyang Technological University, SINGAPORE, Dec. 14, 2012 (INVITED)

115) “How can photosynthetic light harvesting have a quantum efficiency approaching unity?” Conference on New Directions in the Quantum Control Landscape, Kavli Institute for Theoretical Physics, University of California, Santa Barbara, February 28, 2013 (INVITED)

116) “A Nonadiabatic Vibrational Mechanism for Photosynthetic Energy Transfer” Chemical Physics/Physical Chemistry Seminar, University of Colorado, Boulder, March 15, 2013

117) “Two-Dimensional Femtosecond Spectroscopy” Seminar on Optical, Electronic and Quantum Systems, University of Colorado, Boulder, March 22, 2013

118) “Award Address (Ahmed Zewail Award in Ultrafast Science and Technology sponsored by Ahmed Zewail Endowment Fund established by the Newport Corporation (Newport)). 2D Femtosecond Spectroscopy.” Awards Symposium, Division of Physical Chemistry, 245th ACS National Meeting, New Orleans, April 09, 2013

119) “Simultaneous Determination of Concentration and Extinction Coefficient by All-Optical Methods” Contributed Papers in Instrument Development and Sensor Design, SciX – 40th Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS), Milwaukee, WI, October 2, 2013.

120) “2D FT Electronic Spectroscopy of Quantum Dots in the Short-Wave Infrared”, FACSS Innovation Award Plenary Session, SciX – 40th Annual Meeting of the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS), Milwaukee, WI, October 3, 2013 (INVITED PLENARY SESSION).

121) “How can photosynthetic light harvesting have a quantum efficiency approaching unity?” Physical Chemistry Seminar, Department of Chemistry, UC Irvine, November 5, 2013

122) “How can photosynthetic light harvesting have a quantum efficiency approaching unity?” Chemistry Seminar, UC Merced, November 15, 2013

123) “Shared vibrations: How photosynthetic light harvesting approaches 100% efficiency” Chemistry Colloquium, Columbia University, January 30, 2014

124) “Shared vibrations: How photosynthetic light harvesting approaches 100% efficiency” CECAM Workshop “Investigating Fine Quantum Effects in Biological Systems: Toward a Synergy Between Experimental and Theoretical Approaches?”, Paris, May 30, 2014 (INVITED)

125) “The Vibrational Aftermath of Photosynthetic Energy Transfer in 2DFT Electronic Spectra” 7th International Conference on Coherent Multidimensional Spectroscopy (CMDS 2014), Eugene, OR, July 14, 2014 (substitute for invited talk by Andrew Moran)

126) “Shared Vibrations and the Remarkable Quantum Efficiency of Photosynthetic Light Harvesting” Physical Chemistry Seminar, Colorado State University, Fort Collins, CO, Oct. 23, 2014

127) “Shared vibrations: How photosynthetic light harvesting approaches 100% efficiency” Joint Oregon Center for Optics and Physical Chemistry Seminar, University of Oregon, Eugene, OR, November 17, 2014

128) “Watching Electrons Move with Two-Dimensional Femtosecond Spectroscopy” Chemistry Department Seminar, Ohio State University, Columbus, OH, December 3, 2014

129) “How Shared Vibrations Drive Photosynthesis” 62nd Pacific Conference on Spectroscopy and Dynamics, Asilomar, CA, January 30, 2015 (INVITED)

130) “Anti-Correlated Vibrations Drive Fast Non-Adiabatic Light Harvesting” Emerging Ultrafast Technologies, Division of Chemical Physics, American Physical Society March Meeting, San Antonio, TX, March 3, 2015 (INVITED – talk given by William Peters due to DMJ illness)

131) “Shared Vibrations: How Photosynthetic Light Harvesting Approaches 100% Efficiency” Chemistry Department Seminar, Tulane University, New Orleans, LA, March 9, 2015

132) “Two-Dimensional Fourier Transform Spectroscopy” ABB BOMEM-Michelson Award of the Coblentz Society Session, Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy (PITTCON), New Orleans, LA, March 10, 2015 (INVITED)

133) "Non-Adiabatic Mechanism for Photosynthetic Energy Transfer and All-Optical Determination of Concentration using Femtosecond Lasers", DAMOP Thesis Prize Session, 46th Annual Meeting of the American Physical Society Division of Atomic, Molecular and Optical Physics, June 9, 2015 (talk given by DAMOP thesis prize finalist Vivek Tiwari).

