

JEFFREY SCOTT JOHNSON

Department of Chemistry
 The University of North Carolina at Chapel Hill
 Chapel Hill, NC 27599-3290 | 919.843.4936 | jsj@unc.edu

EDUCATION

Harvard University, Cambridge, MA
Ph.D. in Chemistry 1999
 Dissertation: "Enantioselective Catalysis of the Diels-Alder Reaction"

University of Kansas, Lawrence, KS
B.S. in Chemistry 1994
 Highest Distinction, Honors in Chemistry

PROFESSIONAL EXPERIENCE

University of North Carolina, Chapel Hill, NC
Chairperson, Department of Chemistry 2016 –
A. Ronald Gallant Distinguished Professor 2014 –
Professor 2010 –
Associate Professor 2006 – 2010
Assistant Professor 2001 – 2006

University of California, Berkeley, CA
NIH Postdoctoral Research Fellow 1999 – 2001
 Advisor: Professor Robert G. Bergman

Harvard University, Cambridge, MA
Graduate Research Assistant 1994 – 1999
 Advisor: Professor David A. Evans

Columbia University, New York, NY
NSF-REU Fellow 1993
 Advisor: Professor Koji Nakanishi

University of Kansas, Lawrence, KS
Undergraduate Research Assistant 1992 – 1994
 Advisor: Professor Robert Carlson

HONORS AND MEMBERSHIPS

<i>Journal of Organic Chemistry</i> Outstanding Author of the Year	2016
Chairperson, NIH Synthetic and Biological Chemistry A Study Section	2016 – 2018
William C. Friday/Class of 1986 Award for Excellence in Teaching	2016
Academic Leadership Fellow, Institute for the Arts and Humanities	2016 – 2017
Fellow, Japanese Society for the Promotion of Science	2015
The Society of Synthetic Organic Chemistry, Japan Lectureship	2014
Standing Member, NIH Synthetic and Biological Chemistry A Study Section	2013 – 2018
Elias J. Corey Award for Outstanding Original Contribution in Organic Synthesis	2012
American Association for the Advancement of Science, Member	2012 –
W.N. Reynolds Research Leave	2011
Visiting Professor, University of Texas at Austin	2011
Visiting Professor, University of Auckland	2010
Arthur C. Cope Scholar	2010
Novartis Early Career Award in Chemistry	2008
Ruth and Phillip Hettleman Prize for Artistic and Scholarly Achievement	2006
Camille Dreyfus Teacher-Scholar Award	2006
Alfred P. Sloan Fellow	2006 – 2008
GSK Scholar Award	2006 – 2007
Amgen Young Investigator Award	2005
Eli Lilly Grantee	2004 – 2006
Johnson and Johnson Focused Giving Award	2005
University of North Carolina Junior Faculty Development Award	2004
3M Nontenured Faculty Award	2003 – 2005
National Science Foundation CAREER AWARD	2003 – 2008
Research Corporation Research Innovation Award	2002
National Institutes of Health Postdoctoral Fellow	2000 – 2001
Roche Fellow in Organic Chemistry	1998 – 1999
Pharmacia and Upjohn Graduate Fellow	1997 – 1998
National Science Foundation Graduate Fellow	1994 – 1997
American Chemical Society, Member	1994 –
Alpha Chi Sigma Award (Outstanding Senior in Chemistry)	1994
Phi Beta Kappa	1994
Barry M. Goldwater Scholar	1993 – 1994
Fassnacht Scholarship (Outstanding Advanced Student in Chemistry)	1993
Eli Lilly Award for Analytical Chemistry	1993
Taft Award for Physical Chemistry	1993
Sorg Scholarship (Outstanding Beginning Student in Chemistry)	1991
Summerfield Scholar	1990 – 1994
National Merit Scholar	1990

PUBLICATIONS AND PAPERS

Books and Book Chapters

Johnson, J. S. (Volume Editor); *Comprehensive Organic Synthesis, 2nd Ed. Volume 1: Additions to C-X π Bonds, Part 1*. Knochel, P.; Molander, G. Eds. Elsevier: Waltham, MA, 2014.

Boyce, G. R.; Johnson, J. S. *tert*-Butyl 2-(*tert*-butyldimethylsilyl)-2-oxoacetate (2013), *Encyclopedia of Reagents for Organic Synthesis* [Online], John Wiley & Sons Ltd., <http://onlinelibrary.wiley.com/book/10.1002/047084289X.m01583>

Parsons, A. T.; Johnson, J. S. "Dynamic Kinetic Asymmetric Transformations Involving Carbon–Carbon Bond Cleavage." In *Asymmetric Synthesis: More Methods and Applications*; Christmann, M.; Brase, S., eds.; Wiley-VCH, 2012; Chapter 21.

Garrett, M. R.; Johnson, J. S. "Acysilanes (Update 2012)." In *Science of Synthesis Knowledge Update*; Oestreich, M., ed. Thieme: Stuttgart, 2012/2; 1-84.

Johnson, J. S.; Nicewicz, D. A. "Copper Lewis Acids." In *Modern Aldol Reactions*; Mahrwald, R., ed.; Wiley-VCH: Weinheim, 2004; Vol. 2, 69-103.

Evans, D. A.; Johnson, J. S. "Catalytic Enantioselective Diels-Alder Reactions." In *Comprehensive Asymmetric Catalysis*; Jacobsen, E. N.; Pfaltz, A.; Yamamoto, H. Eds.; Springer: New York, 1999; Vol. 3, 1177-1235.

Refereed Papers/Articles

- (1) Fulton, J. L.; Horwitz, M. A.; Bruske, E. L.; Johnson, J. S. Asymmetric Organocatalytic Sulfa-Michael Addition to Enone Diesters. *J. Org. Chem.* **2018**, *83* (6), 3385–3391.
- (2) Horwitz, M. A.; Fulton, J. L.; Johnson, J. S. Enantio- and Diastereoselective Organocatalytic Conjugate Additions of Nitroalkanes to Enone Diesters. *Org. Lett.* **2017**, *19* (21), 5783–5785.
- (3) Bartlett, S. L.; Johnson, J. S. Synthesis of Complex Glycolates by Enantioconvergent Addition Reactions. *Acc. Chem. Res.* **2017**, *50* (9), 2284–2296.
- (4) Good, S. N.; Sharpe, R. J.; Johnson, J. S. Highly Functionalized Tricyclic Oxazinanones via Pairwise Oxidative Dearomatization and N-Hydroxycarbamate Dehydrogenation: Molecular Diversity Inspired by Tetrodotoxin. *J. Am. Chem. Soc.* **2017**, *139* (36), 12422–12425.
- (5) Zavesky, B. P.; Johnson, J. S. Direct Zinc(II)-Catalyzed Enantioconvergent Additions of Terminal Alkynes to α -Keto Esters. *Angew. Chem., Int. Ed.* **2017**, *56* (30), 8805–8808.
- (6) Bartlett, S. L.; Sohtome, Y.; Hashizume, D.; White, P. S.; Sawamura, M.; Johnson, J. S.; Sodeoka, M. Catalytic Enantioselective [3 + 2] Cycloaddition of α -Keto Ester Enolates and Nitrile Oxides. *J. Am. Chem. Soc.* **2017**, *139* (25), 8661–8666.
- (7) Giarrusso, J.; Do, D. T.; Johnson, J. S. Chemoselective and Diastereoconvergent Cu(II)-Catalyzed Aerobic Endoperoxidation of Polycarbonyls. *Org. Lett.* **2017**, *19* (12), 3107–3110.
- (8) Horwitz, M. A.; Massolo, E.; Johnson, J. S. Phosphazene-Catalyzed Desymmetrization of Cyclohexadienones by Dithiane Addition. *Beilstein J. Org. Chem.* **2017**, *13* (1), 762–767.
- (9) Zavesky, B. P.; Bartlett, S. L.; Johnson, J. S. Palladium-Catalyzed β -Arylation of α -Keto Esters. *Org. Lett.* **2017**, *19* (8), 2126–2129.
- (10) Horwitz, M. A.; Johnson, J. S. Local Desymmetrization through Diastereotopic Group Selection: An Enabling Strategy for Natural Product Synthesis. *Eur. J. Org. Chem.* **2017**, 2017 (11), 1381–1390.
- (11) Bartlett, S. L.; Keiter, K. M.; Johnson, J. S. Synthesis of Complex Tertiary Glycolates by Enantioconvergent Arylation of Stereochemically Labile α -Keto Esters. *J. Am. Chem. Soc.* **2017**, *139* (10), 3911–3916.
- (12) Griswold, J. A.; Horwitz, M. A.; Leiva, L. V.; Johnson, J. S. Diastereoselective Organocatalytic Addition of α -Angelica Lactone to β -Halo- α -Ketoesters. *J. Org. Chem.* **2017**, *82* (4), 2276–2280.
- (13) Mackay, W. D.; Johnson, J. S. Kinetic Separation and Asymmetric Reactions of Norcaradiene Cycloadducts: Facilitated Access via H₂O-Accelerated Cycloaddition. *Org. Lett.* **2016**, *18* (3), 536–539.
- (14) Horwitz, M. A.; Zavesky, B. P.; Martinez-Alvarado, J.; Johnson, J. S. Asymmetric Organocatalytic Reductive Coupling Reactions between Benzylidene Pyruvates and Aldehydes. *Org. Lett.* **2016**, *18* (1), 36–39.
- (15) Boyce, G. R.; Johnson, J. S. An Asymmetric Vinylogous Michael Cascade of Silyl Glyoximide, Vinyl Grignard, and Nitroalkenes

