

**Cynthia J. Burrows, Ph. D.**

Distinguished Professor of Chemistry  
Thatcher Presidential Endowed Chair of Biological Chemistry

Department of Chemistry  
University of Utah  
315 S. 1400 East  
Salt Lake City, UT 84112-0850  
<http://www.chem.utah.edu/directory/faculty/burrows.html>

Voice: 801-585-7290  
Assistant: 801-581-5681

Email: [burrows@chem.utah.edu](mailto:burrows@chem.utah.edu)

**Education:**

1975 B. A., Chemistry, University of Colorado (advisor: Prof. Stanley J. Cristol)  
1982 Ph. D., Chemistry, Cornell University (advisor: Prof. Barry K. Carpenter)

**Employment:**

Université Louis Pasteur, Strasbourg, France  
Postdoctoral Research Associate (advisor: Prof. Jean-Marie Lehn) 1981 – 1983

State University of New York at Stony Brook  
Assistant Professor of Chemistry, August 1983 - June 1989  
Associate Professor of Chemistry, July 1989 - June 1992  
Professor of Chemistry, July 1992 - January 1995

University of Utah, Salt Lake City  
Thatcher Presidential Endowed Chair of Biological Chemistry, 2013 – present  
Distinguished Professor of Chemistry, 2007 – present  
Professor of Chemistry, January 1995 – 2007  
Member, Huntsman Cancer Institute, 1995 – present  
Member, Center for Cell and Genome Science, 2020 – present

**Awards and Honors:**

2019 Rosenblatt Prize, University of Utah  
2019-2020 Phi Beta Kappa Visiting Scholar  
2019 Mayent-Rothschild-Institut Curie Sabbatical Award  
2019 ACS Editors' Leadership Award  
2018 Willard Gibbs Medal, ACS Chicago Section  
2018 James Flack Norris Award in Physical Organic Chemistry, ACS  
2016 Utah Governor's Medal for Science and Technology  
2014 Member, National Academy of Sciences  
2014 Linda K. Amos Award for Distinguished Service to Women at the University of Utah  
2013 Thatcher Presidential Endowed Chair of Biological Chemistry  
2011 University of Utah Distinguished Teaching Award  
2010 Fellow, American Chemical Society  
2009 Member, American Academy of Arts and Sciences  
2008 American Chemical Society Cope Scholar Award  
2007 Distinguished Professor, University of Utah  
2005 Distinguished Scholarly and Creative Research Award, University of Utah  
2004 Fellow, American Association for the Advancement of Science  
2004 Bea Singer Award, DNA Lesions and Mutagenesis GRC  
2002 Robert W. Parry Teaching Award, University of Utah  
2002 Professeur Invité, Université Louis Pasteur, Strasbourg  
2000 American Chemical Society Utah Award  
1993-95 National Science Foundation Creativity Award  
1993-94 National Science Foundation Career Advancement Award  
1993 Professeur Invité, Université Louis Pasteur, Strasbourg  
1990 Visiting Professor, University of Minnesota

1989-90	Japan Society for the Promotion of Science Research Fellow, Okazaki
1988-89	Lilly Teaching Fellow, SUNY at Stony Brook
1982-83	Bourse Chateaubriand French Embassy Fellowship
1981-82	NSF - CNRS Exchange of Scientists Postdoctoral Fellowship
1977	Du Pont Teaching Award, Cornell University
1971	President's Scholarship, University of Colorado
1971	Regents' Scholarship, University of Colorado

### **Lectureships:**

Clapp Lectureship, Brown University, March 2021  
Xingda Lectureship, Peking University, May 2020 (postponed by Covid-19)  
John Albert Southern Lectureship, Furman University, February 2020  
James and Jeanette Neckers Lectureship, Hope College, February 2020  
Distinguished Faculty Colloquium, University of Utah, February 2020  
Phi Beta Kappa Lectureships (6), February-April 2020  
Robert W. Taft Memorial Lectureship, University of California-Irvine, October 2019  
Riley O. Schaeffer Endowed Lectureship, University of New Mexico, October 2018  
Johnson-Sessler Endowed Lectureship in Physical Chemistry, Yale University, September 2018  
Siegfried Hünig Lectureship, University of Würzburg, Germany, June 2018  
Lloyd B. Thomas Lectureship, University of Missouri, November 2017  
Swiss Chemical Society Lectureships (5), October 2017  
Zhang Dayu Lectureship, Dalian Institute, China, October 2016  
R. Stephen Berry Lectureship, Telluride Town Talks, Telluride, CO, August 2016  
Eyring Lectures, Arizona State University, November 2015  
Wawzonek Lecture, University of Iowa, April 2015  
Melvin Calvin Lecture, University of California-Berkeley, March 2014  
Jerome A. Berson Lecture, Yale University, September 2014  
Christopher S. Foote Memorial Lectureship, UCLA, May 2011  
Pinhead Town Talk, Telluride, CO, August 2010  
Distinguished Lecturer in Chemical Biology, University of Maine, Orono, September 2009  
Distinguished Lecturer Award, University of Nevada, Reno, April 2009  
King Lectureship, Kansas State University, January 2008  
Merck Lectureship, McGill University, April 2005  
J. Clarence Karcher Lectureship, University of Oklahoma, November 2004  
Sara Jane Rhoads & Rebecca Raulins Lectureship, University of Wyoming, November 2001  
Lucy Pickett Lectureship, Mount Holyoke College, October 2001  
Stanley J. Cristol Lectureship in Physical Organic Chemistry, University of Colorado, November 1998  
Cargill Lectureship, University of South Florida, April 1993

### **Professional Service:**

#### Editorial Service:

Editor-in-Chief	<i>Accounts of Chemical Research</i> , January 2014 – December 2023
Editorial Board	<i>Chemical &amp; Engineering News</i> , 2015 - 2021
Council of Editors	American Chemical Society, 2015-2021
Guest Co-Editor	<i>Journal of Organic Chemistry</i> , 2021, <i>special issue on Solvation</i>
Guest Editor	<i>Biopolymers</i> , January 2021, <i>Special Issue honoring Eric Kool</i>
Senior Editor	<i>Journal of Organic Chemistry</i> , October 2001 – June 2013
Guest Co-Editor	<i>Accounts of Chemical Research</i> , <i>Special Issue on Origins of Chemical Evolution</i> , December 2012
Associate Editor	<i>Organic Letters</i> , January 1999 - September 2002
Editorial Advisory Board	<i>Chemical Reviews</i> , 2013 - 2021
Editorial Advisory Board	<i>Journal of Organic Chemistry</i> , 2015 – 2021
Editorial Advisory Board	<i>Journal of the American Chemical Society</i> , 2004 - 2006
Editorial Advisory Board	<i>Accounts of Chemical Research</i> , 2004 - 2013
Editorial Advisory Board	<i>Organic Letters</i> , 2004 - 2019
Editorial Advisory Board	<i>Bioconjugate Chemistry</i> , 1996-2013
Editorial Advisory Board	<i>Chemical Research in Toxicology</i> , 1996-2000
Editorial Advisory Board	<i>Progress in Physical Organic Chemistry</i> , 1997
Advisory Board	<i>Chemical and Engineering News</i> , 2001-2003

Service to Professional Societies and Government Agencies:

Member-at-Large, Section on Chemistry, AAAS, 2019-2023  
Gordon Research Conferences Board of Trustees, 2018-2024  
Member, ACS search committee for President of Publications, 2019  
Member, ACS search committee for Governing Board for Publishing, 2018  
Max Planck Institute for Biophysical Chemistry Scientific Advisory Board, Göttingen, 2018-2022  
Member, NAS Awards Committee in Chemistry, 2016, 2019  
Member, American Chemical Society Governing Board for Publication, 2013-2021  
Member, NSF Waterman Award Selection Committee, 2015-2017  
Chair, Search Committee for Editor of *Chemical Research in Toxicology*, 2017  
Member, Search Committee for Editor of *Chemical and Engineering News*, 2014  
Director, USTAR Governing Authority, 2009-2013 (appointed by Gov. Jon Huntsman, Jr.)  
Member, Search Committee for NSF CHE Division Director, 2012  
Retiring Chair, AAAS Section on Chemistry, 2012-2013  
Chair, Nominating Committee, Chemistry and Cancer Research, American Association of Cancer Research, 2012  
Chair, AAAS Section on Chemistry, 2011-2012  
Participant, 2011 Chemical Sciences and Society Summit, Beijing, China  
Chair, ACS Priestley Award Canvassing Committee, 2010-2012  
Chair, NSF Committee of Visitors for Chemistry Division, 2009-2010  
ACS Division of Biological Chemistry Executive Committee, 2009-2011  
Board of Directors, Telluride Science Research Center, 2007-2009  
NSF Advisory Committee on Environmental Research & Education (AC-ERE), 2006-2009  
NSF Math & Physical Sciences Directorate Advisory Committee (MPSAC), 2005-2008  
Chair, American Competitiveness Initiative Subcommittee of MPSAC, 2007  
Mentor, NIGMS Mentoring Workshop for Junior Faculty, April 2007  
NIH Chemistry-Biology Interface Summit Subcommittee on Cross-Disciplinary Training, 2006-07  
ACS Executive Director's 2010 Committee, 2004-2010  
AAAS Electorate Nominating Committee for the Section on Chemistry, 2005-2008  
ACS Division of Organic Chemistry, Nominating Committee, 2006  
Graduate Education Advisory Board (GEAB), American Chemical Society, 2004-2007  
Society Committee on Education (SOCED), American Chemical Society, 2004-2007.  
Program Chair, Division of Biological Chemistry, American Chemical Society, 2004  
Advisory Board, Committee on the Advancement of Women Chemists (COACH), 2001 - 2013  
Executive Committee Member, Division of Biological Chemistry, American Chemical Society, 1999-2000  
Alternate Councilor, Division of Inorganic Chemistry, American Chemical Society, 1994-96  
Member, Council of Gordon Research Conferences, 1995-98

