

John F. Hartwig

Henry Rapoport Professor of Chemistry

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Personal

Born August 7, 1964 in Elmhurst, IL

Employment

- 2011-present **University of California, Berkeley** Henry Rapoport Professor of Chemistry.
2011-present **Lawrence Berkeley National Laboratory, Berkeley** Senior Faculty Scientist
2006-2011 **University of Illinois Urbana-Champaign** Kenneth L. Reinhart Jr. Professor of Chemistry.
2004-2006 **Yale University, New Haven, CT** IrénéduPont Professor of Chemistry.
1998-2004 **Yale University, New Haven, CT** Professor of Chemistry.
1996-1998 **Yale University, New Haven, CT** Associate Professor of Chemistry.
1992-1996 **Yale University, New Haven, CT** Assistant Professor of Chemistry. Appointment commenced July 1, 1992.

1990-1992 **Massachusetts Institute of Technology, Cambridge, MA** American Cancer Society Postdoctoral Associate.

1986-1989 **University of California, Berkeley, CA** Graduate Student Instructor. Taught organic chemistry to undergraduate students and inorganic chemistry to graduate students.

1985 **Monsanto Japan Ltd., Kawachi, Japan** Worked among an all Japanese staff for three months on an agricultural and surface science research project.

1984 **General Electric Research and Development, Schenectady, NY** Synthesis of novel monomers, ionomers and polymer blends.

Education

- 1990-1992 **Massachusetts Institute of Technology, Cambridge, MA**
Postdoctoral Advisor: Prof. Stephen J. Lippard
Studied the Pt-DNA adducts formed by an orally active platinum antitumor drug and the ability of these adducts to block DNA replication and bind cellular proteins. Designed, synthesized, and analyzed a platinum antitumor drug possessing a fluorescent ligand for in vivo monitoring.

1986-1990 **University of California, Berkeley, CA** Ph.D., Chemistry.
Ph.D. Advisors: Robert G. Bergman, Richard A. Andersen
Studied the synthesis, transformations, and reaction mechanisms of complexes containing ruthenium-oxygen, ruthenium-nitrogen, and ruthenium-carbon bonds.

1982-1986 **Princeton University, Princeton, NJ** AB, Chemistry, High Honors.
Thesis Advisor: Maitland Jones Jr.
Uncovered a photochemical dihalo-carbene source to study the stereochemistry of their additions to strained olefins.

Awards

2012	Fellow of the National Academy of Sciences
2011	Einstein Visiting Fellowship, Berlin
2010	GlaxoSmithKline Scholars Award
2009	National Institutes of Health MERIT Award
2009	Edward Mack Jr. Memorial Award, Ohio State University
2009	Mitsui Chemicals Catalysis Science Award, Japan
2009	Joseph Chatt Award of the Royal Society of Chemistry
2008	International Catalysis Award from the International Association of Catalysis Societies
2008	Mukaiyama Award from the Society of Synthetic Organic Chemistry, Japan
2008	Paul N. Rylander Award of the Organic Reactions Catalysis Society
2007	Raymond and Beverly Sackler Prize in the Physical Sciences
2007	Tetrahedron Young Investigator Award in Organic Synthesis
2006	ACS Award in Organometallic Chemistry
2005	Fellow of the American Association for the Advancement of Science
2004	Thieme-IUPAC Prize in Synthetic Organic Chemistry
2004	Solvias Ligand Prize
2004	Chemical Abstract Service Science Spotlight Award
2003	Leo Hendrik Baekeland Award
1998	A.C. Cope Scholar Award
1998	Eli Lilly Award Grantee
1997	Camille Dreyfus Teacher-Scholar Award
1996	Alfred P. Sloan Research Fellowship
1996	Union Carbide Innovative Recognition Award
1995	Union Carbide Innovative Recognition Award
1995	Yale University Junior Faculty Fellowship
1994	National Science Foundation Young Investigator Award
1992	Dupont Young Professor Award
1992	Dreyfus Foundation New Faculty Award
1990-1992	American Cancer Society Postdoctoral Fellow
1990	National Institutes of Health Postdoctoral Fellowship (declined)
1988	University of California Regents Fellow
1986	Princeton University Department of Chemistry, High Honors