- via Long Range Stereinduction. *J. Org. Chem.* **2016**, *81* (4), 1712–1717.
- (16) Sharpe, R. J.; Portillo, M.; Vélez, R. A.; Johnson, J. S. A Scalable Protocol for the Regioselective Alkylation of 2-Methylcyclohexane-1,3-Dione with Unactivated sp³ Electrophiles. *Synlett* **2015**, *26* (16), 2293–2295.
- (17) Sharpe, R. J.; Malinowski, J. T.; Sorana, F.; Luft, J. C.; Bowerman, C. J.; DeSimone, J. M.; Johnson, J. S. Preparation and Biological Evaluation of Synthetic and Polymer-Encapsulated Congeners of the Antitumor Agent Pactamycin: Insight into Functional Group Effects and Biological Activity. *Bioorg. Med. Chem.* **2015**, *23* (8), 1849–1857.
- (18) Sharpe, R. J.; Johnson, J. S. Asymmetric Total Synthesis of the Indole Diterpene Alkaloid Paspaline. *J. Org. Chem.* **2015**, *80* (19), 9740–9766.
- (19) Sharpe, R. J.; Johnson, J. S. A Global and Local Desymmetrization Approach to the Synthesis of Steroidal Alkaloids: Stereocontrolled Total Synthesis of Paspaline. *J. Am. Chem. Soc.* **2015**, *137* (15), 4968–4971.
- (20) Krabbe, S. W.; Johnson, J. S. Asymmetric Total Syntheses of Megacerotonic Acid and Shimobashiric Acid A. *Org. Lett.* **2015**, *17* (5), 1188–1191.
- (21) Horwitz, M. A.; Tanaka, N.; Yokosaka, T.; Uraguchi, D.; Johnson, J. S.; Ooi, T. Enantioselective Reductive Multicomponent Coupling Reactions between Isatins and Aldehydes. *Chem. Sci.* **2015**, *6* (11), 6086–6090.
- (22) Goodman, C. G.; Walker, M. M.; Johnson, J. S. Enantioconvergent Synthesis of Functionalized γ -Butyrolactones via (3 + 2)-Annulation. *J. Am. Chem. Soc.* **2015**, *137* (1), 122–125.
- (23) Goodman, C. G.; Johnson, J. S. Asymmetric Synthesis of β -Amino Amides by Catalytic Enantioconvergent 2-Aza-Cope Rearrangement. *J. Am. Chem. Soc.* **2015**, *137* (46), 14574–14577.
- (24) Walker, M. M.; Goodman, C. G.; Johnson, J. S. Experiments Probing the Viability of Donor-Acceptor Norbornenes for (5 + 2)-Annulation. *J. Org. Chem.* **2014**, *79* (19), 9385–9388.
- (25) Mackay, W. D.; Fistikci, M.; Carris, R. M.; Johnson, J. S. Lewis Acid Catalyzed (3+2)-Annulations of Donor-Acceptor Cyclopropanes and Ynamides. *Org. Lett.* **2014**, *16* (6), 1626–1629.
- (26) Goodman, C. G.; Johnson, J. S. Dynamic Kinetic Asymmetric Cross-Benzoin Additions of β -Stereogenic α -Keto Esters. *J. Am. Chem. Soc.* **2014**, *136* (42), 14698–14701.
- (27) Corbett, M. T.; Xu, Q.; Johnson, J. S. Trisubstituted 2-Trifluoromethyl Pyrrolidines via Catalytic Asymmetric Michael Addition/Reductive Cyclization. *Org. Lett.* **2014**, *16* (9), 2362–2365.
- (28) Corbett, M. T.; Johnson, J. S. Dynamic Kinetic Asymmetric Transformations of β -Stereogenic α -Ketoesters by Direct Aldolization. *Angew. Chem., Int. Ed.* **2014**, *53* (1), 255–259.
- (29) Wales, S. M.; Walker, M. M.; Johnson, J. S. Asymmetric Synthesis of Indole Homo-Michael Adducts via Dynamic Kinetic Friedel-Crafts Alkylation with Cyclopropanes. *Org. Lett.* **2013**, *15* (10), 2558–2561.
- (30) Slade, M. C.; Johnson, J. S. Alternaric Acid: Formal Synthesis and Related Studies. *Beilstein J. Org. Chem.* **2013**, *9*, 166–172.
- (31) Sharpe, R. J.; Malinowski, J. T.; Johnson, J. S. Asymmetric Synthesis of the Aminocyclitol Pactamycin, a Universal Translocation Inhibitor. *J. Am. Chem. Soc.* **2013**, *135* (47), 17990–17998.
- (32) Malinowski, J. T.; Sharpe, R. J.; Johnson, J. S. Enantioselective Synthesis of Pactamycin, a Complex Antitumor Antibiotic. *Science* **2013**, *340* (6129), 180–182.
- (33) Krabbe, S. W.; Hatcher, M. A.; Bowman, R. K.; Mitchell, M. B.; McClure, M. S.; Johnson, J. S. Copper-Catalyzed Asymmetric Hydrogenation of Aryl and Heteroaryl Ketones. *Org. Lett.* **2013**, *15* (17), 4560–4563.
- (34) Goodman, C. G.; Do, D. T.; Johnson, J. S. Asymmetric Synthesis of Anti- β -Amino- α -Hydroxy Esters via Dynamic Kinetic Resolution of β -Amino- α -Keto Esters. *Org. Lett.* **2013**, *15* (10), 2446–2449.
- (35) Corbett, M. T.; Johnson, J. S. Enantioselective Synthesis of Hindered Cyclic Dialkyl Ethers via Catalytic Oxa-Michael/Michael Desymmetrization. *Chem. Sci.* **2013**, *4* (7), 2828–2832.
- (36) Corbett, M. T.; Johnson, J. S. Diametric Stereocontrol in Dynamic Catalytic Reduction of Racemic Acyl Phosphonates: Divergence from α -Keto Ester Congeners. *J. Am. Chem. Soc.* **2013**, *135* (2), 594–597.
- (37) Steward, K. M.; Gentry, E. C.; Johnson, J. S. Dynamic Kinetic Resolution of α -Keto Esters via Asymmetric Transfer Hydrogenation. *J. Am. Chem. Soc.* **2012**, *134* (17), 7329–7332.
- (38) Steward, K. M.; Corbett, M. T.; Goodman, C. G.; Johnson, J. S. Asymmetric Synthesis of Diverse Glycolic Acid Scaffolds via

- Dynamic Kinetic Resolution of α -Keto Esters. *J. Am. Chem. Soc.* **2012**, *134* (49), 20197–20206.
- (39) Schmitt, D. C.; Malow, E. J.; Johnson, J. S. Three-Component Glycolate Michael Reactions of Enolates, Silyl Glyoxylates, and α,β -Enones. *J. Org. Chem.* **2012**, *77* (7), 3246–3251.
- (40) Malinowski, J. T.; McCarver, S. J.; Johnson, J. S. Diastereocontrolled Construction of Pactamycin's Complex Ureido Triol Functional Array. *Org. Lett.* **2012**, *14* (11), 2878–2881.
- (41) Malinowski, J. T.; Malow, E. J.; Johnson, J. S. α -Amination of Keto-Nitrones via Multihetero-Cope Rearrangement Employing an Imidoyl Chloride Reagent. *Chem. Commun.* **2012**, *48* (61), 7568–7570.
- (42) Krabbe, S. W.; Do, D. T.; Johnson, J. S. Cu(II)-Catalyzed Aerobic Hydroperoxidation of Meldrum's Acid Derivatives and Application in Intramolecular Oxidation: A Conceptual Blueprint for O₂/H₂ Dihydroxylation. *Org. Lett.* **2012**, *14* (23), 5932–5935.
- (43) Corbett, M. T.; Uraguchi, D.; Ooi, T.; Johnson, J. S. Base-Catalyzed Direct Aldolization of α -Alkyl- α -Hydroxy Trialkyl Phosphonoacetates. *Angew. Chem., Int. Ed.* **2012**, *51* (19), 4685–4689.
- (44) Boyce, G. R.; Liu, S.; Johnson, J. S. Construction of Cyclopentanol Derivatives via Three-Component Coupling of Silyl Glyoxylates, Acetylides, and Nitroalkenes. *Org. Lett.* **2012**, *14* (2), 652–655.
- (45) Boyce, G. R.; Greszler, S. N.; Johnson, J. S.; Linghu, X.; Malinowski, J. T.; Nicewicz, D. A.; Satterfield, A. D.; Schmitt, D. C.; Steward, K. M. Silyl Glyoxylates. Conception and Realization of Flexible Conjunctive Reagents for Multicomponent Coupling. *J. Org. Chem.* **2012**, *77* (Journal Article), 4503–4515.
- (46) Steward, K. M.; Johnson, J. S. Asymmetric Synthesis of α -Keto Esters via Cu(II)-Catalyzed Aerobic Deacylation of Acetoacetate Alkylation Products: An Unusually Simple Synthetic Equivalent to the Glyoxylate Anion Synthons. *Org. Lett.* **2011**, *13* (9), 2426–2429.
- (47) Smith, A. G.; Slade, M. C.; Johnson, J. S. Cyclopropane-Aldehyde Annulations at Quaternary Donor Sites: Stereoselective Access to Highly Substituted Tetrahydrofurans. *Org. Lett.* **2011**, *13* (8), 1996–1999.
- (48) Schmitt, D. C.; Lam, L.; Johnson, J. S. Three-Component Coupling Approach to Trachyspic Acid. *Org. Lett.* **2011**, *13* (19), 5136–5139.
- (49) Moran, J.; Smith, A. G.; Carris, R. M.; Johnson, J. S.; Krische, M. J. Polarity Inversion of Donor-Acceptor Cyclopropanes: Disubstituted δ -Lactones via Enantioselective Iridium Catalysis. *J. Am. Chem. Soc.* **2011**, *133* (46), 18618–18621.
- (50) Greszler, S. N.; Malinowski, J. T.; Johnson, J. S. Formal Synthesis of Leustroducsin B via Reformatsky/Claisen Condensation of Silyl Glyoxylates. *Org. Lett.* **2011**, *13* (12), 3206–3209.
- (51) Tarr, J. C.; Johnson, J. S. Lanthanum Tricyanide-Catalyzed Acyl Silane-Ketone Benzoin Additions and Kinetic Resolution of Resultant α -Silyloxyketones. *J. Org. Chem.* **2010**, *75* (10), 3317–3325.
- (52) Steward, K. M.; Johnson, J. S. Catalytic Nucleophilic Glyoxylation of Aldehydes. *Org. Lett.* **2010**, *12* (12), 2864–2867.
- (53) Smith, A. G.; Johnson, J. S. Lewis Acid-Promoted Friedel-Crafts Alkylation Reactions with α -Ketophosphate Electrophiles. *Org. Lett.* **2010**, *12* (8), 1784–1787.
- (54) Schmitt, D. C.; Johnson, J. S. Synthesis of Γ,δ -Unsaturated Glycolic Acids via Sequenced Brook and Ireland-Claisen Rearrangements. *Org. Lett.* **2010**, *12* (5), 944–947.
- (55) Parsons, A. T.; Smith, A. G.; Neel, A. J.; Johnson, J. S. Dynamic Kinetic Asymmetric Synthesis of Substituted Pyrrolidines from Racemic Cyclopropanes and Aldimines: Reaction Development and Mechanistic Insights. *J. Am. Chem. Soc.* **2010**, *132* (28), 9688–9692.
- (56) Greszler, S. N.; Malinowski, J. T.; Johnson, J. S. Remote Stereoinduction in the Acylation of Fully Substituted Enolates: Tandem Reformatsky/Quaternary Claisen Condensations of Silyl Glyoxylates and β -Lactones. *J. Am. Chem. Soc.* **2010**, *132* (49), 17393–17395.
- (57) Campbell, M. J.; Johnson, J. S. Enantioselective Synthesis of (+)-Polyanthellin A via Cyclopropane-Aldehyde (3+2)-Annulation. *Synthesis* **2010**, No. 16, 2841–2852.
- (58) Campbell, M. J.; Johnson, J. S.; Parsons, A. T.; Pohlhaus, P. D.; Sanders, S. D. Complexity-Building Annulations of Strained Cycloalkanes and C=O π Bonds. *J. Org. Chem.* **2010**, *75* (19), 6317–6325.
- (59) Boyce, G. R.; Johnson, J. S. Three-Component Coupling Reactions of Silyl Glyoxylates, Vinyl Grignard Reagent, and Nitroalkenes: An Efficient, Highly Diastereoselective Approach to Nitrocyclopentanols. *Angew. Chem., Int. Ed.* **2010**, *49* (47),