134) “Nested Funnels for Fast Non-Adiabatic Energy Transfer” Gordon Research Conference on Photochemistry, Easton, MA, July 22, 2015 (INVITED)

135) “2D Spectroscopy of Quantum Dots in the Short-Wave Infrared”, Structure & Dynamics in Complex Chemical Systems, Division of Physical Chemistry, 250th ACS National Meeting, Boston, MA, August 19, 2015 (INVITED)

136) “Watching Electrons Move with Two-Dimensional Femtosecond Spectroscopy”, Physics and Chemistry Seminar, Macalester College, St. Paul, MN, Oct. 21, 2015

137) *Bryce Crawford Lecture* “Two-Dimensional Femtosecond Spectroscopy”, Department of Chemistry, University of Minnesota, Minneapolis, MN, Oct. 22, 2015

138) “How Shared Vibrations Drive Photosynthesis”, Symposium on Molecular Imaging and Spectroscopy, Institute for Basic Science, Korea, Oct. 29, 2015

139) “Shared Vibrations in Photosynthetic Light Harvesting”, Symposium on Photoprocesses and Illusions in Biomolecules and Photosynthesis, Department of Chemical Physics, Lund University, Sweden, Jan. 29, 2016

140) “How Shared Vibrations Drive Photosynthetic Energy Transfer”, Chemistry Department and Center for Photochemical Sciences Seminar, Bowling Green State University, OH, Mar. 2, 2016

141) “Harnessing Shared Vibrations for Energy Transfer”, Symposium on Nonlinear Spectroscopy and Modeling, Division of Analytical Chemistry, 251st ACS National Meeting, San Diego, CA, Mar. 14, 2016 (INVITED)

142) “How Shared Vibrations Drive Photosynthetic Energy Transfer”, Optics Within Life Sciences (OWLS 2016), Mumbai, India, Mar. 18, 2016 (INVITED)

143) “How Shared Vibrations Drive Photosynthetic Energy Transfer”, Art Nozik Symposium, Renewable and Sustainable Energy Institute, University of Colorado, Boulder, CO, Mar. 27, 2016

144) “Ultrafast Laser 2D Spectroscopy” Symposium on Applications of 2D Spectroscopy, National Renewable Energy Laboratory, Golden, CO, Jun. 17, 2016

145) “Optical Inhomogeneity from 2D Spectra vs. Static Size Dispersion in an Ensemble of PbSe Nanocrystals” 8th International Conference on Coherent Multi-Dimensional Spectroscopy, Groningen, NETHERLANDS, Jun. 29, 2016 (talk given by Jisu Ryu)

146) “Shared vibrations: How photosynthetic light harvesting approaches 100% efficiency” Physics Department Colloquium, University of Colorado, Boulder, CO, Sept. 28, 2016

147) “Shared vibrations: How photosynthetic light harvesting approaches 100% efficiency”, Physical Chemistry Seminar, University of Pennsylvania, Philadelphia, PA, Oct. 13, 2016

148) “Energy Transfer Lessons from Photosynthesis”, Solar Energy Research Conference: “Energy Storage: Fundamental to Applied”, University of North Carolina, Chapel Hill, NC, Oct. 21, 2016

149) “Shared vibrations: How photosynthetic light harvesting approaches 100% efficiency”, Chemistry Department Seminar, University of California, Riverside, CA, Feb. 8, 2017

150) “Fast electronic dynamics in 2D spectra of PbS quantum dots” Symposium on Coherent Multidimensional Spectroscopy in Materials Science, Division of Analytical Chemistry, 253rd National Meeting of the American Chemical Society, San Francisco, CA, April 2, 2017