Recent Collaborators:

Recent Collaborators & Co-Editors: Weston Borden (U. North Texas), Michael Bühl (Mülheim), Richard Finke (Colorado State), Karen Goldberg (U. Washington), Michael Hall (Texas A&M), Marc Hillmyer (U. Minnesota), Tatsuo Ishiyama (Hokkaido), William Jones (U. Rochester), Norio Miyaura (Hokkaido), Huimin Zhao (UIUC)

Former Postdocs: Erik Alexanian (Assistant Professor at University of North Carolina), Elsa Alvaro, Chulsung Bae (University of Nevada, Las Vegas), Neal Beare (Gracefield Research in New Zealand), Timothy Boebel (Dow Agroscience), Timothy Boller (ExxonMobil), Erin Burger Dunn (Deciphera Pharmaceuticals), Huiyuan Chen (Compton Corp.), Kevin Cook (SemEquip in Halifax), José Cuevas-Vicario (Universidad de Burgos), Manuel Fernandez-Rodriguez (University of Oviedo), Felix Goodson (Westchester University, PA), Timm Graening (TU Berlin-Berlin University of Technology), Marko Hapke (Ifok-Rostock), Blake Hamman (Attnbi), Sheila Hauck (AstraZeneca), Xiaoming He (Voltaix), Seth Herzon

(Assistant Professor at Yale), Mark Hooper, Lisa Julian (Assistant Professor at U. of Colorado, Denver), Kazumori Kawamura (Mitsui), Motoi Kawatsura (Tottori University), Christoph Kiener (Basell), Yuichiro Kondo (Takeda), Doris Kunz (habilitant with Hofmann in Heidelberg), Ryoichi Kuwano (Professor at Kyushu U.), Joshua Lawrence (Centenary College of Louisiana), Chin-Fa Lee (with Prof. David Leigh at Edinburgh), Dae-Yon Lee (with Toshiaki at NIAIST in Tsukuba, Japan), Sunwoo Lee, Andreas Leitner (BASF), Xuebin Liao (Genomics Institute of the Novartis Research Foundation), Xiaoxiang Liu (Wyeth), Zhijian Liu (Merck), Oliver Löber (BASF), Haige Lu (Memorial Sloan-Kettering), Hiroyuki Morimoto (Assistant Professor at Kyushu U.), Ulrike Nettekowen (Solvias), Tokutaro Ogata (Kyoto U.), Toshimichi Ohmura (Assistant Professor with Michinori Sugimoto, Kyoto U.), Frédéric Paul (Chargé de Recherche at Renne in the CNRS), Florian Rampf (Bayer), André Ridder (Heumann Pharma), Devon Rosenfeld (Dow Chemicals), Per Ryberg (AstraZeneca), Norio Sakai (Tokyo University of Science), Sabine Schlecht (Professor at Freie Universität Berlin), Eric Simmons (Bristol-Myers Squibb), Bjorn Schlummer (Bayer), Kevin Shaughnessy (Associate Professor at U. Alabama), Quinetta Shelby (DePaul University), Chutian Shu (KBP Biosciences), Levy Stanley (Assistant Professor at Iowa State U.), Shaun Stauffer (Assistant Professor at Vanderbilt), Makoto Takahashi (Mitsubishi Chemicals), Jun Takaya (Assistant Professor at Tokyo Institute of Technology), Akihiro Takemiya (Mitsubishi Pharma), Jesse Tye (Assistant Professor at Ball State), Christoph Tzschucke (Freie Universität Berlin), Mitsuhiro Ueda (Assistant Professor at Osaka Prefecture University), Masaru Utsunomiya (Mitsubishi Chemicals), Keith Wampler (now at Elevance Renewable Science), Daniel Weix (Assistant Professor at the University of Rochester), Zhiqiang Weng (National University of Singapore), Lingyun Wu (Lundbeck), Makoto Yamashita (Assistant Professor with Kyoto Nozaki at Kyoto University), Yasuhiro Yamashita (Assistant Professor at the University of Tokyo), Pinjing Zhao (Assistant Professor, North Dakota State University), Jianrong Zhou (Assistant Professor at Nanyang Technological University).