8930–8933.

- (60) Tarr, J. C.; Johnson, J. S. Lanthanum Tricyanide-Catalyzed Acyl Silane-Ketone Benzoin Additions. *Org. Lett.* **2009**, *11* (17), 3870–3873.
- (61) Sanders, S. D.; Ruiz-Olalla, A.; Johnson, J. S. Total Synthesis of (+)-Virgatusin via AlCl₃-Catalyzed [3+2] Cycloaddition. *Chem. Commun.* **2009**, No. 34, 5135–5137.
- (62) Parsons, A. T.; Johnson, J. S. Formal [4+2] Cycloaddition of Donor-Acceptor Cyclobutanes and Aldehydes: Stereoselective Access to Substituted Tetrahydropyrans. *J. Am. Chem. Soc.* **2009**, *131* (40), 14202–14203.
- (63) Parsons, A. T.; Johnson, J. S. Catalytic Enantioselective Synthesis of Tetrahydrofurans: A Dynamic Kinetic Asymmetric [3+2] Cycloaddition of Racemic Cyclopropanes and Aldehydes. *J. Am. Chem. Soc.* **2009**, *131* (9), 3122–3123.
- (64) Mortimer, S.; Johnson, J. S.; Weeks, K. Quantitative Analysis of RNA Solvent Accessibility by N-Silylation of Guanosine. *Biochemistry* **2009**, *48* (Journal Article), 2109–2114.
- (65) Greszler, S. N.; Johnson, J. S. Diastereoselective Synthesis of Pentasubstituted γ -Butyrolactones from Silyl Glyoxylates and Ketones through a Double Reformatsky Reaction. *Angew. Chem., Int. Ed.* **2009**, *48* (20), 3689–3691.
- (66) Greszler, S. N.; Johnson, J. S. Catalytic Redox-Initiated Glycolate Aldol Additions of Silyl Glyoxylates. *Org. Lett.* **2009**, *11* (4), 827–830.
- (67) Campbell, M. J.; Johnson, J. S. Asymmetric Synthesis of (+)-Polyanthellin A. *J. Am. Chem. Soc.* **2009**, *131* (30), 10370–10371.
- (68) Pohlhaus, P. D.; Sanders, S. D.; Parsons, A. T.; Li, W.; Johnson, J. S. Scope and Mechanism for Lewis Acid-Catalyzed Cycloadditions of Aldehydes and Donor-Acceptor Cyclopropanes: Evidence for a Stereospecific Intimate Ion Pair Pathway. *J. Am. Chem. Soc.* **2008**, *130* (27), 8642–8650.
- (69) Parsons, A. T.; Campbell, M. J.; Johnson, J. S. Diastereoselective Synthesis of Tetrahydrofurans via palladium(0)-Catalyzed [3+2] Cycloaddition of Vinylcyclopropanes and Aldehydes. *Org. Lett.* **2008**, *10* (12), 2541–2544.
- (70) Nicewicz, D. A.; Satterfield, A. D.; Schmitt, D. C.; Johnson, J. S. Self-Consistent Synthesis of the Squalene Synthase Inhibitor Zaragozic Acid C via Controlled Oligomerization. *J. Am. Chem. Soc.* **2008**, *130* (51), 17281–17283.
- (71) Nicewicz, D. A.; Br  t  ch  , G.; Johnson, J. S. Tert-Butyl Tert-Butyldimethylsilyl glyoxylate: A Useful Conjunctive Reagent. *Org. Synth.* **2008**, *85* (Journal Article), 278–286.
- (72) Campbell, M. J.; Pohlhaus, P. D.; Min, G.; Ohmatsu, K.; Johnson, J. S. An “anti-Baldwin” 3-Exo-Dig Cyclization: Preparation of Vinylidene Cyclopropanes from Electron-Poor Alkenes. *J. Am. Chem. Soc.* **2008**, *130* (29), 9180–9181.
- (73) Bausch, C. C.; Johnson, J. S. Conjugate addition/Ireland-Claisen Rearrangements of Allyl Fumarates: Simple Access to Terminally Differentiated Succinates. *J. Org. Chem.* **2008**, *73* (4), 1575–1577.
- (74) Allen, J. M.; Racine, A. H.; Berman, A. M.; Johnson, J. S.; Bythell, B. J.; Paizs, B.; Glish, G. L. Why Are $\alpha(3)$ Ions Rarely Observed? *J. Am. Soc. Mass Spectrom.* **2008**, *19* (12), 1764–1770.
- (75) Johnson, J. S. Advances in Acyl Anion and Homo-enolate Catalysis. *Curr. Opin. Drug Disc. Dev.* **2007**, *10* (Journal Article), 691–703.
- (76) Garrett, M. R.; Tarr, J. C.; Johnson, J. S. Enantioselective Metallophosphite-Catalyzed C-Acylation of Nitrones. *J. Am. Chem. Soc.* **2007**, *129* (43), 12944–12945.
- (77) Campbell, M. J.; Johnson, J. S. Mechanistic Studies of the Copper-Catalyzed Electrophilic Amination of Diorganozinc Reagents and Development of a Zinc-Free Protocol. *Org. Lett.* **2007**, *9* (8), 1521–1524.
- (78) Nahm, M. R.; Potnick, J. R.; White, P. S.; Johnson, J. S. Metallophosphite-Catalyzed Asymmetric Acylation of α,β -Unsaturated Amides. *J. Am. Chem. Soc.* **2006**, *128* (8), 2751–2756.
- (79) Linghu, X.; Satterfield, A. D.; Johnson, J. S. Symbiotic Reagent Activation: Oppenauer Oxidation of Magnesium Alkoxides by Silyl glyoxylates Triggers Second-Stage Aldolization. *J. Am. Chem. Soc.* **2006**, *128* (29), 9302–9303.
- (80) Bowman, R. K.; Johnson, J. S. Nickel-Catalyzed Rearrangement of 1-Acyl-2-Vinylcyclopropanes. A Mild Synthesis of Substituted Dihydrofurans. *Org. Lett.* **2006**, *8* (4), 573–576.
- (81) Berman, A. M.; Johnson, J. S. Copper-Catalyzed Electrophilic Amination of Diorganozinc Reagents: 4-Phenylmorpholine. *Org. Synth.* **2006**, *83* (Journal Article), 31–37.
- (82) Berman, A. M.; Johnson, J. S. Copper-Catalyzed Electrophilic Amination of Organozinc Nucleophiles: Documentation of O-

