January 2025

GEORGE C. SCHATZ

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PERSONAL DATA: Born, April 14, 1949 (Watertown, New York)
Married, three sons.

EMPLOYMENT HISTORY:

Northwestern University, Assistant Professor (1976-1980)
Associate Professor (1980-1982)
Professor of Chemistry (1982-present)
Dow Professor (1994-6)
Morrison Professor(2002-present)
Professor of Chemical and Biological Engineering (2009-present)
Professor of Applied Physics (2012-present)

EDUCATION:

Clarkson University (Potsdam, NY) B.S. in Chemistry (June, 1971)
California Institute of Technology (Pasadena, CA) Ph.D. in Chemistry (1976)
Advisor—Aron Kuppermann (deceased)
Massachusetts Institute of Technology (Cambridge,MA)
Research Associate (10/75 to 8/76) with John Ross (deceased)

AWARDS, FELLOWSHIPS:

National Science Foundation Fellowship -- Caltech, 1971-1974
Herbert Newby McCoy Award--Caltech, 1975
Northwestern Faculty Honor Roll, 1978-1979
Alfred P. Sloan Research Fellow, 1980-1982
Camille and Henry Dreyfus Teacher-Scholar, 1981-1986
Fresenius Award (of Phi Lambda Upsilon) - 1983
Japan Society for Promotion of Science Fellowship - 1986
Fellow, American Physical Society - 1987
Visiting Fellow, Joint Institute for Laboratory Astrophysics, University of Colorado -- 1988-89
Welch Foundation Lecturer -- 1989
Max Planck Research Award -- 1993

Summer Lecturer, University of Colorado -- 1995
Fellow, AAAS - 1999
Elected to the International Academy of Quantum Molecular Sciences - 2001
Elected to the American Academy of Arts and Sciences – 2002
Elected to the National Academy of Sciences – 2005
Professeur 'invite classe exceptionnelle' – University Pierre et Marie Curie, Paris, 2007
Bourke Lecturer and Medal of the Faraday Division of the Royal Society of Chemistry – 2007
Ver Steeg Distinguished Research Fellow, Northwestern University, 2008-2013
Feynman Prize of the Foresight Institute – 2008
Fellow of the American Chemical Society – 2009
Special Issue (George C. Schatz Festschrift) of the Journal of Physical Chemistry A, Vol 113, 2009.
Peter Debye Award of the American Chemical Society – 2010
Herschbach Medal of the Conference on the Dynamics of Molecular Collisions-2011
Times Higher Education list of Top 100 Chemists of the Past Decade – 2011
Honorary Degree (Doctor Honoris Causa) University of Córdoba, Argentina – 2011
Honorary Doctorate, Clarkson University – 2012
S F Boys-A Rahman Award of the Royal Society of Chemistry – 2013
Fellow of the Royal Society of Chemistry (FRSC) – 2013
Hirschfelder Prize, University of Wisconsin – 2014
Thompson-Reuters, 2002-2012 citations: Highly Cited Researchers 2014-2016
Mulliken Medal, University of Chicago, 2014
John Stauffer Lecturer, USC, 2015
Edgar Fahs Smith Lecturer, University of Pennsylvania, 2016
Irving Langmuir Award in Chemical Physics, American Chemical Society, 2016
Condon Lecturer, University of Colorado, Boulder, 2016
Distinguished Lecturer, Materials Science and Engineering, RPI, 2016
Joe L. Franklin Memorial Lecturer, Rice University, 2017
Andreas C. Albrecht Lectureship, Cornell, 2017
Xingda Lecture, Peking University, 2017
Plenary Lecture, XXXVI Biannual Meeting of the Royal Society of Chemistry of Spain, 2017
2014-24 Highly Cited Researcher, Clarivate Analytics
Honorary Fellow of the Chemical Research Society of India (CRSI), 2017
Honorary Fellow of the Chinese Chemical Society, 2017
Honorary Professor, Indian Institute of Science Education and Research Kolkata, India 2018
Sackets Harbor (High School) Hall of Fame – 2018, Distinguished Alumni Award - 2019
Ahmed Zewail Prize – 2019
Paul Cross Lecture, University of Washington, 2019
Noyes Lecture, University of Rochester, 2019
Nanqiang Lecture, Xiamen University, 2019
Harvard, MIT, BU theoretical chemistry lecture, 2020
Top influential chemist 2010-2020 (ranked 8th worldwide), academicinfluence.com
Forum of Great Minds Seminar, USTC, 2020
Golden Knight Award 2021, Clarkson University
Max T. Rogers Lecture, 2021, 2022, Michigan State University
Harrison Shull Lecture, 2022, Indiana University

Ranked 59th in the US in Materials Science, and 51st in Chemistry, based on h-index, by Research.com 2022
2022 Anders Gustaf Ekeberg Tantalum Prize
2022 Nakamoto Lecture, Marquette University
2022 Materials Theory Award, Materials Research Society
2023 Marsha I. Lester Award for Exemplary Impact in Physical Chemistry, ACS Physical Division
2023 Flygare Lecture, University of Illlinois, Urbana
2024 Schaad Lecture, Vanderbilt University
2024 Nieuwland Lecture, University of Notre Dame

PROFESSIONAL POSITIONS:

Consultant at Argonne National Laboratory (1978-1982)
Staff Scientist Appointee at Argonne National Laboratory (1983-86)
Consultant at Battelle Columbus Laboratories (1979-1980)
Consultant at Chemical Dynamics Corporation (1981-82)
Panel Review Member for the Department of Energy (1981)
Organizer, 16th Midwest Theoretical Chemistry Conference, Evanston, May 20-21, 1983
Organizer, Workshop on Future Directions for Supercomputer Use in Chemistry, Evanston, Oct. 15-17, 1984
Consultant at Signal UOP Corporation (1985)
Co-Organizer, Gordon Conference on Molecular Energy Transfer, 1989
Panel Review Member, AFOSR (1989)
Panel Review Member, Canadian Centre of Excellence Program (1989)
DOE Review Panel for Combustion Dynamics Facility (1989)
Panel Review Member, Sandia Combustion Research Facility (1991)
NORCUS Faculty Appointment, Pacific Northwest Lab (1991-95)
Vice Chairman, Chair-Elect, Chair Division of Chemical Physics, APS (1992-5)
Vice Chairman, Chair-Elect, Chair Subdivision of Theoretical Chemistry, Physical Division (1992-5)
AFOSR Chemical Sciences Review Panel (1992, 1995-7)
Member, Committee on Mathematical Challenges from Computational Chemistry, National Academy of Sciences, 1994
Organizer, Symposium on Electronically Nonadiabatic Dynamics, ACS Meeting, Washington, D. C., August, 1994
Organizer, 28th Midwest Theoretical Chemistry Conference, Evanston, May 11-13, 1995
Coorganizer, Bodenstein Centennial Meeting, Heidelberg, Germany, July, 1995.
Coorganizer, Symposium on Highly Excited States in Chemistry, ACS Meeting, Orlando, Florida, August, 1996
Organizer, Dynamics of Molecular Collisions Meeting, Gull Lake, MN, July 21-25, 1997
External Committee Member, Theoretical Chemistry Professorship, Gothenburg University, December, 1996
Review Panel, Journal of Chemical Physics, University of Chicago, March 25-26, 1997
Vice Chair, Chair-Elect, Chair - Physical Division, American Chemical Society, 1997-2000
External Review Panel, Department of Chemistry, University of Minnesota, April 20-22, 1997

External Review Panel, Chemistry Division, Brookhaven National Laboratory, October 19-22, 1997

Physics Coordinating Group, Army Research Office, West Point,NY November 17-18, 1997

MURI Review Meeting (Organizer) Northwestern, May 27-28, 1998

NSF Workshop on Future Trends in Chemistry Research, Keystone,CO Sept. 18-20 (panel organizer)

ARO Physics Research Program Panel, Georgia Tech, October 14-16, 1998

MURI Review Meeting (Coorganizer) Aberdeen Proving Ground, June 10-11, 1999

LBL Review of Chemical Dynamics, Feb. 23, 2000

MURI Review Meeting (Organizer) Northwestern, June 1-2, 2000

Panel Review Member, Sandia Combustion Research Facility (2001)

MURI Review Meeting (Organizer) Northwestern, Dec. 12, 2001

External review committee, Institute for Atomic and Molecular Science, Academia Sinica, Taiwan, August 28-29 (2003)

Panel Review Member, CSAFE University of Utah, Oct. 7-8, 2003

Panel Review Member, Brookhaven National Laboratory, Oct. 20-22, 2003

Panel for Selection of Editor of Nano Letters, American Chemical Society, 2004

Visiting Scientist, Argonne National Laboratory (1986-2004)

Advisory Board, Institute for Atomic and Molecular Sciences, Taiwan, 2004-2012

LBL Review of Chemical Dynamics, 2006

National Research Council Postdoctoral Associate Selection Committee 2006-10

External Advisory Board, Center for Nanoscale Materials, Argonne National Laboratory 2007-2012

External Advisory Board, National Center for Design of Biomimetic Nanoconductors, University of Illinois, 2007-2008

Advisory Board, Northwestern Nanoscience and Engineering Research Center, 2005-2010

Advisory Board, Northwestern Materials Research Center, 2006-present

Advisory Board, Network for Computational Nanotechnology, 2006-8

Panel Review Member, Sandia National Laboratory, 2008

Jury Member, Institute Universitaire de France, 2008

Panel Review Member, NSF, 2009

External Advisory Committee, Dept of Chemistry, University of Kansas, 2009

National Research Council, Panel on Armor and Armaments, 2009-2012

Steering Committee of the EPSRC Programme Grant centered in Oxford and Bristol, UK, 2009-2013

Expert Advisor for the BiopSys: Network for Bioplasmonic Systems at the University of Toronto, 2010-2013

Advisory Board, CaSTL Center, Irvine, 2010-2014

Class membership committee, National Academy of Science, 2010-11

External Advisory Committee, School of Chemistry and Biochemistry, Georgia Institute of Technology, 2012

2013 Scientific and Academic Advisory Committee Reviewers for Nanoscience at the Weizmann Institute, Israel

2013 External Advisory Committee, University of Texas, EFRC EFRC on “Understanding Charge Separation and Transfer at Interfaces in Energy Materials” (EFRC:CST)

WTEC (World Technologies and Services) Advisory Committee for Nanomodular Materials and Systems by Design (NMSD), 2015
Review of the School of Chemical Sciences, University of Illinois, June, 2015
NAS Army Panel on Ballistics Science and Engineering, National Research Council, 2015-16
DOE Council on Chemical and Biochemical Sciences, 2015-8
ACS on Campus, Mumbai, Bangalore, Hyderabad India 2016
ACS on Campus, Argonne National Lab, Northwestern University, 2016
ACS on Campus, Hyderabad India 2017
2017 Beckman Institute Research Theme Review Committee for Molecular and Electronic Nanostructures, UIUC, Oct. 18-20, 2017 (committee chair)
Review of School of Chemistry and Biochemistry, Georgia Institute of Technology, Atlanta GA, Feb.6-8, 2018 (committee chair)
External Opponent, PhD thesis of Heikki Rekola, Aalto University, Finland May 25, 2018
Review of Chemistry Department, Washington University, St. Louis, Dec.6-9, 2020
External review panel (chair): Academia Sinica, Taiwan, August 30,31 2021
External review of Purdue Chemistry Department (chair), Sept.12-13, 2022
Advisor for CAREER proposals, NSF, June 6-7, 2022
Panel review for NSF, Sept. 29-30, 2022
MRS Career Counseling Volunteer, 2022
Advisory Board: CENT EFRC (MIT) 2019-present
Advisory Board, Institute for Atomic and Molecular Sciences, Taiwan, 2020-present
NSF Workshop on Challenges and Prospects for the Next 10 Years of Nanochemistry, June 22-23, 2023, Alexandria VA
External Review Committee, UIUC Chemistry Department, Nov. 8-9, 2023.
Co-organizer, PNAS Special Feature, Machine Learning in Chemistry, 2023-2025
External Review Panel, Department of Molecular Chemistry and Materials Science, Weizmann Institute of Science, Israel, Nov. 6-7, 2024

EDITORIAL POSITIONS:

Editorial Board, Journal of Chemical Physics (1990-92)
Specialist Editor, Computer Physics Communications (1991-2008)
Advisory Board, Journal of Physical Chemistry (1992-93, 2020-present)
Editor-in-Chief, Journal of Physical Chemistry (2005-2019)
Senior Editor, Journal of Physical Chemistry (1993-2004)
Editorial Board, Chemical Physics Letters (1994-2008)
Editorial Board, Theoretica Chimica Acta, Theoretical Chemistry Accounts (1995-2008)
Editorial Board, Annual Reviews of Physical Chemistry (2002-5)
Editorial Board, Accounts of Chemical Research (2005-8)
Editorial Board, Advances in Chemical Physics, 2008-18
International Advisory Board, Bulletin of the Korean Chemical Society, 2009-15
Editorial Advisory Board, Chemical Reviews, 2017-present
Advisory Board, Chemical Science, RSC, 2023-25
Advisory Board, ACS Physical Chemistry Au, 2022-present

Volunteer ad hoc Editor, PNAS, 2009-present

RESEARCH SUPPORT:

Petroleum Research Fund-ACS (1977-1980)
"Studies of the Dynamics of Reactions Between Small Molecules Using Classical Stochastic Collision Theory," total amount - $9,000

Research Corporation (1977-1978)
"Theoretical Studies of the Reactions Between Small Molecules Using Stochastic Reduction Collision Dynamics," total amount - $6,000

National Resource for Computation in Chemistry (1978-1979)
"Classical Trajectory Studies of State to State Energy Transfer in Triatomic Molecules," total amount - $2,000

National Science Foundation (1979-1981)
"Theoretical Studies of Chemical Reactions and Collisional Energy Transfer Between Small Molecules," total amount - $120,000

National Resource for Computation in Chemistry (1979-1980)
"Classical Trajectory Studies of State to State Collisional Energy Transfer and Chemical Reactions Involving Triatomic Molecules," - total amount - $6,000

Office of Naval Research (1979-82)
"The Development of Laser Analytical Methods for the Characterization of Solid Liquid and Solid/High Pressure Gas Interfaces" (joint with J. W. Chung, P. C. Stair, R. P. Van Duyne and E. Weitz), $1,256,671

Alfred P. Sloan Foundation Fellowship (1980-1982), total amount $20,000

National Science Foundation (1982-1985)
"Theoretical Studies of Small Molecule Chemical Dynamics", total amount $197,707 supplement in 1984, and a $60,000 supercomputer grant in 1984

Camille and Henry Dreyfus Teacher-Scholar Award (1981-1986), total amount $40,000

Air Force Office of Scientific Research (1983-84)
"Microstructural Fabrication and Characterization by Surface Enhanced Optical Processes", $187,986

National Science Foundation (1984-5)
"Workshop on Future Directions for Supercomputer Use in Chemistry," total amount $39,375

National Science Foundation (1985-88)

"Theoretical Studies of State to State Chemistry," total amount - $240,000 plus a $45,000 supercomputer grant in 1985, $50,000 in 1986, $150,000 in 1987

National Science Foundation (1985-88)
"Ultrahigh Vacuum Surface Optical Spectroscopy" (joint with R. P. Van Duyne), total amount - $257,000

National Science Foundation (1988-91)
"Theoretical Studies of State-to-State Chemistry," total amount $248,700

National Science Foundation (1988-91)
"Ultrahigh Vacuum Surface Optical Spectroscopy," (joint with R. P. Van Duyne) total amount $293,500

NASA Ames (1990-91)
"HN2 Potential Energy Surface and Unimolecular Reaction Dynamics," $19,833

NSF (1991-95)
"Theoretical Studies of State to State Chemistry," $478,000 plus $56,700 supplement for equipment, and
$10,725 for Eastern European collaboration

PRF (1991-93)
"Theoretical Studies of Photodissociation on Surfaces," $40,000

Materials Research Center (1991), Northwestern University, $3600
Seed Funding for Diamond Film Thrust Group

NASA Ames (1992-95)
"Theoretical Studies of Rate Coefficients for Gas Phase Reactions," $46,145 (1992-93); $64,283 (1993-94), $65,003 (1994-95)

PRF(1995-7)
"Theoretical Studies of Surface Enhanced Spectroscopy", $50,000

NSF (1996-8)
ATheoretical Studies of State to State Chemistry@, $370,000

AFOSR (1996-7)
ADynamics of Molecular Collisions Conference@, $10,000

ARO (1997-2002) (G. Schatz, PI, joint with 8 people)
ACenter for Advanced Cluster-derived Materials@, $5,000,000
My share: $150K/yr

Alumnae of Northwestern University (1997)

ADynamics of Molecular Collisions Conference@ $2,000

NSF(1998-2000) (Joint with Chad Mirkin)
ADNA Directed Formation of Inorganic Nanostructures@,$500,000

NSF(1999-2002)
ATheoretical Studies of State of State Chemistry@, $414,962
Annual budget: $130/yr

AFOSR (2000-2005) (Chad Mirkin PI, joint with 8 people)
ASurface-Templated Bio-Inspired Synthesis and Fabrication of Functional Materials@, $5,000,000 My share: $90K/yr

MRSEC/NSF (2000-2010)
Thrust Group: Nanostructured Materials for Chemical and Biological Sensing
$22,000,000 My share: $69K/year

AFOSR (2001-2006) (Steve Sibener PI, joint with 7 people)
AMaterials Chemistry in the Space Environment) $3,000,000
My share: $110 K/yr

DURINT/DARPA (2001-2007) (Chad Mirkin PI, joint with 7 people)
AUltrasensitive and selective chip-based DNA detection) $3,000,000
My share: $73K/yr

NSEC (2001-2011) NSF Nanotechnology Science and Engineering Research Center
Chad Mirkin, PI $22,000,000
My share: $80K/yr

NSF (2002-5)
ATheoretical Studies of State to State Chemistry@, $367,000

AFOSR (2002-7) (Richard Van Duyne, PI, joint with 9 people)
AMultidimensional Surface Enhanced Sensing and Spectroscopy@$3,000,000
My share: 100K/yr

NASA (2002-7) (Rod Ruoff, PI, joint with 5 people at NU; primary location is Princeton)
ABioinspired Design and Processing of Multifunctional Nanocomposites@
My share: 100K/yr

NSF(2002-12) (GCS is NU PI, primary location is at Purdue, Mark Lundstrom is PI)
ANetwork for Computational Nanotechnology@ $12,000,000
My share: $60K/yr

DOE (2003-8) (GCS is PI)

AComputational Nanophotonics: Modeling Optical Interactions and Transport in Tailored Nanosystem Architectures@ 170,000/yr

NSF (2003-6) (Horatio Espinosa is PI, joint with 5 people)
@Science and Technology of Ultrananocrystalline Diamond Films For Multifunctional MEMS/NEMS Devices@
My share: 30K/yr

NASA (2003-4) (Mel Ulmer is PI, joint with GCS)
ASelf Assembly of Optical Structures in Space@ $64,000

DARPA (2002-5) (Mike Wasielewski is PI, joint with GCS, CAM)
"Design, Self-Assembly, and Characterization of Controllable Gradient Index Optics"
$599,525(my share: 80K/year)

DARPA (2005-7) (GCS is PI)
"Computational Electrodynamics Studies of Advanced Lens Structures"
$45,000 + $95,000

AFOSR (DTRA) (2006-8) (R. P. Van Duyne is PI)
"New directions in surface enhanced Raman spectroscopy for chemical and biological sensing"
$180,000

NSF-CHE (2006-9) (GCS is PI) CHE-0843832
"Theory and Computation for Templated Self Assembly in Soft Matter"
$120K per year

NSF-CHE Collaborative Research Program (2006-11) (F. Lewis is PI) CHE-0628130
"DNA Photonics"
$85K per year

AFOSR (2007-10) (G. Schatz is PI) FA9550-07-1-0095
"Theoretical Studies of Ion-molecule and Ion-surface collisions"
$120K per year

DARPA (2008-11) (R. P. Van Duyne is the PI) FA9550-08-1-0221
"Ultrahigh performance nanoantennas for surface enhanced Raman spectroscopy"
$266,000 (first year)

NSF-CMMI (2009-12) (Dean Ho is the PI) CMMI-0856492
"Integrative Modeling/Simulation and Experimental Validation of Therapeutic Nanodiamond Materials"
$1,131,220 (3 years, 4 PIs)

ARO MURI (9/09-8/14) (Horacio Espinosa is PI) #W911NF-09-1-0541

"Multiscale design and manufacturing of hybrid DWNT-polymer fibers"
$85K/yr

DOE-NERC (9/09-6/14) (Bartosz Grzybowski is PI) DE-SC0000989
Center for integrated training in far-from-equilibrium and adaptive materials
$200K/yr

DOE-ANSER (9/09-6/18) (Mike Wasielewski is PI) DE-SC0001059
Argonne-Northwestern Solar Energy Research Center
$130K/yr

NSF-CCI (9/09-6/14) Steven Sibener is PI CHE-0943639
Center for energetic non-equilibrium chemistry at interfaces
$75K/yr

DOE-SISGR (9/09-8/15) Mark Hersam is PI DE-SC0001785
Single molelcule chemical imaging at femtosecond time scales
$70K/yr

NIH/NCI-PSOC (9/09-8/14) Jon Widom in PI 1U54CA143869-01
Physical sciences and oncology center
$100K/yr

DOE-BES (6/10-5/19) DE-SC0004752 DE-FG02-10ER16153
Surface plasmon enhanced chemistry
$570K/3 yrs

NSF DMR- 1006380 (6/10-5/13) Teri Odom is the PI
Broadband, Quasi-Crystalline, and Low-Symmetry Plasmonics
$125K/yr

NSF CHE- 1041812 (9/10-8/13) Richard Van Duyne is PI
Surface-enhanced Raman Spectroscopy for Art Research, with Theory and Education
$90K/yr

AFOSR FA9550-10-1-0205 (5/10-5/13)
Theoretical studies of gas-surface and gas-phase dynamical processes
140K/yr

AFOSR MURI FA9550-11-1-0275 (9/15/11-9/14/14) Chad Mirkin in PI
Bioprogrammable One-, Two-, and Three Dimensional Materials
140K/yr

DARPA-DLT N66001-1165-5536O (10/1/11-9/30/13) Richard Van Duyne is PI
Dialysis-like Therapeutics
~120K/yr

CEMRI DMR-1121262 (9/15/11-8/31/17) Monica Olvera is PI
Northwestern Materials Research Center
$65K/yr

NSF CHE-1147335 Theory and Computation for Self-Assembly in Soft Matter (6/12-5/15)
$432,318

ONR N00014-13-1-0172 (1/13-12/15) Teri Odom is PI
Dynamically textured polymer surfaces
~120K/yr

NSF DMR-1306514 (9/1/13-8/31/22)
Coherence and Energy Transfer Processes in Lattice Plasmon Lasers
$479,865 (80K/yr)
Symmetry Breaking in Non-Hermitian Plasmonic Lattices
$279,000

DOE-BES (6/13-8/23) DE-FG02-10ER16153
Surface plasmon enhanced chemistry
~$150K/yr

Center for Bioinspired Energy Science (CBES) (8/1/14-7/31/22)DE-SC0000989
$12,000,000 $200K/yr

AFOSR FA9550-14-1-0053 (3/1/14-2/28/17) subcontract from Princeton
Fundamental studies of reactive processes at plasma-surface interfaces
$750K/3yrs, 250K/yr

NSF CHE-1414466 (09/01/14 – 08/31/19) subcontract from UC Irvine
The Center for Chemistry at the Space-Time Limit (CaSTL)
20M total budget 195K/yr

Department of Energy (08/01/14 - 07/31/22) DE-AC02-06CH11357
Understanding Roles of Ultrafast and Coherent Electronic and Atomic Motions in Photochemical Reactions
729K/3years, then 82K/yr, then 107K/yr , then 84K/yr

NSF CHE-1465045 (6/15-5/18)
Structures and excited state dynamics of self-assembled photonic structures
$433,304