151) “Harnessing Shared Vibrations to Control Energy Transfer” Symposium on Spectroscopy of Complex Systems, Division of Physical Chemistry, 253rd National Meeting of the American Chemical Society, San Francisco, CA, April 4, 2017 (INVITED)

152) “Bandgap inhomogeneity from 2D spectra vs. size dispersion from TEM in PbSe quantum dots” Symposium on Coherent Multidimensional Spectroscopy in Materials Science, Division of Analytical Chemistry, 253rd National Meeting of the American Chemical Society, San Francisco, CA, April 3, 2017 (INVITED) – talk given by Dmitry Baranov.

153) “Conical Nodes” Workshop on "Quantum Dynamics and Spectroscopy of Functional Molecular Materials and Biological Photosystems", Les Houches, France, May 25, 2017 (INVITED) – talk given by Peter Foster.

154) “Nonadiabatic Dynamics in Energy Transfer” Symposium on Conical Intersections and Nonadiabatic Couplings, Department of Chemistry, New York University, New York, NY, Nov. 10, 2017 (INVITED)

155) “Nonadiabatic Dynamics and Nested Funnels in Energy Transfer and Photosynthesis”, Ultrafast laser techniques for molecular photochemistry and photophysics, Division of Laser Science, APS March Meeting, Los Angeles, CA, March 5, 2018 (INVITED)

156) “Plyler Prize Lecture: Two Dimensional Femtosecond Spectroscopy”, Division of Chemical Physics Awards Symposium, APS March Meeting, Los Angeles, CA, March 8, 2018 (INVITED)

157) “Nested Funnels and Nonadiabatic Dynamics in Photosynthesis”, Nonadiabatica 2018: Theory of Nonadiabatic Processes, Hebrew University of Jerusalem, ISRAEL March 13, 2018 (INVITED)

158) “Measuring the Standard Chemical Potential for Creation of an Exciton”, Ninth International Conference on Coherent Multidimensional Spectroscopy, Seoul, KOREA, June 28, 2018 (INVITED)

159) “Femtosecond Nonadiabatic Dynamics in Photosynthetic Light Harvesting” Session on Ultrafast Processes in Photosynthesis, 21st International Conference on Ultrafast Phenomena, Hamburg, GERMANY, July 16, 2018

160) “Measuring the Standard Chemical Potential for Creation of an Exciton”, Symposium on Characterization, Application, and Detection of Excitons in Chemistry, Division of Physical Chemistry, 256th American Chemical Society National Meeting, Boston, MA, August 20, 2018 (INVITED)

161) “Measuring the Standard Chemical Potential for Creation of an Exciton”, Gerischer Electrochemistry Today Symposium, Boulder, CO, August 15, 2008

162) “Insights into Photosynthetic Light Harvesting from 2D Femtosecond Spectroscopy”, SLAC-LCLS User Workshop, Stanford, CA, September 28, 2018 (INVITED).

163) “Insights into Photosynthetic Light Harvesting from 2D Femtosecond Spectroscopy”, 5th Conference on Ultrafast Dynamic Imaging of Matter (UFDIM) Agios Nikolaos, Crete, GREECE, October 1, 2018 (INVITED)

164) “New Dimensions in Ultrafast Spectroscopy Reveal Ancient Secrets of Photosynthesis”, Annual Meeting of the Four Corners Section of the American Physical Society, Salt Lake City, UT, October 12, 2018 (PLENARY)

165) “Insights into Photosynthetic Light Harvesting from 2D Femtosecond Spectroscopy”, Physical Chemistry Seminar, University of Illinois at Urbana-Champaign, February 20, 2019

166) “Femtosecond nonadiabatic dynamics in photosynthetic light harvesting”, Workshop on Quantum Dynamics and Spectroscopy in Condensed Phase materials and Bio-Systems, Telluride Summer Science Center, June 25, 2018 (INVITED)