- Benzoyl Hydroxylamines as Broadly Useful R₂N(+) and RHN(+) Synthons. *J. Org. Chem.* **2006**, *71* (1), 219–224.
- (83) Pohlhaus, P. D.; Johnson, J. S. Highly Diastereoselective Synthesis of Tetrahydrofurans via Lewis Acid-Catalyzed Cyclopropane/aldehyde Cycloadditions. *J. Org. Chem.* **2005**, *70* (3), 1057–1059.
- (84) Pohlhaus, P. D.; Johnson, J. S. Enantiospecific Sn(II)- and Sn(IV)-Catalyzed Cycloadditions of Aldehydes and Donor-Acceptor Cyclopropanes. *J. Am. Chem. Soc.* **2005**, *127* (46), 16014–16015.
- (85) Nicewicz, D. A.; Johnson, J. S. Three-Component Coupling Reactions of Silylglyoxylates, Alkynes, and Aldehydes: A Chemoselective One-Step Glycolate Aldol Construction. *J. Am. Chem. Soc.* **2005**, *127* (17), 6170–6171.
- (86) Nahm, M. R.; Linghu, X.; Potnick, J. R.; Yates, C. M.; White, P. S.; Johnson, J. S. Metallophosphite-Induced Nucleophilic Acylation of α,β -Unsaturated Amides: Facilitated Catalysis by a Diastereoselective Retro [1,4] Brook Rearrangement. *Angew. Chem., Int. Ed.* **2005**, *44* (16), 2377–2379.
- (87) Linghu, X.; Bausch, C. C.; Johnson, J. S. Mechanism and Scope of the Cyanide-Catalyzed Cross Silyl Benzoin Reaction. *J. Am. Chem. Soc.* **2005**, *127* (6), 1833–1840.
- (88) Berman, A. M.; Johnson, J. S. Nickel-Catalyzed Electrophilic Amination of Organozinc Halides. *Synlett* **2005**, No. 11, 1799–1801.
- (89) Berman, A. M.; Johnson, J. S. Copper-Catalyzed Electrophilic Amination of Functionalized Diarylzinc Reagents. *J. Org. Chem.* **2005**, *70* (1), 364–366.
- (90) Bausch, C. C.; Johnson, J. S. Cyanide-Catalyzed Additions of Acyl Phosphonates to Aldehydes: A New Acyl Donor for Benzoin-Type Reactions. *Adv. Synth. Catal.* **2005**, *347* (9), 1207–1211.
- (91) Pohlhaus, P. D.; Bowman, R. K.; Johnson, J. S. Lewis Acid-Promoted Carbon-Carbon Bond Cleavage of Aziridines: Divergent Cycloaddition Pathways of the Derived Ylides. *J. Am. Chem. Soc.* **2004**, *126* (8), 2294–2295.
- (92) Nicewicz, D. A.; Yates, C. M.; Johnson, J. S. Enantioselective cyanation/Brook rearrangement/C-Acylation Reactions of Acylsilanes Catalyzed by Chiral Metal Alkoxides. *J. Org. Chem.* **2004**, *69* (20), 6548–6555.
- (93) Nicewicz, D. A.; Yates, C. M.; Johnson, J. S. Catalytic Asymmetric Acylation of (Silyloxy)nitrile Anions. *Angew. Chem., Int. Ed.* **2004**, *43* (20), 2652–2655.
- (94) Linghu, X.; Potnick, J. R.; Johnson, J. S. Metallophosphites as Umpolung Catalysts: The Enantioselective Cross Silyl Benzoin Reaction. *J. Am. Chem. Soc.* **2004**, *126* (10), 3070–3071.
- (95) Johnson, J. S. Catalyzed Reactions of Acyl Anion Equivalents. *Angew. Chem., Int. Ed.* **2004**, *43* (11), 1326–1328.
- (96) Bowman, R. K.; Johnson, J. S. Lewis Acid Catalyzed Dipolar Cycloadditions of an Activated Imidate. *J. Org. Chem.* **2004**, *69* (24), 8537–8540.
- (97) Berman, A. M.; Johnson, J. S. Copper-Catalyzed Electrophilic Amination of Diorganozinc Reagents. *J. Am. Chem. Soc.* **2004**, *126* (18), 5680–5681.
- (98) Bausch, C. C.; Johnson, J. S. Cross Silyl Benzoin Additions Catalyzed by Lanthanum Tricyanide. *J. Org. Chem.* **2004**, *69* (12), 4283–4285.
- (99) Linghu, X.; Johnson, J. S. Kinetic Control in Direct α -Silyloxy Ketone Synthesis: A New Regiospecific Catalyzed Cross Silyl Benzoin Reaction. *Angew. Chem., Int. Ed.* **2003**, *42* (22), 2534–2536.
- (100) Linghu, X.; Nicewicz, D. A.; Johnson, J. S. Tandem Carbon-Carbon Bond Constructions via Catalyzed cyanation/Brook rearrangement/C-Acylation Reactions of Acylsilanes. *Org. Lett.* **2002**, *4* (17), 2957–2960.
- (101) Johnson, J. S.; Bergman, R. G. Imidotitanium Complexes as Hydroamination Catalysts: Substantially Enhanced Reactivity from an Unexpected Cyclopentadienide/amide Ligand Exchange. *J. Am. Chem. Soc.* **2001**, *123* (12), 2923–2924.
- (102) Johnson, J. S.; Evans, D. A. Chiral Bis(oxazoline) copper(II) Complexes: Versatile Catalysts for Enantioselective Cycloaddition, Aldol, Michael, and Carbonyl Ene Reactions. *Acc. Chem. Res.* **2000**, *33* (6), 325–335.
- (103) Evans, D. A.; Johnson, J. S.; Olhava, E. J. Enantioselective Synthesis of Dihydropyrans. Catalysis of Hetero Diels-Alder Reactions by Bis(oxazoline) copper(II) Complexes. *J. Am. Chem. Soc.* **2000**, *122* (8), 1635–1649.
- (104) Evans, D. A.; Wu, L. D.; Wiener, J. J. M.; Johnson, J. S.; Ripin, D. H. B.; Tedrow, J. S. A General Method for the Synthesis of Enantiomerically Pure β -Substituted, β -Amino Acids through α -Substituted Succinic Acid Derivatives. *J. Org. Chem.* **1999**, *64* (17), 6411–6417.

- (105) Evans, D. A.; Johnson, J. S.; Burgey, C. S.; Campos, K. R. Reversal in Enantioselectivity of Tert-Butyl versus Phenyl-Substituted bis(oxazoline)copper(II) Catalyzed Hetero Diels-Alder and Ene Reactions. Crystallographic and Mechanistic Studies. *Tetrahedron Lett.* **1999**, 40 (15), 2879–2882.
- (106) Evans, D. A.; Barnes, D. M.; Johnson, J. S.; Lectka, R.; von Matt, P.; Miller, S. J.; Murry, J. A.; Norcross, R. D.; Shaughnessy, E. A.; Campos, K. R. Bis(oxazoline) and Bis(oxazoliny)pyridine Copper Complexes as Enantioselective Diels-Alder Catalysts: Reaction Scope and Synthetic Applications. *J. Am. Chem. Soc.* **1999**, 121 (33), 7582–7594.
- (107) Evans, D. A.; Peterson, G. S.; Johnson, J. S.; Barnes, D. M.; Campos, K. R.; Woerpel, K. A. An Improved Procedure for the Preparation of 2,2-bis[2-[4(S)-Tert-Butyl-1,3-Oxazoliny]]propane [(S,S)-Tert-Butylbis(oxazoline)] and Derived copper(II) Complexes. *J. Org. Chem.* **1998**, 63 (13), 4541–4544.
- (108) Evans, D. A.; Olhava, E. J.; Johnson, J. S.; Janey, J. M. Chiral C-2-Symmetric Cu-II Complexes as Catalysts for Enantioselective Hetero-Diels-Alder Reactions. *Angew. Chem., Int. Ed.* **1998**, 37 (24), 3372–3375.
- (109) Evans, D. A.; Johnson, J. S. Catalytic Enantioselective Hetero Diels-Alder Reactions of α,β -Unsaturated Acyl Phosphonates with Enol Ethers. *J. Am. Chem. Soc.* **1998**, 120 (19), 4895–4896.
- (110) Evans, D. A.; Ripin, D. H. B.; Johnson, J. S.; Shaughnessy, E. A. A New Strategy for Extending N-Acyl Imides as Chiral Auxiliaries for Aldol and Diels-Alder Reactions: Application to an Enantioselective Synthesis of α -Himachalene. *Angew. Chem., Int. Ed. Engl.* **1997**, 36 (19), 2119–2121.
- (111) Evans, D. A.; Johnson, J. S. Chiral C-2 Symmetric Cu(II) Complexes as Catalysts for Enantioselective Intramolecular Diels-Alder Reactions. Asymmetric Synthesis of (-)-Isopulone. *J. Org. Chem.* **1997**, 62 (4), 786–787.

SEMINARS AND PAPERS PRESENTED

Invited Presentations

North Carolina State University	2018.11.19
Auburn University, <i>Graduate Student Choice Colloquium Speaker (inaugural)</i>	2018.10.25
Amgen Young Investigator Symposium	2018.10.18
Northeastern University	2018.10.17
Dow Agrosciences	2018.09.25
Eli Lilly	2018.09.24
University of Illinois	2018.09.07
AstraZeneca BioHub Chemistry Symposium	2018.08.17
Heterocycles Gordon Research Conference	2018.06.20
Canadian Society of Chemistry Conference	2018.05.28
Emory University	2018.02.28
University of California, Berkeley – <i>Sigma-Aldrich Lectureship</i>	2018.01.30
SERMACS – <i>Keynote Lecturer</i>	2017.11.08
National Center for Advancing Translational Sciences – NIH	2017.10.11
University of Maryland	2017.10.10
Cornell University	2017.09.14
Hope College	2017.09.08
University of Kansas – <i>67th Frank Burnett Dains Memorial Lecturer</i>	2017.04.11
University of North Carolina at Greensboro	2017.01.20
Florida State University	2016.11.18
GSK	2016.09.15
Genentech	2016.09.13
JOC/OL Outstanding Author Award Symposium; 252 nd ACS National Meeting; Philadelphia, PA	2016.08.21
University of Oklahoma – <i>Sigma-Aldrich Lectureship</i>	2016.04.22
Wayne State University – <i>Gopal-Singhal Lectureship</i>	2016.04.13
Anatolian Conference on Synthetic Organic Chemistry – <i>Plenary Lecturer</i>	2016.03.21
Georgia State University	2016.03.04
Columbia University – <i>BMS Lectureship</i>	2016.01.14
Duke University	2015.11.10
BASF Crop Protection	2015.11.08
University of Minnesota	2015.10.01
IUPAC Conference, Busan, South Korea	2015.08.13
Ohio State University – <i>Paquette Organic Workshop</i>	2015.06.19
University of Virginia	2015.04.24
University of Florida	2015.04.09
University of Tokyo	2015.03.12
RIKEN	2015.03.11
Tohoku University	2015.03.10
Osaka University	2015.03.09
Nagoya University	2015.03.06
Okayama University	2015.03.05
Kyoto University – Katsura	2015.03.03
Kyoto University – Yoshida	2015.03.02
Kitasato Institute	2015.02.27
College of William and Mary	2014.11.07
Princeton ACS Fall Organic Chemistry Symposium	2014.10.24
5 th International Forum on Homogeneous Catalysis, Shanghai	2014.10.21
Society of Synthetic Organic Chemistry, Japan – <i>Lectureship Award</i> , Fukuoka, Japan	2014.09.19
Gordon Research Conference on Organic Reactions and Processes	2014.07.16
Gilead Sciences	2014.05.16
University of California at Santa Barbara	2014.05.14
University of Arkansas	2014.04.07
Massachusetts Institute of Technology – <i>BMS Lectureship</i>	2014.03.20
Pfizer	2013.12.12
Colorado State University – <i>BMS Lectureship</i>	2013.11.18
University of California, Irvine – <i>Vertex Lectureship</i>	2013.11.14
West Virginia University	2013.04.11
University of Texas at San Antonio	2013.02.11