Air Force Research Laboratory, C-ABN (Center for Advanced Bioprogrammable Nanomaterials) Center of Excellence (6/15-20)

AFOSR MURI: Electrochemical Imaging & Mechanistic Studies on the Nanoscale (1/16-1/20)
$599,726 (total) FA9550-14-1-0003

ICEP (Institute for Catalysis in Energy Processes) 9/16-8/23 DOE DE-FG02-03ER15457 ~$50,000 (per year)

NSF CHE-1760537 (6/1/18-5/31/21) -Donor-Acceptor Energy Transfer in the Presence of Photonic and Plasmonic Structures $433,001 (three years)

DOE Advanced Materials for Energy Water Systems (AMEWS) subcontract from Argonne, ~$200K (four years) 2018-2022

Center for Light Energy Activated Redox Processes (LEAP), DE-SC0001059, 9/18-7/20, $160,000

NSF CHE-1836392 EAGER: Collaborative Research: Developing Experiment and Theory for Entangled Photon Spectroscopy, 8/18-7/20 ($150,000)

NSF CMMI-1848613 RAISE: Auto-regulatory scaffolds for directed evolution of non-living functional materials, $333,000 (three years) 9/18-8/21

NASA Air-Carbon Boundary Layer Chemistry for Hypersonic Ablation 80NSSC19K0220 2/19-1/22. $165,000 (three years)

CSSM: Center for the Sustainable Separations of Metals, NSF 2019-2022 $410K (two PIs)

AFOSR: FA9550-18-1-0252 Electronic Structure Theory for Spin-Forbidden Reaction Dynamics $48564 2019-2020

AFOSR: FA9550-19-1-0410 Fundamental Study of p-Type Doping in MOCVD-Grown Ga2O3 (joint with M. Razeghi) $50K 2019-2020

DOE: Center for Molecular Quantum Transduction (2020-24)
$539,216

ARO MURI: W911NF-20-1-0105 Plasma-driven solution electrochemistry (2020-2025)
$968,822

NSF: DMR-2002891 Collaborative Research: Optical transitions in metallic nanoclusters at high pressure (2020-2024)
$124,999

NSF: CHE-2055565 Donor-acceptor energy transfer involving classical and quantum light in the presence of photonic and plasmonic structures (2021-2024)
$449,425

DOE-BER Biological imaging using entangled photons (2021-4)
$541,000 (joint with Ted Goodson)

DOE-BES Tailoring the selective transport pathway of rare earth elements in solid ionic channels guided by *in situ* characterization and predictive modeling (2021-2024) $450,000 (joint with Chong Liu)

NSF-DMR Designer Photonic Lattices and Multilayer Structures that support Bound Optical Modes and Electrically-driven Excitation (2022-2025) $635310 (joint with Teri Odom)

DOE-BES Advanced Materials for Energy Water Systems (AMEWS) subcontract from Argonne, 500,000 2022-2026

DOE-BES (10/01/22 - 09/30/25) DE-AC02-06CH11357 subcontract from Argonne
Understanding Roles of Ultrafast and Coherent Electronic and Atomic Motions in Photochemical Reactions, 282,900

DOE-FES Mechanistic Determination of Plasma-Surface Interactions for Low Temperature Plasmas: Novel Methods for Understanding and Controlling Chemical Outcomes at Interfaces (joint with Dayne Swearer and Bryan Hunter) (2023-26) 180,000 DE-SC0024540

ONR MURI Award N00014-22-1-2661 subcontract from U of Colorado (2023-2027) 800,000
Fundamental Non-equilibrium Processes in Weakly Ionized Hypersonic Flows

NSF: CHE-2347622 450,000 2024-2027
Understanding emission, absorption and energy transfer involving classical and quantum light interacting with molecules

DEPARTMENTAL COMMITTEES:
Graduate Admissions Committee, 1977-1986 (Chairman, 1980-1986), 1997-2004, 2006-present
Graduate Affairs Committee, 1976-1977, 1983-1986 (Chairman, 1983-1986), 1997-8,2001-4, 2010-2012
Computer Committee, 1977-present
Chairman, Physical-Analytical Division, 1983-84, 1989-1992, 2022-present
Planning Committee, Chair 1992-1995 Vision Committee 2004-6
Facilities Committee, 1994-5
General Chemistry Program (2004-2022), Chair 2001-4
Space Committee: Chair 2006-7, 2011-2014, 2017-8
Executive Committee: 2018-present
Search Committee Chair, Chemistry, 2020
Chair of Reappointment Committee: 2021-2, 2022-3
Junior Search Committee Chair, 2021-2
Strategic Hiring Committee, 2021-22

ADVISING:
Freshman Advisor, 1977-1981, 1991; Upperclassmen 1995-present

COURSES TAUGHT:
General Chemistry A72-172 (Winter, 1999,2000, 2001,2009, 2025),

171 (Fall 2001-21)
Physical Chemistry C40-1 1980 (Spring), 1984 (Fall)
C40-2 1977 (Spring)
C40-3 1978 (Spring), 1980 (Fall), 1987 (Spring) 342-2 2004 (winter)
C48 1984 (Fall)
C61-1 1980 (Winter), 1982 (Winter)
342-2 2004-10 (Winter)
Junior Tutorial C85 1990 (Spring), 1991 (Spring), 1992 (Spring)
Quantum Chemistry D42-1 1977, 1978 (Fall), 1985-87 (Fall), 1989 (Fall), 1990 (Fall), 1991 (Fall), 1992 (Fall), 1995(Fall), 1996(Fall), 1997 (Fall), 2023 (Fall)
D42-2 1977-1984 (Winter), 1988 (Winter), 1989 (Spring), 1990 (Winter), 1992 (Winter), 1993 (Winter), 1995(Winter) 1996 (Winter), 1997 (Winter), 1998 (Winter), 1999(Winter)
442-2 2011-25
Advanced Topics D45-445 1978 (Fall), 1980 (Fall),2000(Spring)
D46 1988 (Spring), 1991 (Spring)
448 2001 (Spring), 2002(Spring),2003 (Spring), 2023 (Spring)
Seminar Courses D61 1977 (Fall), 1981 (Spring), 1984 (Winter), 1986 (Fall), 1989 (Fall), 1993(Winter), 1996 (Spring), 1998 (Fall), Winter(2009),Winter(2010)
591 RCR (Spring 2023)

UNDERGRADUATE RESEARCH C99 STUDENTS:

Cassandra Vaughn	1977 B.S.(1977)	presently at IBM
Robert Altkorn	1978 B.S.(1979)	presently at Northwestern Technical Staff
Gregg Wells	1980-1981 B.S.(1981)	Asst Prof, Texas A&M Medical School
Kim A. White	1982-1983 B.S.(1983)	Exxon
Jay Badenhoop	1985-1987 B.S. (1987)	Faculty, Potomac State College, WVU
Bill Bender	1987-1988 B.S.(1988)	presently at ZS Associates
Jeff Dyck	1990	Carnegie-Mellon University (grad student)
Scott Florance	1991-2	
Sapan Shah	1991	
Morfia Komotos	1992-4	DePaul Law School
Stephanie Halstead	1994	
Joe McMahon	1994	
Chris Maierle	1995	Grad School, Berkeley
Mike Mesleh	1995-6	Grad School, Penn
Anatasios Papaioannou	1996	Grad School (physics) at Wisconsin
Brent Fischer	1998	Grad School, MIT
Ken Kumayama	1999	Medical School
Will Grande	2000	Medical School
Julianne Kuk	2003-4	Grad School, Northwestern
Nicolas Janel	2003	Ecole Superieur d=Optique, Orsay, France
Norman Mangeret	2004	Ecole Superieur d=Optique, Orsay, France
Elodie Tartas	2004	Ecole Superieur d=Optique, Orsay, France
Greg Cvetanovic	2004	
Anne-Sophie Louis	2005	Ecole Superieur d=Optique, Orsay, France

Eduard Moreaux	2005	Ecole Superieur d=Optique, Orsay, France
Jack Flinterman	2005	
Gene Rayford	2005	Southern Illinois University
Joshua Banks	2005	University of Chicago
Brian Radak	2006-8	Northwestern University
Ben Faber	2007	Caltech
Tyler Takashita	2007	University of Northern Colorado
Brett Margolis	2008	Northwestern University
Elizabeth Brezinski	2008-9	Northwestern University
Wasut Pornpatcharapong	2009-2010	Northwestern University
Yamei Liu	2009-2010	Northwestern University
Jason Hucheson	2009-2013	Northwestern University
Jenna Franck	2011-2012	Northwestern University
Victoria Vaccarezza	2013-5	Northwestern University
John Coukos	2013-5	Northwestern University
Samson Fong	2013-5	Northwestern University
Colin Egan	2014-5	Northwestern University
Brandon Ko	2015-6	Northwestern University
Leighton Zhao	2017-9	Northwestern University
Joshua Kim	2017-8	Northwestern University
Kyle Rocha	2017	UCSC
Faraz Khan	2018-9	
Sam Kielar	2019-2021	grad school Cornell
Max Wirtz	2021	UW Platteville
Michaela Polley	2022	Carleton College
Umar Kamara	2024	ChBE major Northwestern
Quentin Ott	2024	Bradley University

GRADUATE STUDENTS:

Mark Moser	1977-1981	Ph.D.(1982)	UOP
Thomas Mulloney	1977-1980	M.S. (1980)	
Henry Elgersma	1978-1981	M.S. (1980)	
Dean DeCrease	1979-1981	M.S. (1981)	Dir. Tech. Services, Weyerhauser Co.
Lynn Geiger	1981-1984	Ph.D.(1984)	Northern Colorado Univ., faculty
Mitch Colton	1983-1985	Ph.D.(1985)	Cerac Chemicals Co.
Ellen Zeman	1983-1987	Ph.D.(1987)	Journal Editor, Univ. of Vermont
Joseph Khoury	1984-1985	M.S. (1984)	
Lester Gibson	1984-1986	Ph.D.(1986)	Center for Naval Analysis
Michael FitzCharles	1985-1987	M.S. (1986)	
Peggy Bruehl	1986-1990	Ph.D.(1990)	UCAR (Boulder, CO), CU Denver
Hiroyasu Koizumi	1987-1991	Ph.D.(1991)	Asso. Prof., Tsukuba Univ.
Kathy Kudla	1988-1993	Ph.D. (1993)	Searle
Michelle Brown	1989-1990	M.S. (1990)	
Wen-hui Yang	1990-1995	Ph.D. (1995)	Planck Engineering
Renee Guadagnini	1991-1998	Ph. D. (1998)	Center for Naval Analysis

Andrew Pipino	1991-1995	Ph.D. (1995) NIST (staff), Tanner Research
Kimberly Bradley	1993-1998	Ph.D. (1998) Forensics Lab, State of Illinois
Traci Jensen	1994-1999	Ph.D. (1999) Omega Optical
Lance Kelly	1997-2002	Ph.D. (2002) Five stones research (Huntsville AL)
Guosheng Wu	1997-2001	Ph. D. (2002) Pharmoron
Jiang-tien Li	1998-2000	M. S. (2000)
Newt Miller	1999-2001	M. S. (2001)
Hai Long	2000-2006	Ph. D. (2006) NREL staff
Linlin Zhao	2001-2006	Ph. D. (2006) lecturer Penn State
Les Kismartoni	2001-2002	M.S. (2002)
Wenfang Hu	2002-2007	Ph. D. (2007) Central Florida postdoc
Leif Sherry	2002-2007	Ph. D. (2007) Center for Naval Analysis (deceased)
Jing Zhao	2003-2008	Ph. D. (2008) faculty U. Conn.
Joshua Middendorf	2004-2006	MS. (2006)
Stacey Standridge	2005-2010	Ph. D. (2010) AAAS Fellow
Martin McCullagh	2005-2010	Ph. D. (2010) faculty Colorado State, Oklahoma St NIH Fellowship 2012
Jeffrey McMahon	2005-2010	Ph. D. (2010) faculty Washington State
Logan Ausman	2006-2010	Ph. D. (2010) IDA
Jennifer Roden	2006-2008	MS (2008) Chicago Public Schools
Ari Atkinson	2007-2009	MS (2009)
Nicholas Valley	2007-2012	Ph. D. (2012) PD Oregon, fac. Calif. Northstate U
Vince Cho	2008-2016	Ph. D. (2016)
Eric Smoll	2009-2013	Montana St., postdoc at NASA Ames
Patrick Shively	2009-2011	
Dan Hannah	2010-2015	Ph. D. (2015)NSF Fellowship 2012-5, PD Berkeley GRC Young Investigator award (2014) Insight Data Science (Boston)
Lindsey Madison	2010-2015	Ph. D. (2015) NSF Fellowship 2012-5, PD Washington, faculty Colby College
Natalie Gruenke	2010-2015	Ph. D. (2015) NSF Fellowship, PD Berkeley, Exponent, Inc.
Daniel Park	2010-2015	Ph. D. (2015) Protiviti
Michael Ross	2011-2016	Ph. D. (2016) NDSEG Fellowship 2012-5, PD Berkeley, faculty Univ. Mass Lowell
Lam-Kiu Fong Eiranova	2012-2018	Ph. D. (2018)NSF Fellowship 2013-6, PD UCSF, San Francisco State, Department of Biology
Adam Ashwell	2012-2017	Ph. D. (2017)IDA
Michael McAnally	2012-2017	Ph. D. (2017) NSF Fellowship 2014-7, Scipher
Weijia Wang	2012-2018	Ph. D. (2018)Lam Research, Apple
Danqing Wang	2013-2019	PD Berkeley (Miller Fellow), Faculty at Fudan University, Shanghai
Matthew Kelley	2014-2018	NDSEG Fellowship 2015-8
Mohamad Kodaimati	2014-2019	PD Harvard (Whitesides), LEK Consulting, Bain Consulting

Claire Miller	2014-2016	M.S. 2017
Aysenur Iscen	2014-2019	PD Max Planck Mainz; Sabanci University
Marc Bourgeois	2015-2019	PD U Washington (Masiello)
Gyeongwon (Kevin) Kang	2015-2021	PD Cambridge University (Baumberg), Kangwon University
Laurel Jones	2016-2018	M.S. 2020
Muwen Yang	2016-2021	PD Cornell (Peng Chen), LEK Consulting
Yue Wu	2016-2021	Picarro Inc.
Rohit Raghavendra Murthy	2016-2018	M. S. 2018 Wilbraham and Monson Academy, Law School at Vanderbilt
Jun Guan	2016-2021	PD Northwestern, MIT, Chinese University of Hong Kong in Shenzhen
Chelsea Mueller	2017-2023	Postdoc, Northwestern
Cindi Zheng	2017-2021	IPMI Award 2021, Intel
Jiang-Wei Li	2018-2018	
Yeonjun Jeong	2018-2022	PD Argonne (Jasper)
Alanna Felts	2019-2023	staff at the University of Virginia
Zeynab Mousavikhamene	2020-2024	
Nikhil Chellam	2020-present	(NSF Fellowship 2021)
Tse-Min Chiang	2020-present	
Baxter Fluor	2020-present	
Zach Mast	2021-present	(NSF Fellowship 2023)

POSTDOCTORAL STUDENTS:

Frederick W. King	1977-1978	Faculty (Professor) University of Wisconsin, Eau Claire
Charles Gallucci	1980-1981	Ohio Dominican College (Asst. Prof.)
Uri Laor	1980-1981	Nuclear Research Center, Beer Sheva, Israel
Prabhat K.K. Pandey	1980-1983	AT&T Bell Laboratories
Wayne A. Kraus	1982-1983	Singer
Charles W. Eaker	1983-1984	University of Dallas (retired)
Ronald Duchovic	1984-1985	Indiana Univ, Purdue Univ. Ft. Wayne
Grigory Natanson	1985-1988	Computer Science Corp.
Joseph Golab	1986-1988	Amoco
Hua Guo	1988-1990	Faculty (Prof.) University of New Mexico
George Lendvay	1989-1991	Group Leader, Hungarian Academy of Science
Neil Snider	1991-1992	Senior Research Associate, Northwestern
Mark Thachuk	1991-1993	University of British Columbia (faculty)
Patrick McCabe	1992-1993	Oxford University (programming)
Marc ter Horst	1993-1996	University of North Carolina (staff)
Kathy Kudla	1993-1995	Searle
Toshiyuki Takayanagi	1995-1996	Saitama University (faculty)
Toshimasa Ishida	1996-1997	University of Malaya
Lisa Pederson	1997-1998	Holland
Anne Lazarides	1997-2000	Duke University (faculty)
Karen Drukker	1998-2000	University of Chicago (Research Associate Professor, Dept of Radiology)

Mark Hoffmann	1999-2000	University of North Dakota (faculty)
Matt Lakin	2000-2002	EPA scientist
Joonkyung Jang	2000-2003	Pusan University in Korea (faculty)
Eduardo Coronado	2001-2001	University of Cordoba, Argentina (faculty)
Encai Hao	2001-2004	Nanofilm, Inc.
Biswajit Maiti	2001-2005	Banaras Hindu University (faculty)
Stefan Tsonchev	2001-2005	Northeastern Illinois (faculty)
Diego Troya	2002-2004	Virginia Tech (faculty)
Steven Mielke	2002-2008	University of Minnesota (deceased)
Shengli Zou	2003-2006	U. of Central Florida (faculty)
Lipeng Sun	2003-2006	North Carolina State (postdoc)
Kevin Shuford	2003-2006	Baylor University (faculty)
Hyonseok Hwang	2003-2007	Kangwon National University (faculty)
Gilbert(Shih-hui)Chang	2003-2005	National Cheng Kung University, Taiwan (faculty)
Seol Ryu	2003-2006	Chosun University, Seoul, Korea (faculty)
Sung Yong Park	2004-2006	University of Southern California (research faculty)
Zenong Ding	2003-2004	Compsyc
Maodu Chen	2003-2005	Dalian University (faculty)
Jeff Paci	2004-2007	research faculty, Univ of Victoria
Anatoliy Pinchuk	2004-2008	Colorado Springs (faculty)
Lasse Jensen	2004-2007	Penn State University (faculty)
Alexander Kudlay	2004-2006	business school, Berkeley
Sonya Garaschuk	2005-2006	University of South Carolina (faculty)
James Sullivan	2004-2005	Virginia Commonwealth (faculty)
Younjoon Jung	2005-2006	Seoul National University, Korea (faculty)
Christine Aikens	2005-2007	Kansas State (faculty)
Dongwook Kim	2005-2007	Kyonggi University, Suwon, Korea (faculty)
Jon Camden	2005-2008	Notre Dame (faculty)
Shuzhou Li	2006-2010	Nanyang Technical Univ, Singapore (faculty)
Nicolas Winter	2006-2009	Rosary College (faculty)
Stefano Tonzani	2006-2008	Cell Press
David Masiello	2006-2009	Univ. of Washington (faculty)
Tatiana Prytkova	2007-2010	Chapman University;Now at Cloud Pharmaceuticals
Maricris Lodriguito Mayes	2007-2011	U Mass Dartmouth (faculty)
Scott Yockel	2007-2010	Harvard University High Performance Computing
Ignacio Franco	2008-2011	Fritz Haber Institute, Berlin (staff) Fac. Rochester 2013
Ana Gonzalez	2008-2010	Univ. Puebla, Mexico (faculty)
One-Sun Lee	2008-2014	Qatar Research Institute
	2021-2022	Center for Interdisciplinary Biosciences, Kosice, Slovakia
Anne-Isabelle Henry	2008-2013	Northwestern University (administration)
Hanning Chen	2008-2012	American University (faculty)
Nadine Harris	2009-2011	Cambridge University/Nokia/Mentor Graphics
Jonathan Mullin	2009-2011	Army Research Lab
Tomekia Simeon	2009-2014	Dillard University (faculty)
Xiao Zhu	2010-2011	Purdue (research computing)/ Intel
Marty Blaber	2010-2013	Seagate

Marcin Ziolkowski	2010-2013	Clemson University
Biswajit Saha	2010-2013	Tata Steel
Mausumi Ray	2010-2013	Tata Steel
Ilyas Yildirim	2010-2014	Florida Atlantic Univ (faculty)
Wenchun Gan	2010-2011	
Xiaohu Li	2010-2013	Combustion Research Facility
Lakshmi Sankaran	2010-2012	
Montacer Dridi	2010-2014	Assistant Prof. at Civil Engineering, CESI School of Engineering (Paris, France) (faculty)
Al'ona Furmanchuk	2012-2015	PD Northwestern
Korosh Torabi	2012-2014	Clinical Asst Prof., Chem Eng., UIC (faculty)
Yang Yang	2012-2014	BASF
Fredy Aquino	2012-2013	QSimulate
Yong Zhou	2012-2014	Anhui University (faculty)
Sameer Patwardhan	2012-2017	India
Tao Yu	2012-2014	University of North Dakota (faculty) deceased 2021
Britain Willingham	2013-2013	Schlumberger
Craig Tainter	2013-2016	Vanderbilt University (lecturer)
Craig Chapman	2013-2017	Univ. New Hampshire (faculty)
Nicolas Large	2014-2016	UT San Antonio (faculty)
Kelsey Stocker	2014-2016	Suffolk University (faculty)
Adam Gagorik	2014-2017	Continental Corp, Detroit
Andrew Sirjoosingh	2014-2017	National Defence (Canada)
Eric Cheng-Tsung Lai	2014-2018	Incyte Inc.
Jeffrey McMahon	2014-2015	Washington State (faculty)
Clotilde Lethiec	2014-2016	Edmonton, Canada; UC Louvain
Yu Zhang	2015-2017	LANL
Wendu Ding	2015-2018	MIT postdoc/Wake Forest Univ.(faculty)
Martin Mosquera	2015-2020	Montana State University (faculty)
Rebecca Gieseking	2015-2018	Brandeis (faculty), Iowa Clinic
Dhara Trivedi	2015-2018	Clarkson (faculty)
Wei Lin	2015-2018	Fuzhou University (faculty)
Chad Heaps	2016-2018	Afton Chemical
Liang-Yan Hsu	2016-2017	IAMS (faculty)
Micaela Matta	2017-2019	Univ. Liverpool (Newton Fellowship, Marie Curie Fellowship) King's College London (faculty)
Kobra Nasiri	2017-2022	Intel
Charles Cherqui	2017-2022	unknown
Leighton Jones	2019-present	
Suzanne Neidhart	2019-2020	Henderson State University (faculty), Honeywell Kansas City National Security Campus
Kuniyuki Miwa	2019-2020	Institute for Molecular Science
Subhajyoti Chaudhuri	2020-present	
Charles Jason Zeman	2020-2024	EPA Chicago
Marc Bourgeois	2020-2020	postdoc U. Washington
Qinsi Xiong	2020-present	

Tumpa Sadhukhan	2020-2022	SRM University (faculty)
Woo Cheol Jeon	2021-present	
Sajal Giri	2021-2024	IIT Dhanbad (faculty)
Diptesh Dey	2022-present	
Rameshwar Kumawat	2023-present	
Chelsea Mueller	2023-present	
Yanze Wu	2023-present	
Abhisek Goshal	2023-present	
Moumita Kar	2024-present	

Senior Staff

Fred Arnold	2003-2005
Baudilio Tejerina	2005-2011
Marcelo Carignano	2011-2012
Kevin Kohlstedt	2012-present

VISITORS:

Howard Mayne (1992)	University of New Hampshire
Gabriel Balint-Kurti (1996)	Bristol University
Carlo Petrongolo(1998)	University of Siena, Italy
George Lendvay (1999, 2000-12)	Hungarian Academy of Science
Rob van Harrevelt (2000)	University of Leiden
Diego Troya (1999, 2000,2001)	University of La Rioja, Spain
Fabrizio Santoro (2000)	University of Siena, Italy
Ronald Pascual (2000-2002)	Philippines
Jan (Gershom) Martin (2007-8)	Weizmann Institute, Israel
Joonkyun Jang (2009-2010)	Pusan, S. Korea
Per-Olaf Astrand (2009-2010)	Trondheim, Norway
Cecilia Noguez 2010-2011	UNAM, Mexico City, Mexico
Raul Esquivel Sirvent 2010-2011	UNAM, Mexico City, Mexico
Kok-Hwa Lim 2011-2012	NTU, Singapore
Rong Huang 2012-4	Xiamen, China
Yen-Hsun Su 2012	National Cheng Kung University, Taiwan
Xiaoming Liu 2015-6	Tsing-hua University
Igor Tsukerman 2017	University of Akron
Lu Wang 2019-2021	China University of Petroleum-Beijing
Tomekia Simeon 2021	Dillard University
Naciye Durmus Isleyen 2021-22	Istanbul University

General Chemistry Super TA's:

Margaret Welk 2000-1
Geoff Hutchinson 2001-2
Catherine Schmidt 2003
Michael Irwin 2004-5
Mario Apodaca 2006-7

Cecelia Gondek 2008
Felix Amoankona-Diawuo 2008-9
Dan Fowler 2010-1
Lam-kiu Fong 2012-3
Kacper Skakui 2014-5
Rohit Raghavendra Murthy 2016-7
Haley Palm 2017-8
Mark Taylor 2018-9
Andrew Salij 2019-20
Sangmin Park 2021
Sara Mersch 2025
Kyle Kairys 2025

UNIVERSITY AND COLLEGE COMMITTEES:

University Grants Committee, 1979-1982
Edunet Committee, 1979-1981
University Appeals Committee, 1980-1983
Computer Advisory Committee, 1980-1983
Computer Policy Advisory Committee, 1983-1984
Ph.D. Examining Committees - 4-6 per year
Northwestern University Network Task Force, 1985-1986
Joint Committee on the Programs in Computer Studies and computing in the Arts and Sciences, 1986
Program Review Committee for Math Department, 1986-87, 1995
Graduate School Fellowship Committee, 1986-89
Curricular Policies Committee, 1989-92
General Faculty Committee, 1991-1994
(1) Subcommittee on Benefits, 1991-1994, Chair 1993-94
(2) Committee on Committees, 1991-1994, Chair 1992-93
Coordinating Council on Instructional Computing, 1993-4
High Performance Computing Committee, 1996
Research Policy Committee of GFC 1995-9
Environmental Science Program CAS, 1995-2000
Search Committee, Vice-President for Research, April-July, 1997
WCAS Committee on Senior Appointments, 2000-2003
Undergraduate Research Grants Committee 2003-2007
Machine and Electronics Shop Advisory Committee 2005-2006
University Academic Dishonesty Committee 2007
Quest allocations committee 2010-2016
Member, Materials Committee of the MRSEC 2005-2016
Member, Honorary Degree Committee, 2015-7
Member, Executive Committee of the Center of Bioinspired Energy Science (CBES) 2014-2018
Member, DOE Council on Chemical Sciences, Geosciences and Biosciences 2015-2018
Member, Executive Committee of the C-ABN Air Force Center 2015-2020

Member, Advisory Board, Center for interdisciplinary exploration and research in astrophysics (Ciera) 2010-2018
Member, Allocations Committee for Quest 2005-2016
Chair, Program Review Council 2015-2017

G. C. Schatz

Seminars and Colloquia (Since 9/76)

1. "The Quantum Dynamics of the Three Dimensional H + H_2 Reaction" at the University of Chicago, October 20, 1976.