Symposium Organizing Committees:

ACS-IBS Forum on Nanomaterials for Energy and Life Sciences, Seoul, Korea, September 2019  
JF Norris Award Symposium Organizing Committee, New Orleans, LA, March 2018  
Chair, Gordon Research Conference on Nucleosides, Nucleotides and Oligonucleotides, June 25-30, 2017  
Chair, Presidential Symposium on Holy Grails in Chemistry, National ACS Meeting, San Francisco, April 2, 2017  
Co-Organizer, ACS-ICCAS Symposium on Molecular Sciences, Beijing, China, October 23-26, 2016  
Chair, ACS Editors' Conference, Scottsdale, AZ, January 9-11, 2015  
Vice-Chair, Gordon Research Conference on Nucleosides, Nucleotides and Oligonucleotides, July 2015  
Co-Organizer, NSF-NASA Workshop on Alternative Chemistries of Life, Arlington, VA, April 1-4, 2012  
Co-Organizer, AAAS Symposium on *Chemical Evolution*, February 19, 2012  
Member, AACR-ACS Special Conference, *Biological Chemistry of Inflammation as a Cause of Cancer*, Jan. 2011  
Co-Organizer, *JOC: Defining the Frontiers of Organic Chemistry for 75 Years*, Symposium at the ACS National Meeting, Boston, MA, August 22-23, 2010  
Founding Chair, *Workshop on Nucleic Acid Chemistry*, Telluride, August 3-8, 2008  
Co-Chair, *Gordon Research Conference on Nucleic Acids*, Newport, RI, June 3-8, 2007  
Co-Vice Chair, *Gordon Research Conference on Nucleic Acids*, Newport, RI, June 4-9, 2006  
Chair, *Radicals in the Rockies*, Telluride, CO, July 16-22, 2006  
Chair, *NIH Workshop on Chemical Modifications of Nucleic Acids for RNA Interference*, Bethesda, MD, May 13, 2005  
Program Chair, Division of Biological Chemistry, National Meeting of the American Chemical Society, Philadelphia, PA, August 22-26, 2004

Co-Organizer, *Symposium on Chemistry and Biology of DNA Damage in Cells*, Divisions of Biological Chemistry and Chemical Toxicology, National Meeting of the ACS, Philadelphia, PA, August 23, 2004  
Member of Governing Board, *Reaction Mechanisms Conference*, 1998-2004  
Member, *27th Reaction Mechanisms Conference*, Asilomar, CA, June 28 - July 3, 1998  
Chair, *NSF Workshops on Organic Synthesis and Natural Products Chemistry*, Point Reyes, CA, 1997  
Member, *NSF Workshops on Organic Synthesis and Natural Products Chemistry*, 1996-1998.  
Chair, *Symposium on Mechanisms of Metal-Mediated Cleavage of Biopolymers*, Divisions of Inorganic & Organic Chemistry, National Meeting of the American Chemical Society, Orlando, FL, Aug. 1996  
Member, *XIXth International Symposium on Macrocyclic Chemistry*, Lawrence, KS, June 1994  
Chair, *Gordon Research Conference on Physical Organic Chemistry*, Holderness, NH, June 20-25, 1993  
Member, *13th Enzyme Mechanisms Conference*, Key Largo, FL, January 6-10, 1993  
Chair, *NSF Workshop on Reactive Intermediates*, Shelter Island, NY, September 19-23, 1992  
Member, *NSF Workshops on Reactive Intermediates*, 1991-1993  
Member, *23rd Reaction Mechanisms Conference*, Boulder, CO, June 10-14, 1990

Service on Review Panels:

National Institutes of Health, Synthetic & Biological Chemistry A study section, 2021-2025 (pending approval)  
National Institutes of Health, F31/F32 review panel ZRG1 F04A-V (20) L, March 2021  
National Institutes of Health, F31/F32 review panel ZRG1 F04A-D (20) L, July 2020  
University of Utah, Covid-19 review panel, June 2020  
National Institutes of Health, K-99 Review panel for NIEHS, July 2019  
Max Planck Institute for Biophysical Chemistry, Göttingen, May 2019  
National Institutes of Health, 2019/05 ZCA1 RPRB-N (M1) S Study Section (NCI R35), March 2019  
Institut Curie external review committee, Orsay, France, January 2019  
NSF CAREER review panel, Arlington, VA, September 2018  
PhD External examiner, McGill University, Montreal, Que., November 2017  
PhD External examiner, Nanyang Technological University, Singapore, November 2017  
National Institutes of Health, MIRA (NIGMS R35) Review Panel, November 2017  
PhD External examiner, Simon Fraser University, Burnaby, B.C., April 2017  
University of Michigan, Dept. of Chemistry External Review Committee, October 2017  
Institute of Organic Chemistry and Biochemistry, Academy of Science of the Czech Republic, Prague, International Advisory Committee, 2011—2018  
UCLA Department of Chemistry External Review Committee, March 6-8, 2016  
National Institutes of Health, Special Emphasis Panel/Scientific Review Group ZRG1 IMST-L (02) M, 10/15.  
University of Ruhr, Bochum, Selection Committee for Chair of Organic Chemistry, 2014-15  
National Science Foundation Waterman Award Review Board, 2015-17  
National Institutes of Health, Special Emphasis Panel/Scientific Review Group ZRG1 BCMB-W, 12/14.  
National Institutes of Health, Cancer Etiology Study Section, Ad Hoc Member, 2/14  
Montana State University, Department of Chemistry, External Review Committee, 10/11  
University of British Columbia, Dept. of Chemistry, External Review Committee, 1/10.  
National Science Foundation, Committee of Visitors for Chemistry Division, Chair, 2009-2010  
National Institutes of Health, Pioneer Award Review Committee, 2008-2010.  
Vanderbilt Institute of Chemical Biology, External Advisory Committee, 2006--2013  
National Science Foundation, Committee of Visitors, Chemistry Division, 2007  
University of Nevada, Department of Chemistry, Graduate Program External Review, 9/06  
National Institutes of Health, Synthetic and Biological Chemistry A Study Section, Ad Hoc Member, 2/06  
National Science Foundation, Math & Physical Sciences Advisory Committee, 2005-2008  
National Institutes of Health, Synthetic and Biological Chemistry B Study Section, Ad Hoc Member, 6/05  
National Science Foundation, Review Panel for Chemical Bonding Centers, 1/05; 6/05  
National Institutes of Health, Special Study Section, Conflicts in Biophysics and Chemistry-B, 3/04  
National Institutes of Health, Panel on Scientific Boundaries for Review, Biological Chemistry & Macromolecular Biophysics, 2/03  
National Institutes of Health, Chemical Pathology Ad hoc Study Section, Member, 11/02  
National Institutes of Health, Alcohol and Toxicity-1 Study Section, Ad Hoc Member, 2/00  
National Institutes of Health, Bioorganic and Natural Products Ad Hoc Study Section, Member, 12/98  
National Science Foundation, Committee of Visitors, Chemistry Division, 1998  
National Science Foundation Postdoctoral Fellowship Committee, 1995  
National Institutes of Health, Medicinal Chemistry Ad Hoc Study Section, Chair, 12/94  
National Institutes of Health, Medicinal Chemistry Ad Hoc Study Section, Member, 8/94  
National Science Foundation Young Investigator Review Committee, 1992

National Institutes of Health Reviewers' Reserve, 1994-1998  
National Institutes of Health, Bioorganic and Natural Products Study Section, 1990-1994  
National Institutes of Health, Metallobiochemistry Study Section, Ad Hoc Member, 1989  
Office of Naval Research, Divisions of Chemistry and Molecular Biology, 1987  
National Science Foundation, College Science Instrumentation Program, 1987

Recent University Service:

Member, Search Committee for Director of the School of Computing, 2020  
Member, RPT Policy Task Force, 2019  
Co-Chair, Search Committee for Senior Vice President for Academic Affairs, 2018  
Member, Executive Committee for PITCH (Training Grant in Chemical Biology), 2018-2022  
Member, Search Committee for Chair of Pharmaceutics, 2017-18  
Member, Search Committee for Director of Technology and Venture Capital Office, 2016  
Member, Linda K. Amos Award Selection Committee, 2016-18  
Member, Distinguished Professor Review/Selection Committee, 2014-2016.  
Member, Dean of the College of Pharmacy Search Committee, 2014-2016  
Chair, Department of Chemistry, University of Utah, July 1, 2013 – June 30, 2019  
Member, Internal Review Committee of the Department of Pathology, University of Utah, November 2012  
Judge, 12<sup>th</sup> Annual Research Symposium, ARUP Institute for Clinical and Experimental Pathology, May 2012  
Founding Member and Faculty Liaison, University of Utah Curie Club for Women in Science, 2011—  
Member, CCSG-HCI Steering Committee for Nuclear Control, 2009—  
Member, Utah Center for Science and Mathematics Education Steering Committee, 2009-2010  
Member, Science Initiative Committee, College of Science, 2008  
Co-Chair, Search Committee for Dean of the College of Science, 2007  
University Senate Committee on Retention, Promotion and Tenure Policies, 2003 - 2006  
College of Science *Frontiers of Science* Lectureship Committee, 1999 – 2007  
Internal Review Committee for Department of Medicinal Chemistry, 2005  
Ad hoc committee for advancement of women in science & engineering, 2002 - 2006  
Member, Huntsman Cancer Institute, 1996 - present  
Member, Interdepartmental Program in Biological Chemistry, 1995 - present  
Co-Director, NIH Training Grant at the Chemistry - Biology Interface, 1996 – 2009

Recent/Past Industrial Consulting and Collaborations:

Zars Pharma, Salt Lake City, UT.  
Kenyon & Kenyon, New York City, NY.  
Electronic Bio Sciences, San Diego, CA and Salt Lake City, UT.  
BioFire, Salt Lake City, UT.

**Peer-Reviewed Publications:**

1. C. J. Burrows and B. K. Carpenter, "Substituent Effects on the Aliphatic Claisen Rearrangement. 1. Synthesis and Rearrangement of Cyano-Substituted Allyl Vinyl Ethers" *J. Am. Chem. Soc.* **1981**, *103*, 6983-6984.
2. C. J. Burrows and B. K. Carpenter, "Substituent Effects on the Aliphatic Claisen Rearrangement. 2. Theoretical Analysis" *J. Am. Chem. Soc.* **1981**, *103*, 6984-6986.
3. J. P. Behr, C. J. Burrows, R. Heng, and J. M. Lehn, "Synthesis of Novel Macrobicyclic Polyfunctional Cryptands," *Tetrahedron Lett.* **1985**, *26*, 215-218.
4. J. F. Marecek and C. J. Burrows, "Synthesis of an Optically Active Spermine Macrocycle, (S)-6-(Hydroxymethyl)-1,5,10,14-tetraazacyclooctadecane, and its Complexation to ATP" *Tetrahedron Lett.* **1986**, *27*, 5943-5946.
5. T. R. Wagler and C. J. Burrows, "Synthesis of an Optically Active C-Functionalized Cyclam, (S)-5-(Hydroxymethyl)-1,4,8,11-tetraazacyclotetradecane and its Ni(II) Complex," *J. Chem. Soc., Chem. Commun.* **1987**, 277-278.
6. C. J. Burrows and R. Sauter, "Synthesis and Conformational Studies of a New Host System Based on Cholic Acid," *J. Inclusion Phenom.* **1987**, *5*, 117-121.
7. J. F. Kinneary, T. R. Wagler and C. J. Burrows, "Alkene Epoxidation Using Ni(II) Complexes of Chiral Cyclams," *Tetrahedron Lett.* **1988**, *29*, 877-880.
8. C. A. Salata, D. Van Engen and C. J. Burrows, "Synthesis and Structure of a Semi-Rigid Dinucleating Macrocycle containing the 2,6-Di(thiomethyl)pyridine Unit and Reactions of its Cu(II) Complex," *J. Chem. Soc., Chem. Commun.* **1988**, 579-580.

9. J. F. Kinneary, J. S. Albert and C. J. Burrows, "Mechanistic Studies of Alkene Epoxidation Catalyzed by Nickel(II) Cyclam Complexes. <sup>18</sup>O-Labeling and Substituent Effects," *J. Am. Chem. Soc.* **1988**, *110*, 6124-6129.
10. H. Yoon and C. J. Burrows, "Catalysis of Olefin Oxidation by Nickel Salen Complexes Using NaOCl under Phase Transfer Conditions," *J. Am. Chem. Soc.*, **1988**, *110*, 4087-4089.
11. T. R. Wagler and C. J. Burrows, "Synthesis of a Chiral Dioxocyclam Derived from L-Phenylalanine and its Application to Olefin Oxidation Chemistry," *Tetrahedron Lett.* **1988**, *29*, 5091-5094.
12. J. F. Marecek, P. A. Fischer and C. J. Burrows, "Complexation of ATP to a Synthetic [15]-N<sub>3</sub> Macrocyclic Polyammonium Receptor," *Tetrahedron Lett.* **1988**, *29*, 6231-6234.
13. J. F. Kinneary, T. M. Roy, J. S. Albert, H. Yoon, T. R. Wagler, L. Shen and C. J. Burrows, "Progress Toward Artificial Metalloenzymes: New Ligands for Transition Metal Ions and Neutral Molecules," *J. Inclusion Phenom.* **1989**, *7*, 155-168.
14. T. R. Wagler, Y. Fang and C. J. Burrows, "Optically Active Difunctionalized Dioxocyclam Macrocycles. Ligands for Nickel-Catalyzed Oxidation of Alkenes," *J. Org. Chem.* **1989**, *54*, 1584-1589.
15. C. A. Salata, M. T. Youinou, and C. J. Burrows, "(Template)<sub>2</sub> Synthesis of a Dinucleating Macrocyclic Ligand and Crystal Structure of its Dicopper(II) Imidazolite Complex," *J. Am. Chem. Soc.* **1989**, *111*, 9278-9279.
16. C. J. Burrows, "Catalytic Reactions of Macrocyclic Nickel(II) Complexes," in *Inclusion Phenomena and Molecular Recognition*, Atwood, J. L., Ed.; Plenum: New York, 1990; 199-207.
17. H. Yoon, T. R. Wagler, K. J. O'Connor and C. J. Burrows, "High Turnover Rates in pH-Dependent Alkene Epoxidation using NaOCl and Square Planar Nickel(II) Catalysts," *J. Am. Chem. Soc.* **1990**, *112*, 4568-4570.
18. H. S. Ham and C. J. Burrows, "Synthesis of a New Molecular Receptor Based on Cholic Acid," *Taehan Hwahakhoe Chi* **1990**, *34*, 215-216.
19. K. J. O'Connor and C. J. Burrows, "Catalysis of Aryl Halogen Exchange by Nickel(II) Complexes using NaOCl," *J. Org. Chem.* **1991**, *56*, 1344-1346.
20. X. Chen, S. E. Rokita and C. J. Burrows, "DNA Modification: Intrinsic Selectivity of Nickel(II) Complexes," *J. Am. Chem. Soc.* **1991**, *113*, 5884-5886.
21. C. A. Salata, M. T. Youinou, and C. J. Burrows, "Preparation and Structural Characterization of Dicopper(II) and Dinickel(II) Imidazolite-Bridged Macrocyclic Schiff Base Complexes," *Inorg. Chem.* **1991**, *30*, 3454-3461.
22. X. Chen, C. J. Burrows, and S. E. Rokita, "Conformation Specific Oxidation of Guanosine in DNA: Ends, Mismatches, Bulges, and Loops," *J. Am. Chem. Soc.* **1992**, *114*, 322-325.
23. K. J. O'Connor, S. J. Wey and C. J. Burrows, "Alkene Aziridination and Epoxidation Catalyzed by Chiral Metal Salen Complexes," *Tetrahedron Lett.* **1992**, *33*, 1001-1004.
24. J. G. Muller, X. Chen, A. C. Dadiz, S. E. Rokita, and C. J. Burrows, "Ligand Effects Associated with the Intrinsic Selectivity of DNA Oxidation Promoted by Nickel(II) Macrocyclic Complexes," *J. Am. Chem. Soc.* **1992**, *114*, 6407-6411.
25. C. C. Cheng, S. E. Rokita, and C. J. Burrows, "Nickel(III)-Promoted DNA Scission using Ambient Dioxide" *Angew. Chem.* **1993**, *105*, 290-292, and *Angew. Chem. (Int. Ed. Engl.)* **1993**, *32*, 277-278.
26. J. G. Muller, X. Chen, A. C. Dadiz, S. E. Rokita, and C. J. Burrows, "Macrocyclic Nickel Complexes in DNA Recognition and Oxidation," *Pure Appl. Chem.* **1993**, *65*, 545-550.
27. S. J. Wey, K. J. O'Connor, and C. J. Burrows, "Preparation of Primary Vicinal Diamines from Amino Acid Esters and Crystal Structure of a Chiral Nickel Salen Complex," *Tetrahedron Lett.* **1993**, *34*, 1905-1908.
28. X. Chen, S. Woodson, C. J. Burrows and S. E. Rokita, "A Highly Sensitive Probe for Guanine N7 in Folded Structures of RNA: Application to tRNAPhe and *Tetrahymena* Group I Intron," *Biochemistry*, **1993**, *32*, 7610-7616.
29. S. A. Woodson, J. G. Muller, C. J. Burrows and S. E. Rokita, "A Primer Extension Assay for Modification of Guanine N7 by Ni(II) Complexes," *Nucl. Acids Res.* **1993**, *21*, 5524-5525.
30. J. G. Muller, S. J. Paikoff, S. E. Rokita and C. J. Burrows, "DNA Modification Promoted by Water-Soluble Nickel(II) Salen Complexes: A Switch to DNA Alkylation," *J. Inorg. Biochem.* **1994**, *54*, 199-206.
31. S. M. Evans, C. A. Venanzi and C. J. Burrows, "Design of Cholic Acid Hosts for Molecular Recognition of Glucose using Systematic Conformational Searching," *J. Molec. Struct.*, **1994**, *308*, 159-174.
32. C. J. Burrows and S. E. Rokita, "Recognition of Guanine Structure in Nucleic Acids by Nickel Complexes," *Acc. Chem. Res.* **1994**, *27*, 295-301.
33. H. P. Hsieh, J. G. Muller, and C. J. Burrows, "Structural Effects in Novel Steroidal Polyamine-DNA Binding," *J. Am. Chem. Soc.* **1994**, *116*, 12077-12078.
34. K. J. Fordon, C. G. Crane, and C. J. Burrows, "A Novel Method for the Synthesis of 5-Substituted 6-Membered Cyclic Ureas," *Tetrahedron Lett.* **1994**, *35*, 6215-6216.
35. S. E. Rokita, P. Zheng, N. Tang, C.-C. Cheng, R.-H. Yeh, J. G. Muller and C. J. Burrows, "Nickel Complexes in Modification of Nucleic Acids," In *Genetic Response to Metals*, B. Sarkar, Ed.; M. Dekker: New York, 1995, pp 201-216.
36. S. M. Evans, C. J. Burrows, and C. A. Venanzi, "Design of Cholic Acid Macrocycles as Hosts for Molecular Recognition of Monosaccharides," *J. Molec. Struct.* **1995**, *334*, 193-205.