University of Göttingen	2013.01.30
Spelman University	2012.10.01
University of Texas at Austin	2012.09.07
University of Texas at San Antonio	2012.09.06
SUNY Buffalo	2012.08.31
Merck West Point	2012.08.17
Bristol-Myers-Squibb	2012.08.10
Bristol-Myers-Squibb	2012.08.09
Symposium Honoring Robert Bergman (70 th Birthday Celebration), UC Berkeley	2012.06.16
French-American Chemical Society Meeting	2012.06.10
Elias J. Corey Award Symposium; 243 rd American Chemical Society National Meeting; San Diego, CA	2012.03.27
EPF Lausanne, Switzerland	2011.12.13
ETH, Zürich – Organic Syntheses Lectureship	2011.12.12
Sunovion; Marlborough, MA	2011.11.18
Roche; Nutley, NJ	2011.11.03
Abbott Laboratories	2011.10.14
Dartmouth College	2011.09.29
University of Texas, Austin	2011.04.18
University of Ottawa – Astra Zeneca Lectureship	2011.04.13
Astra-Zeneca, Montreal	2011.04.12
University of Auckland, NZ	2010.10.19
University of Auckland, NZ	2010.09.21
Amgen; Thousand Oaks, CA	2010.08.27
Arthur C. Cope Award Symposium; 240 th American Chemical Society National Meeting; Boston, MA	2010.08.23
Amgen; San Francisco, CA	2010.07.16
Natural Products Gordon Research Conference	2010.07.25
6 th Sino-US Chemistry Professors Conference; Hangzhou, China	2010.06.15
Shanghai Institute of Organic Chemistry	2010.06.14
Montana State University	2010.04.23
Butler University – Woods Lecturer	2010.04.02
Ernest Guenther Award Symposium; 239 th American Chemical Society National Meeting; San Francisco, CA	2010.03.23
Oregon State University	2010.02.22
University of Toronto – Symposium Honoring Adrian Brook	2010.01.29
University of North Carolina, Wilmington	2010.01.15
Ohio State University	2009.11.19
Columbia University	2009.11.12
Gregynog Synthesis Symposium (Wales)	2009.09.12
Wyeth (Cambridge, MA)	2009.08.11
Novartis (Basel, Switzerland)	2009.07.01
Novartis (Horsham, UK)	2009.06.29
Novartis (Cambridge, MA)	2009.06.09
University of Michigan – Novartis Lectureship	2009.06.05
Schering-Plough	2009.05.20
University of Rochester	2009.05.15
University of Kansas	2009.04.03
University of South Carolina	2009.02.26
Roche; Palo Alto, CA	2008.10.17
Gilead Sciences; San Francisco, CA	2008.10.16
University of California, Irvine: Merck Symposium on Organic Synthesis; Irvine, CA	2008.09.20
Dupont Crop Protection; Wilmington, DE	2008.06.11
Abbott Laboratories; Chicago, IL	2008.05.09
Merck Catalysis Symposium; Princeton, NJ	2008.05.01
Indiana University; Bloomington, IN	2008.04.14
East Carolina University	2008.04.04
Boston University; Boston, MA	2008.02.25
Virginia Tech University; Blacksburg, VA	2008.02.01
University of Montreal; Montreal, Canada	2007.11.02
Wake Forest University; Winston-Salem, NC	2007.10.17
Organic Reactions and Processes Gordon Research Conference; Smithfield, RI	2007.07.18
Heterocyclic Compounds Gordon Research Conference; Newport, RI	2007.06.25

E.J. Corey Young Investigator Award Symposium; 233 rd American Chemical Society Nat'l Mtg; Chicago, IL	2007.03.27
Yale University	2007.03.07
Emory University; Atlanta, GA	2007.02.21
Boston College; Boston, MA	2006.12.12
Novartis Symposium on Advances in Organic Synthesis (Honoring David Evans)	2006.12.05
Johnson & Johnson Focused Funding Symposium; New Brunswick, NJ	2006.11.28
Johnson & Johnson; Cranbury, NJ	2006.11.27
Phillip and Ruth Hettleman Award Lecture, University of North Carolina; Chapel Hill, NC	2006.11.16
Cope Scholar Award Symposium – Southeastern Regional ACS Meeting; Augusta, GA	2006.11.01
Texas A&M; College Station, TX	2006.10.26
University of Texas Southwestern Medical Center; Dallas, TX	2006.10.24
GSK Scholars Symposium, Research Triangle Park, NC	2006.09.29
Cornell University; Ithaca, NY	2006.09.25
Merck Research Laboratories; Boston, MA	2006.09.22
Scripps Research Institute; La Jolla, CA	2006.08.11
Johnson & Johnson; La Jolla, CA	2006.08.10
Ludwig-Maximilians-Universität; Munich, Germany	2006.07.17
Ludwig-Maximilians-Universität; Freiburg, Germany	2006.07.10
University of Basel; Basel, Switzerland	2006.07.07
Eli Lilly Grantee Symposium; Indianapolis, IN	2006.03.07
California Institute of Technology; Pasadena, CA	2006.02.22
Brown University; Providence, RI	2006.02.17
University of Illinois; Urbana-Champaign, IL	2006.02.02
University of Alabama; Tuscaloosa, AL	2005.12.01
Massachusetts Institute of Technology; Cambridge, MA (Student-Invited Lecture)	2005.11.17
Pittsburgh University; Pittsburgh, PA	2005.10.25
Pennsylvania University; Philadelphia, PA	2005.10.24
Rutgers University	2005.10.18
Amgen Young Investigator Award Symposium; Thousand Oaks, CA	2005.09.26
Johnson & Johnson; Raritan, NJ	2005.09.19
University of Colorado; Boulder, CO	2005.09.13
Colorado State University; Fort Collins, CO	2005.09.12
Symposium: "Modern Synthetic Methods/Chiral USA"; Princeton, NJ	2005.07.12
Bristol Myers Squibb; Lawrenceville, NJ	2005.07.11
Amgen, Inc.; Cambridge, MA	2005.04.22
21 st Century COE Kyoto University Alliance for Chemistry International Symposium; Kyoto, Japan	2005.03.22
Bayer Pharmaceuticals; West Haven, CT	2005.03.07
University of Texas; Austin, TX	2005.02.04
University of California; Berkeley, CA	2004.11.16
Florida State University; Tallahassee, FL	2004.10.26
Pfizer Central Research; Groton, CT	2004.09.16
Wayne State University; Detroit, MI	2004.09.08
US/UK Workshop on Organic Synthesis; Edinburgh, Scotland	2004.07.27
Gordon Research Conference on Organic Reactions and Processes; (Selected from poster competition)	2004.07.22
Bristol Myers Squibb; Wallingford, CT	2004.07.14
Eli Lilly; Indianapolis, IN	2004.06.29
Abbott Laboratories; Abbott Park, IL	2004.06.04
Merck Research Laboratories; West Point, PA	2004.05.24
University of Minnesota; Minneapolis, MN	2004.05.07
3M Pharmaceuticals; Minneapolis, MN	2004.05.06
GlaxoSmithKline; Research Triangle Park, NC	2004.03.10
Merck Research Laboratories; Rahway, NJ	2004.02.27
North Carolina State University; Raleigh, NC	2003.11.07
Eastman Chemical Company; Kingsport, TN	2003.10.13
Appalachian State University; Boone, NC	2003.09.05
Gordon Research Conference on Natural Products; Tilton, NH	2003.07.31
J. F. Norris Award Symposium for Physical Organic Chemistry, 225 th American Chemical Society Nat'l Mtg.	2003.03.23

Contributed Papers and Posters

Presentations by J.S.J.