2. "Stochastic Reductions in the Theory of Molecular Collisions" at Argonne National Laboratory, February 17, 1977.

3. "On the Use of Franck Condon Factors in Chemical Reaction Dynamics" at Northwestern University, April 22, 1977.

4. "The Use of Franck Condon Factors in Studies of Chemical Dynamics" at Illinois Institute of Technology, November 16, 1977.

5. "Theoretical Chemical Dynamics: Molecular Billiards" at Northwestern University, January 13, 1978.

6. "Some New Approaches to the Treatment of Energy Transfer in Small Molecules" at University of Illinois (Urbana, January 25, 1978.

7. "Theoretical Studies of Collisions between Small Molecules" at Ohio State University, October 27, 1978.

8. "Classical Trajectory Studies of Atom-Triatom Reactions" at Max-Planck-Institut fur Stromungsforschung, Gottingen, West Germany, April 2, 1979.

9. "Theory of Raman Scattering by Molecules Adsorbed on Electrode Surfaces" at Argonne National Laboratory, June 7, 1979.

10. "Classical Trajectory Studies of Polyatomic Molecule Collision Dynamics" at Lawrence Berkeley Laboratory, October 5, 1979.

11. "Classical Trajectory Studies of State Resolved Atom Plus Triatomic Molecule Collisions" at California Institute of Technology, October 9, 1979.

12. "Theoretical Studies of State Resolved Chemical Reactions" at University of Pennsylvania, October 23, l980.

l3. "Surface Enhanced Raman Spectroscopy" at University of Minnesota, January l9, l981.

14. "Rough Surface Electrodynamics, Metal Cluster Polarizabilities and Surface Enhanced Raman Spectroscopy", at Argonne National Laboratory, May 21,1981.

15. "Theoretical Studies of Thermal and State Resolved Chemical Reaction Kinetics", at University of Pittsburgh, January 14, 1982.

16. "Theories of Surface Enhanced Raman Spectroscopy", at Illinois Institute of Technology, January 20, 1982.

17. "Theoretical Studies of Thermal and State Resolved Gas Phase Reaction Dynamics," at UCLA, October 4, 1982.

18. "Theoretical Studies of State to State Reaction Dynamics in OH + H_2, H + H_2O and H + H_2," at University of California at Berkeley, November 2, 1982.

19. "Theoretical Studies of Mode Specific Reaction Dynamics," at Stanford University, November 11, 1982.

20. "Theoretical Studies of State to State Reaction Dynamics," at Caltech, November 6, 1982.

21. "Theoretical Studies of State to State Reaction Dynamics, at USC, November 17, 1982.

22. "Surface Enhanced Raman Spectroscopy," at University of Washington, November 29, 1982.

23. "Theoretical Studies of Mode Specific Reaction Dynamics," at SRI International, December 14, 1982.

24. "Theoretical Studies of Surface Enhanced Raman Spectroscopy," at Harvard University, January 19, 1983.

25. "Chemical Reaction Rates from First Principles: Application to Combustion Chemistry," at Pennsylvania State University, February 10, 1983.

26. "Theoretical Studies of Fast Hydrogen Atom Collisions with Small Molecules", at Notre Dame University, November 3, 1983.

27. "Theoretical Studies of Gas Phase Reaction Dynamics", at Kansas State University, November 17, 1983.

28. "Theoretical Studies of State to State Chemistry" at Max-Planck Institut fur Stromungsforschung, Gottingen, West Germany, May 7, 1984.

29. "State to State Chemistry: The New Alchemy" at University of Maryland, September 27, 1984.

30. "State to State Chemistry", at Michigan State University, November 1, 1984.

31. "State to State Chemistry Using Fast Hydrogen Atoms" at University of Chicago, November 20, 1984.

32. "State to State Chemistry Using Fast Hydrogen Atoms", at University of Illinois (Urbana), January 30, 1985.

33. "State to State Chemistry", at Iowa State University, February 22, 1985.

34. "Theories of Surface Enhanced Raman Scattering", at Clarkson University, March 7, 1985.

35. "State to State Chemistry Using Fast Hydrogen Atoms", at NRC Canada (Ottawa), March 8, 1985.

36. Theoretical Studies of State to State Chemistry" at University of Wisconsin, November 5, 1985.

37. "State to State Chemistry" at Rice University, February 5, 1986.

38. "State to State Chemistry" at Cambridge University, March 18, 1986.

39. "Reactive Scattering" at University of Sussex, March 20, 1986.

40. "Reactive Scattering Studies of H + H_2, O(^{1}D) + H_2 and Isotopic Analogs" at Northwestern University (CARDGOCK Meeting) March 24, 1986.

41. "State to State Chemistry Using Fast Hydrogen Atoms" at Cornell University, May 5, 1986

42. "Theoretical Studies of Gas Phase Reaction Dynamics: From Potential Energy Surfaces to Reaction Rate Constants", at Tokyo Institute of Technology, July 31, 1986.

43. "State to State Chemistry Using Fast Hydrogen Atoms" at Kyoto University, Aug. 12, 1986.

44. "State to State Chemistry Using Fast Hydrogen Atoms", at the University of Tokyo, Sept. 5, 1986.

45. "Theoretical Studies of Gas Phase Reaction Dynamics: From Potential Energy Surfaces to Reaction Rate Constants", at Osaka University, Sept. 8, 1986.

46. "Theoretical Studies of the Dynamics of the Reactions H + H_2 6 H_2 + H and H_2^+ + H_2 6 H_3^+ + H and Their Isotopic Counterparts", at Institute for Molecular Science (Okazaki), Sept. 11, 1986.

47. "State to State Chemistry", at Institute for Space and Astronautical Studies (Tokyo), Sept. 16, 1986.

48. "Theoretical Studies of the Reaction H_2^+ + H_2 6 H_3^+ + H" at Keio University (Yokohama), Sept. 19, 1986.

49. "State to State Chemistry Using Fast Hydrogen Atoms", at University of Colorado, October 31, 1986.

50. "Computational Studies of Chemical Reaction Dynamics", for Seminar on Computational Science and Engineering at Northwestern University, Jan. 10, 1987.

51. "Theoretical Studies of State to State Chemistry", at Texas A&M University, Feb. 4, 1987.

52. "Theoretical Studies of State to State Chemistry", at University of Texas, Feb. 5, 1987.

53. "Theoretical Studies of Gas Phase Reaction Dynamics", at University of Minnesota, Feb. 16, 1987.

54. "Theoretical Studies of Fast Hydrogen Atom Collisions", at USC, March 9, 1987.

55. "Theoretical Studies of Gas Phase Reaction Dynamics", at University of California at Irvine, March 10, 1987.

56. "Theoretical Chemistry of Dynamical Processes: Reactions in Van der Waals Complexes, Quantum Scattering, and Surface Enhanced Spectroscopy" at Texas A&M University, March 26, 1987.

57. "State to State Chemistry" at Wayne State University, October 21, 1987.

58. "State to State Chemistry: New Probes of Transition State Structure" at John Hopkins University, Nov. 17, 1987.

59. "State to State Chemistry" at Emory University, Dec. 1, 1987.

60. "Theoretical Studies of Fast Hydrogen Atom Collisions" at USC, Jan. 11, 1988.

61. "Theoretical Studies of Gas Phase Reaction Dynamics" at University of Waterloo, June 15, 1988.

62. "Tunnelling in Chemical Reactions" at UIC, Chicago Computational Chemistry Club, July 7, 1988.

63. "Reactive Resonances and the Photodetachment Spectra of $ClHCl^-$ and IHI^-" at JILA, University of Colorado, Boulder, Sept. 5, 1988.

64. "Vibrational Relaxation in Highly Excited Polyatomic Molecules" at Chemistry Department, University of Colorado, Boulder, Oct. 7, 1988.

65. "Theoretical Studies of Transition State Spectroscopy and of Collisional Relaxation in Highly Excited Polyatomic Molecules" at Purdue University, Oct. 19, 1988.

66. "Theoretical Studies of Transition State Spectroscopy and of Collisional Relaxation in Highly Excited Polyatomic Molecules" at Indiana University, Oct. 20, 1988.

67. "Theoretical Studies of Surface Enhanced Optical Spectroscopy" at Physics Department, Colorado School of Mines, Oct. 25, 1988.

68. "Theoretical Studies of Transition State Spectroscopy and of Collisional Relaxation in Highly Excited Polyatomic Molecules" at NASA Ames, Nov. 1, 1988.

69. "Theoretical Studies of Transition State Spectroscopy and of Collisional Relaxation in Highly Excited Polyatomic Molecules" at Berkeley, Nov. 3, 1988.

70. "Theoretical Studies of Transition State Spectroscopy and of Collisional Relaxation in Highly Excited Polyatomic Molecules" at Colorado State University, Nov. 29, 1988.

71. "Theoretical Studies of Transition State Spectroscopy: The Photodetachment Spectra of $ClHCl^-$ and IHI^-" at University of Utah, Dec. 1, 1988.

72. "Spectroscopy of the Transition State: Theoretical Studies of the Photodetachment Spectra of $ClHCl^-$ and IHI^-", at University of Texas at Austin, January 24, 1989.

73. "Spectroscopy of the Transition State", at Stephen F. Austin University, Nacogdoches, Texas, January 25, 1989.

74. "The Interface Between Intramolecular and Intermolecular Dynamics: Energy Transfer and Reactions in Polyatomic Molecules", at University of Texas at El Paso, January 26, 1989.

75. "Transition State Spectroscopy" at University of Northern Colorado, Feb. 3, 1989.

76. "Quantum Scattering Studies of Alignment in $Na(^2P_{3/2}) + He$ 6 $Na(^2P_{1/2}) + He$ Collisions", at Joint Institute for Laboratory Astrophysics, University of Colorado, Feb. 9, 1989.

77. "Theoretical Studies of Transition State Spectroscopy", at the University of Illinois at Chicago, May 2, 1989.

78. "Theoretical Studies of Reactions and Energy Transfer Between Small Molecules" at Queen's University, April 4, 1990.

79. "Theoretical Studies of Photodissociation Dynamics on Surfaces and in the Gas Phase", at Pacific Northwest Laboratory, May 15, 1990.

80. "Transition State Spectroscopy and Chemical Reactions" at IIT (CCCC Meeting) Sept. 11, 1990.

81. "Resonances in Chemical Reactions" at Berkeley, Sept. 25, 1990.

82. "Resonances in Chemistry" at University of Nevada, Reno, Sept. 26, 1990.

83. "Characterizing Transition States of Chemical Reactions" at University of Idaho, Nov. 13, 1990.

84. "Resonances in Chemistry" at NASA Ames, Nov. 14, 1990.

85. "Theoretical Studies of Transition State Spectroscopy" at Syracuse University, Feb. 12, 1991.

86. "Theoretical Studies of Reaction Dynamics," at University of Wisconsin, Madison, Oct. 29, 1991

87. "Using Wave Packets to Calculate Rates of Chemical Reactions" at Pacific Northwest Laboratories, Jan. 23, 1992.

88. "Theoretical Studies of Reaction Dynamics" at NYU, Feb. 21, 1992.

89. "Transition State Spectroscopy" at Loyola University, March 19, 1992.

90. "Theoretical Studies of the OH + CO and H + CO_2 Reaction Dynamics," at Central Research Institute for Chemistry, Budapest, Hungary, Oct. 16, 1992.

91. "Theoretical Studies of Transition State Spectroscopy," at Argonne National Laboratory, Nov. 9, 1992.

92. "How Chemical Reactions Work," at University of Chicago, January 11, 1993.

93. "Theoretical Studies of Transition State Spectroscopy," at Duke University, Feb. 24, 1993.

94. "Close Encounters Between Molecules: Understanding How Chemical Reactions Take Place," at University of North Carolina, Feb. 25, 1993.

95. "Theoretical Studies of Transition State Spectroscopy," at Princeton University, Nov. 9, 1993.

96. "Theoretical Studies of Combustion Reactions," at Notre Dame, March 3, 1994.

97. "Reactive Collision Dynamics and Transition State Spectroscopy," at University of Tokyo, May 17, 1994.

98. "Theoretical Studies of Reactions Involved in Nitric Oxide Formation and Removal" at Tokyo Institute of Technology, May 18, 1994.

99. "Reactive Collision Dynamics and Transition State Spectroscopy," at Institute for Space and Astronautical Science, May 19, 1994.

100. "Reactive Collision Dynamics and Transition State Spectroscopy," at University of Kyoto, May 21, 1994.

101. "Theoretical Studies of Reactions Involved in Nitric Oxide Formation and Removal," at Himeji Institute of Science and Technology, May 23, 1994.

102. "Quantum Reactive Scattering Studies of OH + CO and NH + NO," at Institute for Molecular Science, May 25, 1994.

103. "Theoretical Studies of Reactions Involved in Nitric Oxide Formation and Removal," at Nagoya University, May 26, 1994.

104. "Gas Phase Reaction Dynamics," at Queen's University, June 7, 1994.

105. "Theoretical Studies of Combustion Reactions" at Columbia University, Nov. 3, 1994.

106. "Theory, Reaction Dynamics and Transition State Spectroscopy," at University of British Columbia, Nov. 8, 1994.

107. "Potential Energy Surfaces, Reaction Dynamics and Combustion Chemistry", at Ohio State University, January 9, 1995.

108. "Potential Energy Surfaces, Reaction Dynamics and Combustion Chemistry", at University of Utah, January 23, 1995.

109. "Theoretical Studies of Electronically Nonadiabatic Chemical Reactions", at Northwestern University, January 30, 1995.

110. "Potential Energy Surfaces, Reaction Dynamics and Combustion Chemistry", at Case Western Reserve University, February 2, 1995.

111. "Potential Energy Surfaces, Reaction Dynamics and Combustion Chemistry", at North Dakota State University, February 9, 1995.

112. "Potential Energy Surfaces, Reaction Dynamics and Combustion Chemistry", at University of North Dakota, February 10, 1995.

113. "Potential Energy Surfaces, Reaction Dynamics and Combustion Chemistry"; "Surface Enhanced Spectroscopy" Frontiers of Science Lectures at the University of Toledo, April 24 and 25, 1995.

114. Physical Chemistry Summer Lectures, University of Colorado, June 22-28, 1995
    1. "Classical Trajectory Studies of Mode-Specific Chemistry"
    2. "Quantum Reactive Scattering"
    3. "Electronically Nonadiabatic Dynamics"
    4. "Collisional Energy Transfer from Highly Excited Polyatomic Molecules"
    5. "Theoretical Studies of Surface Enhanced Spectroscopy"

115. "Collisional Energy Transfer from Highly Excited SO_2", at the University of Karlsruhe, Aug. 2, 1995.

116. ATheoretical Studies of Surface Enhanced Spectroscopy@, at Iowa State University, January 19, 1996.

117. ATheoretical Studies of Surface Enhanced Spectroscopy@, at University of Pennsylvania, Feb. 1, 1996.

118. ATheoretical Studies of Combustion Reactions@, Nagoya University, Nagoya, Japan, March 6, 1996

119. ATheoretical Studies of Combustion Reactions@, Kyoto University, Kyoto, Japan, March 7, 1996

120. Theoretical Studies of Reaction Dynamics, Institute for Molecular Science, Okazaki, Japan, March 8, 1996.

121. ATheoretical Studies of 4-Atom Bimolecular Reaction Dynamics@, Australian National University, Canberra, Australia, July 12, 1996.

122. ARecent Advances in Reaction Dynamics Calculations@, at the Steacie Institute, National Research Council,Ottawa, Canada, Sept 20, 1996.

123. APotential Energy Surfaces, Reaction Dynamics and Combustion Chemistry@, at Central Research Institute for Chemistry, Hungarian Academy of Sciences, Budapest, Hungary, October 27, 1996.

123. AReaction Dynamics and Combusion Chemistry@, at National Taiwan University, Taiwan, Dec. 13, 1996.

124. APotential Energy Surfaces, Reaction Dynamics and Combustion Chemistry@ at University of Gothenburg, Sweden, Dec. 18, 1996.

125. ACollisional Energy Transfer@ at Stanford University, April 12, 1997

126. AReaction Dynamics and Energy Transfer@ at University of California, Berkeley, Sept. 23, 1997

127. AReaction Dynamics and Surface Hopping in Simple Insertion Reactions@, Caltech, Feb. 24, 1998.

128. ATheoretical Studies of Nonadiabatic Reaction Dynamics@, Boston University, March 23, 1998

129. AOptical Properties of Metal Nanoparticles@, Boston College, March 24, 1998

130. ANonadiabatic Reaction Dynamics@, Emory University, October 13, 1998.

131. JILA Distinguished Visitor Program, University of Colorado, March 31-April 13, 1999
1. Reaction of H with Highly Excited H_2O, Activated or Not?
2. Optical Properties of Metal Nanoparticles.

132. ATheoretical Studies of $O(^1D)+H_2$ and $N(^2D)+H_2$", University of Birmingham, July 9, 1999.

133. Northwestern University, Industrial Associates Meeting, May, 2000 AOptical Properties of Metal Nanoparticles and Nanoparticle Aggregates Important in Biosensors.@ (Invited talk).

134. Emory University, October 2, 2000 AOptical Properties of Metal Nanoparticles and Nanoparticle Aggregates Important in Biosensors.@

135. AOptical Properties of Metal Nanoparticles and Nanoparticle Aggregates Important in Biosensors.@,Wayne State, January 24, 2001

136. AOptical Properties of Metal Nanoparticles and Nanoparticle Aggregates Important in Biosensors.@,Hungarian Academy of Sciences, March 20, 2001

137. AOptical Properties of Metal Nanoparticles and Nanoparticle Aggregates Important in Biosensors.@, UC Irvine, April 16, 2001

138. AGas Phase Reaction Dynamics@, USC, April 17, 2001

139. AOptical and Structural Properties of Metal Nanoparticles and Nanoparticle Aggregates Important in Biosensors.@ Indiana University, October 16, 2001

140. AGas phase reaction dynamics@ Indiana State University, November 27, 2001

141. AOptical and Structural Properties of Metal Nanoparticles and Nanoparticle Aggregates Important in Biosensors.@, UIC, March 14, 2002

142. AColors of Silver and Gold Nanoparticles: Influence of Size, Shape and Environment@, Special Topics Short Course, Illinois Benedictine College, Sept. 10, 2002

143. ANanoparticles and DNA: New Challenges for Theoretical Chemistry@, Montana State University, Dec. 6, 2002

144. ANanoparticles and DNA: New Challenges for Theoretical Chemistry@, Michigan State University, February 20, 2003.

145. Morrison Inaugural Lecture, Theory and Nanoparticles, Northwestern University, February 26, 2003.

146. Nanoparticle Optical Properties and DNA Detection: Theoretical Studies, University of Pisa, Sept. 11, 2003.

147. Theoretical Studies of DNA Structures and Dynamics, University of Siena, Sept. 15, 2003.

148. "Nanoparticle Optics and DNA Melting", Center for Nanomaterials, Argonne National Laboratory, Oct. 3, 2003.

149. "Modeling Dynamical Processes in Materials", Beckman Institute, University of Illinois, Oct. 14. 2003

150. "Nanoparticles and Nanoconfined DNA: New Challenges for Theory", Stanford University, Dec. 1, 2003

151. "Theory of Dip Pen Nanolithography", NanoInk, Inc. Dec. 9, 2003.

152. "Nanoparticles and Nanoconfined DNA: New Challenges for Theory", University of Colorado, Feb. 6, 2004

153. "Nanoparticles and Nanoconfined DNA: New Challenges for Theory", Pusan University, Korea, Feb. 19, 2004

154. "Metal Nanoparticle Optical Properties and DNA Structures and Thermodynamics", Dupont, March 8, 2004

155. "Supercollisions and Self Assembled Monolayers", Columbia University, June 12, 2004.

156. "Reactions of Atomic Oxygen, from small molecules to polymers", University of Wisconsin, Sept. 21, 2004

157. "Nanoparticles and Biomolecule Detection: New Challenges for Theory", Queen's University, Dec. 3, 2004

158. "DNA Melting and Optical Sensors", Jan. 18, 2005, Integrated DNA Technologies, Skokie IL

159. "Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory", University of Buffalo, Jan. 21, 2005

160. "Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory", University of Michigan, Feb. 24, 2005

161. "Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory", University of Chicago, March 8, 2005.

162. "Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory", (W. Albert Noyes, Jr. Lecture), University of Texas, Sept. 8, 2005-10-10

163. “Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory”, (C. A. Coulson Lecture), University of Georgia, Athens, GA, Sept. 27, 2005.

164. “Theory and SERS” (Van Duyne Festschrift), Northwestern University, Evanston IL Oct. 15, 2005.

165. “Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory”, Caltech, November 15, 2005.