167) “Insights into Photosynthetic Light Harvesting from 2D Femtosecond Spectroscopy”, Femtochemistry 14, Shanghai, CHINA, July 30, 2019 (INVITED)

168) “Insights into Photosynthetic Light Harvesting from 2D Femtosecond Spectroscopy”, Physical Chemistry Seminar, Purdue University, Oct. 9, 2019

169) “Quantum Dot Carrier Dynamics: from ballistic to thermodynamic”, Noyes Distinguished Lecture, Department of Chemistry, University of Texas at Austin, Oct. 24, 2019

170) “Insights into Photosynthetic Light Harvesting from 2D Femtosecond Spectroscopy” 11th Workshop on Quantum Effects in Biological Systems, Puebla, MEXICO, Oct. 30, 2019 (INVITED)

TBA, Jahn-Teller effect and vibronic coupling in molecules and materials (JT2020), Telluride Summer Science Center, to be given June 12-17, 2020 (INVITED) – meeting cancelled

171) “Can we use vibrational-excitonic resonance to control energy transfer?” Investigation of Ultrafast Dynamics of Molecular Excitons, A virtual symposium sponsored by the Initiative for the Theoretical Sciences and the CUNY doctoral programs in Chemistry and Physics, City University of New York, October 16, 2020

172) “Excited State Thermodynamics from 2D Spectra” Symposium on Emerging Techniques to Probe Condensed Phase Dynamics Across Time & Space, ACS Spring 2021 (virtual), April 16, 2021 (INVITED)

173) “The Geometry of Nodes in Nonadiabatic Quantum Mechanics”, Mathematical Physics Seminar, Department of Mathematics, University of Colorado Boulder, February 16, 2022.

174) “Femtosecond 2DFT Spectroscopy Resolves Disorder to Reveal Reactive Dynamics, Even Under the Quantum Zero-Point”, Nobel symposium NS173 “Exploring complex molecular and condensed phase processes and functions by multidimensional spectroscopy from THz to X-rays” Båstad, SWEDEN, Aug. 8, 2022 (INVITED)

175) “Spectroscopic measurement of free energies: Thermodynamic cycles for excited state chemistry”, Symposium on “Spectroscopy, Imaging, and Dynamics of Energy Related Materials”, Fall ACS National Meeting, Chicago, IL, August 23, 2022. (INVITED)

176) “Photosynthetic energy transfer and vibronic decoherence”, TSRC Workshop on “Spatio-Temporal Dynamics of Excitons: Bridging the Gap Between Quantum Mechanics and Applications”, Telluride, CO, Sept. 20, 2022. (INVITED)

177) “Single-molecule relationship between absorption and emission in 2D spectra”, Symposium on “Experimental and theoretical progress in multidimensional spectroscopy: Elucidating charge and energy transfer in the condensed phase” Spring ACS National Meeting, March 27, 2023 (INVITED).

178) “Award Address (E. Bright Wilson Award in Spectroscopy sponsored by the ACS Division of Physical Chemistry). Vibration below the zero point can drive intermolecular electronic motion.” Spring ACS National Meeting, March 28, 2023 (INVITED).

179) “How to move electrons and electronic energy efficiently”, Department of Chemistry, Texas A&M University, April 18, 2023.

180) “Ensemble quantum dot absorption and photoluminescence provide single-dot dynamics” in “Inorganic Nanoscience Award: Symposium in Honor of Jon Owen”, Fall 2023 ACS National Meeting, San Francisco, CA, August 15, 2023. (INVITED)

180) “2D spectroscopy, a quantitative theory of luminescence, and ultrafast thermodynamics”, Symposium on "Advances in Applied Nonlinear Spectroscopy", Fall 2023 ACS National Meeting, San Francisco, CA, August 16, 2023. (INVITED)

182) “Generalized Einstein Relations for Spectroscopy, Quantum Dots, and Excited State Thermodynamics”, Physical Chemistry Seminar, Department of Chemistry, Emory University, January 30, 2024.