Elias J. Corey Award Symposium; 243 rd American Chemical Society National Meeting; San Diego, CA	2012.03.27
Arthur C. Cope Award Symposium; 240 th American Chemical Society National Meeting; Boston, MA	2010.08.23
Ernest Guenther Award Symposium; 239 th American Chemical Society National Meeting; San Francisco, CA	2010.03.23
E.J. Corey Young Investigator Award Symposium, 233 rd American Chemical Society Nat'l Meeting; Chicago, IL	2007.03.26
58 th Southeast Regional Meeting of the American Chemical Society, Augusta, GA	2006.11.01
Metal Catalyzed Electrophilic Amination. Pacificchem; Honolulu, HI.	2005.12.18
Gordon Research Conference on Organic Reactions and Processes	2005.08.01
Gordon Research Conference on Organic Reactions and Processes; Bristol, RI	2004.07.23
Gordon Research Conference on Natural Products; Tilton, NH	2003.07.29
Gordon Research Conference on Organic Reactions and Processes; Bristol, RI	2003.07.21
J. F. Norris Award Symposium, 225 th American Chemical Society National Meeting; New Orleans, LA	2003.03.21
Gordon Research Conference on Heterocyclic Compounds; Newport, RI	2002.07.02

ii) Presentations by Students

Mackay, W. D.; Johnson, J. S. DOC Graduate Research Symposium	2016
Sharpe, R. J.; Johnson, J. S. "Asymmetric Synthesis of Pactamycin." Milliken Graduate Symposium.	2014
Sharpe, R. J.; Johnson, J. S. "Asymmetric Synthesis of Pactamycin and Studies Toward the Total Synthesis of Paspaline" National Organic Symposium, Seattle, WA.	2013
Goodman, C. G. Johnson, J. S. "Dynamic Kinetic Resolution of β -Stereogenic α -Keto Esters via Asymmetric Transfer Hydrogenation." National Organic Symposium, Seattle, WA.	2013
Scott W. Krabbe, [†] Mark A. Hatcher, [‡] Roy K. Bowman, [‡] Mark B. Mitchell, [‡] Michael S. McClure, [‡] and Jeffrey S. Johnson [†] "Asymmetric Copper Catalyzed Ketone Reductions with Hydrogen Gas: A Greener Alternative to Transition Metal Hydrogenations." National Organic Symposium, Seattle, WA.	2013
Steward, K. M.; Johnson, J. S. "Strategies for the Synthesis and Use of \square -Stereogenic \square -Keto Esters." National Organic Symposium, Princeton, NJ.	2011
Malinowski, J. T.; Johnson, J. S. "Synthesis of Leustroducsin B and Efforts Toward the Total Synthesis of Pactamycin." National Organic Symposium, Princeton, NJ.	2011
Parsons, A. T.; Johnson, J. S. "Donor-Acceptor Carbocycles as Building Blocks for the Construction of Oxygen-Containing Heterocycles." National Organic Symposium, Boulder, CO.	2009
Greszler, S. N.; Johnson, J. S. "Silyl Glyoxylates in Reformatsky Cascades: Diastereoselective Synthesis of Highly Substituted \square -Butyrolactones and Application Toward the Synthesis of Leustroducsin B." National Organic Symposium, Boulder, CO.	2009
Tarr, J. C.; Johnson, J. S. "Enantioselective Metallophosphite-Catalyzed Aza-Benzoin Condensation Between Acyl Silanes and Nitrones." National Organic Symposium, Durham, NC.	2007
Satterfield, A. D.; Johnson, J. S.; Linghu, X. "Symbiotic reagent activation: Meerwein-Ponndorf-Verley reduction of silylglyoxylates by a magnesium alkoxides triggers second-stage aldolization." National Organic Symposium, Durham, NC.	2007
Satterfield, A. D.; Johnson, J. S.; Linghu, X. "Symbiotic reagent activation: Meerwein-Ponndorf-Verley reduction of silylglyoxylates by a magnesium alkoxides triggers second-stage aldolization." 233 rd ACS National Meeting, Chicago, IL.	2007
Sanders, S. D.; Johnson, J. S. "Alkenyl-Substituted tetrahydrofurans via enantiospecific aldehyde/cyclopropane cycloadditions." 233 rd ACS National Meeting, Chicago, IL.	2007
3.27Campbell, M. C.; Johnson, J. S. "Mechanistic studies of the copper-catalyzed electrophilic amination of O-benzoyl hydroxylamines." 233 rd ACS National Meeting, Chicago, IL.	2007
Nicewicz, D. A.; Johnson, J. S. "Three-component coupling reactions of silylglyoxylates, alkynes, and aldehydes: A chemoselective one-step glycolate aldol construction." National Organic Symposium, Salt Lake City, UT.	2005
Nahm, M. R.; Johnson, J. S. "Metallophosphite-Induced Nucleophilic Acylation of $\square\square\square$ -Unsaturated Amides: Facilitated Catalysis via a Diastereoselective Retro-[1,4]-Brook Rearrangement." National Organic Symposium, Salt Lake City, UT.	2005
Bausch, C. C.; Johnson, J. S. "Novel Acyl Anion Donors for Cyanide-Catalyzed Benzoin Type Reactions." National Organic Symposium, Salt Lake City, UT.	2005
Nicewicz, D. A.; Johnson, J. S. "Three-component coupling reactions of silylglyoxylates, alkynes, and aldehydes: A chemoselective one-step glycolate aldol construction." 229 th ACS National Meeting, San Diego, CA.	2005
Bowman, R. K.; Johnson, J. S. "Mild Lewis acid-catalyzed dipolar cycloadditions of imidates."	

228th ACS National Meeting, Philadelphia, PA.	2004
<i>Pohlhaus, P. D.; Bowman, R. K.; Johnson, J. S.</i> "Lewis acid-promoted carbon-carbon bond cleavage of aziridines: Divergent cycloaddition pathways of the derived ylides."	
228th ACS National Meeting, Philadelphia, PA.	2004
<i>Johnson, J. S.; Berman, A. M.</i> "Copper-catalyzed electrophilic amination of diorganozinc reagents."	
228th ACS National Meeting, Philadelphia, PA.	2004
<i>Linghu, X.; Johnson, J. S.</i> "Tandem carbon-carbon bond constructions via catalyzed Brook rearrangement reactions." 227th ACS National Meeting, Anaheim, CA.	2004
<i>Nicewicz, D. A.; Johnson, J. S.</i> "Catalytic enantioselective domino reactions of acylsilanes."	
226th ACS National Meeting, New York, NY.	2003

b) Meetings Attended

Heterocyclic Compounds Gordon Research Conference; Newport, RI	2018.06
American Chemical Society Meeting; Philadelphia, PA	2016.08
243rd American Chemical Society Meeting; San Diego, CA	2012.03
240th American Chemical Society Meeting; Boston, MA	2010.08
Gordon Research Conference on Natural Products; Tilton, NH	2010.07
239th American Chemical Society Meeting; San Francisco, CA	2010.03
Organic Reactions and Processes Gordon Research Conference; Smithfield, RI	2007.07
Heterocyclic Compounds Gordon Research Conference; Newport, RI	2007.06
233rd American Chemical Society National Meeting; Chicago, IL	2007.03
Pacificchem; Honolulu, HI	2005.12
Gordon Research Conference on Organic Reactions and Processes; Bryant, RI	2005.07
US/UK Workshop on Organic Synthesis; Edinburgh, Scotland	2004.07
Gordon Research Conference on Organic Reactions and Processes; Bristol, RI	2004.07
NSF Workshop on Synthetic Organic Chemistry; Squam Lake, NH	2004.06
Gordon Research Conference on Natural Products; Tilton, NH	2003.07
Gordon Research Conference on Organic Reactions and Processes; Bristol, RI	2003.07
225th American Chemical Society National Meeting; New Orleans, LA	2003.03
Gordon Research Conference on Heterocyclic Compounds; Newport, RI	2002.07

7. Teaching Record

a) Course Assignments

Chemistry 468 (7 students)	2018.spring
Chemistry 261 (220 students)	2015.fall
Chemistry 468 (10 students)	2015.spring
Chemistry 469 (18 students)	2014.fall
Chemistry 468 (15 students)	2014.spring
Chemistry 261 (217 students)	2013.fall
Chemistry 262H(40 students)	2013.spring
Chemistry 469 (12 students)	2012.fall
Chemistry 262H (40 students)	2012.spring
Chemistry 261 (210 students)	2011.fall
Chemistry 262H (36 students)	2010.spring
Chemistry 261 (70 students)	2009.fall
Chemistry 262 (158 students)	2009.spring
Chemistry 466 (38 students)	2008.fall
Chemistry 466 (38 students)	2007.fall
Chemistry 262H (33 students)	2007.spring
Chemistry 466 (36 students)	2006.fall
Chemistry 168 (14 students)	2006.spring
Chemistry 168 (14 students)	2005.spring

Chemistry 160L (1 student)	2004.fall
Chemistry 265 (11 students)	2004.spring
Chemistry 160L (5 students)	2003.fall
Chemistry 166 (26 students)	2003.fall
Chemistry 62 (172 students)	2003.spring
Chemistry 166 (28 students)	2002.fall
Chemistry 166 (23 students)	2001.fall