166. “Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory”, Emory University, November 28, 2005.

167. “DNA-linked Nanoparticle Aggregates”, Condensed Matter Physics, Ohio State University, January 23, 2006

168. “Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory”, Department of Chemistry, University of Maryland, February 15, 2006

169. “Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory”, Department of Chemistry, University of Pennsylvania, February 16, 2006

170. “Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory”, Harvard/MIT Physical Chemistry Colloquium, March 2, 2006

171. “Materials Fracture and Adhesion”, Union University, Department of Chemisty, March 17, 2006

172. “Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory”, Pennsylvania State University, March 24, 2006

173. “Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory”, Jackson State University, Sept. 1, 2006

174. “Nanoparticle Optical Properties and Biomolecule Detection: New Challenges for Theory”, Kilpatrick Lecture, Illinois Institute of Technology, Sept. 15, 2006

175. “The strength of carbon nanotubes, and nanoscale diamond and graphite”, “Medical diagnostics with gold and silver nanoparticles”, University of Missouri (Thomas Lectures), Nov. 30, Dec. 1, 2006

176. “Nanoparticle optical properties and biomolecule detection: New challenges for theory”, Marquette University, Jan. 19, 2007

177. “Nanoparticle optical properties and biomolecule detection: New challenges for theory”, Columbia University, Jan. 24, 2007

178. “Nanoparticle optical properties and biomolecule detection: New challenges for theory”, Cherry Emerson Lecture, Georgia Tech, Feb. 13, 2007

179. Lectures at Pierre and Marie Curie University, April 25-May 8, 2007
1. Nanparticle optical properties
2. Hole arrays and extraordinary transmission
3. Self assembly modeling
4. Fracture of nanomaterials
5. DNA and DNA aggregates

180. Ecole Normal Superiore, May 4, 2007
“Dynamics of the reaction of atomic oxyten with liquid hydrocarbon surfaces”

181. “Theory and computation in nanoscience”, Yale University, Oct. 22, 2007.

182.“Electrodynamics and electronic structure studies of nanoparticle optical properties”, Rice University, Dec. 6, 2007.

183. “Building functional materials with DNA”, Nanyang Technical University, Singapore, Dec. 19, 2007.

184. “Building functional nanostructures with DNA: theory and modeling” Harvard-MIT seminar, Feb. 7-8, 2008

185. Optical properties of metal nanostructures: electrodynamics and electronic structure studies, Univ. of Pittsburgh, Feb. 21, 2008.

186. Nanoparticle optical properties and DNA-linked nanoparticle structures: new challenges for theory, Kahn Lecture, University of New Mexico, February 29, 2008

187. Optical Properties of metal nanostructures: electrodynamics and electronic structure studies, James W. Neckers Lecture, Southern Illinois University, April 16, 2008.

188. Nanoparticles, biosensing and theory, University of Stockholm, May 26, 2008.

189. DNA structures and dynamics, Karolinska Institute, May 27, 2008.

190. Optical properties of metal nanostructures: electrodynamics and electronic structure studies, University of Technology at Sydney, Australia, Sept. 15, 2008

191. Nanoparticles, DNA and Theory, University of Melbourne, Sept. 19, 2008

192. Nanoparticles, DNA and Theory, University of Washington, Oct. 1, 2008

193. Nanoparticles, DNA and Theory, Illinois State University, Oct. 31, 2008

194. DNA structures, excites states and nanomaterials, Steacie Institute, Ottawa, Nov. 4, 2008

195. DNA structures, excites states and nanomaterials, UIUC, Nov.19, 2008

196. Nanoparticle optical properties and DNA-linked nanoparticle structures: new challenges for theory, Univ. of Manitoba, Nov. 21, 2008

197. Nanoparticles, DNA and theory, Clemson Univ, Dec. 4, 2008

198. Molecules, surfaces, plasmons and theory, Scoles Festschrift, Princeton Univ, Dec. 141-6, 2008

199. Nanoparticles, DNA and Theory, Texas Tech University, Lubbock TX, March 11, 2009

200. Nanoparticles, DNA and Theory, Iowa State Univ., Ames IA March 13, 2009.

201. Nanoparticles, DNA and Theory, Truman State Coll., Chicago, IL, March 19, 2009

202. Nanoparticles, DNA and Theory, UNAM, Mexico City, March 27, 2009.

203. Nanoparticles, DNA and Theory, NYU, April 3, 2009.

204. Nanoparticles, DNA and Theory, Kansas State, April 22, 2009.

205. Dalian Institute of Chemical Physics, Dalian, China, Sept. 2-4, 2009.
1. Gas Phase and Gas/liquid Reaction Dynamics,
2. Nanoparticles, DNA and Theory

206. Frontiers of Chemistry Research Lectures, Texas A&M University, College Station Texas, Sept 14-16, 2009
1. Silver and gold nanoparticles, plasmons and sensing
2. DNA structures, excited states and nanomaterials
3. Carbon nanotubes, graphene and nanodiamond

207. Modeling the self-assembly of nanostructures, University of Tennessee, Nov. 5, 2009

208. University of North Texas, Nov. 19-20, 2009
1. DNA structures, excited states, and nanomaterials
2. Computational electrodynamics of plasmonic nanostructures

209. University of Copenhagen, Dec. 10-11, 2009
1. DNA structures, excited states, and nanomaterials
2. Theoretical studies of metal nanoparticle optical properties

210. University of Wisconsin, April 5,6, 2010
Modeling the self-assembly of nanostructures (McElvain Lecture)

211. University of Texas at Dallas, April 16, 2010
Nanostructure assembly and optical property modeling

212. Air Force Institute of Technology, Wright-Patterson Air Force Base, Dayton, OH, June 3, 2010
Connecting theory and experiment: silver nanoparticle optical properties

213. University of Technology at Sydney, July 21, 2010
DNA structures, excited states and nanomaterials

214. University of Colorado, Aug. 4-10, 2010
1. Theories of metal nanoparticle optical properties: Bottom-up meets top-down
2. Modeling the self-assembly of nanostructures
3. Gas-phase and gas-surface reaction dynamics studies
4. DNA structures, excited states and nucleosome binding
5. Carbon nanotubes, graphene and nanodiamond

215. UC Berkeley, November 16, 2010.
Plasmon enhanced optical phenomena

216. University of Rochester, Feb. 16, 2011
DNA structures, excited states and nanomaterials

217. Pacific Northwest National Laboratories, March 14, 2011
Plasmon enhanced optical phenomena

218. Wroclaw University of Technology, June 6-8, 2011 Distinguished Lecturer
1. DNA structures, excited states and nanomaterials
2. Theories of plasmonic nanoparticle optical properties
3. Gas-phase and gas-surface reaction dynamics studies

219. University of Arizona, Tucson, Sept. 29, 2011 Eminent Scholar Series
Plasmon enhanced optical phenomenon

220. University of Kansas, Nov. 18, 2011 Davidson Lecture
New twists on DNA in Biology and Materials

221. Northwestern University, Dec. 1, 2011, ANSER Seminar
Theories of plasmon enhanced photoprocesses important in solar energy

222. Montana State University, Dec. 9, 2011 Distinguished Lecturer
New twists on DNA in Biology and Materials

223. Northwestern University, NERC seminar, Dec.13, 2011
Using DNA to make functional nanostructures: theoretical models

224. Penn State, Feb. 2, 2012
New twists on DNA in biology and materials.

225. Scuola Normale Superiore, Pisa, Italy, Feb. 15, 2012
Opportunities in nanoscience with gold particles

226. University of Kentucky, Feb. 17, 2012
1. Novel plasmonic nanostructures
2. Plasmon-enhanced optical phenomena

227. Georgia Tech March 20, 2012
Gold nanoparticle structures and optical properties

228. University of Central Florida, April 8, 2012
New twists on DNA in Biology and Materials

229. University of California, San Diego, April 26, 2012
New twists on DNA in Biology and Materials (Distinguished Lecturer)

230. Clarkson University, Potsdam, NY, May 10, 2012
New opportunities in nanoscience with gold nanoparticles (Honorary Degree)

231. Missouri University of Science and Technology, September 24, 2012
Opportunities in Nanoscience with Gold Nanoparticles

232. Aron Kuppermann Memorial Symposium, Caltech, Oct. 23, 2012
New Directions in Plasmonics and Biomaterials

233. University of Iowa, Iowa City, November 30, 2012
New Plasmonic Materials and Optical Applications

234. Wayne State University, Detroit, MI Feb. 4, 2013 (Frontiers in Chemistry Lecturer)
New plasmonic nanomaterials and optical applications

235. Florida State University, Tallahassee, FL April 5, 2013
New plasmonic nanomaterials and optical applications

236. University of Texas at San Antonio, Sept. 13, 2013
Modeling active plasmonic response

237. Computational Chemistry Symposium, Georgia Tech, Oct. 15, 2013

Modeling active plasmonic response

238. Inaugural Symposium on Computational Science, Temple University, Oct. 18, 2013
Coupling Self-Assembly to Plasmons

239. Weizmann Institute of Science, October 27, 2013
Modeling active plasmonic response

240. University of Bristol, March 24, 2014
New plasmonic materials and optical applications: theory drives experiment

241. University of Manchester, March 25, 2014
New plasmonic materials and optical applications: theory drives experiment

242. University of York, March 26, 2014
RSC Symposium
New plasmonic materials and optical applications: theory drives experiment

243. Herriot-Watt University, March 27, 2014
Hyperthermal Chemistry

244. Harvard, MIT, BU Joint Symposium, April 2, 2014
Plasmon-molecule interactions.

245. Seoul National University, Seoul Korea April 21, 2014
Molecular Plasmonics

246. KAIST, Daejon, Korea April 22, 2014
Molecular Plasmonics

247. POSTECH, Pohang Korea April 24, 2014
Molecular Plasmonics

248. Pusan University, Pusan Korea, April 25, 2014
New directions in the assembly of functional materials

249. Leibniz Institute, Jena, Germany, August 6, 2014
Plasmonic Arrays

250. Hirschfelder Lectures, University of Wisconsin, Oct. 6-8, 2014
1. Silver and Gold Nanoparticles
2. Using self-assembly to make functional materials
3. Can one make useful structural materials with carbon nanotubes/graphene?

251. Mulliken Lecture, University of Chicago, October 13, 2014
Plasmon-molecule interactions.

252. Michigan State University, Lansing MI January 29, 2015
Using Self-assembly to make functional materials

253. University of Illinois, Urbana IL Feb. 19, 2015
1. “Silver and Gold Nanoparticles: New Directions for Theory”
2. “Using Self-Assembly to Make Functional Materials”

254. Stauffer Lecture, University of Southern California, April 16-17, 2015
1. Silver and Gold Nanoparticles: New Directions for Theory
2. Using self-assembly to make functional materials

255. University of California, Irvine, May 22, 2015
“Understanding self-assembly in making functional materials

256. Institute of Organic Chemistry and Biochemistry, Academy of Sciences, Prague, August 31, 2015
“DNA/gold nanoparticle structures and optical properties”

257. University of Michigan, Sept. 16, 2015, Moses Gomberg Lecture
“Plasmonic Arrays”

258. University of Northern Colorado, Oct. 9, 2015
“Silver and Gold Nanoparticles:From Stained Glass to Nanomedicine”

259. CUNY, November 2015
“Electromagnetic and Chemical Effects in SERS”

260. IMPACT Lecture Notre Dame Feb. 4, 2016
“Self-Assembled Plasmonic Structures”

261. AFRL Feb. 9, 2016
“Understanding SERS-based Detection of Chemical and Biological Targets”

262. Temple University Feb. 18, 2016
“Self-Assembled Plasmonic Structures”

263. Edgar Fahs Smith Lecture University of Pennsylvania March 3, 2016
“Silver and Gold Nanoparticles:New Directions for Theory”

264. Condon Lecture University of Colorado April 15, 2016
“Self-assembled plasmonic structures”

265. RPI Materials Science and Engineering Dept, (Distinguished Lecture), May 11, 2016
“Self-Assembled Plasmonic Structures”

266. University of Memphis, Chemistry Department, Sept. 2, 2016
"A new direction in chemical bonding: using nanoparticles as atoms and DNA as linkers to make functional materials"

267. Texas Tech University, Chemistry Department, Sept. 28, 2016
"A new direction in chemical bonding: using nanoparticles as atoms and DNA as linkers to make functional materials"

268. MIT Center for Excitonics, Nov. 29, 2016
"Plasmons, Excitons and Theory"

269. University of Manitoba, Jan. 20 2017
"New insights from theory on the hydrogenation of CO_2"

270. Rice University, Joe L. Franklin Memorial Lecturer, Feb. 1 2017
"Self-Assembled Plasmonic Structures"

271. Baylor University, Feb. 17, 2017
"Self-Assembled Plasmonic Structures"

272. Cornell University, Andreas C. Albrecht Lecture, March 13, 2017
"Self-Assembled Plasmonic Structures"

273. Peking University, Xing Da Lecture, May 12, 2017
"Silver and Gold Nanoparticles: New Directions for Theory"

274. TIFR-Hyderabad, Hyderabad, India, July 14, 2017
"Nanoparticles, SERS and Theory"

275. University of California Santa Cruz, Feb 26, 2018 Distinguished Lecturer
Manipulating Plasmons using Nanoparticle Arrays

276. University of Utah, April 2, 2018 Eyring Lecturer
Nanoparticles, Plasmons and Theory

277. University of South Carolina, April 6, 2018 Davis Lecture
Silver and Gold Nanoparticles: New Directions for Theory

278. Zheijiang University, Hangzhou, China May 7, 2018
Catalysts for CO_2 and N_2 Reduction

279.Aalto University, Helsinki, Finland, May 24, 2018
Opportunities for plasmonics in lasers and metamaterials

280.IISER Kolkata, India, July 21, 2018
Arrays of Gold Nanoparticles: From Lattice Plasmons to Lasers

281.CINVESTAV Mexico City, October 2, 2018
Manipulating Plasmons Using Nanoparticle Arrays (including Self Assembly) (invited)

282. National Taiwan University, Jan. 30, 2019
Nanoparticles, SERS and Theory

283. RCAS (Research Center for Applied Sciences) Academia Sinica, Taipei, Taiwan, Jan. 31, 2019
Manipulating plasmons using nanoparticle arrays

284. University of Illinois, Chicago. Chemical Engineering Department, Feb. 28, 2019
Self-assembled plasmonic structures

285. University of California, San Diego March 12, 2019
Manipulating plasmons using nanoparticle arrays (2019 Student-Invited Theoretical/Computational PChem Seminar)

286. University of Washington, Seattle, May 28, 2019
Nanoparticles, SERS and Theory (Paul Cross Lecture)
Manipulating Plasmons using Nanoparticle Arrays (Invited Physical Seminar)

287. University of Tennessee, Knoxville Sept. 12, 2019
Nanoparticles, SERS and Theory

288. University of Rochester, Rochester NY, Oct. 8-10, 2019
Nanoparticles, SERS and Theory (Noyes Lecture)
Manipulating Plasmons using Nanoparticle Arrays
Understanding self-assembly of functional nanostructures

289. Xiamen University, Xiamen, China, Nov. 11, 2019
Nanoparticle Arrays (Nanqiang Lecture)

290. University of Colorado, Boulder Nov. 18, 2019
Nanoparticles, SERS and Theory

291. Wichita State University, Wichita KS Jan. 29, 2020
Understanding Self-Assembly of Functional Nanostructures

292. MIT, (HarvardMITBU Theoretical Chemistry Seminar) Feb. 26, 2020
Plasmonic Lattices

293. IISER Kolkata (Virtual Seminar) September 9, 2020
Nanoparticles, plasmons and theory

294. USTC (University of Science and Technology of China), Virtual, December 16, 2020
Understanding the self-assembly of functional nanostructures (Forum of Great Minds Seminar)
Nanoparticles, plasmons and theory, physical chemistry seminar, Dec. 18, 2020

295. Nanyang Technical University, Virtual, Jan. 12, 2021
Plasmonic Photocatalysis

296. Wake Forest University (Virtual) Physics Department, January 28, 2021
Plasmonic lattices

297. University of Maryland Baltimore County, February 26, 2021
Plasmonic Photocatalysis

298. Northwestern Polytechnical University, Xi'an China, May 11, 2021
Functional nanomaterials from self-assembly: how to model and how to publish

299. Michigan State University, Max T. Rogers Lecture (virtual) October 4, 2021
Using quantum chemistry to describe plasmons

300. Illinois Institute of Technology, October 13, 2021
Understanding the Self-Assembly of Functional Nanostructures (in-person)

301. University of Illinois (UIUC) Department of Materials Science and Engineering, Nov. 30, 2021
Plasmonic Materials: at the Interface of Quantum Chemistry and Classical Electrodynamics

302. Indiana University, Harrison Shull Lecture, March 2-3, 2022
1. Nanoparticles, Plasmons and Theory
2. Exciton Transport in Complex Environments

303. Michigan State University, Max T. Rogers Lectures Nov. 10,11, 2022
Understanding the Self-Assembly of Functional Nanostructures
Exciton transport in complex environments and with entangled photons

304. Marquette University, Nakamoto Lecture, Dec. 2, 2022
Nanoparticles, plasmons, photocatalysis and theory

305. National Taiwan University, Chemistry Seminar, Feb. 5, 2023
Single photon emitters: challenges and opportunities

306. Flygare Lecture, University of Illinois, Urbana, IL April 28, 2023
Plasmons, molecules and theory: where top-down meets bottom-up

307. Schaad Lecture, Vanderbilt University, January 22, 2024
Plasmons, molecules and theory: where Bottom-up meets Top-down

308. University of Notre Dame, Reilly Lecture, Feb. 14-15, 2024
Plasmons, molecules and theory: where Top-down meets Bottom-up
Modelling the Uptake and Transport of Multiply Charged Ions Through MoS_2 and Other Membranes

309. University of Houston, March 27, 2024
Plasmons, molecules and theory, where Bottom-up meets Top-down

310. Tata Steel, India (Virtual) April 10, 2024
Modelling the Uptake and Transport of Multiply Charged Ions Through Inorganic Membranes

311. Mirkunite: Titans of the Tiny, Northwestern University, July 13, 2024
Theory, Modeling, and Mirkin (Invited)

G. C. Schatz
Papers Given at Scientific Meetings

1. American Physical Society March Meeting, San Diego, CA, March 19-22, 1973.

   (a) Time Delays and Resonances in the H + H_2 Exchange Reaction, G. C. Schatz and Aron Kuppermann.
   (b) Quantum and Quasi-Classical Reaction Probabilities for the Collinear F + H_2 6HF + H Reaction, G. C. Schatz, J. M. Bowman and Aron Kuppermann.

2. VIII International Conference on the Physics of Electronic and Atomic Collisions, Belgrade, Yugoslavia, July 16-20, 1973.

   (a) Time Delays, Phase Behavior and Resonances in the Collinear H + H_2 Exchange Reaction, G. C. Schatz and A. Kuppermann.
   (b) Quantum, Quasi-Classical and Semi-Classical Reaction Probabilities for the Collinear F + H_2 6 FH + H Reaction, G. C. Schatz, J. M. Bowman and Aron Kuppermann.

3. IX International Conference on the Physics of Electronic and Atomic Collisions, Seattle, WA, July 24-30, 1975.

   (a) Quantum Dynamical Resonance Effects in the Collinear F + HD(DH) and H + FH Reactions, G. C. Schatz and Aron Kuppermann.
   (b) Comparison of Accurate and Approximate Cross Sections for Planar H + H_2 Reactions, A. Kuppermann, G. C. Schatz and M. Baer.
   (c) Feshbach Resonances in Planar Reactive H + H_2, G. C. Schatz and Aron Kuppermann.
   (d) Fully Converged Quantum Mechanical Reactive Cross Sections for Three Dimensional H + H_2, Aron Kuppermann and G. C. Schatz.
   (e) Inelastic and Elastic Quantum Mechanical Nonreactive Cross Sections for 3-D H + H_2, G. C. Schatz and Aron Kuppermann.

4. Gordon Conference on Molecular Interactions, Wolfeboro, NH, August 9-13, 1976.

   (a) The Quantum Dynamics of the Three Dimensional H + H_2 Exchange Reaction, G. C. Schatz. (invited talk)

5. American Physical Society Annual Meeting, Chicago, IL., February 7-10, 1977.

   (a) Projection Operator Approach to Stochastic Reductions in Molecular Collision Dynamics, G. C. Schatz.

6. American Chemical Society (173rd Meeting), New Orleans, LA, March 21-25, 1977.

   (a) The Generalized Cumulant Expansion Approach to Stochastic Reductions in Collision Dynamics, G. C. Schatz.

7. Tenth Midwest Theoretical Chemistry Conference, Argonne National Laboratory, Argonne, IL, May 26-28, 1977.
   (a) Stochastic Reductions in Molecular Collision Dynamics, G. C. Schatz.

8. American Physical Society Annual Meeting, Washington, D.C., March 27-30, 1978.

   (a) The Importance of Anharmonicity on the Rates of Energy Transfer in Polyatomic Molecules, G. C. Schatz and M. D. Moser.
   (b) A New Method for Determining Semiclassical Eigenvalues in Nonseparable Systems, G. C. Schatz.

9. Eleventh Midwest Theoretical Chemistry Conference, Battelle Columbus Laboratories, May 18-20, 1978.

   (a) A Generalized Langevin Equation Approach to Gas Phase Collision Dynamics.
   (b) The Importance of Anharmonicity on the Rates of Energy Transfer in Polyatomic Molecules.
   (c) The Theory of Raman Scattering by Molecules Adsorbed on Electrode Surfaces.

10. 1978 Conference on Dynamics of Molecular Collisions, Asilomar, CA, June 26-29, 1978.

    (a) New Theoretical Approaches to the Treatment of Inelastic and Reactive Collisions of Polyatomic Molecules (Invited Talk).

11. American Conference on Theoretical Chemistry, Boulder, CO, June 25-30, 1978.

    (a) Reduced Phase Space Approaches to Molecular Collision Dynamics.

12. American Physical Society Annual Meeting, Chicago, IL, March 15-19, 1979.

    (a) Theory of Raman Scattering from Molecules Adsorbed on Electrode Surfaces (Invited Talk).
    (b) The Effects of Anharmonicity in Determining the Rates of Collisional Energy Transfer Kr + CO_2, T. Mulloney and G. C. Schatz.
    (c) A New Semiclassical Method for Determining Tunnelling Probabilities in Atom-Diatom Chemical Reactions, G. C. Schatz and R. I. Altkorn.

13. Symposium on "Reaction Dynamics and Energy Transfer in Systems with Many Accessible States," Munich, Germany, March 26-30, 1979.

    (a) Theoretical Studies of Collisional Energy Transfer and Chemical Reaction Dynamic Involving Small Molecules (Invited Talk).

14. The Chemical Society Faraday Division, General Discussion No. 67, "Kinetics of State Selected Species," Birmingham, England, April 9-11, 1979.

A Study of the Effect of Reagent Vibrational Excitation on Chemical Reaction Rates and on Collisional Energy Transfer in Atom plus Triatom Systems.

15. 12th Midwest Theoretical Chemistry Conference, Purdue University, May 3-5, 1979.

    (a) The Effect of Reagent Vibrational Excitation on Chemical Reaction Rates in Atom Plus Triatom Reactions.

16. NRCC Workshop on "Stochastic Molecular Dynamics," Woods Hole, MA, July 8-11, 1979 (Invited Talk).

    (a) Langevin Studies of Gas-Phase Collisional Energy Transfer.

17. Gordon Conference on "Few Body Problems in Chemistry and Physics," Brewster Academy, Wolfeboro, NH, August 13-17, 1979 (Invited Talk).

    (a) Use of Stochastic Methods in Studies in Molecular Collisions.

18. International Conference on Non-Traditional Approaches to the Study of the Solid-Electrolyte Interface, Snowmass, Colorado, September 24-27, 1979.

    (a) Theory of Surface Enhanced Raman Scattering.