37. C. J. Burrows, J. G. Muller, H.-C. Shih, and S. E. Rokita, "Interaction of Metal Complexes with B vs. Z DNA," in "Supramolecular Stereochemistry," J. S. Siegel, Ed.; Kluwer: Dordrecht, 1995, pp 57-62.
38. H. P. Hsieh, J. G. Muller, and C. J. Burrows, "Synthesis and DNA Binding Properties of C3-, C12- and C24-Substituted Amino-Steroids Derived from Bile Acids," *Bioorg. Med. Chem.* **1995**, *3*, 823-838.
39. C. J. Burrows and S. E. Rokita, "Nickel Complexes as Probes of Guanine Sites in Nucleic Acid Folding," in *Metal Ions in Biological Systems, Vol.33*, H. Sigel and A. Sigel, Eds., M. Dekker: New York, 1995, Chap. 18, pp537-560.
40. J. G. Muller, M. M. P. Ng, and C. J. Burrows, "Hydrophobic vs. Coulombic Interactions in the Binding of Steroidal Polyamines to DNA," *J. Molec. Recognit.* **1996**, *9*, 143-148.
41. J. G. Muller, P. Zheng, S. E. Rokita, and C. J. Burrows, "DNA and RNA Modification Promoted by [Co(H<sub>2</sub>O)<sub>6</sub>]Cl<sub>2</sub>: Guanine Selectivity, Temperature Dependence and Mechanism," *J. Am. Chem. Soc.* **1996**, *118*, 2320-2325.
42. W. Nam, S. J. Baek, K. A. Lee, B. T. Ahn, J. G. Muller, C. J. Burrows, and J. S. Valentine, "Nickel Complexes as Antioxidants," *Inorg. Chem.* **1996**, *35*, 6632-6633.
43. C. J. Burrows, J. G. Muller, G. T. Poulter and S. E. Rokita, "Nickel-Catalyzed Oxidations: From Hydrocarbons to DNA," *Acta Chem. Scand.* **1996**, *50*, 337-344.
44. C.-C. Cheng, J. Gulia, S. E. Rokita, and C. J. Burrows, "Dioxygen Chemistry of Nickel(II) Dioxopentaazamacrocyclic Complexes: Substituent and Medium Effects," *J. Mol. Catal., A* **1996**, *113*, 379-391.
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#### Book Chapters, Editorials, and Other Articles:

1. C. J. Burrows, "Catalysis" in *Yearbook of Science and Technology*, Parker, S. B., Ed.; McGraw-Hill: New York, 1991; pp 50-53.
2. C. J. Burrows and S. J. Wey, "Bis( $N$ -methylsalicylaldimine)nickel" in *Encyclopedia of Reagents for Organic Synthesis*, Paquette, L. A., Ed.; Wiley: New York, 1995.
3. C. J. Burrows and S. J. Wey, " $N,N$ -Bis(salicylidene)ethylenediaminenickel(II)" in *Encyclopedia of Reagents for Organic Synthesis*, Paquette, L. A., Ed.; Wiley: New York, 1995.
4. C. J. Burrows and S. J. Wey, "Nickel Acetate" in *Encyclopedia of Reagents for Organic Synthesis*, Paquette, L. A., Ed.; Wiley: New York, 1995.
5. C. J. Burrows and S. J. Wey, "Nickel(II) 2-ethylhexanoate" in *Encyclopedia of Reagents for Organic Synthesis*, Paquette, L. A., Ed.; Wiley: New York, 1995.
6. C. J. Burrows and S. J. Wey, "Nickel(II) Tetrphenylporphine" in *Encyclopedia of Reagents for Organic Synthesis*, Paquette, L. A., Ed.; Wiley: New York, 1995.
7. C. J. Burrows, "Chlorine," *Chem. Eng. News* **2003**, *81*, 62.
8. C. J. Burrows, "Postdoctoral Studies Abroad—A Reality Check," *Graduate Education Newsletter*, ACS, **2005**, *4*, 10-11.
9. C. J. Burrows, "Choreographing DNA," in *Letters to a Young Chemist*, Ghosh, A., Ed. Wiley: New York, **2011**.
10. D. Lynn, C. Burrows, J. Goodwin, A. Mehta "Origins of Chemical Evolution," (guest editorial) special issue of *Acc. Chem. Res.* **2012**, *45*, 2023-2024.
11. C. J. Burrows, "RNA Takes its Vitamins," *Nature Chemistry, News & Views*, **2013**, *5*, 900-901. DOI:10.1038/nchem.1786.
12. C. J. Burrows, "Editorial," *Acc. Chem. Res.* **2014**, *47*, 1.
13. C. J. Burrows, "Changes Afoot!" (editorial) *Acc. Chem. Res.* **2015**, *48*, 153.
14. K. D. Karlin, S. J. Lippard, J. S. Valentine, and C. J. Burrows, "Solving 21st Century Problems in Biological Inorganic Chemistry Using Synthetic Models," (editorial) *Acc. Chem. Res.* **2015**, *48*, 2659-2660.
15. C. J. Burrows, "Evolution of Accounts," (editorial) *Acc. Chem. Res.* **2016**, *49*, 1-2.
16. C. J. Burrows, "50 Years of Accounts" (editorial) *Acc. Chem. Res.* **2017**, *50*, 1.
17. C. J. Burrows, "Holy Grails in Chemistry, Part II," (editorial) *Acc. Chem. Res.* **2017**, *50*, 445.
18. C. J. Burrows, "Hearing ALL the Voices," *The Bond*, IOCB Newsletter, Prague, September 27, 2017.

19. C. J. Burrows, "50 Years of a Great Idea," (editorial) *Acc. Chem. Res.* **2018**, *51*, 1-2.
20. C. J. Burrows, "First Accounts: The Capstone of a Tenure Tour," (editorial) *Acc. Chem. Res.* **2020**, *53*, 1003-1004.
21. C. J. Burrows, et al., "Update to Our Reader, Reviewer, and Author Communities—April 2020," (editorial) *Acc. Chem. Res.* **2020**, *53*, 1001-1002.
22. C. J. Burrows, "Key References: A New Feature in *Accounts*," (editorial) *Acc. Chem. Res.* **2020**, *53*, 1101.
23. C. J. Burrows, et al., "Confronting Racism in Chemistry Journals," (editorial) *Acc. Chem. Res.* **2020**, *53*, 1257-1259.
24. C. J. Burrows, "Welcoming our new sister journal *Accounts of Materials Research*," (editorial) *Acc. Chem. Res.* **2020**, *53*, 2495.
25. C. J. Burrows, "Kool Chemistry of DNA and RNA Biopolymers," (editorial) *Biopolymers* **2021**, *112*, e23417.
26. C. J. Burrows, "Accounts journal club begins with focus on natural products," (editorial) *Acc. Chem. Res.* **2021**, *54*, xxxx.