b) Dissertations and Theses

Xin Linghu , <i>New Carbon-Carbon Bond Constructions via [1,2]-Brook Rearrangement Reactions</i>	2005
Patrick Dennis Pohlhaus , <i>Lewis Acid-Promoted Cycloaddition Reactions of Aziridines and Cyclopropanes</i>	2006
David Nicewicz , <i>The [1,2]-Brook Rearrangement: Novel Carbon-Carbon Bond Forming Reactions and Application to the Total Synthesis of Zaragozaic Acid C</i>	2006
Ashley Berman , <i>Catalytic Electrophilic Amination Reactions</i>	2007
Mary Robert Garrett , <i>Enantioselective Metallophosphite Catalyzed Acylation of □□□-Unsaturated Amides and Nitrones</i>	2007
Cory Bausch , <i>Benzoin Type Reactions and Tandem C-C Bond Forming Reactions Using Acyl Anion Equivalents</i>	2007
Rebecca Cuellar , <i>The Total Synthesis of Alternaric Acid and Progress Toward the Synthesis of Subglutinol</i>	2008
Matthew Campbell , <i>I. Mechanistic Studies of a Copper-Catalyzed Electrophilic Amination of Diorganozinc Reagents by O-Benzoyl N,N-Dialkylhydroxylamines. II. Development of a 3-Exo-Dig Cyclization for the Preparation of Vinylidene Cyclopropanes. III. Total Synthesis of (+)-Polyanthellin A</i>	2009
Shanina Sanders , <i>Lewis Acid-Catalyzed Cycloaddition Reactions of Donor-Acceptor Cyclopropanes</i>	2009
Andrew Satterfield , <i>I. [1,2]-Brook Rearrangement: Application of Silyl Glyoxylates In a Novel Glycolate Aldol Reaction and in a Controlled Oligomerization to Complete the Total Synthesis of Zaragozaic Acid C. II. Progress Toward The Total Synthesis of Pactamycin</i>	2009
Andrew Parsons , <i>Metal Catalyzed Annulations of Strained Ring Cycloalkanes</i>	2010
J. Christopher Tarr , <i>I. Enantioselective Metallophosphite-Catalyzed Aza-Benzoin Reaction Between Acyl Silanes and Nitrones. II. Lanthanum Tricyanide-Catalyzed Acyl Silane-Ketone Benzoin Additions and Kinetic Resolution of Resultant α-Silyloxyketones. III. Bis-Functionalization of Glyoxylate for the Synthesis of Fully Substituted Glycolic Acids.</i>	2010
Stephen Greszler , <i>I. Catalytic Redox-Initiated Glycolate Aldol Additions of Silyl Glyoxylates. II. Diastereoselective De Novo Synthesis of Pentasubstituted □-Butyrolactones from Silyl Glyoxylates and Ketones via Double Reformatsky Reactions. III. Progress Toward the Total Synthesis of Leustroducsin B</i>	2010
Austin Smith , <i>I. Lewis Acid-Promoted Friedel-Crafts Alkylation of □□Ketophosphate Electrophiles. II. (3+2)-Annulation of Quaternary Donor-Acceptor Cyclopropanes and Aldehydes. III. Enantioselective Synthesis of Pyrrolidines from Racemic Cyclopropanes and Aldimines: Reaction Development and Mechanistic Insights.</i>	2011
Michael Slade , <i>I. Novel Derivatives and Applications of Silyl Glyoxylates: Silyl Glyoximines and Efforts Toward the Total Synthesis of Alternaric Acid. II. Cyclopropane-Aldehyde (3+2) Annulations at Quaternary Donor Sites.</i>	2011
Daniel Schmitt , <i>Complexity Building Transformations of Silyl Glyoxylates.</i>	2011
Gregory Boyce , <i>Vinylogous Michael Cascade Reactions Employing Silyl Glyoxylates and Silyl Glyoximides</i>	2011
Kimberly Steward , <i>Strategies for the Synthesis and Use of □-Stereogenic-□-Keto Esters</i>	2012
Justin Malinowski , <i>Complexity-Building Reaction Development and the Total Synthesis of Pactamycin</i>	2013
Michael Corbett , <i>Complexity-Building Deracemization and Desymmetrization Methodologies</i>	2013
Dung Do , <i>Stereoselective Functionalization of Meldrum's Acids and the Efforts Toward Total Synthesis of Echinospurin</i>	2014
Scott Krabbe , <i>Strategic Applications of New Redox Transformations in Organic Synthesis</i>	2015
Robert Sharpe , <i>On the Merits of Stereoselective Desymmetrization Reactions in the Assembly of Complex Natural Products: The Total Synthesis of Pactamycin and Paspaline</i>	2015
Guy Goodman , <i>Stereoconvergent Transformations of Carbonyls for Expedient Synthesis of Stereochemically Complex Small Molecules</i>	2016

Will Mackay , <i>Novel Applications of Donor-Acceptor Cyclopropanes and Dearomatization towards the Expedient Synthesis of Highly Substituted Carbocycles</i>	2017
Samuel Bartlett , <i>Novel Methods Exploiting the Ambiphilic Reactivity of α-Keto Esters</i>	2017

c) Research Group

i) Current Group

1) Graduate Students

Matt Horwitz	(5 th year student)
Kendrick Smith	(5 th year student)
Desiree Matias	(5 th year student)
Jessica Griswold	(4 th year student)
Blane Zavesky	(4 th year student)
Steffen Good	(4 th year student)
Jennifer Fulton	(3 rd year student)
Mike McLaughlin	(3 rd year student)
Cody Padgett	(2 nd year student)
Jacob Robins	(2 nd year student)

2) Undergraduate Students

Morgan Yapundich	(senior)
------------------	----------

3) Postdoctoral Research Associates

ii) Former Students and Postdoctoral Associates

Santhanaraman Manikandan (post-doc (Ph.D. Madras University, India))	2001–2002
Christopher M. Yates (M.S.)	2001–2003
Jonathan Suther (B.S.)	2002–2003
Lauren Chapman (B.S.)	2003–2004
Nicole Peterson (B.S.)	2003–2004
Roy Bowman (M.S.)	2002–2005
Xin Linghu (Ph.D.)	2001–2005
David Nicewicz (Ph.D.)	2001–2006
Patrick Pohlhaus (Ph.D.)	2001–2006
Justin Potnick (M.S.)	2002–2006
Ashley Berman (Ph.D.)	2002–2007
Mary Garrett (Ph.D.)	2002–2007
Cory Bausch (Ph.D.)	2002–2007
Rebecca Cuellar (Ph.D.)	2006–2008
Matthew Campbell (Ph.D.)	2004–2009
Shanina Sanders (Ph.D.)	2004–2009
Andrew Satterfield (Ph.D.)	2004–2009
Jennifer Carman (M.S.)	2007–2009
Wei Li (B.S.)	2007
Hunter Shunatona (B.S.)	2008
Andrew Parsons (Ph.D.)	2005–2010
J. Christopher Tarr (Ph.D.)	2005–2010
Stephen Greszler (Ph.D.)	2005–2010
Emily Owens (B.A.)	2009–2010
Rebecca Collins (exchange student, University of Sheffield)	2009–2010
Austin Smith (Ph.D.)	2006–2011
Dan Schmitt (Ph.D.)	2006–2011
Michael Slade (Ph.D.)	2006–2011
Gregory Boyce (Ph.D.)	2006–2011
Andrew Neel (B.S.)	2009–2011

Adam Gray (B.S.)	2009–2011
Leighann Lam (B.S.)	2009–2011
Jeremy Roach (B.S.)	2010–2012
Steven Wales (postdoctoral associate, Australian-American Fellow)	2012
Kimberly Steward (Ph.D.)	2007–2012
Justin Malinowski (Ph.D.)	2008–2013
Emily Gentry (B.S.)	2011–2013
Kyle Sebastian (B.S.)	2011–2013
Stefan McCarver (B.S.)	2011–2013
Michael Corbett (Ph.D.)	2009–2013
MacKenzie Walker (B.S.)	2012–2014
Michael Ramsey (B.S.)	2012–2014
Maribel Portillo (B.A., McNair Scholar)	2013–2014
Dr. Jamie Rogers (postdoctoral associate, UT Southwestern)	2013–2014
Dung Do (Ph.D.)	2009–2014
Scott Krabbe (Ph.D.)	2010–2015
Robert Sharpe (Ph.D.)	2011–2015
John Farrokh (M.S.)	2012–2015
Lexi Akeyson (B.S.)	2014–2015
Qihai Xu (postdoctoral)	2013–2015
Guy Goodman (Ph.D.)	2011–2016
Kendall Weeks (B.A.)	2015–2016
Jesus Martinez-Alvarado (B.S.)	2014–2016
Will Mackay (Ph.D.)	2012–2017
James Giarrusso (M.S.)	2013–2017
Elisabetta Massolo (postdoctoral associate)	2016–2017
Samuel Bartlett (Ph.D.)	2012–2017
Kimberly Keiter (B.S.)	2015–2017

iii) Awards, Honors, and Special Achievements of Graduate, Postdoctoral, and Undergraduate Students

Jennifer Fulton – NSF Graduate Fellowship	2016
Michael McLaughlin – NSF Graduate Fellowship	2016
Matthew Horwitz – NSF EAPSI Fellowship	2015
Robert Sharpe – St. Jude National Graduate Student Symposium	2015
Desiree Matias – NSF Graduate Fellowship	2014
Samuel Bartlett – NSF EAPSI Fellowship	2014
Guy Goodman – Burroughs Wellcome Fellowship	2013
Robert Sharpe – ACS Division of Organic Chemistry Fellowship	2013
Michael Corbett – Ernest Eliel Fellowship	2012
Robert Sharpe – NSF Graduate Fellowship	2012
Justin Malinowski – ACS Division of Organic Chemistry Fellowship	2011
Scott Krabbe – NSF Graduate Fellowship	2011
Kimberly Steward – NIH Predoctoral Fellowship	2011
Michael Corbett – NSF EASPI Fellowship	2011
Dan Schmitt - Sigma-Aldrich Graduate Student Innovation Award	2010
Rebecca Duenes – NIH Predoctoral Fellowship	2007
Kimberly Steward - BMS Minority Chemist Fellowship	2007
Ashley Berman - Burroughs Wellcome Fellowship	2005
David Nicewicz - Eli Lilly Graduate Fellowship	2004
David Nicewicz - ACS Division of Organic Chemistry Fellowship	2004
Xin Linghu - Sachiko Sakura Travel Fellowship	2003
Xin Linghu - Burroughs Wellcome Fellowship	2003
David Nicewicz - R.W. Bost Fellowship	2003