19. American Physical Society Annual Meeting, Chicago, IL, January 21-24, 1980.

    (a) A Quasiclassical Trajectory Study of Collisional Excitation in $Li^+ + CO_2(000)$.

20. 13th Midwest Theoretical Chemistry Conference, University of Minnesota, May 9-10, 1980.

    (a) A Quasi-Classical Trajectory Study of Product Vibrational Distributions in the $OH + H_2$ 6 $H_2O + H$ Reaction, G. C. Schatz and H. Elgersma.

21. 10th Northeast Regional ACS Meeting, Potsdam, NY, June 30-July 3, 1980.

    (a) Theoretical Studies of Mode Specific Rate Enhancements in the $OH + H_2$ 6 $H_2O + H$ and $O + CS_2$ 6 $CS + SO$ Reactions.
    (b) Theory of Enhanced Raman Scattering by Molecules Adsorbed on Metal Surfaces.

22. American Chemical Society Meeting, Las Vegas, Nevada, August 25-29, 1980.

    (a) Overview of Reactive Scattering. A State Resolved Trajectory Study of $OH + H_2$ 6 $H_2O + H$. (Invited Talk)

23. 1981 Sanibel Symposia, Palm Coast, Florida, March 9-14, 1981.

    (a) Quasiclassical Trajectory Methods for Studying State to State Collision Processes Involving Polyatomic Molecules (Invited Talk)
    (b) State to State Reaction Dynamics in $OH + H_2$ and $H + H_2O$, H. Elgersma and G. C. Schatz

24. 14th Midwest Theoretical Chemistry Conference, University of Chicago, May 7-8,1981.

(a) The Influence of Surface Roughness in Surface Enhanced Raman Spectroscopy, U.Laor and G.C. Schatz
(b) A Quasiclassical Trajectory Study of Collisional Energy Transfer and Dissociation in He + HO_2, C.R.Gallucci and G.C.Schatz
(c) A Quasiclassical Trajectory Study of Mode Specific Reaction Rate Enhancements in H + $H_2O(v_1,v_2,v_3)$ 6 OH + H_2, H.Elgersma and G. C. Schatz
(d) Calculation of Resonance Polarizabilities and Polarizability Derivatives in Li_2, P.K.K. Pandey and G.C.Schatz

25. Gordon Conference on "Molecular Energy Transfer", Brewster Academy, Wolfeboro, NH, June 29-July 3,1981.

(a) Theories of Surface Enhanced Raman Spectroscopy (Invited talk)

26. Gordon Conference on "Dynamics of Molecular Collisions", Holderness School, Plymouth, NH, July 27-31,1981.

(a) A Study of Mode Selective Reaction Rate Enhancements in H + $H_2O(v_1,v_2,v_3)$ 6 OH + H_2.

27. American Chemical Society Meeting, New York, NY, August 24-28, 1981.

(a) Can There Be Mode Specific Chemistry in the Gas Phase? (Invited Talk)

28. 15th Midwest Theoretical Chemistry Conference, Michigan State University, April 29,30, 1982.

(a) Energy Transfer, Stabilization and Dissociation in Collisions of He with Highly Excited HO_2, G.C. Schatz and C.R. Gallucci.

29. Gordon Conference on "Atomic and Molecular Interactions," Brewster Academy, Wolfeboro, NH, July 26-30, 1982.

30. International Conference on Vibrations at Surfaces, Asilomar, CA, September 1-4, 1982.

(a) Ab Initio Studies of Molecules Adsorbed onto Metal Clusters: Application to Surface Enhanced Raman Spectroscopy (SERS), G.C. Schatz and P.K.K. Pandey.

31. 184th National Meeting of the American Chemical Society, Kansas City, MO, September 13-17, 1982.

(a) Third Body Effects in the Unimolecular Decay of Triatomic Molecules, G.C. Schatz.
(b) The Calculation of Rate Constants from First Principles: A Comparison of Transition State and Other Theories with Experiment for Several Reactions, G.C. Schatz (Invited Talk).

32. 16th Midwest Theoretical Chemistry Conference, Northwestern University, May 20, 21, 1983.

(a) The DWBA Method: How to Make it Quantitative for 3D H + H_2, G.C. Schatz, L.M. Hubbard, P.S. Dardi and W.H. Miller.

33. Conference on Dynamics of Molecular Collisions, Gull Lake, MN, June 26-July 1, 1983

    (a) The DWBA Method: How to Make It Quantitative for 3D H + H_2, G.C. Schatz

    (b) Quantum Reactive Scattering: An Accurate Study of the Extent of Vibrational Actiabaticity in H + H_2 and D + H_2, G.C. Schatz

34. 187th National Meeting of the American Chemical Society, St. Louis, MO, April 9-12, 1984.

    (a) Resonances in the Collisional Excitation of CO by Fast H Atoms, G.C. Schatz (Invited Talk).

35. 17th Jerusalem Symposium in Quantum Chemistry and Biochemistry, "Dynamics of Molecule-Surface Interactions", April 30-May 3, 1984 (Jerusalem, Israel).

36. Meeting on the Theory of Chemical Reaction Dynamics, Magdalene College, Cambridge, England, July 13-16, 1984.

    (a) Quantum Reactive Scattering Studies of D + H_2, H + D_2 and O + H_2 (Invited Talk)

37. 8th International Symposium on Gas Kinetics, Nottingham, England, July 15-20, 1984.

    (a) Theoretical Studies of State to State Kinetics in H + H_2O 6 OH + H_2, $H_2 + H_2^+$ 6 H_3^+ + H and O + H_2 6 OH + H.

38. Workshop on Future Directions for Supercomputer Use in Chemistry, Evanston, IL, Oct. 15-17, 1984. (Organizer and Session Chairman).

39. Workshop on Future of Computer Simulation in Chemistry, Arden House, Harriman, NY, April 26-28, 1985 (Organized by Bruce Berne, Columbia U.).

    (a) Quantum Scattering Via Supercomputers (Invited Talk).

40. 18th Midwest Theoretical Chemistry Conference, Marquette University, May 16-18, 1985.

    (a) Semiclassical Rotational Eigenvalues, G.C. Schatz and R.J. Duchovic.
    (b) A Quasiclassical Trajectory Study of Collisional Excitation in H + NO, M.C. Colton and G. C. Schatz.
    (c) Coverage Dependence of SERS: A Local Electromagnetic Field Enhancement Model, E.J. Zeman and G.C. Schatz.

    (d) A Theoretical Study of $H_2^+ + H_2$ 6 H_3^+ + H, G.C. Schatz and C.W. Eaker.
    (e) Semiclassical Trajectory Study of the ArOCS van der Waals Complex, L.L. Gibson and G.C. Schatz.

41. CECAM/NATO Advanced Research Workshop, Orsay, France, June 17-28, 1985

(a) Recent Calculations on the H + H_2 Reaction and its Isotopic Counterparts, G.C. Schatz (Invited Talk).

42. Conference on the Dynamics of Molecular Collisions, Snowbird, Utah, July 14-19, 1985.

(a) Theoretical Studies of State to State Chemistry: A + BC and Beyond, G.C. Schatz (Invited Talk).

43. Gordon Conference on "Chemistry at Interfaces", Kimball Union Academy, Meriden, N.H., July 21-26, 1985 (Session Chairman).

44. Microsymposium on Elementary Processes and Chemical Reactivity, Liblice, Czechoslovakia, Sept. 2-6, 1985.

(a) Theoretical Studies of Gas Phase Bimolecular Reaction Dynamics, G.C. Schatz (Invited Talk).

45. 1985 ACS Annual Meeting, Chicago, IL, Sept. 8-13, 1985.

(a) Accurate Quantum Dynamical Studies of Tunnelling in Mu + H_2, H + H_2, D + H_2 and H + D_2, G.C. Schatz.
(b) Coverage Dependence of Surface Enhanced Resonance Raman Scattering: An Electromagnetic Field Model, E.J. Zeman and G.C. Schatz.

46. Gordon Conference on "Isotopes in Chemistry and Physics", Casa Sirena Marina, CA, Feb. 10-14, 1986.
"Quantum Dynamics of Isotope Effects in Chemical Reactions" (invited talk)

47. 1986 Sanibel Snowbird Symposium and Workshop, Snowbird, Utah, April 21-25, 1986
"The Dynamics of Reactions which Produce Highly Excited Intermediates or Products: The Need for Better Global Potential Surfaces" (invited talk)

48. 19th Midwest Theoretical Chemistry Conference, Bloomington, IN, May 15-17, 1986
"Quantum Reactive Scattering" (invited talk)

49. 20th Great Lakes ACS Regional Meeting, Marquette University, Milwaukee, WI, June 2-4, 1986
"Theoretical Studies of State to State Chemistry" (invited talk)

50. 3rd Conference on Theoretical Chemistry, Hachioji, Japan, Aug. 20-23, 1986
"State to State Chemistry" (invited talk)

51. 10th International Conference on Atomic Physics, Tokyo, Japan, Aug. 26-29, 1986
"Accurate Quantum Scattering Calculations of Cross Sections and Rate Constants for Atom-Diatom (A + BC) Reactive Collisions"

52. 1987 ACS Meeting, Denver, CO, April 6-10, 1987. "Quantum Reactive Scattering Using Supercomputers: Results for Cl + HCl" (invited talk).

53. 20th Midwest Theoretical Chemistry Conference, Pittsburgh, PA, May 14-16, 1987 "Energy Transfer and Reaction in Collisions of Fast H Atoms with CO_2"

54. Conference on the Dynamics of Molecular Collisions, Oglebay Park, West Virginia, July 13-17, 1987.
"Energy Transfer and Reaction in Collisions of Fast H Atoms with CO_2"

55. American Conference on Theoretical Chemistry, Gull Lake, Minnesota, July 27-31, 1987.
"Quantum Reactive Scattering Studies of Heavy-Light-Heavy Reactions" (Invited Talk)

56. Gordon Conference on Dynamics of Simple Systems in Physics and Chemistry, Brewster Academy, Wolfboro, NH, Aug. 10-14, 1987.
"The Collisional Theory of Chemical Reactions" (Invited Talk)

57. 10th Conference on Molecular Energy Transfer (COMET-10), Emmetten, Switzerland, August 26-30, 1987.
"Collisional Energy Transfer Involving Fast Hydrogen Atoms" (Invited Talk)

58. NATO Advanced Research Workshop on "Selectivity in Chemical Reactions" Bowness on Windemere, Cumbria, England, Sept. 7-11, 1987
"A Quasiclassical Trajectory Study of the Oriented Reaction HBr≅CO_2 6 OH + CO + Br" (Invited Talk)

59. Faraday Discussion No. 84, "Dynamics of Elementary Gas-Phase Reactions", Birmingham, England, Sept. 14-16, 1987.
"State to State Chemistry with Fast Hydrogen Atoms: Reaction and Collisional Excitation in H + CO_2" (Invited Talk) G. C. Schatz

60. Workshop on Nonlinear Dynamics, Lake Arrowhead, CA March 7-9, 1988.
"Theoretical Studies of Relaxation of Highly Excited Polyatomic Molecules"

61. 21st Midwest Theoretical Chemistry Conference, Argonne, May 12-13, 1988
"Quantum Reactive Scattering"

62. 1988 ACS Meeting, Toronto, June 6-10, 1988
"Nonlinear Dynamical Processes in Chemistry" (Invited Talk)

63. Gordon Conference on Atomic and Molecular Interactions, Plymouth State College, Plymouth, NH, Aug. 1-5, 1988.
"Quantum Reactive Scattering Studies of Heavy + Light-Heavy Reactions" (Invited Talk)

64. 1988 ACS National Meeting, Los Angeles, Sept. 26-30, 1988
"Molecular Vibrations: An Overview" (Invited Talk)

65. 1989 Sanibel Symposium, St. Augustine, FL, April 1-8, 1989
"Quantum Reactive Scattering Studies of Heavy + Light-Heavy Reactions" (Invited Talk)

66. 22nd Midwest Theoretical Chemistry Conference, IUPUI, May 11-13, 1989
"Quantum Scattering Studies of Alignment Effects in Na ($^2P_{3/2}$) + He Collisions" (with L. J. Kovalenko and S. R. Leone)

67. 23rd Great Lakes Regional Meeting, Duluth, May 31-June 2, 1989
"Reactive Scattering Resonances and the Photodetachment Spectra of ClHCl$^!$ and IHI$^!$" (Invited Talk)

68. Molecular Energy Transfer Gordon Conference (Wolfeboro, NH), July 10-14, 1989
"Vibrational Relaxation of CS_2 by Rare Gas Atoms; Alignment Effects in Na + He; ICN Photodissociation"

69. Dynamics of Molecular Collisions Conference, (Asilomar, CA), July 17-21, 1989
"Overview of Reactive Scattering" (Invited Talk)

70. 1989 ACS National Meeting, Miami, Sept. 11-15, 1989
"Transition State Spectroscopy and the Photodetachment Spectra of ClHCl$^!$ and IHI$^!$" (Invited Talk)

71. Workshop on Quantum Theory of Reactive Scattering, Cambridge, England, March 26-28, 1990
"Coupled Channel Hyperspherical Studies of Heavy-Light-Heavy Reactions and Photodetachment Spectra" (Invited Talk)

72. 1990 ACS National Meeting, Boston, April 24-27, 1990
"Accurate Quantum Studies of Reactive Resonances in Hydrogen Transfer Reactions" (Invited Talk)

73. 23rd Midwest Theoretical Chemistry Conference, Madison, WI, May 18-19, 1990
"Transition State Resonances and the Photodetachment Spectrum of IHI$^!$"

74. Gordon Conference on "Atomic and Molecular Interactions," Newport, R. I., July 30-Aug. 3, 1990
"Photodissociation Dynamics of Molecules at Surfaces"

75. 1990 ACS National Meeting, Washington, D.C., Aug. 29-31, 1990
"Theoretical Studies of the OH + CO Reaction" (Invited Talk)

76. NATO Conference on Dynamical Stereochemistry, Santa Cruz, CA, Nov. 14-18, 1990
"Classical and Quantum Dynamics of the H + CO_2 6 OH + CO Reaction: Studies of the Reaction Mechanism and the Effect of van der Waals Precursor Formation" (Invited Talk)

77. Gordon Conference on "Dynamics, Energetics and Structure of Gas Phase Ions," Ventura, CA, March 3-6, 1991 (Session Chair).

78. CCP6 and MBDG meeting, Oxford, England, March 20-22, 1991
"Time Dependent Dynamics of Methyl Iodide Photodissociation in the Gas Phase and on MgO Surfaces" (invited talk)

79. Faraday Discussion No. 91, Nottingham, England, March 22-25, 1991
"Resonances in Heavy + Light!Heavy Reactions: Influence on Reactive Cross Sections and on Transition State Photodetachment Spectra" (invited talk)

80. 1991 ACS National Meeting, Atlanta, March 17-20, 1991
"Theoretical Studies of Isotope Effects in Collisions of H with N_2 and in CH_3I Photodissociation" (Invited Talk)

81. 1991 APS Spring Meeting, Washington, D.C., March 21-24, 1991
"Theoretical Studies of Alignment Effects in Atom-Molecule Collisions" (Invited Talk)
"Theoretical Studies of Vibrational Excitation Effects in IHI$^{!}$ Photodetachment Spectra"

82. 24th Midwest Theoretical Chemistry Conference, Northern Illinois University, May 16-18, 1991
"Overview of Molecular Reaction Dynamics" (Invited Talk)

83. 7th International Congress of Quantum Chemistry, Menton, France, July 2-5, 1991
"Quantum Reactive Scattering Studies of Transition State Spectroscopy" (Invited Talk)

84. 7th Interdisciplinary Laser Science Conference (ILS-VII), Monterey, CA, Sept. 22-26, 1991
"Theoretical Studies of Alignment and Orientation Effects in Chemical Reactions" (Invited Talk)

85. US-Israel Workshop on Computational Chemistry, Berkeley, Jan. 28-29, 1992
"Reaction Dynamics" (Invited Talk)

86. 1992 ACS National Meeting, San Francisco, CA, April 5-10, 1992
"Accurate Quantum Dynamics Studies of Electronically Nonadiabatic Chemical Reactions" (Invited Talk)

87. 20th Informal Conference on Photochemistry, Atlanta, GA, April 26-May 1, 1992
"Theoretical Studies of Vibrational and Electronic State Specificity in Chemical Reactions: $H + H_2O$ 6 $OH + H_2$ and $Cl + HCl$ 6 $ClH + H$" (Invited Talk)

88. Workshop on Environmental Chemistry: Soils and Groundwater, Battelle Conference Center, Seattle, WA, May 1-2, 1992
"Time Dependent Dynamics Methods" (Invited Talk)

89. Annual Meeting of the Division of Atomic and Molecular Physics, Chicago, IL, May 20-22, 1992
"Theoretical Studies of Fine Structure Effects in Molecular Collisions"

90. 25th Great Lakes Regional Meeting of the ACS, Milwaukee, WI, June 1-3, 1992
"Theoretical Studies of Transition State Photodetachment Spectroscopy" (Invited Talk)

91. 25th Midwest Theoretical Chemistry Conference, East Lansing, MI, June 4-6, 1992
"Accurate Quantum Dynamics Studies of Electronically Nonadiabatic Reactions"

92. 1992 ACS National Meeting, Washington, DC, Aug. 24-28 (1992)
"Theoretical Studies of Surface Enhanced HyperRaman Spectroscopy"

93. Workshop on Wavepacket Dynamics, Argonne National Laboratory, Sept. 16-30, 1992.
"Theoretical Studies of OH + CO and H + CO_2" (Invited Talk)

94. 1992 Latsis Symposium, Zurich, Switzerland, Oct. 20-23, 1992.
"Quantum Reaction Dynamics Studies of Bimolecular Reactions that Proceed Through Complexes" (Invited Talk)

95. 1993 Sanibel Symposium, St. Augustine, FL, March 13-20, 1993.
"Electronic Fine Structure and Alignment Effects in Atom-Atom and Atom-Molecule Collisions" (Invited Talk)

96. 1993 APS March Meeting, Seattle, WA, March 15-19, 1993
Symposium Organizer for "Elementary to Complex Systems" (20 speakers)

97. 1993 ACS National Meeting, Denver, CO, March 29-April 2, 1993
"Theoretical Studies of Fine Structure Effects on Chemical Reaction Rates" (Invited Talk)

98. 26th Midwest Theoretical Chemistry Conference, Carbondale, May 20-22 (1993)
"Classical and Quantum Dynamical Studies of OH + CO 6 H + CO_2"

99. 1993 Conference on the Dynamics of Molecular Collisions, Helena, GA, June 6-11, 1993
(Session Chair)

100. Gordon Conference on Molecular Energy Transfer, June 21-25, 1993
"Theoretical Studies of Aligned and Unaligned H + CO_2 (Invited Talk)

101. Forum on Computational Chemistry, NASA Ames Research Lab, Aug. 26-27, 1993
"Theoretical Studies of Important Combustion Reactions" (Invited Talk)

102. 1994 ACS National Meeting, San Diego, March 13-17, 1994
"Theoretical Studies of NH + O and NH + NO" (Invited Talk)

103. 1994 APS March Meeting, Pittsburgh, March 21-25, 1994 (Program Chair)

104. 1994 APS April Meeting, Washington, D.C., April 18-22
"Quantum Reactive Scattering Studies of OH + CO" (Invited Talk)

105. Workshop on Nonadiabatic Dynamics, Argonne National Laboratory, July 20-23
"Theoretical Studies of Nonadiabatic Chemical Reactions" (Invited Talk)

106. 1994 ACS National Meeting, Washington, D.C. Aug. 21-25, 1994
Symposium on Nonadiabatic Dynamics (Symposium Organizer)
"Theoretical Studies of Nonadiabatic Chemical Reactions"

107. 1994 Gas Kinetics Symposium, Dublin, Ireland, Sept. 12-15, 1994
"Theoretical Studies of Combustion Reactions" (Invited Talk)

108. International Symposium on Computational Molecular Dynamics, Minnesota Supercomputer Institute, Minneapolis, Oct. 24-26, 1994 (Organizer)
"Quantum Scattering Studies of Electronically Nonadiabatic Reactive Collisions"

109. Air Force Workshop on High Energy Density Materials, Edwards Air Force Base, January 18-19, 1995
"Dynamics Calculations" (invited)

110. APS March Meeting, San Jose, CA, March 20-24
"Enhanced Second Harmonic Generation on Gratings"

111. 1995 ACS National Meeting, Anaheim, CA April 2-6, Symposium on Coherent Control
"Mode-specific Reaction Dynamics" (Invited Talk)

112. 28th Midwest Theoretical Chemistry Conference; Symposium in Honor of John Pople, May 11-13, 1995 (Co-organizer)

113. 1995 Dynamics of Molecular Collisions Conference, July 17-21, 1995, Asilomar, CA
"4-Atom Reactions" (Invited Talk)

114. Bodenstein Centennial Conference, July 25-28, 1995, Heidelberg, Germany (Conference Co-organizer)

115. 1995 ACS National Meeting, Chicago IL August 20-24
"Theoretical Studies of Surface Enhanced Spectroscopy"

116. Faraday Discussion on Unimolecular Reactions, Oxford, England, Dec. 19-21, 1995
"Theoretical Studies of Collisional Energy Transfer in the Ar/SO_2 System" (Invited Talk).

117. US/Japan Meeting on Heavy-Light-Heavy Reactions, University of Tokyo, March 5, 1996
AI + HI Reaction Dynamics and Photodetachment Spectroscopy@

118. 1996 Spring Meeting of the American Chemical Society, New Orleans, March, 1996
AElectronically Nonadiabatic Reaction Dynamics Studies of the Cl + HCl Reaction@ (Invited Talk).

119. 1996 Spring Meeting of the American Physical Society, Indianapolis, May 4, 1996 AOverview of Quantum Reactive Scattering@ (Invited Talk)

120. Workshop on High Performance Computing in Chemistry, Argonne National Laboratory, May 20-22, 1996 AApplication of High Performance Computers to Scattering Calculations@ (Invited Talk)

121. Workshop on ACollisional Energy Transfer from Highly Excited Polyatomic Molecules@, MacLarens on the Lake, Adelaide, Australia, July 7-11, 1996
AQuantum Scattering Studies of Collisional Energy Transfer from Highly Excited Polyatomic Molecules@ (Invited talk)

122. 1996 Fall Meeting of the American Chemical Society, Orlando, August 24-28, 1996,
AReactions of $C(^3P)$ Radicals@
Symposium on Highly Excited States in Chemistry (Organizer)

123. Symposium on Unimolecular Reactions, Tutzing, Germany, Oct. 16-21, 1996
(Session Chair)
ATheoretical Studies of Collisional Energy Transfer from Highly Excited Polyatomic Molecules@

124. Symposium on AModern Trends in Chemical Dynamics@, Academia Sinica, Taipei, Taiwan, Dec.9-12, 1996
ATheoretical Studies of Chemical Reaction Dynamics@ (invited talk)

125. Gordon Conference on Molecular Energy Transfer, Ventura, Calif. Jan 5-10, 1997
ATheoretical Studies of Collisional Energy Transfer from Highly Excited Polyatomic Molecules@ (Invited Talk).