#### Patent Applications:

1. C. J. Burrows and T. R. Wagler, "Polyazamacrocycles and Their Metal Complexes" U. S. patent Number 4,987,227, issued January 22, 1991.
2. C. J. Burrows, T. R. Wagler, and H. Yoon, "Polyazamacrocycles and Their Metal Complexes and Oxidations Using Same," U. S. Patent Number 5,126,464 issued June 30, 1992.
3. C. J. Burrows, S. E. Rokita, and X. Chen, "Modification of DNA and Oligonucleotides using Metal Complexes of Polyaza Ligands," U. S. patent no. 5,272,076, issued December 21, 1993.
4. C. J. Burrows, T. R. Wagler, and H. Yoon, "Oxidations using Polyazamacrocyclic Metal Complexes," U. S. patent no. 5,428,180, issued June 27, 1995.
5. C. J. Burrows and H.-P. Hsieh, "Steroidal Polyamines," U. S. Patent No. 5,610,149 issued March 11, 1997.
6. C. J. Burrows, S. E. Rokita, and X. Chen, "Modification of DNA and Oligonucleotides Using Metal Complexes of Polyaza Ligands," U. S. patent no. 5,504,075, issued April 2, 1996.
7. C. J. Burrows and M. M. Awada, "Steroidal Polyamines for Gene Transfer," U. S. provisional patent application filed, February 24, 1997.
8. S. E. Rokita and C. J. Burrows, "Nickel-based Reagents for Detecting DNA and DNA-Protein Contacts," U. S. Patent no. 7,371,579, issued May 13, 2008.
9. C. J. Burrows, R. A. Jameton, "New Manganese Complexes as SOD Mimics," U. S. Provisional Patent Application filed 3/01.
10. Burrows, Cynthia J.; White, Henry S.; Kawano, Ryuji; Fleming, Aaron M.; An, Na, "Amperometric detection and localization of nucleic acid lesions and adducts using nanopores," PCT Int. Appl. (2011), WO 2011109825 A2 20110909.
11. C. J. Burrows, A. Kannan, P. A. Beal, "Methods and Compositions Related to Modified Guanine Bases for Controlling Off-target Effects in RNA Interference," U. S. Patent Application 2012/0095077A1 filed on March 23, 2010. Issued: September 30, 2010, WO 2010111290 A1; published 4/19/12.
12. Burrows, Cynthia J.; Ghanty, Uday, "Methods and compositions related to modified adenosines for controlling off-target effects in RNA interference," PCT Int. Appl. (2011), WO 2011119674 A1 20110929
13. Burrows, Cynthia J.; White, Henry S.; Kawano, Ryuji; Fleming, Aaron M.; An, Na, "Detection of nucleic acid lesions and adducts using nanopores," U.S. Pat. No. 9,005,425, issued 4/14/15.
14. Burrows, Cynthia J. and Riedl, J. "Methods for Site-Specific Detection of DNA Base Modifications," U. S. Pat. Appl. No. 61841117, filed 6/28/13.
15. Burrows, C. J.; Fleming, A. M.; Ding, Y.; Johnson, R.; Jin, Q.; White, H. S. "Methods and Systems for Detecting Variations in DNA," United States Provisional Patent Application No. 62/245,920, submitted 10/23/15.
16. Burrows, C. J.; Fleming, A. M.; Ding, Y. Identification of G-Quadruplexes in Zika virus, June 2016
17. Burrows, C. J.; Fleming, A. M.; Ding, Y.; Johnson, R.; Jin, Q.; White, H. S. "Methods and Systems for Detecting Variations in DNA," October 23, 2016; licensed by Electronic Bio Sciences.

#### Invited Lectures at Conferences (since 1995):

- |                 |   |
|-----------------|---|
| 1/22/95-1/27/95 | Gordon Research Conference on Metals in Biology, Ventura, CA.   |
| 4/2/95-4/7/95   | Symposium Honoring Margaret Cavanaugh, ACS Natl. Meeting, Anaheim, CA.                                      |
| 5/21/95-5/24/95 | 36th Annual Buffalo Medicinal Chemistry Symposium, Buffalo, NY  |
| 6/14/95-6/17/95 | Symposium on Reactive Intermediates, Northwest & Rocky Mountain Regional Meeting of the ACS, Park City, UT. |



6/19/95-6/23/95  
7/3/95-7/7/95  
9/3/95-9/7/95  
12/17/95-12/22/95  
4/14/96-4/19/96  
6/23/96-6/28/96  
6/28/96-7/2/96  
8/25/96-8/27/96  
9/15/96-9/20/96  
4/26/97  
7/11/97-7/15/97  
11/11/97-11/15/97  
5/25/98-5/29/98  
7/11/98-7/17/98  
7/16/98-7/20/98  
8/30/98-6/4/98  
2/13/99  
6/23/99  
6/27/99-7/2/99  
1/27/00-1/30/00  
3/4/00  
6/25/00-6/28/00  
6/28/00-6/29/00  
7/12/00  
7/17/00-7/20/00  
1/20/01  
4/3/01  
7/1/01-1/6/01  
8/26/01-8/31/01  
9/1/01-9/8/01  
2/10/02-2/15/02  
7/7/02-7/12/02  
7/28/02-8/2/02  
8/25/02-8/29/02  
7/6/03-7/12/03  
8/10/03-8/15/03  
9/7/03-9/11/03  
9/7/03-9/11/03  
3/7/04-3/12/04  
7/10/04-7/16/04  
9/18/04-9/19/04  
6/5/05-6/10/05  
9/29/05-9/30/05  
1/12/06-1/15/06  
3/5/06-3/10/06  
7/2/06-7/6/06  
7/16/06-7/23/06

Gordon Research Conference on Bioorganic Chemistry, Proctor Academy, NH.  
Gordon Research Conference on Physical Organic Chemistry, Holderness, NH.  
Nobel Symposium on Catalytic Asymmetric Synthesis, Karlskoga, Sweden.  
Symposium on Molecular Recognition and Supramolecular Assemblies, 1995 Pacificchem Conference, Honolulu, HI.  
6th International Symposium on the Activation of Dioxygen and Homogeneous Catalytic Oxidation, Noordwijkerhout, The Netherlands.  
21st International Symposium on Macrocyclic Chemistry, Montecatini Terme, Italy  
NSF Workshop on Organic Synthesis and Natural Products Chemistry, Holderness, NH  
Symposium on Mechanisms of Metal-Mediated Biopolymer Cleavage, National American Chemical Society Meeting, Orlando, FL  
IUPAC Symposium on the Chemistry of Natural Products, Chicago, IL  
Organic Chemistry Day, University of Missouri, Columbia, MO  
NSF Workshop on Organic Synthesis and Natural Products Chemistry, Tomales Bay, CA  
Symposium on the Role of Nickel in Catalysis and Bioinorganic Chemistry, North American Chemical Congress, Cancun, Mexico  
2nd International Symposium on Metals and Genetics, Toronto, Canada  
Gordon Research Conference on Organic Reactions and Processes, NH.  
NSF Workshop on Organic Synthesis and Natural Products Chemistry, Holderness, NH  
33rd International Conference on Coordination Chemistry, Florence, Italy  
American Biophysical Society Meeting, Baltimore, MD  
Symposium on Chemical Biology, NW Regional ACS Meeting, Portland, OR  
Gordon Research Conference on Heterocyclic Chemistry, Newport, RI  
Graduate Bioinorganic Gordon Research Conference, Ventura, CA.  
Marie Goeppert-Mayer Memorial Symposium, San Diego, CA.  
Reaction Mechanisms Conference, Madison, WI.  
Metals in Medicine, Bethesda, MD  
Journée Scientifique pour Académicien Bernard Meunier, Toulouse, France.  
European Bioinorganic Chemistry Conference, Toulouse, France  
Irvine Organic Synthesis Symposium: Biological Tools and Targets, University of California, Irvine, CA.  
Symposium on Metal-binding Peptides, 221st National ACS Meeting, San Diego, CA.  
Gordon Research Conference on Physical Organic Chemistry, Holderness, NH.  
10th International Conference on Bioinorganic Chemistry, Florence, Italy  
3rd International Meeting on Molecular Mechanisms of Metal Toxicity and Carcinogenicity Stintino, Italy  
Gordon Research Conference on Oxygen Radicals in Biology, Ventura, CA.  
Reactive Intermediates and Reaction Mechanisms, Ascona, Switzerland.  
Gordon Research Conference on Natural Products Chemistry, NH.  
3rd International Conference on Supramolecular Science and Technology, Buenos Aires Argentina (plenary lecture)  
Radicals in the Rockies IV, Telluride, CO.  
9th International Congress of Heterocyclic Chemistry, Fort Collins, CO (plenary lecture)  
Symposium on Medicinal Inorganic Chemistry, 226th National American Chemical Society Meeting, New York, NY.  
Symposium on the Chemistry of Reactive Intermediates, 226th National American Chemical Society Meeting, New York, NY.  
Gordon Research Conference on Mutagenesis and Carcinogenesis, Ventura, CA  
Symposium on Mechanisms of DNA Oxidative Damage, American Society of Photobiology, Seattle, WA.  
Workshop on Molecular Basis of Life Processes, ACS, Washington, DC  
Gordon Research Conference on Nucleic Acids, Newport, RI  
Stony Brook Symposium on New Horizons in Organic Chemistry, Stony Brook U., NY  
Organic Chemistry Winter Meeting, Skeikampen, Norway  
Gordon Research Conference on DNA Lesions, Mutations and Cancer, Ventura, CA.  
International Symposium on Radical Ion Chemistry, Rome, Italy  
Radicals in the Rockies, Telluride, CO.