8. Grant Acquisitions – Direct and (Total) Costs

a) Current Extramural Funding

SusChEM: Complexity-Building Reactions from Feedstock Chemicals [CHE-1665008]	2017.07-2020.06
NSF	(\$450,000)
Synthesis of Bioactive Small Molecule Building Blocks (PI)	2016.04-2021.03
NIGMS	\$1,659,711 (2,370,119)

b) Proposals Submitted and Pending

c) Proposals Submitted and Funded

REU Program at UNC Chapel Hill (PI)	2015.06-2018.05
NSF	\$270,000
New Approaches Toward Sustainable Catalysis in the Synthesis of Bioactive Small Molecules (co-PI)	2014.01–2016.12
NSF/IUPAC	\$ (390,000 to JSJ)
New Dynamic Processes for the Preparation of Bioactive Small Molecules (PI)	2013.03-2017.02
NIGMS	\$520,000 (\$714,000)
Asymmetric Synthesis of Bioactive Natural Products (PI)	2013.03-2017.02
NIGMS	\$720,000 (\$1,023,032)
Complexity-Building Annulations Reactions with Strained Ring Building Blocks (PI)	2013.03-2016.02
NSF	\$209,906 (\$296,000)
Development of Mild Green Hydrogenation Reactions (co-PI)	2012.07-2013.07
GSK	\$50,000 (\$50,000)
Asymmetric Synthesis of Bioactive Natural Products (PI)	2009.03-2013.02
NIGMS	\$720,000 (\$1,023,032)
Novartis Early Career Award (PI)	2009.01-2011.12
Novartis	\$150,000
Asymmetric Synthesis of Complex Heterocycles from Simple Cyclopropanes (PI)	2009.03-2013.02
NSF	\$255,000
Alfred P. Sloan Fellowship	2006.09-2008.09
Sloan Foundation	\$40,000

Camille Dreyfus Teacher Scholar	2006.06-2008.05
Drefyus Foundation	\$75,000
Young Investigator Award	2005.09-2006.08
Amgen	\$25,000 (\$25,000)
Eli Lilly Grantee	2004.10-2006.09
Eli Lilly	\$100,000 (\$100,000)
New Domino Reactions for Enantioselective Synthesis (PI)	2004.05-2009.04
NIGMS	\$825,000 (\$1,163,385)
Development of New Catalytic Asymmetric Carbon-Nitrogen Bond Constructions (PI)	2004.01-2004.12
UNC Junior Faculty Development	\$5,000 (\$5,000)
Nontenured Faculty Award	2003.05-2004.04
3M	\$45,000 (\$45,000)
CAREER: Discovery of New Enantioselective Dipolar Cycloadditions from Small Ring Heterocycles (PI) Heterocycles (PI)	2003.02-2008.01
NSF	\$339,435 (\$470,000)
Domino Sigmatropic Rearrangements (PI)	2002.09-2004.09
American Chemical Society PRF	\$35,000 (\$35,000)
Tandem Dynamic Kinetic Resolution (PI)	2002.05-2007.05
Research Corporation	\$35,000 (\$35,000)

d) Proposals Submitted and Not Funded

High Throughput Development of Green Hydrogenation Catalysts Based On Earth-Abundant Metals (co-PI)	2014.07-2016.06
NSF (GOALI)	(\$232,623)
NSMDS: Sustainable Methods for Fine Chemical Synthesis (PI)	2014.07-2017.06
NSF	(\$5,000,000)
REU Site: Tomorrow's STEM Leaders: REU in Chemistry at UNC Chapel Hill (PI)	2014.05-2016.08
NSF	(\$360,000)

New Approaches to Enolate-Based C-C, C-N, and C-O Bond Constructions (PI)	2011.06
NIGMS	\$1,000,000
Simple New Reactions Based On Glyoxylate Templates (revision) (PI)	2010.11
NIGMS	\$1,000,000
Rapid Assembly of Terpene Alkaloids via Nonclassical Cycloaddition (revision) (PI)	2010.06
NIGMS	\$1,000,000
Simple New Reactions Based On Glyoxylate Templates (PI)	2010.03
NIGMS	\$1,000,000
Rapid Assembly of Terpene Alkaloids via Nonclassical Cycloaddition (PI)	2009.09
NIGMS	\$1,000,000
Synthesis of Diverse Medicinally Relevant Heterocycles from a Common Cycloaddition Platform (PI)	2009.04
ACS-TEVA	\$150,000
Development of Green Acyl Anion Catalysis for Small Molecule Synthesis (PI)	2009.04
NIGMS	\$402,000
Enantioselective Synthesis of Heterocycles from Donor-Acceptor Cyclopropanes	2008.06
NIGMS	\$725,000
New Domino Reactions for Enantioselective Synthesis (PI)	2008.06
NIGMS	\$725,000
Enantioselective Electrophilic Amination: Merging C-N Bond Constructions with Stereocontrol	2007.06
NSF	\$255,000 (\$360,000)
Enantioselective Electrophilic Amination: Merging C-N Bond Constructions with Stereocontrol	2007.03
ACS-PRF	\$150,000
Catalytic Electrophilic Amination of Latent Carbon Nucleophiles (PI)	2006.05

NIGMS	\$1,000,500.00
-------	----------------

Catalytic Electrophilic Amination of Latent Carbon Nucleophiles (PI)	
NIGMS	\$1,001,700.00

Cooperative Strategies in Enantioselective Catalysis and Classroom Learning	2003.08
Research Corporation	\$75,000

Cooperative Enantioselective Umpolung Catalysis (PI)	2003.12
Boehringer Ingelheim	\$70,000

Cooperative Enantioselective Catalysis (PI)	2003.09
Beckman Foundation	\$240,000

Environmentally Benign and Energy-Efficient Approaches to Fine Chemical Synthesis (co-PI)	2003.04
DOE	\$1,000,000

New Enantioselective Domino Reactions for the Synthesis of Complex Acyclic Molecules (PI)	2003.01
Johnson & Johnson	\$137,796 (\$150,000)

Discovery and Development of New Catalytic Enantioselective Domino Reactions (PI)	2002.11
Boehringer Ingelheim	\$70,000

New Domino Reactions for Enantioselective Synthesis (PI)	2002.10
NIGMS	\$750,000 (\$1,063,849)

New Investigator Award	2001.12
Boehringer Ingelheim	\$70,000

New Faculty Award (PI)	2001.05
Dreyfus Foundation	\$40,000 (\$70,000)

9. Professional Service

a) Service to discipline

- Editorial Board, *Trends in Chemistry* (Cell Press), 2018 –
- Board of Editors, *Organic Reactions* (2010 – 2015)
- Volume Editor, *Comprehensive Organic Synthesis II* (2011 – 2014)
- Chairperson, NIH SBCA Study Section (2016 – 2018)
- Permanent Panel Member, NIH SBCA Study Section (2013 – 2018)
- Manuscript reviewer: *Science*, *Nature*, *Nature Chemistry*, *Journal of the American Chemical Society*, *Angewandte Chemie*, *Organic Letters*, *Journal of Organic Chemistry*, *Tetrahedron*, *Tetrahedron Letters*, *Inorganic Chemistry*, *European Journal of Inorganic Chemistry*, *Synthesis*, *Advanced Synthesis and Catalysis*, *European Journal of Organic Chemistry*, *Journal of Organometallic Chemistry*, *Chemistry – A European Journal*, *Chirality*, *Applied Organometallic Chemistry*, *Chirality*, *Organometallics*, *Organic and Biomolecular Chemistry*
- Proposal reviewer: National Science Foundation, American Chemical Society Petroleum Research Fund, Research Corporation, NSERC
- Ad hoc member
 - Site Visit Review: NSF CCHF, Emory University (May 2016)
 - NSF CAREER Proposal Review Panel (October 2014)
 - NSF Synthesis Review Panel (January, 2013)
 - NIH SBCA Study Section (October 2012)
 - NIH Special Emphasis Panel BCMB - Biological Chemistry and Macromolecular Biophysics B (March 2011)
 - NSF Synthesis Review Panel (October, 2009)
 - NIH Challenge Grant Review Panel (June, 2009)
 - ACS PRF Review Panel (June, 2009)
 - NIH SBCB Study Section (February, 2009)
 - NIH SBCA Study Section (June 4-5, 2008)
 - NSF Synthesis Review Panel (March 31-April 1, 2008)
 - NIH Medicinal Chemistry A Study Section (June 23-24, 2004)
- Panel Member: ACS Presidential Symposium: “Academic Hiring: How Do You Get the Job?” 231st National ACS Meeting; Atlanta, Ga.; March 26, 2006
- SPGRE PI, Summer, 2005, 2006
- RECAP mentor, Summer, 2008, 2010
- Project SEED mentor, Summer 2008, 2009, 2010, 2011 (Kori McDonald), 2012 (Asha Bethea), 2013 (Michael Zhou)
- Chair, ACS National Awards Canvassing Committee for the Elias J. Corey Award, 2013-2016

b) Departmental Service

- Department Chair 2016-
- Committee
 - 2012-2015 Vice Chair for Diversity
 - 2011-2012 Vice Chair for Facilities
 - 2009-2010 Vice Chair for Development
 - 2006-2009 Graduate Studies
 - 2006-2010 Safety
 - 2005-2010 Library Liaison
 - 2001-2006 Undergraduate Studies
- Faculty Search Committees
 - 2009 Inorganic Faculty Search Committee
 - 2008 Chair, Organic Faculty Search Committee
 - 2007 Organic Faculty Search Committee
 - 2006 Organic Faculty Search Committee
 - 2005 IAM Faculty Search Committee
- Proposals: “LCT Mass Spectrometer,” National Science Foundation, \$283,000, Submitted 6/26/2003

c) University Service

- Dean’s Advisory Committee, College of Arts and Sciences, 2018-
- Chancellor’s Science Scholars Executive Advisory Board, 2018-

- Council on Scientific Enrichment, 2016-
- Conflict of Interest Monitoring Committee, 2015
- Hettleman Prize Selection Committee, 2014-2016
- ADVANCE Institutional Inventory Subcommittee, 2013-2015
- Chancellor's Science Scholar Advisory Committee, 2013-
- Graduate School Diversity Advisory Board, 2013-
- College of Arts and Sciences Diversity Liaison, 2013-2015
- Chancellor's Task Force on Commercialization, 2012
- UNC Faculty Recruitment Advisory Committee, 2009
- UNC Task Force on Future Promotion and Tenure Policies and Practices-Engagement and New Forms of Scholarly Communications subcommittee, 2009
- Discussion Leader – Carolina Summer Reading Program, 2005
- University Safety Committee – 2006-2010