126. 1997 Mesilla Chemistry Workshop on AComparisons of Classical and Quantum Dynamics@, Meson de Mesilla, NM, Feb. 9-12, 1997
Coorganizer and Invited Speaker
AClassical /Quantum Comparisons in Bimolecular Collisions@

131. American Chemical Society, Spring Meeting, San Francisco, April 13-18, 1997
AAlignment in the reaction H + CO_2"

132. Midwest Theoretical Chemistry Conference, May 23-24,1997 (University of Illinois)
ADiscrete Dipole Method for Calculating Enhancements in SERS@

133. Kickoff Meeting for MURI Center at Northwestern, June 13, 1997 (Northwestern)-organizer

134. Conference on Dynamics and Stereochemistry, Bielefeld, Germany, June 30-July 3, 1997
ARotational Alignment Effects in H + CO_2 and H + H_2O@ (invited talk)

135. Conference on the Dynamics of Molecular Collisions, Gull Lake, Minnesota, July 20-25, 1997 - organizer
ATheoretical Studies of the $O(^1D)$ + H_2 Reaction Dynamics@

136. American Chemical Society, Fall Meeting, Las Vegas, September 7-11, 1997
ATheoretical Studies of the N(^{2}D) + H_2 Reaction Dynamics@

137. Second Kickoff Meeting for MURI Center at Northwestern (NRL and Edgewood) September, 16-17, 1997 - coorganizer and speaker

138. 5th North American Chemical Congress, Cancun, Mexico, Nov. 11-13, 1997
ATheoretical Studies of Surface Enhanced Raman Spectroscopy@, invited talk

139. Faraday Discussion 108 AElectronically Nonadiabatic Processes@, University of Sussex, Dec. 15-17, 1997
ANonadiabatic Effects in the O(1D) + H2 6 OH + H Reaction@ (invited talk)

140. American Chemical Society, Spring Meeting, Dallas, TX, March 29-April 2,1998
ATheoretical Studies of Chemical Reactions Important in Combustion@ (invited talk)

141. Lake Balaton Meeting of the Hungarian Chemical Kinetics Group, Lake Balaton, Hungary, April 16-17, 1998
ATheoretical Studies of Combustion Reactions@ (Plenary talk)

142. Informal Photochemistry Conference, Pasadena, May 11-15, 1998
ARotational Alignment Effects in the H + H_2O and H + CO_2 Reactions@

139. Midwest Theoretical Chemistry Conference, Purdue University, May 22-23, 1998
Electrodynamics of Noble Metal Nanoparticles

148. Faraday Discussion 110 ATheory of Chemical Reaction Dynamics@, St. Andrews University, July 1-3, 1998
ANonadiabatic Reaction Dynamics Studies of the Cl + HCl Reaction@ (invited talk)

149. American Chemical Society, Fall Meeting, Boston MA, August 23-27, 1998
ANanoparticle Electrodynamics@

150. MOLEC Meeting (European Meeting on Molecular Collision Dynamics), Bristol, UK, September 7-11, 1998
ATheoretical Studies of Reaction Dynamics@ (Invited talk)

151. American Chemical Society, Spring Meeting, Anaheim CA, March 21-25, 1999
AOptical Properties of Metal Nanoparticles@

152. Midwest Theoretical Chemistry Conference, Notre Dame University, May 20-22, 1999
ACollisional Energy Transfer Involving Highly Excited Polyatomic Molecules@

145. MURI Review Meeting, Aberdeen Army Base, June 10-11, 1999, coorganizer

146. COMET Meeting, Assisi, Italy, June 20-25, 1999; Session Chair

AN(^{2}D)+H_2 Reaction Dynamics@

147. Workshop on Quantum Reactive Scattering, Perugia, Italy, June 25-27, 1999
AQuantum Scattering Studies of Nonadiabatic Effects on O(^{1}D) + H_2"

148. First International School on Computational Chemistry, Perugia, Italy, June 28-30, 1999
AFitting Potential Energy Surfaces@ (Invited Talk)

149. Faraday Discussion 113, University of Leeds, July 5-7, 1999
AReaction of H with Highly Excited H_2O: Activated or Not?@ (Invited)

150. Conference on the Dynamics of Molecular Collisions, Lake Harmony, PA July 18-23, 1999
AQuantum Scattering Studies of Nonadiabatic Effects on O(^{1}D) + H_2"

151. American Chemical Society, Fall Meeting, New Orleans, LA, August 22-27, 1999
AQuantum Scattering Studies of Nonadiabatic Effects on O(^{1}D) + H_2" (Invited)
AOptical Properties of Metal Nanoparticles@ (Invited).

152. 8th Conference on the Current Trends in Computational Chemistry, Vicksburg, MS Nov. 4-6, 1999.
AOptical Properties of Metal Nanoparticles and Nanoparticle Aggregates Important in Biosensors.@ (Invited talk)

153. Pitzer Memorial Symposium, Berkeley CA, January 10-12, 2000
AOptical Properties of Metal Nanoparticles and Nanoparticle Aggregates Important in Biosensors.@ (Invited talk)

154. 2000 Sanibel Symposium, February 27-29, 2000
ANonadiabatic Reactions@ (Invited talk)

153. American Chemical Society, Spring Meeting, San Francisco, CA, March 26-30, 2000
Potential Energy Surfaces for Chemical Reactions (Invited)
Nonadiabatic Dynamics (Invited)

154. Northwestern University, Industrial Associates Meeting, May,9-10 2000
AOptical Properties of Metal Nanoparticles and Nanoparticle Aggregates Important in Biosensors.@ (Invited talk)

155. ACS Great Lakes Regional Meeting, Cincinnati, OH, May 18, 2000
Theoretical Studies of the Dynamics of Chemical Reactions (invited)

156. MURI Kickoff Meeting, Northwestern, June 12, 2000
Molecular Dynamics Models of DNA Hybridization

157. Atomic and Molecular Interactions Gordon Research Conference, Colby Sawyer College, NH, July 2-7, 2000
The Rich World of Nonadiabatic Reaction Dynamics (invited)

158. Telluride Workshop in Nonadiabatic Interactions, Telluride CO July 31-Aug. 5, 2000
Nonadiabatic Reaction Dynamics (invited)

159. Materials Research Society Meeting, Boston MA Nov 27-30, 2000
Optical Properties of Nanoparticles and Nanoparticle Aggregates (invited)

160. Pacifichem Meeting, Honolulu, HI, Dec. 14-19, 2000
Collisional Energy Transfer in Highly Excited Molecules (invited)
Optical Properties of Nanoparticle Aggregates

161. Nanopatterning and Molecular Self-Assembly Meeting, Duck Key, FL Feb. 1, 2001
ATheory of Dip Pen Nanolithography@ (invited)

164. Theory of Chemical Dynamics, Berkeley March 29-30, 2001 (meeting organizer)
AGas Phase Chemical Reaction Dynamics@ (invited)

165. Minisymposium on Chemical Reaction Dynamics, Pasadena, March 31, 2001
ANanoparticle Optical Properties@ (invited)

166. ACS Spring Meeting, San Diego, April 1-4, 2001
ANonadiabatic reactions@ (invited)

167. MURI Kickoff, NASA Glen Laboratory, June 15, 2001
ACollisions of O atoms@

168. ACS Fall Meeting, Chicago, August 24-28, 2001
ANanoparticle Optical Properties@

169. Midwest Theoretical Chemistry Conference, Oct. 1, 2001, Minneapolis, MN
ANanoparticle Optical Properties@

169. NSEC Kickoff Meeting, October 31, 2001
ANSEC Outreach Programs@

170. 10th CCTCC Meeting, Jackson, MS November 1, 2001
ATheory of Dip Pen Nanolithgraphy@ (invited)

171. ACS Meeting, Orlando Fl, April 7-12, 2002
ADirect Dynamics Studies of Fast O atom Reactions with Hydrocarbons and Model Polyimides@ (Invited)

172. MRSEC Annual Review Meeting, Northwestern, April 16, 2002

AHyperRayleigh Scattering from Silver Nanoparticles@

173. NSEC Review Meeting, April 17, 2002
ALight Scattering from Nanoparticle Arrays@

174. Nanoparticles 2002 Meeting, Orlando FL April 21-23, 2002
ASensing applications based on plasmon resonance extinction spectra of nonspherical silver nanoparticles@ (Invited)

175. 6th International Conference on Protection of Materials and Structures from Space Environment, Toronto, May 1-3, 2002
ADirect Dynamics Studies of Fast O atom Reactions with Hydrocarbons and Model Polyimides@

176. Quantum Device Technology Workshop, May 20-24, 2002 Potsdam NY
ALinear and nonlinear optical properties of metal nanoparticles, aggregates and arrays: applications in sensing and photonics@ (Invited)

177. Materials Chemistry in the Space Environment, Annual Review Meeting, University of Chicago, June 17, 2002
ADirect Dynamics Studies of Fast O atom Reactions with Hydrocarbons@

178. Workshop on Quantum Dynamics in Condensed Phases, Rethimno Crete, June 24-28, 2002
ANew challenges for theoretical chemistry: nanoparticle optical properties and DNA melting@

179. Annual Meeting of the International Academy of Quantum Molecular Science, Menton France, July 6-7, 2002
ANew challenges in theoretical chemistry: scattering and reaction dynamics@

180. International Chemistry Physics Meeting, Marley le Roi, France, July 8-16, 2002.
ANew challenges for theoretical chemistry: nanoparticle optical properties and DNA melting@

181. ACS National Meeting, Boston MA August 18-21, 2002
AModeling the extinction spectra of metal nanoparticle chains and arrays@ (Invited)

182. Annual Review of Physical Chemistry, Editorial Committee Meeting, Palo Alto, CA Aug. 23, 2002.

183. MURI/DURINT Review meetings, Northwestern University, Sept. 17-18, 2002
ATheory of Dip Pen Nanolithography@
ATheory of DNA melting in DNA-linked gold nanoparticle aggregates@

184. American Academy of Arts and Sciences, Installation, Cambridge, MA, Oct. 5, 2002

185. American Academy Stated Meeting, Minneapolis, MN, Oct. 26, 2002

186. Workshop on Communication and Information, National Academy of Sciences, Oct. 31-Nov. 2, 2002
ASimulation in Materials Science@ (Invited)

187. Kickoff Meeting for NASA URETI BiMAT Program, Langley VA Nov. 7-8, 2002
AElectronic structure modeling of nanotube fracture@

188. MRS Annual Meeting, Boston MA Dec. 2-4, 2002
AStructural, thermodynamic and optical properties of DNA-linked metal nanoparticle aggregates and arrays: Theoretical studies@ (Invited)

189. Northwestern Chemistry Department Industrial Affiliates Meeting, May 8, 2003 ANanoparticle Optical Properties and DNA Sensing@

190. NATO Advanced Research Workshop, Balatonfolvar, Hungary, June 7-12, 2003 AIntersystem Crossing Effects in Chemical Reactions@ (Invited)

191. Conference on Molecular Energy Transfer, San Lorenzo El Escorial, Spain, June 15-20, 2003
AOverview of Reactive Scattering@ (Invited)

192. Workshop on Quantum Reactive Scattering, San Lorenzo El Escorial, Spain, June 21-23, 2003
AReactions of Hyperthermal Oxygen: From hydrocarbons to polymers@

193. 2nd European Summer School on Computational Chemistry, June 24-29, 2003 in Barcelona, Spain, ADNA Modelling@ (Invited)

194. Gordon Conference on Electronic Spectroscopy and Dynamics, July 6-9, 2003 at Bates College, Maine AOptical Properties of Metal Nanoparticles and Nanoparticle Arrays@ (Invited)

195. International Quantum Chemistry Symposium, Bonn, Germany, July 21-15, 2003 AReactions of Hyperthermal Oxygen: From hydrocarbons to polymers@ (Invited)

196. tutorial on Nanoparticle Optical Properties at the Summer Nanoschool at Argonne National Laboratory (Invited), August 6, 2003.

197. Nanoparticle Optical Properties, workshop at Argonne National Laboratory on Electromagnetic Scattering theory methods (Invited), Aug. 22, 2003.

198. MURI/DURINT research conference at Wright Patterson Air Force Base, Sept 4-5, 2003.

199. Dip Pen Nanolithography Workshop, Duck Key, Fl Jan. 26, 27, 2004. (invited talk)

200. Conference on Theoretical and Computational Chemistry, Feb. 16-19, Giongiu, Korea
Carbon Nanotube Fracture and Hyperthermal Chemistry (invited talk)

201. Particles 2004 meeting, Orlando Fl March 7-9, 2004

Optical Properties of Anisotropic Particles (invited)

202. ACS National Meeting, Anaheim CA March 28-31, 2004
Electronically Nonadiabatic Reactions (invited)
Hyperthermal Chemistry
Anisotropic Metal Nanoparticles (presented by E. Hao)
DNA Melting and Dynamics (presented by H. Long)
Optical Properties of Arrays of Nanoparticles (presented by S. Zou)
Self-assembly processes in peptide amphiphiles (presented by S. Tsonchev)

203. Foundations of Nanoscience Meeting, Snowbird UT April 21-23, 2004
DNA Structural and Thermal Properties (invited)

204. 7th International Conference on Protection of Materials and Structures from Space Environment, Toronto, May 9-13, 2004
ADirect Dynamics Studies of Hyperthermal O atom Reactions with Alkane Thiol Self-Assembled Monolayers"
"Studies of Hyperthermal O Atom reactions with Fluorinated Hydrocarbons" (presented by D. Troya)
"Reactions of O^+ with methane and with alkane thiol self-assembled monolayers" (presented by L. Sun)

205. Bimat Research Conference, UCSB, May 21-22, 2004
"Carbon Nanotube Fracture"

206. NCN Annual Review, Purdue University, June 23-25, 2004

207. Molecular Conduction Workshop, Northwestern University, July 8, 2004
"Computational Chemistry"

208. Conference on Free Radicals, Taipei, July 25-30, 2004
"Hyperthermal Chemistry" (invited)

209. BOSS Review Meeting, Waldorf Astoria Hotel, New York, July 28-29, 2004
"Optimizing Gradient Index Lens Performance"

210. 18th Gas Kinetics Symposium, Bristol, England, August 8-12, 2004
"Hyperthermal Chemistry" (invited)

211. Truhlar Fest, Computational Chemical Dynamics, University of Minnesota, Oct. 8,9, 2004
"Reactions of Hyperthermal Atomic Oxygen" (invited)

212. SERS Workshop, Wright Patterson Air Force Base, Nov. 11-12, 2004.
"Theoretical Studies of SERS"

213. MRS Fall National Meeting, Boston, Nov. 29-Dec. 2, 2004
"Fracture in Carbon Nanotubes" (invited)

214. Space Effects MURI Meeting, Bozeman, MT January 27-28, 2005
Modeling Polymer Erosion by Hyperthermal O and O^+

215. ACS Editor's Conference, San Diego, January 6-7, 2005

216. BOSS Review Meeting, Ritz-Carson, Tyson's Corner, McLean VA, Feb. 7-8, 2005
"Optimizing Gradient Index Lens Performance"

217. ACS National Meeting, San Diego, CA March 12-17, 2005
"Biological sensing with silver nanoparticles and nanoparticle arrays: theoretical studies"
"The Pople years at Northwestern: a dynamicist learns electronic structure theory"
"New Uses for Electronic Structure and Molecular Dynamics Calculations" (BIMAT and NSF)

218. MRS Spring Meeting, San Francisco, March 31, 2005
QM/MM Studies of Polymer Degradation due to Hyperthermal Atomic Oxygen (invited)

219. CCP6 Workshop, Belfast UK April 1-5, 2005
Reactions of atomic oxygen and sulfur with H_2 and hydrocarbons (invited)

220. Foundations of Nanoscience, Snowbird, Utah, April 24-28, 2005
Session organizer, Track on DNA/Nanoparticle aggregates

221. SPP2 Conference, Graz Austria May 22-25, 2005
Theoretical studies of nanoparticle and nanohole arrays.

222. NSF Summer Institute on Nano Mechanics and Materials, Northwestern University, June 6-10 (2005)
Empirical Potential Modeling of Proteins;Computational Chemistry; Modeling Bioadhesion (three invited talks)

223. IAMS Retreat, Taipei, Taiwan, June 16-17, 2005
Reactive Collision Dynamics; Metal Nanoparticle Optical Properties (invited)

224. Quantum Reactive Scattering Workshop, Santa Cruz, CA July 15-18, 2005
Direct Dynamics Calculations (invited)

225. American Conference on Theoretical Chemistry, UCLA, July 18-21, 2005
Session Chair on Biophysics Theory

226. DARPA Workshop on SERS, San Francisco, CA, July 29, 2005
Electronic structure studies and mixed QM/ED studies of SERS (invited).

227. DARPA-BOSS Workshop, Sante Fe, October 25, 2005
Computational Electrodynamics Studies of Advanced Lens Structures

228. NSF Workshop on Emerging Opportunities of Nanoscience to Energy Conversion and Storage, Washingon, DC Nov. 21-22, 2005.
Modeling the optical and structural properties of nanoparticle arrays and DNA-linked nanoparticle aggregates

229. Bimat (NASA) review meeting, Langley VA, Dec.8, 2005
Multiscale Modeling and Simulation

230. Pacifichem (ACS Meeting), Honolulu, Dec. 15-18, 2005
Theoretical Studies of Plasmon-based Optical Sensors (Invited)
Nonadiabatic Dynamics Associated with Intersystem Crossing in Bimolecular Chemical Reactions (Invited, and organized symposium jointly with Kazuo Takatsuka)
Optical Properties of Silver and Gold Clusters and Particles: Bridging Quantum Chemistry and Electrodynamics (Invited)

231. Quantitative Electronic Structure Calculations (Dunning Symposium), Santa Fe, March 18-20, 2006
Hyperthermal reactions of atomic oxygen/hydrogen (Invited).

232. Foundations of Nanoscience, Snowbird, Utah, April 24-27, 2006
Narrow melting transitions in DNA-linked aggregates (Invited talk)

233. APS Users Meeting, Nanophotonics Workshop, May 2, 2006
Plasmonic effects in nanoparticles and nanoholes (Invited)

234. AFOSR Contractors Meeting, June 5-7, 2006, Arlington VA
Theoretical Studies of SERS

235. DARPA BOSS Workshop, June 7-8, 2006, Napa, CA
Computational Electrodynamics Studies of Advanced Lens Structures

236. ESPA2006 Meeting, Santiago de Compostela, Spain, June 16-19, 2006
Electronic structure studies of fracture in carbon nanotubes and other nanomaterials (Invited).

237. Nanonet-6 Workshop, Portsmouth, England, July 28, 2006
Modeling the optical and structural properties of nanoparticle arrays and DNA-linked nanoparticle aggregates (Invited).

238. Summer Institute on Nanomechanics, Northwestern University, Aug. 7-11, 2006
Empirical potential modeling of protein structure and mechanical properties
Electronic structure calculations and bioadhesion (invited)

239. ACS National Meeting, San Francisco, September 10-14, 2006
Reactions of hyperthermal atomic oxygen atoms with polymer surfaces (Invited)

Direct Dynamics Simulations of O and O^+ Reactions with Small Molecules

240. 2006 Meeting on Condensed Phase and Interfacial Molecular
Science (CPIMS), Airlie Conference Center, Virginia, Oct. 22-25, 2006
"Computational nanophotonics: modeling optical interactions and transport in tailored nanosystem architectures" (invited)

241. Pan American Advanced Studies Institute (Pasi), Bariloche Argentina, Nov. 13-22, 2006
Electronic Stucture Calculations and Applications to Nanomaterials Fracture (Invited)
Atomistic Modeling of DNA and Protein Structure (Invited)

242. "Trends in Chemical Dynamics: From Small Molecules to Biomolecules" (Y. T. Lee 70th Birthday celebration), Taiwan, Dec. 11-15, 2006
Theoretical Studies of Hyperthermal Reactions (invited)

243. Kickoff Meeting for Plasma Dynamics for Aerospace Applications, Reno, NV, Jan. 12, 2007
"Chemical Reactions Important in Hypersonic Combustion" (invited)

244. Mesilla Conference, Los Cruces, NM, Feb. 5-6, 2007
"Nanopatterning and Self Assembly" (invited)

245. "Trends in Nanoscience 2007", Irsee, Germany, Feb. 24-28 (2007).
"Plasmon-based biomolecule sensing: theory and experiment" (invited)

246. W. A. Lester Birthday Celebration Symposium, Berkeley, March 28-30 (2007)
"Electronic structure studies of metal cluster optical properties" (invited)

247. Workshop Honoring George C. Schatz, April 27, 2007, University Pierre et Marie Curie, Paris, organized by Marie-Paule Pileni
"Metal nanoparticle optical properties and biomolecule sensing: New challenges for theory"

248. International Symposium on Atomic and Molecular Clusters (TAMC5), Richmond, VA May 13-17, 2007
"Plasmonic properties of silver and gold clusters" (invited)

249. Plasmonics Meeting, Strasbourg, France May 28-31, 2007
"Optical properties of metal nanoparticles" (invited)

250. Dynamics of Molecular Collisions, Santa Fe, NM, July 7-12, 2007
Theoretical studies of hyperthermal reactions (invited)

251. 6th annual Mercury conference of undergraduate researchers, Hamilton College, July 28-July 31, 2007
Theory and Nanoscience (invited)

252. Cluster Gordon Conference, July 28-31, 2007
"Optical properties of metal clusters"

253. ACS Meeting, Boston, MA, Aug. 19-23, 2007
DNA, and DNA-linked Nanoparticle Aggregates (invited)
Modeling reaction dynamics at liquid surfaces (invited)
Optical properties of dye molecules interacting with silver particles (invited)
TDDFT studies of resonance Raman processes: understanding SERS (invited)

254. SPIE meeting, San Diego, Aug. 26, 2007
Quantum mechanics and electrodynamics studies of the optical properties of metal nanoparticles (invited)

255. Workshop on spin and optoelectronics, Berlin, Germany, Sept 28, 2007
Optical Properties of Metal Nanostructures: Electrodynamics and Electronic Structure Studies (invited)

256. Bourke Lectures: Oxford, Manchester, UC London, Oct. 8-10, 2007
Theory and computation in nanoscience (invited)

257. Theoretical chemistry workshop, Trondheim Norway, Nov. 8, 2007
Theory and computation in nanoscience (invited)

258. Rice Computational Biology Workshop, Dec. 8, 2007
Theoretical studies of DNA and DNA-linked nanoparticle aggregates (invited)

259. Singapore International Conference on Chemistry (SICC-5), Dec. 17-19 (2007)
Nanoparticle optical properties and biomolecule detection: New challenges for theory (invited).

260. APS Meeting, New Orleans, March 10-12, 2008
Quantum mechanics and electrodynamics studies of the optical properties of metal clusters/nanoparticles (invited)

261. MRS Meeting, San Francisco, March 24-26, 2008
Shape control and optical properties of silver and gold nanoparticles (invited)

262. ACS National Meeting, New Orleans, April 6-9, 2008
Optical properties of metal nanostructures: electrodynamics and electronic structure studies (invited)

263. Ohio nanotechnology workshop, April 10, 2008
Nanoparticle optical properties, DNA-linked nanoparticles, and applications to biomolecule detection (invited)

264. NATO ASW, Bogolyubov Institute, Kiev, June 11, 2008
Optical properties of metal nanostructures: electrodynamics and electronic structure theory (invited)

265. Gas phase and Gas-liquid reaction dynamics, Workshop on Chemical Dynamics, University of Bristol, England June 27, 2008

266. DNA structures, excited states and nanomaterials, Gordon Conference on Atomic and Molecular Interactions, Mt. Holyoke College, July 9, 2008

267. Nanoparticle optical property modeling, SPIE Meeting, San Diego, Aug. 12, 2008

268. Theory and computation in nanoscience, American Conference on Theoretical Chemistry, Northwestern University, July 22, 2008

269. (1) Optical properties of silver and gold nanoparticles, nanoholes, and nanoarrays, (2)Molecules and plasmons, Aspen Lodge Conference, Estes Park Colorado, Sept. 3, 2008

270. Optical properties of metal nanostructures: electronic structure studies of plasmon excitation effects, WATOC Conference, Sydney Australia, Sept. 18, 2008

271. Nanoparticle optical property modeling, Lippencott Award Symposium, FACCS Meeting, Reno, NV, Oct. 2, 2008.

272. Computational electrodynamics studies of SERS, DARPA contractors meeting, Minneapolis, Jan. 6-7 (2009).

273. Theoretical studies of dynamical processes: electron impact-dissociation; combustion of ionic liquids, AFOSR Plasma Theme Review, Orlando, FL, Jan. 9, 2009.

274. Trajectory studies of gas/liquid reactions, Chemical Dynamics Workshop, Institute for Mathematics Applications, University of Minnesota, Jan. 12-16, 2009.