183) “Absorption from an Extreme Stokes’ Shift” Telluride Workshop on "Spatio-Temporal Dynamics of Excitons: Bridging the Gap Between Quantum Mechanics and Applications," June 11, 2024

184) “Generalized Einstein Relations between Absorption and Emission for Excited State Thermodynamics” American Conference on Theoretical Chemistry, Chapel Hill, NC, June 17, 2024 (POSTER)

185) “Decoherence and Vibrational-Electronic Resonance in Photosynthesis” American Conference on Theoretical Chemistry, Chapel Hill, NC, June 18, 2024 (INVITED)

186) “Generalized Einstein Relations between Absorption and Emission: a Theory of Fluorescence, Excited State Thermodynamics, and Extreme Stokes’ Shifts” 17th International Conference on Optics Within Life Sciences, Mumbai, INDIA, November 21, 2024. (INVITED)

187) “Generalized Einstein Relations between Absorption and Emission Spectra: a Theory of Fluorescence, Excited State Thermodynamics, and Extreme Stokes’ Shifts” Division of Chemical Sciences, Indian Institute of Science Bangalore, Bengaluru, INDIA, November 22, 2024.

188) “Generalized Einstein Relations for Spectroscopy, Quantum Dots, and Excited State Thermodynamics” Department of Chemical Sciences, Indian Institute of Science Education and Research Mohali, Mohali, INDIA, November 25, 2024.

189) “Generalized Einstein Relations between Absorption and Emission for Excited State Thermodynamics”, Les Houches Workshop on Quantum Dynamics and Spectroscopy of Functional Molecular Materials and Biological Photosystems, Les Houches, FRANCE, March 3, 2025. (POSTER)

190) “Decoherence and Vibrational-Electronic Resonance in Photosynthesis”, Les Houches Workshop on Quantum Dynamics and Spectroscopy of Functional Molecular Materials and Biological Photosystems, Les Houches, FRANCE, March 6, 2025. (INVITED)

191) “Applications of Generalized Einstein Relations between Absorption and Emission Spectra” Symposium on Coherent Multidimensional Spectroscopies from the Visible to the Terahertz Range, Materials Research Society Spring Meeting, April 8, 2025. (INVITED)

192) “Generalized Einstein Relations between Absorption and Emission: a Theory of Fluorescence, Excited State Thermodynamics, and Extreme Stokes’ Shifts” Physical Chemistry/Chemical Physics Seminar, University of Colorado Boulder, January 30, 2026.

193) “Two-Dimensional Femtosecond Spectroscopy” Frank T. Gucker Lecture, Department of Chemistry, Indiana University, Bloomington, to be given March 4, 2026

194) “Coherence and Energy Transfer in Photosynthesis” Physical Chemistry Seminar, Indiana University, Bloomington, to be given March 5, 2026

195) “TBA” "Symposium on Topological Quantum Matter" Department of Mathematics, University of Colorado Boulder, to be given April 10, 2026

196) “2D Spectroscopy, Generalized Einstein Relations between Absorption and Emission, and Spectroscopic Thermodynamics” International Conference on Coherent Multidimensional Spectroscopy, SINGAPORE, to be given June 23-26, 2026 (INVITED).

Research Support

prior

"Femtosecond Nonlinear Spectroscopic Studies of Chemical Reactions in Condensed Phases"
$32,000 - National Science Foundation, 8/1/95-7/31/96

"Femtosecond Wavepacket Studies of Thermally Activated Chemical Reactions",
$25,000, Camille and Henry Dreyfus Foundation, 8/1/95-7/30/00

Junior Faculty Development Award
$5,000 - University of Colorado, 6/1/96-8/14/96

"Femtosecond Spectroscopic Studies of Thermally Activated Chemical Reactions"
$20,000 - Petroleum Research Fund of the American Chemical Society, 9/1/96-8/30/98

Packard Foundation Fellowship Grant
$575,000, David and Lucile Packard Foundation, 10/1/96-9/30/01

"Femtosecond Nonlinear Spectroscopic Studies of Chemical Reactions in Condensed Phases",
$287,257 - National Science Foundation, 4/1/97-7/31/00