9/13/06 Symposium on Heavy Metal Toxicity, National American Chemical Society Meeting, San Francisco, CA

2/04/07-2/07/07 Chemistry in Cancer Research, San Diego, CA.

6/19/07-6/23/07 Albany 2007: The 15<sup>th</sup> Conversation, Albany, NY

7/15/07-7/20/07 21<sup>st</sup> International Congress on Heterocyclic Chemistry, Sydney, Australia

9/30/07-10/05/07 9<sup>th</sup> Latin American Conf. on Physical Organic Chem., Cordoba, Argentina

6/15/08-6/17/08 Bioorganic Symposium, 2008 ACS Northwestern/Rocky Mountain Regional Meeting, Park City, UT

7/12/08-7/16/08 Chinese Chemical Society Conference, Tianjin, China

7/25/08 Journal of Organic Chemistry Symposium, Deer Valley, UT

8/3/08-8/9/08 Telluride Workshop on Nucleic Acid Chemistry, Telluride, CO

8/15/08-8/16/08 Chemical Insights into Biological Processes, National Cancer Institute, Frederick, MD

8/19/08 Cope Award Symposium, National Meeting of the ACS, Philadelphia, PA

9/20/08-9/24/08 Radiation Research Society, Boston, MA

1/18/09-1/23/09 8<sup>th</sup> Winter Research Conference on DNA Damage, Les Houches, France

6/28/10-7/2/10 EuChem Conference on Free Radicals, Bologna, Italy (plenary lecture)

7/19/10-7/23/10 Radicals in the Rockies, Telluride, CO

8/2/10-8/6/10 Workshop on Nucleic Acid Chemistry, Telluride, CO

8/22/10 Symposium on Women at the Forefront of Preventing and Combating Disease, Women Chemists Committee, ACS National Meeting, Boston, MA

8/25/10 Symposium on Inflammation Biomarkers and Interventions, Division of Chemical Toxicology, ACS National Meeting, Boston, MA

1/30/11-2/3/11 AACR-ACS Joint Conference on Biological Chemistry of Inflammation as a Cause of Cancer, San Diego, CA

3/29/11 Nakanishi Prize Symposium, ACS National Meeting, Anaheim, CA

6/5/11-6/10/11 15<sup>th</sup> Symposium on the Chemistry of Nucleic Acid Components, Cesky Krumlov, Czech Republic

6/26/11-7/1/11 Gordon Research Conference on Physical Organic Chemistry, Holderness, NH

7/22/11 *Journal of Organic Chemistry* Symposium, University of California, Davis, CA

3/24/12-3/28/12 Symposium on Geochemistry to Biochemistry and the Origin of Life, 243<sup>rd</sup> National Meeting of the American Chemical Society, San Diego, CA

4/1/12-4/4/12 NSF-NASA Workshop on Empirical Approaches to Alternative Biochemistries of Life, Arlington, VA.

4/12/12-4/13/12 Wageningen Symposium on Organic Chemistry, Wageningen, Netherlands

6/25/12 AAAS-ACS Joint Northwest Regional Meeting, Keynote Lecture, Boise, ID

7/29/12-8/3/12 Workshop on Nucleic Acid Chemistry, Telluride, CO

8/5/12-8/9/12 XX International Roundtable on Nucleosides, Nucleotides, and Nucleic Acids, Montreal, Que.

3/2/13-3/5/13 19<sup>th</sup> Indian Society of Chemists and Biologists International Conference, Udaipur, Rajasthan, India

3/12/13 10<sup>th</sup> Anniversary Celebration of Vanderbilt Institute for Chemical Biology, Nashville, TN

3/18/13-3/20/13 X-GEN Congress on Applying Next-Generation Sequencing, San Diego, CA

4/8/13 James Flack Norris Award Symposium in honor of Ned Porter, ACS National Meeting, New Orleans, LA

4/8/13 ACS Award for Computers in Chemical & Pharmaceutical Research Symposium in honor of Berny Schlegel, ACS National Meeting, New Orleans, LA

4/8/13-4/12/13 12<sup>th</sup> Latin-American Conference on Physical Organic Chemistry, Iguasu Falls, Brazil

4/18/13 Frontier Scientists Symposium on "Impact of Chemistry on Biology" hosted by Korean Academy of Science and Technology, Kintex, Gogang, South Korea

6/30/13-7/4/13 Gordon Research Conference on Nucleosides, Nucleotides and Oligonucleotides, Salve Regina, RI

7/4/13-7/8/13 International Conference on Chemical Bonding, Kauai, HI

7/21/13-7/26/13 Radicals in the Rockies TSRC Workshop, Telluride, CO

8/2/2013 *Journal of Organic Chemistry* Editors' Symposium, Irvine, CA

3/28/14 Women in Science Symposium, Texas Woman's University, Denton, TX

7/28/14-8/1/14 Telluride Workshop on Nucleic Acid Chemistry, Telluride, CO

8/11/14 Symposium on Chemical Approaches towards Understanding and Reprogramming RNA, ACS National Meeting, San Francisco, CA

10/9/14 Frontiers in Genome Sciences, Institute of Chemical Biology & Drug Discovery, Stony Brook, NY

10/12/14-10/15/14 Self-Assembly of Biomolecules, Balard Conference, Montpellier, France

2/10/15-2/12/15 EVONIK Symposium of Organic Chemistry, Ruhr-Universität Bochum, Germany

3/12/15 50<sup>th</sup> Anniversary of the Foote/Wexler Discovery: A Milestone for Singlet Oxygen Research, UCLA, Department of Chemistry, Los Angeles, CA

3/22/15-3/24/15 Award Symposium for Jaqueline Kiplinger, ACS National Meeting, Denver, CO

4/26/15-5/1/15 Bùrgenstock Conference on Stereochemistry, Bùrgenstock, Switzerland

5/28/15-5/29/15 Chemistry-Biology Interface Keynote Speaker, University of Rochester, Rochester, NY

6/26/16-6/29/16 36<sup>th</sup> Reaction Mechanisms Conference, St. Louis, MO

7/25/16-7/30/16 Telluride Workshop on Nucleic Acid Chemistry, Telluride, CO

8/1/16-8/5/16 Radicals in the Rockies, Telluride, CO

10/23/16-10/25/16 ACS International Symposium on Innovations in Molecular Sciences, Beijing, China

4/3/17 Nucleic Acid Therapeutics: Mechanisms and Applications, 253<sup>rd</sup> National ACS Meeting, San Francisco, CA

5/31/17-6/3/17 6<sup>th</sup> International Symposium on Quadruplex Nucleic Acids, Prague, Czech Republic

6/4/17-6/9/17 15<sup>th</sup> Symposium on the Chemistry of Nucleic Acid Components, Cesky Krumlov, Czech Republic

6/16/17 Science@theInterface, University of Chicago, Department of Chemistry, Chicago, IL

8/18/17 Light and Dark Properties of DNA and Other Supramolecular Systems, JHU, Baltimore, MD

9/12/17 Bioscience Symposium, University of Utah, Salt Lake City, UT

2/11-15/18 DNA Replication and Repair Structures & Cancer Conference, Cancun, Mexico

3/19/18 James Flack Norris Award Symposium, National ACS Meeting, New Orleans, LA

3/20-21/18 Symposium on Discovery of Small Molecules Targeting RNA, National ACS Meeting, New Orleans, LA

5/11/18 Gibbs Medal Award Address, ACS Chicago Section Meeting

5/27/18-6/1/18 15<sup>th</sup> International Workshop on Radiation-induced DNA Damage, Aussois, France

6/20-22/18 Reunion Bienal de Quimica Organica, Santiago de Compostela, Spain

7/8-13/18 International Symposium on Macrocyclic and Supramolecular Chemistry, Quebec, Canada