275. Trajectory studies of gas/liquid reactions, Gordon Conference on Molecular Energy Transfer, Ventura, CA, Jan. 19-22, 2009.

276. Nanoparticles, DNA and theory, 5th Aarhus Winter Meeting, Aarhus University, Denmark, Jan. 30, 2009.

277. Metal nanoparticles and SERS, Great Lakes Regional ACS Meeting, Lincolnwood, IL , May 15, 2009

278. Gas-phase and Gas-liquid dynamical processes, AFOSR Contractor's meeting, San Diego, May 19, 2009.

279. Design and modeling of silver and gold nanostructures for applications to biomolecule sensing, Photonics North Meeting, Quebec City, May 24, 2009.

280. NSF Summer Institute Short Course on Multiscale Science Based-Modeling and Simulation and Experimental Validation on Enabling Materials, Hilton Garden Inn, Evanston, May 27-30, 2009

- Electronic structure calculations: fundamentals (Schatz)
- Electronic structure calculations: methods and applications to graphite erosion (Schatz)

Empirical potentials for modeling mechanical pulling experiments with biomolecules(Schatz)

- Nanodiamond mechanical properties and chemistry (Schatz)

281. CMMI Grantees Conference, Honolulu, Hawaii, June 22-24, 2009
Molecular simulation of nano-diamond assisted drug delivery

282. Midwest Universities Computational Chemistry Conference, Chicago IL July 26, 2009
DNA-linked nanoparticles

283. 42nd IUPAC Conference, Glasgow, Scotland, Aug. 3-7, 2009
Nanoparticles, DNA, Sensing and Theory

284. ACS Fall Meeting, Washington DC, Aug. 16-20, 2009
Metal nanoparticles structural and optical properties
Electrodynamics of plasmonic materials
Nanoparticle optical property modeling

285. ICCMSE Conference, Rhodes, Greece, Sept. 29-Oct. 3, 2009
Nanoparticles, DNA and Theory

286. ARL Fellows Symposium, Aberdeen, MD, Oct. 8, 2009
Theoretical studies of nanoparticle optical properties

287. International symposium on "Molecular theory for real systems", Fukui Institute for Fundamental Chemistry, University of Kyoto, Japan Jan. 7-9, 2010.
Gas-surface reaction dynamics studies

288. PittCon Meeting, Orlando Fl, March 2, 2010
New developments in the theory of SERS

289. ACS National Meeting, San Francisco, March 21-24, 2010
Using DNA to link nanoparticles or molecules to build complex structures
Theory and Nanoscience

290. Workshop on nano-optics, plasmonics and advanced materials, NIST, Gaithersburg, MD, April 19, 2010

Theory and plasmons: going beyond conventional classical electrodynamics

291. Midwest theoretical chemistry conference, Purdue University, May 21, 2010
Theories of metal nanoparticle optical properties, and of molecules interaction with metals: bottom-up meets top-down

292. Molecular Quantum Mechanics Conference(MQM2010) Berkeley, May 28, 2010
New developments in optical property calculations for plasmonic materials

293. 93rd Canadian Chemistry Conference, Toronto, May 30, 2010
Surface enhanced Raman spectroscopy: connecting theory and experiment

294. WCCM/APCOM Conference (World's Congress on Computational Mechanics/ Asian Pacific Congress on Mechanics), Sydney, Australia, July 19-23, 2010
"Single Molecule Mechanics Modeling"

295. Canadian Conference on Computational Chemistry, Edmonton, Alberta, July 26, 2010
Theories of Metal Nanoparticle Optical Properties: Bottom-up Meets Top-down

296. ACS Fall National Meeting, Boston, August 23-25, 2010
"Theories of the SERS effect: top down meets bottom up" (Van Duyne symposium)
"Plasmon enhanced dye sensitized solar cells: current status and multiscale modeling"

297. MOLEC 2010 Conference, Curia, Portugal, Sept 6-10, 2010
"Gas-liquid reaction dynamics studies"

298. Symposium on Chemistry at the Space-Time Limit, Irvine, Calif, September 17-18, 2010
"Understanding the electromagnetic properties of plasmonic junction structures"

299. ISSPIC IV Meeting, September 20, 2010, Oaxaca, Mexico
"Small gap effects in SERS: going beyond conventional classical electrodynamics"

300. 4th symposium on DNA photonics, Tulane Univ, Oct. 16, 2010
"DNA structures, excited states, mechanics, machines"

301. European Optical Society Conference, Paris, October 26, 2010
"Theory and plasmons: going beyond conventional classical electrodynamics"

302. Nanoscience Days 2010, Jyvaskyla, Finland, October 28, 2010
"Theories of metal nanoparticle optical properties: Bottom-up meets top-down"

303. Pacifichem, Honolulu, Hawaii, Dec. 15-20, 2010
"Plasmon enhanced photochemistry"
"Gas-liquid reaction dynamics simulations"
"Theoretical studies of SERS"

304. Northwestern, India, Israel Workshop, Evanston, March 24, 2011
"Modeling soft material self assembly: peptide amphiphiles and DNA-linked materials"

305. ACS National Meeting, Anaheim, CA March 26-29, 2011
"Gas-phase and gas-surface reaction dynamics studies" Dunning Symposium
"Theory and modeling of the individual and collective properties of nanoparticles" Brenner Symposium

306. ARO-MURI review, Aberdeen MD April 14, 2011
Carbon-nanotube modeling

307. AFOSR Contractor's meeting, Pasadena CA, May 15-17, 2011
Gas-phase and Gas-liquids dynamics studies

308. XVII Congreso Argentino de Fisicoquimica, Cordoba, Argentina, May 3-7, 2011
Plasmon-enhanced optical phenomena (Invited, degree of Doctor Honoris Causa)
Novel plasmonic structures (Invited, plasmonics satellite)

309. CPIMS DOE Contractors Meeting, Baltimore, June 13, 2011
Theories of Active and Passive Plasmon Enhanced Chemical Reactions.

310. Dynamics of Molecular Collisions Meeting, Snowbird Utah, July 11-15, 2011
Gas-phase and gas-liquid reaction dynamics
(Herschbach Award of the DMC)

311. CECAM Workshop on Coarse-Grained Methods, Lugano Switzerland, July 26-28, 2011
Coarse-grained modeling

312. 2011 IUPAC meeting, San Juan, PR, Aug. 2, 2011
DNA-based and peptide-based nanomaterials modeling.

313. International conference on theoretical and high performance computational chemistry, Xi'an, China, Aug. 13, 2011.
Theoretical methods for describing plasmon-enhanced photochemical processes

314. Symposium on theoretical and computational chemistry, Dalian, China, Aug. 19, 2011
Modeling soft material self assembly: peptide amphiphiles and DNA-linked materials

315. ACS National Meeting, Denver, Aug. 28-31, 2011
1) Gas-liquid and gas-solid reaction dynamics studies
2) DNA in nucleosomes: mechanical properties and TT photodimerization
3) Theoretical studies of plasmon enhanced optical processes
4) Computational methods for modeling plasmon-enhanced photoreactions

316. Comet 2011, Oxford, England, Sept. 11-15, 2011
Gas phase and gas-surface reaction dynamics studies

317. DNA Photonics meeting, Northwestern University, Sept. 19, 2011
DNA in nucleosomes: mechanical properties and TT photodimerization

318. CCTCC-20, Conference on Current Trends in Computational Chemistry, Jackson MS Oct. 27-29, 2011
DNA in nucleosomes: Mechanical properties and TT photodimerization

319. Kansas Physical Chemistry Symposium, University of Kansas, Nov. 19, 2011
Plasmon enhanced optical phenomenon

320. Materials research society meeting, Boston, Dec. 2, 2011
Theory and computational studies of carbon nanotube bundles

321. Biopsys annual meeting, University of Toronto, Jan. 5, 2012
DNA-based and peptide-based nanomaterials modeling

322. Millerfest meeting, Berkeley, Jan. 12, 2012
Excited state dynamics

323. APS Meeting, Boston, Feb. 27, 2012
Theories of plasmon enhanced optical processes important in solar energy

324. ACS National Meeting, San Diego, March 26-28, 2012
1. Nonadiabatic dynamics
2. Hyperthermal gas-surface collisions: theoretical studies

325. Michigan State, April 6, 2012
Computational methods for combining electrodynamics with quantum mechanics: applications to plasmon-enhanced photoprocesses

326. 3rd Annual Physical Sciences in Oncology Meeting, Tampa, FL April 16-18.
Schatz: Nucleosome structure propensities and TT-photodimerization

327. CECAM meeting: Chemical and topological functionalization of graphitic surfaces: open challenges for computational modeling, April 23-25 2012 Lausanne, Switzerland
Models of functionalized carbon: nanodiamonds, carbon nanotubes and graphene

328. 95th Canadian Chemistry Conference and Exhibition, Calgary Alberta May 29, 2012
"Theories of plasmon enhanced optical processes"

329. Yamada Conference: International Conference on the Nanostructure-Enhanced Photo-Energy Conversion, June 4, 2012, Tokyo, Japan

"Theories of plasmon enhanced optical processes important in solar energy"

330. International conference on theoretical and high performance computational chemistry(ICT-HPCC12), July 8-11, 2012 Nanjing, China
"New twists on DNA in Biology and Materials"

331. Telluride Workshop on "Nanomaterials: Theory and Computation", July 17, 2012
"Theories of plasmon enhanced optical processes"

332. ACS National Meeting, Philadelphia, Aug. 20, 2012
"New plasmonic materials and applications"

333. TACC-2012 (Theory and Applications of Computational Chemistry) Meeting, Pavia Italy, Sept. 2-7, 2012
"Gas phase and gas-surface reaction dynamics"

334. SCIX 2012, Kansas City, MO, Oct. 1-3, 2012
"New directions in plasmonic materials and SERS applications"

335. SERMACS 2012: Photonic Assemblies, Materials and Catalysts for Solar Fuels , Raleigh, NC Nov. 14, 2012
"Theories of plasmon enhanced optical processes important in solar energy "

336. Workshop on Computational Methods for Complex Systems – Univ. of Hong Kong, Hong Kong, Dec. 9, 2012
"Theories of plasmon enhanced optical processes"

337. Small Sciences Symposium: Frontiers in Nanomedicine, Dec. 10-12, 2012, Mandarin Orchard Hotel, Singapore
"Modeling Nanomaterials for biomedical applications"

338. Indo-US Workshop on "Advanced and Nano-Structured Materials" Bangalore, India, Jan. 21-22, 2013
"Opportunities in Nanoscience with Silver and Gold Nanoparticles"

339. CRC International Symposium "Chemical Theory for Complex Systems" Strasbourg, France, March 7, 2013
"Coupling quantum mechanics to classical electrodynamics"

340. International Workshop: "Molecular Modeling and Simulation:Natural Science and Engineering" DECHEMA, Frankfurt, Germany, March 11-12, 2013
"Modeling molecules interacting with carbon or gold nanostructures"

341. ACS National Meeting, New Orleans, April 7-11, 2013
"Gas-liquid surface scattering"

342. SPP6 Meeting, Ottawa, Canada May 29-31, 2013
“New directions in plasmonic materials and SERS applications”

343. Materials Genome Initiative Grand Challenges Summit, Rockville MD, June 25, 2013
“Discovery of Plasmonics Materials”

344. Telluride Workshop “The Chemistry and Physics of Defects in Carbon Nanotubes, July 7-11, 2013
“Models of functionalized carbon: nanodiamonds, carbon nanotubes, and graphene”

345. Piers 2013 Conference, Stockholm Sweden, August 13, 2013
“New directions in plasmonics: SERS and nanoparticle superlattice crystals”

346. Quantum Plasmonics Incubator, Optical Society of America, Washington DC Aug. 22, 2013
“Quantum mechanical modeling”

347. SPIE conference, San Diego Aug. 25-27, 2013
“Modeling Active Plasmonic Response”
“Modeling Plasmonic Superlattice Crystals”

348. ACS National Meeting, Indianapolis September 8-11, 2013
“Modeling excited state dynamics in nanoparticles and nanocrystals”

349. ARO Conference on Plasmonics, Rice University, Oct. 22, 2013
“Modeling active plasmonic response

350. SERMACS 2013, Loews Hotel, Atlanta, Nov. 14, 2013
“History of the Journal of Physical Chemistry”

351. Materials Genome Initiative Grand Challenges Summit, Rockville MD, November 20-21, 2013

352. QSCP XVIIIth International Workshop on Quantum Systems in Chemistry, Physics and Biology, Paraty, Brazil, Dec. 1-7, 2013
”Coupling quantum mechanics to classical electrodynamics for plasmon-molecule interactions”

353. CRC-EC International Symposium on "Chemical Theory for Complex Systems” Emory University, Jan. 8,9, 2014
“Coupling quantum mechanics to classical electrodynamics”

354. Mesilla Workshop on Nonadiabatic Dynamics, Las Cruces, NM Feb. 2-4, 2014
“What do we do with nonadiabatic reactions when there are too many coupled states?”

355. Nano and Giga Challenges in Electronics, Photonics and Renewable Energy, Tempe, AZ March 10-14, 2014
"Modeling active plasmonic response"

356. ACS Spring Meeting, Dallas, TX March 18-20, 2014,
"Studies of gas-surface interactions and of ions at liquid surfaces"
"Coupling quantum mechanics to classical electrodynamics for plasmon-molecule interactions"

357. Korean Chemical Society Meeting, Seoul Korea April 17, 2014
Plenary Talk: Plasmon-molecule interactions
Keynote Talk: New directions in the assembly of functional materials

358. 2014 Yonsei International Symposium on Nano-Bio Molecular Assembly, Seoul Korea, April 18-19, 2014
New Directions in the Assembly of Functional Materials

359. PSOC workshop: applying computation and modeling to cancer research, Northwestern, June 27, 2014
DNA Bending in Cell Nuclei

360. 2014 Castl Summer School, University of California, Irvine, July 9-11, 2014
Theoretical Framework of SERS

361. 2014 Gordon Conference on Atomic and Molecular Interactions, Stonehill College, MA, July 13-17, 2014
Understanding DNA Bending in Nucleosomes and Transcription Factors

362. SES2014 (Surface Enhanced Spectroscopy), Chemnitz, Germany Aug 7-9, 2014
SERS Theory: Hot Spots and Chemical Effects

363. ACS Fall Meeting, San Francisco, August 10, 2014, Symposium on "Engineered nanomaterials interacting with natural and engineered interfaces"
How well do carbon nanotubes and other nanoparticles stick to graphene?

364. M3 Meeting of the Molecular Graphics and Molecular Simulation Society, Strathclyde University, Glasgow, Scotland UK Aug. 20-22, 2014
Using self-assembly to make functional optical materials

365. MURI closeout symposium, Army Research Lab, Aberdeen, MD Sept 17, 2014
Shear interactions and adhesion involving carbon nanotubes and graphene: Using CNT's to template carbonization

366. 8th International Meeting on Photodynamics and Related Aspects, Oaxaca, Mexico, October 30, 2014
Excited state dynamics of metal and semiconductor nanoparticles

367. 2014 NSF Nanoscale Science and Engineering Grantees Conference, Arlington VA Dec. 9-10, 2014
Keynote lecture: Nanoscale modeling and simulation

368. NSF Software Institute Conceptualization Molecular Sciences Software Institute (MolSSI) Workshop, Jan. 22-24, 2015 Houston Texas

369. APS Meeting, San Antonio Texas March 2-4, 2015
Focus Session: At the Interface of Molecules and Materials (organizer)

370. CMS Computational Molecular Science Meeting, Warwick UK March 16-18, 2015
Modeling the self-assembly of DNA- and peptide-based optical materials

371. ACS National Meeting, Denver, CO March 22-24, 2015
1. Plasmon Enhanced Chemistry (Catalysis Division)
2. Plasmon/exciton and plasmon/photonic mode interaction (Physical Division)
3. Electronic structure models of plasmon-enhanced processes (Colloid Division)

372. MRS Spring Meeting, San Francisco, CA April 6-10, 2015
Plasmonic Arrays

373. Computational and Theoretical Chemistry (CTC) Research Meeting, Annapolis MD, April 26-29, 2015
Hybrid Plasmonics: Coupling Plasmons with Excitons, and Plasmons with Optical Modes

374. Center for Nanomaterials (CNM) Workshop on Nanophotonics, Argonne National Laboratory, May 12, 2015
"Plasmonic Arrays"

375. ICQC conference on "Theoretical Challenges in Small Molecular Dynamics", Dalian Institute of Chemical Physics, Dalian China, June 3-6, 2015
"Plasma Enhanced Dry Reforming: Theoretical Studies"

376. International Congress on Quantum Chemistry, Tsinghua University, Beijing, China, June 8-12, 2015
"Plasmonic Arrays" (Plenary Lecturer)

377.QRS 2015 Conference, Salamanca, Spain July 10, 2015
"Plasma enhanced dry reforming: theoretical studies,"

378. Quantum Days Workshop, Bilbao, Spain, July 13, 2015
"Exciton diffusion, splitting excitons, and exciton-plasmon interactions"

379. MU3C (Midwest Universities Computational Chemistry Conference), Evanston IL July 23, 2015
"Connecting small and large length scales for metal nanoparticle optical properties"

380. ACS National Meeting, Boston, MA August 18, 2015
"Modeling the effect of carbon nanotube functionalization on mechanical and optical properties"
381. VM60 Conference in Copenhagen, August 26, 2015
"Plasmonic Arrays"

382. nanosa15 Conference in Dresden, August 29, 2015
"Plasmonic Arrays"

383. Symposium on SERS, CUNY, Nov. 11, 2015
"Electromagnetic and Chemical Effects in SERS"

384. MRS Symposium WW Modeling and Theory-Driven Design of Soft Materials, Dec, 2, 2015
"Modeling the self-assembly of DNA- and peptide-based plasmonic material"

385. BU Photonics Center Symposium, Boston, Dec. 3, 2015
"Merging photonics and plasmonics"

386. Pacifichem Meeting, Honolulu, Dec. 14-20, 2015
Symposium: Natural to Nanosphere Lithographies: Two Decades of Self-assembled Advanced Materials
"Self-assembled Plasmonic Structures"
Symposium: Frontiers of Plasmon Enhanced Spectroscopy
"Plasmonic Arrays"
Symposium: Challenges in Plasmonic Photochemistry
"Plasmon-enhanced Chemistry: Theoretical Studies"

387. ACS on Campus, Mumbai, Bangalore, Hyderabad India January 2016
"Connecting Chemistry with Plasmons"

388. PittCon, Atlanta, March 10, 2016
"Recent computational studies related to the use of plasmonic materials for analytical applications**"**

389. ACS San Diego,
Computers in Chemistry Symposium, March 13, 2016,
"Using Self-Assembly to make Functional Materials: Computational Perspectives"
Nanometal: Synthesis, structures, property and application, March 15, 2016
"Recent theory studies of vibrations at surfaces: SERS, FSRS
Langmuir Award Lecture March 15, 2016
"New perspectives in plasmonics"

Physical principles in functional nanosciences: a symposium in honor of Mostafa A. El-Sayed, March 17, 2016
"New directions in research with anisotropic metal nanoparticles and their optical properties"

390. Workshop on Plasmonics and its Applications, University of Colorado, Boulder, March 21, 2016
1.Surface enhanced spectroscopy and chemistry: theoretical studies
2.Plasmonic Arrays

391. Materials Research Society, Spring Meeting, Phoenix, March 29, 2016
"DNA-Based Plasmonic Metamaterial:"

392. CSTCC Meeting, Regina, Saskatchewan, Canada July 11, 2016
"Theory and Modeling of the Self-assembly of Plasmonic Structures"

393. ICCB Conference, Lihui, Hawaii, July 15, 2016
"A new direction in chemical bonding: using nanoparticles as atoms and DNA as linkers to make functional materials"

394. ISTCP Conference, Grand Forks, ND July 21, 2016
"Theory of Surface Enhanced Femtosecond Stimulated Raman Scattering"

395. XXV International Materials Research Congress – Cancun Mexico, August 15, 2016
"Plasmonic Lattices"

396. ACS Fall National Meeting, Philadelphia PA August 21, 2016
(a) "Functional materials from peptide amphiphiles: theory and experiment"
(b) "DNA-based Plasmonic and photonic metamaterials"

397. MOLEC XXI meeting, Toledo Spain, Sept 15, 2016
"Plasma enhanced dry reforming: theoretical studies"

398. To SERS with Love, Minneapolis MN, Sept. 18, 2016
"SERS and SE-FSRS"

399. 51st Midwest Regional ACS Meeting, Manhattan KS, Oct. 27, 2016
"CO2 and N2 reduction: New Directions"

400. American Vacuum Society 63rd Annual Meeting, Nashville, Nov. 10, 2016
"Using theory and computation to understand plasma enhanced dry reforming on nickel catalysts"

401. Faraday Discussion on "Chemical Physics of Electroactive Materials", Cambridge UK, April 12, 2017
"Semiempirical Modeling of Electrochemical Charge Transfer"

402. Workshop on Emerging Topics in Optics, Institute for Mathematics and its Applications, University of Minnesota, April 24, 2017
"Optics, Plasmonics and Excitonics: Connecting Fundamental Theory to Experiments and Applications"

403. XXXVI Biennial Meeting of the Spanish Royal Society of Chemistry, Sitges, Spain June 26-29, 2017
"A new direction in chemical bonding: using nanoparticles as atoms and DNA as linkers to make functional materials" Invited Plenary Talk

404. CRSI-ACS Symposium, Hyderabad India, July 13, 2017
"Self-assembled plasmonic structures" Invited Plenary Talk

405. American Conference on Theoretical Chemistry, Boston MA July 19, 2017
"CO_2 and N_2 reduction: New directions"

406. Gordon Conference on Dynamics at Surfaces, Salve Regina University, Newport, RI, July 31, 2017
"CO_2 and N_2 reduction: New directions"

407. ACS Fall National Meeting, Washington DC Aug. 20-24, 2017
"Nanoparticle superlattices in 2D and 3D" Yugang Sun PHYS
"Electronic structure theory and plasmonics" Jensen Symposium
"New insights into SERS/TERS/FSRS mechanisms" Jing Zhao COLL

408. WATOC, Munich, Aug. 27-29 (2017)
"Theories of SERS, TERS, Electrochemistry and Plasmon-Enhanced Energy Transfer"

409. Faraday Discussion: Surface Enhanced Raman Scattering, Glasgow, UK Aug.30-Sept 1, 2017
"Theoretical modelling of voltage effects and the chemical mechanism in surface-enhanced Raman scattering"

410. ACS-iCHEM meeting on "Innovation in Energy Conversion" Dalian China Sept 24-26, 2017 (Schatz organizer)
"CO_2 and N_2 Reduction: New Directions"

411.25th CCTCC meeting, Jackson MS Nov. 10-11, 2017
"SERS, TERS and Plasmon Enhanced Energy Transfer"

412. MRS meeting, Symposium NM, Boston, Nov. 29, 2017
"Understanding plasmonics using silver and gold clusters"

413. PQE (Physics of Quantum Electronics) meeting Snowbird Utah, Jan 10 2018

Theories of SERS, TERS and plasmon enhanced energy transfer

414. Light Conference ICOMET 2018 Taitung, Taiwan, Jan. 30-Feb. 1, 2018
Opportunities for Plasmonics in Lasers and Metamaterials (Plenary speaker)
Supreme Brightness Award and Oriental Lazurite Award

415. Royal Society Meeting in Honor of Sir David Clary, Chicheley, UK April 19, 2018
Chemical Dynamics and Heterogeneous Catalysis (Invited)

416. 31st Chinese Chemical Society Congress, May 5, 2018 Hangzhou, China
Nanoparticles, SERS and Theory (Invited)

417. Chemical Research Society of India, 21st National Symposium, July 13, 2018, Bhopal India
"Self-Assembled Plasmonic Nanostructures (Invited)"