"supplement to Femtosecond Nonlinear Spectroscopic Studies of Chemical Reactions in Condensed Phases" $23,510 - National Science Foundation, 3/1/00-3/31/01

Alfred P. Sloan Fellowship Grant
$35,000, Alfred P. Sloan Foundation, 9/16/99-9/15/03

"Multidimensional Femtosecond Studies of Chemical Reactions in Condensed Phases",
$338,697, National Science Foundation, 8/1/00-7/31/03

"supplement to Multidimensional Femtosecond Studies of Chemical Reactions in Condensed Phases" $49,192, National Science Foundation, 10/01/03-9/31/04

"Basic Research Studies of Electron Cooling and Transport Dynamics in Semiconductor Quantum Dots and Quantum Dot Arrays, $136,131, Department of Energy, NREL, 9/1/00-12/31/04 (co-PI with Arthur Nozik)

"Optical and Electrical Properties of Quantum Dot Arrays", $113,580, Department of Energy, NREL, 4/1/02-6/30/05 (co-PI with Arthur Nozik)

"Studies of the Optical and Electrical Properties of Quantum Dot Arrays", $33,000, Department of Energy, NREL, 4/1/02-6/30/05

"supplement to Multidimensional Femtosecond Studies of Chemical Reactions in Condensed Phases" $11,107, National Science Foundation, 6/1/04-7/31/05

"Exciton Multiplication in Quantum Dots" $7,152, Department of Energy NREL, 12/01/05 - 2/28/06

"Carrier Multiplication and Cooling Dynamics in Small Bandgap Quantum Dots, Quantum Rods, and Novel Molecular Chromophores", $91,659, Department of Energy, NREL, 7/13/04-7/12/06 (co-PI with A. Nozik)

“Multidimensional Surface-Enhanced Sensing and Spectroscopy”, $506,765, Department of Defense, MURI, sub-contract from Northwestern University (PI – Richard P. Van Duyne) 7/1/02 – 6/30/07

"Research and Development of Photoanode for Water Splitting Based on Quantum Dot-Sensitized Nanocrystalline Hole-Conductor", $132,515, Department of Energy (NREL) 09/01/06 - 03/15/08 (with Arthur Nozik)

"Understanding Multiple Exciton Generation and Applications to High Efficiency Solar Cells", $29,441, Department of Energy (NREL), 3/1/07 - 9/30/08

“Multidimensional Femtosecond Studies of Chemical Reactions in Condensed Phases”, $762,000, National Science Foundation, 8/1/03 - 7/31/08

"IGERT: Graduate Training in Optical Sciences and Engineering" $3,722,037, National Science Foundation (co-PI with PI Dana Anderson and 3 others) 10/1/03 - 9/30/08

"Mechanistic Studies of Surface Enhanced Raman Scattering, SERS Continuum, and Noble Metal Luminescence" $72,000, National Science Foundation, 3/1/07 - 8/31/09

"Study of Multiple Exciton Generation with New Multi-dimensional Spectroscopies", $730,000, Department of Energy (Basic Energy Sciences), 9/01/07 - 8/31/10

"Multidimensional Femtosecond Studies of Chemical Reactions in Condensed Phases" $461,650, National Science Foundation, 8/15/08 - 7/31/11

"Bright Coherent Optical Waveforms from the Visible to the Vacuum Ultraviolet for Manipulation and Detection of Molecules" $369,750, Army Research Office (co-PI with Margaret Murnane and Henry Kapteyn) 8/19/08 - 11/18/11 (no-cost extended)

"Basic Studies of Multiple Exciton Generation in Semiconductor Quantum Dots" $185,000, Department of Energy NREL, 10/01/08 - 3/30/12

"Study of Multiple Exciton Generation with New Multi-dimensional Spectroscopies", $630,000, Department of Energy (Basic Energy Sciences), 9/01/10 - 8/31/13