11/14-17/18 Society for Redox Biology and Medicine, Chicago, IL

1/4-6/19 ACS Editors' Meeting, Keynote Lecture, Phoenix, AZ

4/3-5/19 European Chemical Biology Symposium ECBS, Madrid, Spain

6/23-28/19 Gordon Research Conf. on Nucleosides, Nucleotides and Oligonucleotides, Newport, RI

7/7-7/12/19 Radicals in the Rockies, Telluride, CO

8/25-29/19 International Conference on Radiation Research, Manchester, UK

8/30/19 Nucleic Acid Chemical Biology Colloquium, Imperial College London, UK

9/19-23/19 Environmental Mutagenesis and Genomics Society Annual Meeting, Washington, DC

10/29-31/19 International Symposium on Nucleic Acid Chemistry, Tokyo, Japan

12/6/19 St. Nikolaus Symposium for Chemical Epigenetics, Munich, Germany

3/5-6/20 Miller Symposium, Keynote Lecture, University of California-Davis

6/18/20 Nucleic Acid Secondary Structures, G4s and Beyond, Webinar series, May-July (online)

8/18/20 ACS National Meeting, TOXI Division Keynote Lecturer, San Francisco, CA (online)

10/18-21/20 Radiation Research Society, Plenary lecture, Kona, Hawaii (online)

11/13/20 Rocky Mountain Regional Meeting of the ACS (online)

1/13/21 iNANO Symposium, Aarhus University, Aarhus, Denmark (online)

4/6/21 Biopolymers Symposium in honor of Eric Kool, ACS National Meeting (online)

5/10-12/21 Supra Bio Symposium, Plenary lecture (online)

9/21-24/21 European DNA Repair Conference, Mainz, Germany

10/17-20/21 7<sup>th</sup> US-EU Conference on Repair of Endogenous DNA Damage, Airlie House, VA

12/2021 Chemistry, Biology & Drug-Targeting of G- and C-Quadruplexes, Pacifichem, Honolulu, HI\*\*

12/2021 Free radical chemistry in biology, materials, Pacifichem, Honolulu, HI\*\*

6/6-11/22 16<sup>th</sup> Symposium on the Chemistry of Nucleic Acid Components, Cesky Krumlov, Czech Republic

6/25-29/22 International Conference on Hydrogen Atom Transfer Chemistry, Rome, Italy

6/28-30/22 38<sup>th</sup> Biennial Meeting of the Spanish Royal Society of Chemistry, Plenary lecture, Granada.

7/20-24/22 Workshop on Nucleic Acid Chemistry, Telluride, CO

8/27-9/1/22 International Conference on Environmental Mutagenesis, Keynote address, Ottawa, CA

\*\* Cancelled or postponed due to COVID-19

#### Invited Lectures at Institutions (*since 1995*):

9/1/95 Université Louis Pasteur, Faculté de Pharmacie, Strasbourg, France

10/26/95 University of California at Los Angeles, Department of Chemistry, LA, CA

1/29/96 University of Toledo, Department of Chemistry, Toledo, OH

1/30/96 Parke-Davis, Inc., Department of BioOrganic Chemistry, Ann Arbor, MI  
 1/31/96 University of Michigan, Department of Chemistry, Ann Arbor, MI  
 2/1/96 Purdue University, Department of Chemistry, West Lafayette, IN  
 2/8/96 University of Utah, Department of Medicinal Chemistry, Salt Lake City, UT  
 2/12/96 University of California at Santa Cruz, Department of Chemistry, Santa Cruz, CA  
 2/14/96 University of Utah, Biochemistry Interest Group Seminar, Salt Lake City, UT  
 3/1/96 Utah State University, Department of Chemistry, Logan, UT  
 3/19/96 University of Houston, Department of Chemistry, Houston, TX  
 3/20/96 Texas A & M University, Department of Chemistry, College Station, TX  
 4/18/96 University of Amsterdam, E. C. Slater Institute, Amsterdam, the Netherlands  
 5/15/96 Science at Breakfast, Salt Lake City, UT  
 6/25/96 University of Padova, Department of Chemistry, Padova, Italy  
 10/22/96 NeXstar Pharmaceuticals, Department of Medicinal Chemistry, Boulder, CO  
 11/5/96 Brigham Young University, Department of Chemistry, Provo, UT  
 2/6/97 University of Indiana, Department of Chemistry, Bloomington, IN  
 2/7/97 University of Rochester, Department of Chemistry, Rochester, NY  
 2/28/97 University of Texas, Department of Chemistry & Biochemistry, Austin, TX  
 4/1/97 University of California, Department of Chemistry, Berkeley, CA  
 4/26/97 University of Missouri, Department of Chemistry, Columbia, MO  
 2/12/98 North Dakota State University, Department of Chemistry, Fargo, ND  
 2/13/98 University of Minnesota, Department of Chemistry, St. Paul, MN  
 2/16/98 University of Wisconsin, Department of Chemistry, Madison, WI  
 3/4/98 University of Maryland, Department of Chemistry and Biochemistry, College Park, MD  
 4/9/98 Swarthmore College, Department of Chemistry, Swarthmore, PA  
 5/5/98 Université de Toulouse, Laboratoire de Chimie de Coordination, Toulouse, France  
 5/11/98 Université Louis Pasteur, Faculté de Pharmacie, Illkirch, France  
 5/12/98 University of Erlangen-Nürnberg, Institut für Anorganische Chemie, Erlangen, Germany  
 6/11/98 Affymax Research Institute, Santa Clara, CA  
 10/22/98 Pharmacia & Upjohn, Kalamazoo, MI  
 11/2/98 University of Colorado, S. J. Cristol Lectureship in Physical Organic Chemistry, Department of Chemistry, Boulder, CO  
  
 11/5/98 Colorado College, Department of Chemistry, Colorado Springs, CO  
 11/6/98 University of Colorado, Department of Chemistry, Colorado Springs, CO  
 12/2/98 University of Connecticut, Department of Chemistry, Storrs, CT  
 12/3/98 State University of New York at Stony Brook, Department of Chemistry, Stony Brook, NY  
 2/11/99 University of Kentucky, Department of Chemistry, Lexington, KY  
 2/12/99 National Cancer Institute, Laboratory for Comparative Carcinogenesis, Frederick, MD  
 3/12/99 University of Cincinnati, Department of Chemistry, Cincinnati, OH  
 3/16/99 Carnegie-Mellon University, Department of Chemistry, Pittsburgh, PA  
 4/23/99 City of Hope Medical Center, Beckman Research Institute, Department of Molecular Biology, Duarte, CA  
  
 10/18/99 University of Montana, Departments of Chemistry and Biosciences, Missoula, MT  
 11/17/99 New Mexico Institute of Technology, Department of Chemistry, Socorro, NM  
 2/7/00 University of Alberta, Department of Chemistry Graduate Student Invitee, Edmonton, Alberta  
 7/12/00 Université de Toulouse, Departement de Chimie, Toulouse, France  
 1/29/01 Duke University, Department of Chemistry, Durham, NC  
 1/30/01 University of North Carolina, Department of Chemistry, Chapel Hill, NC  
 2/14/01 Utah State University, Department of Chemistry, Logan, UT  
 10/16/01 Mount Holyoke College, Lucy Pickett Lectureship, Department of Chemistry, South Hadley, MA  
 11/9/01 University of Wyoming, Sara Jane Rhoads and Rebecca Raulins Lecture in Organic Chemistry, Department of Chemistry, Laramie, WY  
  
 1/29/02 University of Maryland–Baltimore County, Department of Chemistry and Biochemistry, MD  
 1/30/02 Johns Hopkins University, Department of Chemistry, Baltimore, MD  
 2/12/02 California State University at Los Angeles, Department of Chemistry, LA, CA  
 2/22/02 University of Texas at El Paso, Department of Chemistry, El Paso, TX  
 4/16/02 Middlebury College, Department of Chemistry, Middlebury, VT  
 4/17/02 Boston College, Department of Chemistry, Boston, MA  
 5/02/02 California Institute of Technology, Department of Chemistry, Pasadena, CA  
 5/23/02 Université Louis Pasteur, Department of Chemistry, Strasbourg, France  
 5/27/02 Université Louis Pasteur, Department of Chemistry, Strasbourg, France