Former Graduate Students: Luis Alcazar-Roman (Ph.D. now in industry in Cyprus), Natia Anastasi (Ph.D. now in industry in Cyprus), Fabiola Barrios-Landeros (Ph.D. now a postdoc with James Leighton, Columbia U.), Mathew Berger (M.S.), Brad Carrow (Ph.D. now a postdoc with Kyoko Nozaki, U Tokyo), Darcy Culkin-Stambuli (Ashland Inc.), Michael Driver (Ph.D. now at Chevron, CA), David Huang (M.S.), Adam Johns (Ph.D. now at Halcyon Molecular), Christopher Krug (Ph.D. now at Schering-Plough), Janis Louie (Ph.D. now Assistant Professor at U. Utah), Grace Mann (Ph.D. now at Exelixis), Seth Marquard (Ph.D., now at Brandeis), Clare Muhoro (Ph.D. now Assistant Professor at Towson University), Jaclyn Murphy Knight (Ph.D. now at Dow Houston), Mark Pouy (Ph.D. now at University of Virginia), Amy Roy MacArthur (Ph.D. now Assistant Professor at US Naval Academy), Qilong Shen (Ph.D. now at Shanghai Institute of Organic Chemistry), Shashank Shekhar (Ph.D. now at Abbott Pharmaceuticals), Heather Smith-Hesslink (M.S.), James Stambuli (Ph.D. now Assistant Professor at Ohio State), Giang Vo (Ph.D. now a postdoc with Jeff Coates at Cornell), Karen Waltz (Ph.D.), Joanna Wolkowski (M.S. now at Pfizer), Carolyn Wei (M.S. now at Bristol-Myer Squibb), Jing Zhao (Ph.D. now Professor at Nanjing University).

Former Visiting Scholars: Miguel Alvarez-Falcon (U. Murcia), Domingo Garcia, Thomas Gogsig (Aarhus University), Tatsuo Ishiyama (Associate Professor at Hokkaido), Martin Jarenmark, Morten Jorgensen (Lundbeck), Noriyasu Kataoka (Ajinomoto), Patricia Lara Munoz (Laboratoire de Chimie de Coordination, Toulouse, France), Jens Larsen (Danish

University of Pharmaceutical Sciences), Fernando Lopez (postdoc with Ben Feringa), Dean Markovic (EPFL, Switzerland), Yasunori Minami (Osaka U.), Yoshiaki Nakao (Assistant Professor with Tamao at Kyoto U.), Florian Puschmann (postdoc with Grützmacher at ETH), Jan Pawlas (Acadia Pharmaceuticals), Trang Nguyen (Hanoi University of Science), Susana Pérez-Ferreras, Dieter Schaarschmidt (Chemnitz U. of Tech.), Dan Sheeran (Eastern Illinois University), Christian Steffens (Institute for Technical and Macromolecular Chemistry), TetsuTsubogo (U. Tokyo), Satoshi Ueno (Assistant Professor at Kyushu University), Akira Yada (Max Planck Institute), Hideaki Yamamichi (Sumitomo Chemical), Yasuhiro Yamashita (University of Tokyo).

Current Students:

Patrick Fier, Rebecca Green, Patrick Hanley, Hanna Key, Jessica Klinkenberg, Carl Liskey, Sherzod Madrahimov, Cass Richers, Dan Robbins, Christo Sevov, Alexandra Strom, Yichen Tan, Philip Vogel.

Current Postdoctoral Associates:

Joseph Bair, Andy Bruck, Wenyong Chen, Shaozhong Ge, Ramesh Giri, Zheng Huang, Nichole Litvinas, Benjamin Partridge, Phong Pham, Jason Rohde, Alexey Sergeev, Andrey Solovyev, Ba Tran, Johnathan Webb, Tyler Wilson.