418. ACS National Meeting Boston August 18-22, 2018
Lattice plasmon laser modelling (invited for MPPG)
Hot atom reactions involving CO_2: comparing gas phase and gas-surface dynamics (invited for PHYS)
Calculating photocatalytic properties (invited for COMP)
At the interface of plasmonics and electronic structure theory (invited for PHYS)

419. ICORS 2018, Jeju Island, South Korea, August 27, 2018
Understanding SERS and TERS using metal cluster models and electronic structure theory (Plenary Talk)

420. Molecular Videography Workshop, Telluride TSRC, Colorado September 19, 2018
Hot Electron Effects; TERS and electrochemistry; plasmon mediated energy transfer (Invited)

421. 53rd Congress of the Mexican Chemical Society, Mexico City, October 3, 2018
Nanoparticles, SERS and Theory (Plenary Talk)

422. Chemical Physics Conference (CPC-12), Safranbolo, Turkey, Oct. 12, 2018
SERS and Theory (Invited Talk)

423. The importance of gas phase reaction dynamics in heterogeneous catalysis, IAMS Academia Sinica, Taipei, Taiwan Jan. 28, 2019

424. Pittcon, Philadelphia PA, March 21, 2019
Theoretical studies of electrochemical TERS (invited)

425. ACS meeting, Orlando Fl April 1, 2019
Switchable polymer properties: computational modeling (invited)
Issues with publishing papers: scope, impact, ethics (invited)

426. ICES-4 International Conference on Surface Enhanced Spectroscopy, London Ontario, June 16-20, 2019
Plasmonic Arrays, invited plenary talk

427. Dynamics of molecular collisions, Big Sky, Montana, July 7-12, 2019
Complex potentials for gas-phase and gas-surface reaction dynamics (invited)
428. 1st International Symposium of Theoretical & Physical Chemistry, Sustech, China, July 29, 2019
Quantum effects and plasmonics (Invited Plenary)

429. Femto14, Shanghai, China, August 1, 2019
Plasmonic Arrays (Invited Plenary)

430. Penn Conference on Theoretical Chemistry (PCTC) Aug 12-14
Donor-acceptor energy transfer with plasmons and entangled photons (Invited)

431. International Materials Research Conference (IMRC) Cancun Mexico, Aug. 21-22, 2019
Plasmonic Arrays

432. ACS National Meeting, San Diego, Aug. 25-29, 2019
Theories of SERS, TERS and Plasmon-Enhanced Energy Transfer (invited for PHYS)
Modeling organic solar cells (invited for ENFL)

433. Workshop, University of Utah, Park City, Utah Sept. 24, 2019
Plasmonics and Optical Physics (invited)

434. SERS-2019 Conference, Suzhou, China, November 7, 2019
SERS and Theory studies of hot electron-induced chemistry(invited)

435. TERS7 Conference, Xiamen, China, November 10, 2019
TERS excitation studies, reactions in UHV, and imaging of electrochemical reactions (invited)

436. CLEO 2020 Conference (virtual), San Jose, CA May 11-15, 2020
Energy transfer and two-photon absorption with entangled photons (invited)

437. CTC (Chemical Theory and Computation) DOE 2020 Virtual Conference, August 13, 2020
Surface plasmon enhanced chemistry

438. ACS meeting (virtual) August 17, 2020
Theory of entangled two-photon absorption (invited, Brad Moore Symposium)

439. Materials Research Society 2020 (virtual) November 29, 2020
Understanding self-assembly of functional nanostructures with actuation capabilities (invited)

440. TMS2021 Annual Meeting, March 15, 2021 (TMS: minerals, metals and materials)

Gold, Au/Ni and other plasmonic nanoparticles: using theory to understand metal recovery and optical properties (invited)

441. e2pa virtual seminar series, Match 30, 2021
Efficient modeling of organic chromophores for entangled two-photon absorption (invited)

442. ACS National Meeting (Virtual), April 5-15, 2021
1. Energy transfer and two photon absorption with entangled photons (Hase Symposium, Physical Div)
2. Optical properties of 2D and 3D plasmonic nanoparticle arrays (Odom Symposium, Coll Div)
3. Reaction and dissociation of CO_2 in high energy collisions with O and Ar (Kouri Symp, COMP)

443. TSRC Workshop, Spatio-temporal dynamics of excitons: bridging the gap between quantum mechanics and applications, June 12-16, 2021
"Exciton Transport in complex environments"

444. VISTA virtual seminar (Virtual International Seminar on Theoretical Advancements) July 28, 2021
I. Self-assembly of peptide amphiphiles
II. Two-photon absorption with entangled photons

445. IEEE RAPID Virtual Conference (Research and applications of photonics in defense), , Aug. 2-4, 2021
"Dynamics control of 2D and 3D plasmonic arrays"

446. Fall Meeting of the American Chemistry Society (virtual), August 22-26, 2021, Invited talk in the COMP division.
"Using quantum chemistry to describe plasmonic excited states".

447. Pacifichem 2021 (virtual) Dec. 20, 2021, Symposium on Frontiers of Plasmon Enhanced Spectroscopy II, Tamitake Itoh
"SERS, TERS, hot electrons and Van Duyne"

448. 61st Sanibel Symposium, St. Simon's Island, Georgia February 13-18, 2022
"Exciton Transport in Complex Environment Including Entangled Photons"

449. ACS National Meeting, San Diego CA, March 20-23, 2022
"Bottom up meets Top down in Understanding Nanoscale Interfaces"

450. Baekeland Award Symposium, Farleigh Dickinson University, May 12, 2022
"Nanoparticles, plasmon and theory"

451. MRS: Bioinspired structural composites – Advances in Experiments, Simulations and AI-Based Design, Virtual. May 25, 2022
"Bioinspired Assembly of Peptide and DNA-Based Nanostructures"

452. WATOC 2022, Vancouver, Canada, July 7, 2022
"Donor-Acceptor Energy Transfer in Complex Environments Including Entangled Photons"
453. Molecular Interactions and Dynamics Gordon Research Conference, Stonehill College, July 14, 2022
Molecular Interactions at Long Range: Energy Transfer in Complex Environments, including Nanoparticles, Plasmons, Cavities and Entangled Photons

454. Vibrational Spectroscopy Gordon Research Conference, Bryant University, Aug. 3, 2022
SERS/TERS and Theory Studies of Hot Electron-Induced Chemistry

455. ACS Meeting, Chicago, July 14, 2022 Symposium:Advances in Single-Particle Imaging: From Single Molecules to Nanomaterials: Energy, Charge and Thermal Transport
Opportunities for Spectroscopy and Imaging with Entangled Photons

456. Quantum Reactive Scattering (QRS) 2022 Balatonfoldvar, Hungary, Sept 5, 2022
Getting CO_2 to react isn't easy: hitting it hard with atomic oxygen or with hot electrons

457. Telluride Scientific Research Conference, Telluride CO, Sept. 23, 2022 Spatio-Temporal Dynamics of Excitons: Bridging the Gap Between Quantum Mechanics and Applications
Energy Transfer and Absorption Involving Two Entangled Photons

458. Oesper Award Symposium, University of Cincinnati, Oct. 14, 2022
Plasmons, Molecules and Theory: where Bottom-up meets Top-down

459. 65th Conference on Chemical Research, The Welch Foundation, Post Oak Hotel, Houston, TX, October 24, 2022
Plasmons, molecules and theory:Top-down and Bottom-up

460. IIN Symposium, Northwestern University, Oct. 27, 2022
Nanotechnology Mimicking Living Systems (joint with Monica Olvera)

461. Materials Research Society, annual meeting, Boston, Nov. 29-Dec. 1, 2022
Theory and Plasmons (Lightening talk for the Materials Theory Award)

462. CMQT Monthly Meeting, invited seminar, Northwestern University, Jan. 5, 2023
Single photon emitters: challenges and opportunities

463. IAMS Workshop, Taipei, Taiwan Feb. 6, 2023
Plasmons, molecules and theory: where top-down meets bottom-up

464. ACS National Meeting, Indianapolis, IN March 26, 2023

Mechanism of Ethanol-induced Actuation of DNA-linked Superlattices (invited PMSE speaker)

465. MRS Meeting, San Francisco, April 12, 2023
MRS Symposium EN07-Critical Materials for Energy

Modeling the uptake, transport and separation of multiply charged ions through MoS2 membranes (invited)

466. 53rd Midwest Theoretical Chemistry Conference, Purdue, June 1-3, 2023
Energy Transfer and Absorption Involving Two Entangled Photons

467. Challenges and Prospects for the Next 10 Years of Nanochemistry, NSF Workshop, Alexandria, VA, June 22-23, 2023
Nanoscale Modeling and Simulation (invited)

468. Gordon Research Conference, Vibrational Spectroscopy, July 23-28, 2023, Salve Regina University, Providence RI
Theory and computational studies of plasmonic photocatalysis (invited)

469. ACS Fall Meeting, San Francisco, Aug. 13-17, 2023
Plasmons, molecules and theory: where top-down meets bottom-up (invited for Physical Division Awards Symposium)

470. Stephen Gray retirement symposium, Argonne National Laboratory, Nov. 6, 2023
Wavepackets and plasmons (invited)

471. AFOSR/ONR MURI Review Meeting, Arlington, VA December 12, 2023
Development of Validated Hypersonic Plasma Kinetics Models Including Atomic Excitation: Molecular Computations (invited)

472. Mesilla Workshop, Las Cruces, NM Feb. 4-6, 2024
Collisional Excitation and Associative Ionization associated with hypersonic atmospheric kinetics (invited)

473. ACS Meeting, New Orleans, LA March 18-21, 2024
Modelling the Uptake, Transport and Separation of Multiply Charged Ions Through MoS_2 Membranes (invited Voth Symposium)
Theory of entangled two photon absorption (invited Kamat Symposium)

474. ARO Energy Sciences – Extramural Program Review, (Virtual), March 28 (2024)
Theory and computation for processes underlying PDSE (invited)

475. 7th International Symposium on Monolayer-Protected Clusters Penn State , State College, PA June 12-14, 2024

Electronic structure studies of plasmonic cluster properties: pressure effects and photocatalysis (invited)

476. Noble Metal Nanoparticles Gordon Research Conference, June 26-31 (2024)
Using Electronic Structure Theory to Study Plasmonics (invited)

477. International Workshop on New Advances in Theoretical and Computational Molecular Sciences for Complex and Quantum Processes, Seoul, South Korea, July 8-11, 2024
Plasmons, molecules and theory: where Top-down meets Bottom-up (invited)

478. Midwest Undergraduate Computational Chemistry Consortium meeting, Northwestern university, July 22, 2024
Theory and Computational Studies of Nanoscale Processes (Invited)

479. ACS Fall Meeting, Merz Symposium, Denver, August 19, 2024
Modelling the Uptake and Transport of Multiply Charged Ions Through MoS_2 and Other Membranes (invited)

480. AFOSR/ONR MURI Review, Arlington VA, Dec. 2, 2024
"Molecular computations" (invited).

481. MRS Boston, Dec. 3, 2024
"Modelling the Uptake and Transport of Multiply Charged Ions Through MoS_2 and Other Membranes" (invited)

482. ARO Energy Sciences – Extramural Program Review, Riviera Beach, Fl, Jan. 13-17, 2025
Theory and computation for processes underlying PDSE (invited)

List of Publications

Books

143. **Quantum Mechanics in Chemistry**, G. C. Schatz and M. A. Ratner, Prentice Hall, Englewood Cliffs, NJ, 1993, xix+325 pages; republished by Dover, 2002 with additions and corrections. ISBN 0-486-42003-5.

144. **Introduction to Quantum Mechanics in Chemistry**, M. A. Ratner and G. C. Schatz, Prentice Hall, Upper Saddle River, NJ, 2001, x+296 pages. ISBN 0-13-895491-7

145. **Highly Excited Molecules: Relaxation, Reaction and Structure**, A. S. Mullin and G. C. Schatz, ACS Symposium Series 678, American Chemical Society, Washington, D.C.330 pp (1997) OSBM 0-8412-3534-1

146. **Frontiers of Plasmon Enhanced Spectroscopy**, Volume 1 and Volume 2, Y. Ozaki, G. C. Schatz, D. Graham and T. Itoh, ACS Symposium Series Vols. 1245 and 1246, American Chemical Society, Washington, D. C., 210 and 271 pp (2016) ISBN13: 9780841232013, ISBN13: 9780841232037

Podcast Interviews:

1. Sci-Impact: University of Colombo in Sri Lanka (2022)
YouTube:https://www.youtube.com/watch?v=A2Uqnr0418k

2. Chem Talk (chemistrytalk.org) (7/10/23)
https://podcasts.apple.com/us/podcast/episode-30-dr-george-schatz-on-the-mystery-of/id1568451535?i=1000619939710.

3. Science Sense Podcast: (1/17/24)
Video at: https://youtu.be/FFMAIEFJwQU
Audio at: Prof. George Schatz of Northwestern University on nanoparticles - Scientific Sense ® | Podcast on Spotify

4. A look into our future through science, Thinking on Paper Podcast & Book Club (6/20/2024)
Video at: https://www.youtube.com/watch?v=_wHlznZg2qE

Patent Applications and Patents:

Nanoparticulate Nanosensors, NU application 22078/23008/25033, filed May 2005 based on provisional patents 10/784,129 filed Feb. 20, 2004 and 60/448,592 filed Feb. 20, 2003.

Immobilized Nano Rod Assembly (INRA): Multi-scale Fabrication Technique for Plasmonic Substrates, NU application 2012-143, filed Oct. 26, 2012

Broadband plasmonic absorber with hotspot generating gapped nanoantennas, NU application 2012-136, filed Nov. 5, 2012. Provisional application serial number 61/722,319.

Compositions, devices and methods for SERS and LSPR, Van Duyne, Richard P.; Zhang, Xiaoyu; Zhao, Jing; Whitney, Alyson V.; Elam, Jeffrey W.; Schatz, George C.; Stair, Peter C.; Zou, Shengli; Young, Matthew; Lyandres, Olga, Patent No. US 8,628,727 B2, dated Jan. 14, 2014

Conical pore ion pump for desalination, Yu Zhang and George C. Schatz, NU application NU2017-086, filed May 5, 2017

Photonic crystals comprising nanoparticles and spacer groups, NU application 2017-130, ChadA. Mirkin, Lin Sun, Haisin Lin, George C. Schatz, filed July 14, 2017. PCT Int. Appl. (2019), Patent No. WO 2019152594 A11 20190808 US 2018-62624328

Papers in Journals

1. Electron Paramagnetic Resonance of Magnetically Dilute Cupric ($3d^9$, ^2D) Ion in Single Crystals of Zinc 3-Pyridine Sulfonate, G.C. Schatz and J.A. McMillan, J. Chem. Phys., **55**, 2343-6 (1971). Doi: 10.1063/1.1676413

2. Chemiluminescence Excited by Atomic Fluorine, G.Schatz and M. Kaufman, J. Phys. Chem., **76**, 3586-90 (1972). Doi: 10.1021/j100668a015

3. Quantum Initial Conditions in Quasi-Classical Trajectory Calculations, J.M. Bowman, Aron Kuppermann, and G.C. Schatz, Chem. Phys. Lett., **19**, 20-25 (1973). Doi: 10.1016/0009-2614(73)87052-6

4. Large Quantum Effects in the Collinear $F + H_2 \rightarrow FH + H$ Reaction, G.C. Schatz, J.M. Bowman and Aron Kuppermann, J. Chem. Phys., **58**, 4023-5 (1973). Doi: 10.1063/1.1679760

5. Role of Direct and Resonant (Compound State) Processes and of Their Interferences in the Quantum Dynamics of the collinear $H + H_2$ Exchange Reaction, G.C. Schatz and A. Kuppermann, J. Chem. Phys., **59**, 964-5 (1973). Doi: 10.1063/1.1680122

6. Violation of Microscopic Reversibility and the Use of Reverse Quasi-Classical Trajectories for Calculating Reaction Cross Sections, J.M. Bowman, G.C. Schatz and A. Kuppermann, Chem. Phys. Lett., **24**, 378-80 (1974). Doi: 10.1016/0009-2614(74)85282-6

7. Coplanar and Collinear Quantum Mechanical Reactive Scattering: The Importance of Virtual Vibrational Channels in the $H + H_2$ Exchange Reaction, Aron Kupperman, G.C. Schatz and M. Baer, J. Chem. Phys., **61**, 4362-3 (1974). Doi: 10.1063/1.1681746

8. Quantum Mechanical Reactive Scattering: An Accurate Three-Dimensional Calculation, Aron Kuppermann and G.C. Schatz, J. Chem. Phys., **62**, 2502-4 (1975). Doi: 10.1063/1.430733

9. Exact Quantum, Quasi-Classical and Semi-Classical Reaction Probabilities for the Collinear $F + H_2 \rightarrow FH + H$ Reaction, G.C. Schatz, J.M. Bowman and Aron Kuppermann, J. Chem. Phys., **63**, 674-84 (1975). Doi: 10.1063/1.431390

10. Exact Quantum, Quasi-Classical and Semi-Classical Reaction Probabilities for the Collinear F + D_2 → FD + D Reaction, G.C. Schatz, J.M. Bowman and Aron Kuppermann, J. Chem. Phys., **63**, 685-96 (1975).
Doi: 10.1063/1.431391

11. Dynamical Resonances in Collinear, Coplanar and Three Dimensional Quantum Mechanical Reactive Scattering, G.C. Schatz and Aron Kupperman, Phys. Rev. Lett., **35**, 1266-9 (1975).
Doi: 10.1103/PhysRevLett.35.1266

12. The Quantum Dynamics of Atom Plus Diatom Chemical Reactions, G.C. Schatz, Ph.D. Thesis, California Institute of Technology, 1975.
http://de.scientificcommons.org/15473309

13. Quantum Mechanical Reactive Scattering for Planar Atom plus Diatom Systems: I. Theory, Aron Kuppermann, G.C. Schatz and M. Baer, J. Chem. Phys., **65**, 4596-4623 (1976).
Doi: 10.1063/1.432916

14. Quantum Mechanical Reactive Scattering for Planar Atom plus Diatom Systems: II. Accurate Cross Sections for H + H_2, G.C. Schatz and A. Kuppermann, J. Chem. Phys., **65**, 4624-4641 (1976).
Doi: 10.1063/1.432917

15. Quantum Mechanical Reactive Scattering for Three-Dimensional Atom plus Diatom Systems, I. Theory, G.C. Schatz and Aron Kuppermann , J. Chem. Phys., **65**, 4642-4667 (1976).
Doi: 10.1063/1.432918

16. Quantum Mechanical Reactive Scattering for Three-Dimensional Atom plus Diatom Systems: II. Accurate Cross Sections for H + H_2, G.C. Schatz and Aron Kuppermann, J. Chem. Phys., **65**, 4668-4692 (1976).
Doi: 10.1063/1.432919

17. Franck-Condon Factors in Studies of Dynamics of Chemical Reactions I. General Theory, Application to Collinear Atom-Diatom Reactions, G.C. Schatz and J. Ross, J. Chem. Phys., **66**, 1021-1036 (1977).
Doi: 10.1063/1.434059

18. Franck-Condon Factors in Studies of Dynamics of Chemical Reaction II. Vibration-Rotation Distributions in Atom-Diatom Reactions, G.C. Schatz
and J. Ross, J. Chem. Phys., **66**, 1037-1053 (1977).
Doi: 10.1063/1.434060

19. Angular Momentum Decoupling Approximations in the Quantum Dynamics of Reactive Systems, A. Kuppermann, G.C. Schatz and J.P. Dwyer, Chem. Phys. Lett., **45**, 71-73 (1977).
Doi: 10.1016/0009-2614(77)85211-1

20. Franck-Condon Factors in Studies of Dynamics of Chemical Reactions III. Analysis of Information Theory for Vibration-Rotation Distributions and Isotopic Branching Ratios, G.C. Schatz and J. Ross, J. Chem. Phys., **66**, 2943-2958 (1977).

Doi: 10.1063/1.434363

21. On Stochastic Reductions in Molecular Collision Theory: Projection Operator Formalism: Application to Classical and Quantum Forced Oscillator Model, G.C. Schatz, F.J. McLafferty and J. Ross, J. Chem. Phys. **66**, 3609-3623 (1977).
Doi: 10.1063/1.434395

22. The Generalized Cumulant Expansion Approach to Stochastic Reductions in Molecular Collision Dynamics: Applications to Collisional Energy Transfer, G.C. Schatz, J. Chem. Phys., **66**, 5220-5225 (1977).
Doi: 10.1063/1.433785

23. On Self-Consistent and Stochastic Treatments of V-T Energy Transfer in Collinear Atom-Diatom Collisions, G.C. Schatz, Chem. Phys., **24**, 263 (1977).
Doi: 10.1016/0301-0104(77)85233-6

24. The Direct Histogram Method for Quasiclassical Collision Dynamics: Application to Collinear Atom-Diatom Scattering, G.C. Schatz and C. Vaughn, Chem. Phys. Lett., **54**, 327-331 (1978).
Doi: 10.1016/0009-2614(78)80111-0

25. A Direct Method for Determining Moments of Final State Distributions in Molecular Collisions, G.C. Schatz, Mol. Phys., **35**, 477-500 (1978).
Doi: 10.1080/00268977800100351

26. The Importance of Anharmonicity on the Rates of Energy Transfer in Rare Gas/CO_2 Systems, G.C. Schatz and M.D. Moser, J. Chem. Phys., **68**, 1992-1993 (1978).
Doi: 10.1063/1.435877

27. A Generalized Langevin Equation Approach to Molecular Collision Dynamics, G.C. Schatz, Chem. Phys., **31**, 295-307 (1978).
Doi: 10.1016/0301-0104(78)87044-X

28. Stochastic Theory of Collisional Energy Transfer: Nature of Convergence of Master Equation Transition Probabilities and Moments as a Function of Cumulant Expansion Order, G.C. Schatz, Chem. Phys. Lett., **58**, 368-374 (1978).
Doi: 10.1016/0009-2614(78)85055-6

29. Theory of Raman Scattering by Molecules Adsorbed on Electrode Surfaces, F.W. King, R.P. Van Duyne and G.C. Schatz, J. Chem. Phys., **69**, 4472-4481 (1978).
Doi: 10.1063/1.436436

30. A Method for Determining "Good" Action-Angle Variables and Semiclassical Eigenvalues in Nonseparable Systems, G.C. Schatz and M.D. Moser, Chem. Phys., **35**, 239-251 (1978).
Doi: 10.1016/0301-0104(78)85209-4

31. Theory of Raman Scattering by Molecules Adsorbed at Electrode Surfaces. Model Calculations for Resonance Raman Scattering by an Adsorbed Diatomic, F.W. King and G.C. Schatz, Chem. Phys., **38**, 245-256 (1979).
Doi: 10.1016/0301-0104(79)85068-5

32. Franck-Condon Factors in Studies of Dynamics of Chemical Reactions. V. Simple Construction of Quasiadiabatic Potential Energy Surfaces and Numerical Evaluation of Franck-Condon Integrals, C.L. Vila, J.L. Kinsey, J. Ross and G.C. Schatz, J. Chem. Phys., **70**, 2414-2424 (1979). Doi: 10.1063/1.437752

33. Comment on "Theory of Collisions Between an Atom and a Diatomic Molecule in the Body-Fixed Coordinate System," G.C. Schatz and A. Kuppermann, J. Chem. Phys., **70** 3151-3152 (1979). Doi: 10.1063/1.437783

34. Stochastic Theory of Vibrational Energy Transfer in Collinear Atom-Diatom Collisions: The Role of Non-Markovian Effects, F.W. King and G.C. Schatz, Mol. Phys., **38**, 257-272 (1979). Doi: 10.1080/00268977900101641

35. Classical Perturbation Theory of Good Action-Angle Variables: Applications to Semiclassical Eigenvalues and to Collisional Energy Transfer in Polyatomic Molecules, G.C. Schatz and T. Mulloney, J. Phys. Chem., **83**, 989-999 (1979). Doi: 10.1021/j100471a021

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