“Controlling Surface States and Dynamics In Semiconductor Quantum Dots”, $103,415, Department of Energy NREL, 11/1/11-9/30/13

“Time Resolved Charge Injection Study of Self-Repairing Water Oxidation Catalyst Activity” $40,000, Center for Revolutionary Solar Photoconversion (Niels Damrauer and Charles Rogers are co-PIs), 9/1/12-6/30/13

"Multidimensional Femtosecond Studies of Chemical Reaction Dynamics"
$415,000 National Science Foundation, 10/1/11 - 9/30/14

"Center for Advanced Solar Photophysics" $422,519 for DMJ over five years, Department of Energy, (lead PI - Victor Klimov, LANL, DMJ as Senior Personnel) 08/26/10 - 08/25/15

"Bright Coherent Optical Waveforms from the Visible to the Vacuum Ultraviolet for Manipulation and Detection of Molecules based on Ultrafast Mid-Infrared Lasers" $440,000 Army Research Office (co-PI with Margaret Murnane and Henry Kapteyn) 8/19/11 - 8/18/14 (no-cost extended)

“3D FT Spectroscopic Study of Photosynthetic Energy Transfer”, $100,000, Petroleum Research Fund, 9/1/14-8/31/15, (co-PI with Steve Cundiff)

“Controlling Energy Transfer Pathways”, $600,000, Air Force Office of Scientific Research, 9/1/14-8/31/17

"Study of Multiple Exciton Generation with New Multi-dimensional Spectroscopies", $672,325, Department of Energy (Basic Energy Sciences), 9/01/13 - 2/28/18

"Multidimensional Femtosecond Studies of Chemical Reaction Dynamics"
$520,895, National Science Foundation, 9/1/14 - 8/31/18

“Controlling Energy Transfer Pathways”, $555,000, Air Force Office of Scientific Research, 3/15/18-3/14/22

"Multidimensional Femtosecond Studies of Chemical Reaction Dynamics"
$502,275, National Science Foundation, 9/1/18 - 8/31/22

"Multidimensional Femtosecond Studies of Chemical Reaction Dynamics COVID Supplement" $83,273, National Science Foundation, 9/1/21 - 8/31/22

“Disentangling quantum dot luminescence lineshapes in epitaxial perovskite lattices” with co-PI Jonathan Owen, $74,167 to DMJ as PI, Seed Grant from NSF STC Center for Integration of Modern Optoelectronic Materials on Demand, 10/1/2022-9/30/2023

“DURIP: Ultrashort Pulsed Laser for Research on Quantum Confined Nanomaterials, Energy Transfer, and Excited State Thermodynamics”, $256,996, Air Force Office of Scientific Research, 9/15/2022-3/14/2024

"Are there quantum resonances across interfaces between photosynthetic proteins?" with co-PIs Jeff Cameron and Sandeep Sharma, $49,102, RIO Seed Grant, 7/1/2022-6/30/2024

"Disentangling quantum dot luminescence lineshapes to elucidate dynamical broadening" with co-PI Jonathan Owen, $60,000 to DMJ as PI, Seed Grant from NSF STC Center for Integration of Modern Optoelectronic Materials on Demand, 10/1/2023-9/30/2024

current

"Multidimensional Femtosecond Studies of Chemical Reaction Dynamics" $550,000, National Science Foundation, 8/1/2022-7/31/2026

"EFRC: Center for Electrochemical Dynamics and Reactions on Surfaces (CEDARS)" PI Dhananjay Kumar, $552,000 to DMJ as senior personnel, Department of Energy, 8/1/2022-7/31/2026

"Generalized Einstein relations for magic clusters and quantum dot nano-lasers" $150,000 to DMJ as Senior Personnel, NSF STC Center for Integration of Modern Optoelectronic Materials on Demand, 10/1/2024-9/30/2026

pending

"Generalized Einstein relations for quantum dot spectroscopy" $359,520 to DMJ as Senior Personnel, NSF STC Center for Integration of Modern Optoelectronic Materials on Demand, 10/1/2026-9/30/2031