5/29/02 Université Louis Pasteur, Department of Pharmacy, Illkirch, France  
 6/4/02 Centre d'Energie Atomique, Grenoble, France  
 6/10/02 CNRS, Laboratoire de Chimie de Coordination, Toulouse, France  
 2/28/03 Northwestern University, Department of Chemistry, Evanston, IL  
 4/25/03 Montana State University, Department of Chemistry, Bozeman, MT  
 9/17/04 University of Nebraska, Department of Chemistry, Lincoln, NE  
 11/4/04 University of Oklahoma, Department of Chemistry & Biochemistry, Norman, OK (J. Clarence Karcher Lecture)  
 1/12/05 Vanderbilt University, Biological Chemistry Program, Nashville, TN  
 1/13/05 University of Denver, Department of Chemistry and Biochemistry, Denver, CO  
 4/5/05 McGill University, Department of Chemistry, Montreal, Que. (Merck Lecture)  
 4/6/05 Merck Frosst, Montreal, Que  
 5/11/05 Stanford University, Department of Chemistry, Stanford, CA  
 3/8/06 California State University, Department of Chemistry, Northridge, CA  
 5/1/06 Huntsman Cancer Institute, Melanoma Research Interest Group, Univ. of Utah  
 11/1/06 University of Minnesota, Department of Medicinal Chemistry, Minneapolis, MN  
 1/26/07 Portland State University, Department of Chemistry, Portland, OR.  
 3/21/07 Wayne State University, Department of Chemistry, Detroit, MI  
 11/30/07 University of California-Riverside, Department of Chemistry, Riverside, CA  
 1/31/08 Kansas State University, King Lectureship, Dept. of Chemistry, Manhattan, KS  
 4/29/08 University of Wisconsin, Department of Chemistry, Madison, WI  
 4/30/08 University of Vermont, Department of Microbiology & Molecular Genetics, Burlington, VT  
 7/8/08 Chinese Academy of Sciences, Institute of Chemistry, Beijing, China  
 7/9/08 Peking University, Department of Chemistry, Beijing, China  
 7/10/08 Tsinghua University, Department of Chemistry, Beijing, China  
 1/27/09 Rutgers University, Department of Chemistry & Chemical Biology, Piscataway, NJ  
 2/18/09 University of Washington, Department of Chemistry, Seattle, WA  
 4/30/09 University of Nevada, Department of Chemistry, Reno, NV (Student Invited Dist. Lecturer)  
 5/16/09 University of California, Davis, Larock Undergraduate Research Symposium Keynote Lecturer, Department of Chemistry, Davis, CA.  
 9/29/09 University of Maine Chemical Biology Lectureship, Department of Chemistry, Orono, ME (2 lectures)  
 6/16/10 Czech Academy of Sciences, Institute of Organic Chemistry and Biochemistry, Prague, C. R.  
 8/3/10 Pinhead Town Talk, Telluride Science Research Center, Telluride, CO  
 10/15/10 University of Cincinnati, Department of Chemistry, Cincinnati, OH  
 5/12/11 Christopher S. Foote Lectureship, UCLA, Department of Chemistry, Los Angeles, CA  
 6/14/11 Institut de Sciences et d'Ingenierie Supramoleculaires, Strasbourg, France.  
 11/18/11 Brown University, Department of Chemistry, Providence, RI  
 12/1/11 Texas Christian University, Department of Chemistry, Ft. Worth, TX  
 12/2/11 Texas Lutheran University, Department of Chemistry, San Antonio, TX  
 2/17/12 Simon Fraser University, Department of Molecular Biology and Biochemistry, Vancouver, BC  
 7/11/12 University of Konstanz, Department of Chemistry, Konstanz, Germany  
 7/12/12 Eidgenössisch Technische Hochschule, Zürich, Switzerland  
 9/19/12 Brigham Young University, Department of Chemistry, Provo, UT  
 11/5/12 Emory University, Department of Chemistry, Atlanta, GA  
 11/12/12 Pacific Lutheran University, Department of Chemistry, Tacoma, WA  
 10/1/13 Johns Hopkins University, Department of Chemistry, Baltimore, MD  
 3/28/14 Texas Woman's University, Department of Chemistry and Biochemistry, Denton, TX  
 4/24/14 Pennsylvania State University, Department of Chemistry, University Park, PA  
 9/25/14 Yale University, Jerome A. Berson Lecturer, Department of Chemistry, New Haven, CT  
 3/31/15 UC-Berkeley, Melvin Calvin Lecture, Department of Chemistry, Berkeley, CA  
 4/03/15 University of Iowa, Wawzonek Lecture, Department of Chemistry, Iowa City, IA  
 5/28/15 University of Rochester, Biological Chemistry Cluster Featured Speaker, Rochester, NY  
 11/5-6/15 Arizona State University, Eyring Lectures (2), Department of Chemistry & Biochemistry, Tempe, AZ  
 11/11/15 IUPUI, Department of Chemistry and Chemical Biology, Indianapolis, IN  
 3/21/16 University of Toledo, Department of Chemistry, Toledo, OH  
 4/7/16 Cornell University, Department of Chemistry and Chemical Biology, Ithaca, NY  
 4/25/16 Carnegie Mellon University, DNA Day Plenary Speaker, Pittsburg, PA  
 5/2/16 National Cancer Institute, Frederick, MD  
 9/15/16 Huntsman Cancer Institute, University of Utah, Salt Lake City, UT

10/7/16	NAKAMA Program, University of Utah, Salt Lake City, UT
10/24/16	National Center for Nanoscience and Technology, Beijing, China
10/28/16	Zhang Dayu Lectureship, Dalian Institute, Dalian, China
4/14/17	University of Colorado, Department of Chemistry, Denver, CO
4/27/17	Simon Fraser University, Department of Chemistry, Vancouver, BC
5/2/17	University of San Diego, Department of Chemistry and Biochemistry, San Diego, CA
5/12/17	University of Texas, Department of Chemistry, Austin, TX
6/16/17	University of Chicago, Department of Chemistry, Chicago, IL
8/18/17	Johns Hopkins University, Department of Chemistry, Baltimore, MD
10/16-20/17	Swiss Chemical Society Lectureships: ETH, University of Zurich, University of Fribourg, University of Geneva, University of Basel
11/16-17/17	University of Missouri, Thomas Lectures, Department of Chemistry, Columbia, MO
6/5/18	Institut Curie, Paris, France
6/7/18	University of Würzburg, Siegfried Hünig Lecture, Department of Chemistry, Würzburg, Germany
9/14/18	Yale University, Department of Chemistry, Johnson-Sessler Lecture, New Haven, CT
10/19/18	University of New Mexico, Schaeffer Endowed Lecture, Dept. of Chemistry and Chemical Biology, Albuquerque, NM
2/11/19	University of Illinois, Department of Chemistry, Urbana-Champaign, IL
3/19/19	Texas A & M University, Department of Chemistry, College Station, TX
10/2/19	University of Ulsan, Institute for Basic Science, Ulsan, Korea
10/9/19	University of California-Irvine, Department of Chemistry, Taft Memorial Lecture, Irvine, CA
11/1/19	University of Tokyo, Department of Chemistry, Tokyo, Japan
11/7/19	Institut Curie, Orsay, France
11/19/19	Institut Curie, Paris, France
2/6/20	University of Utah, Department of Chemistry, Distinguished Faculty Colloquium.
2/17/20	Furman University, Phi Beta Kappa Lecture, Greenville, SC
2/18/20	Furman University, Department of Chemistry, Greenville, SC
2/20/20	Hope College, Phi Beta Kappa Lecturer, Holland, MI
2/21/20	Hope College, Department of Chemistry, Holland, MI
2/27-28/20	Smith College, Phi Beta Kappa Lecture, Northampton, MA
3/5-6/20	University of California, Department of Chemistry, Davis, CA
3/16-17/20	Wittenberg College, Phi Beta Kappa Lecture, Springfield, OH**
3/19-20/20	Bucknell University, Phi Beta Kappa Lecture, Lewisburg, PA**
4/2-3/20	Oregon State University, Phi Beta Kappa Lecture, Corvallis, OR**
4/29/20	Nanjing University, Department of Chemistry, Nanjing, China**
5/4-6/20	ICCAS, Beijing, China**
5/8/20	Peking University, Xingda Lecture, Beijing, China**
5/21/20	New England BioLabs, Ipswich, MA (presented online)
10/28/20	Oakland University, Department of Chemistry, MI (online)
3/2/21	Ohio State University, Molecular, Cellular & Devel. Biology Program, Columbus, OH (online)
3/8/21	University of Arkansas, Cancer Institute Forum, Little Rock, AR (online)
3/17-18/21	Brown University, Leallyn Clapp Lecture & Colloquium, Department of Chemistry, Providence, RI (online)
5/27/21	Institute of Cellular and Molecular Radiobiology, CEA, Fontenay-aux-Roses, Université Paris-Saclay, France (online)

**\*\* Cancelled or postponed due to COVID-19**

### Current Funding

NIH	"Chemistry and Biology of Oxidized Purine Lesions in DNA," R01 CA-090689, \$1,554,095 for 5/15-4/20. PI: Burrows; Co-PI: Sheila S. David
NIH	"Interplay of RNA Structural Motifs with Base Modifications," R01 GM-093099, \$1,351,500 for 6/1/20-5/31/24. PI: Burrows
NIH	"Oxidative Stress and Base Modifications in Regulatory DNA," R01 GM129267, \$1,239,000 for 8/1/18-4/30/22. PI: Burrows
NSF	"Redox Photochemistry in Genomes of Microorganisms," CHE-1808475, \$525,000 for 8/1/18-7/31/21. PI: Burrows