Teaching

Fall 1992	Chem 452a/552a "Organometallic Chemistry" 25 students
Fall 1993	Chem 452a/552a "Organometallic Chemistry" 24 students
Spring 1994	Chem 555b "Mechanistic Transition Metal Chemistry" 12 students
Fall 1994	Chem 457a/557a "Modern Coordination Chemistry" 25 students
Spring 1995	Chem 555b "Mechanistic Transition Metal Chemistry" 8 students
Fall 1995	Junior Faculty Fellowship
Spring 1996	Junior Faculty Fellowship
Fall 1996	Chem 452a/552a "Organometallic Chemistry" 12 students
Spring 1997	Chem 114 "Comprehensive General Chemistry" 150 students
Fall 1997	Chem 452a/552a "Organometallic Chemistry" 16 students
Spring 1998	Chem 114 "Comprehensive General Chemistry" ca. 150 students
Fall 1998	Chem 452a/552a "Organometallic Chemistry" 12 students
Spring 1998	Faculty Leave
Fall 1999	Chem 457a/557a "Coordination Chemistry" 11 Students
Spring 2000	Chem 555b "Mechanistic Transition Metal Chemistry" 15 students
Fall 2000	Chem 452a/552a "Organometallic Chemistry" 13 students
Spring 2001	Chem 252 "Introduction to Inorganic Chemistry" 5 students
Fall 2002	Chem 555b "Mechanistic Transition Metal Chemistry" 8 students
Spring 2003	Chem 252 "Introduction to Inorganic Chemistry" 25 students
Fall 2003	Chem452a/552a "Organometallic Chemistry" 20 students
Spring 2004	Chem 252 "Introduction to Inorganic Chemistry" 12 students
Fall 2004	Chem452a/552a "Organometallic Chemistry" 25 students
Spring 2005	Faculty Leave
Fall 2005	Chem 452/552 "Organometallic Chemistry" 9 students
Spring 2006	Chem 555b "Mechanistic Transition Metal Chemistry" 19 students
Spring 2007	Chem 538a "Organometallic Chemistry" 30 students

Fall 2007	Chem 538a "Organometallic Chemistry" 30 students
Spring 2008	Chem 530 "Organic Structure and Spectroscopy"
Fall 2008	Chem 538a and b "Organometallic Chemistry" 25 students
Spring 2009	Chem 530 "Organic Structure and Spectroscopy" 19 students
Fall 2009	Chem 535 "Organic Chemistry Seminar" 7 students
Spring 2010	Chem 530 "Organic Structure and Spectroscopy" 22 students
Fall 2010	Chem 535 "Organic Chemistry Seminar" 8 students
Spring 2011	Chem 530 "Organic Structure and Spectroscopy" 23 students
Spring 2012	Chem 262 "Metal in Organic Synthesis" 20 students
	Chem 263 A and B "Synthesis Design I and II" 21 students

Meeting Organization

1998	National Academy of Sciences, Frontiers of Science Symposium: Chemistry session on "Femtochemistry"
1999	National Academy of Sciences, Frontiers of Science Symposium: Chemistry session on "Combinatorial Chemistry beyond Pharmaceuticals"
2000	National Academy of Sciences, Frontiers of Science Symposium: Chemistry session on "Cell Surfaces and Molecular Recognition"
2000	Spring ACS National Meeting: Session on Combinatorial Catalyst Development
2001	Fall ACS National Meeting: Session on Homogeneous Catalysis in the Petrochemical Industry

Professional Activities

2010-current AAAS Chemistry Section, Council Delegate

Community Activities

1999 The Science Coalition, Washington DC, Congressional Lobbying Day

Journal Activities

2006-2009 Editorial Advisory Board for *Organometallics*
 2009-current Editorial Advisory Board for *CHEMCATCHEM*
Extensive reviewing for ACS journals, Science, Nature, Nature-Chemistry, Wiley Journals, Chemical Communications, and Tetrahedron journals.

Consulting

Member of the Scientific Advisory Board for Johnson-Matthey Catalysts
 Member of the Scientific Advisory Board for Micurx
 Member of the Scientific Advisory Board for applica Tech
 Member of the Scientific Advisory Board for Cambridge Major Laboratories
 Consultant for Halcyon Molecular
 Consultant for Dow Chemicals
 Consultant for Eli Lilly
 Founder of Catylix, Inc.

Selected Named Lectureships

1998	R.C. Fuson Lectureship, Urbana-Champaign, Illinois
2000	Frontiers of Chemistry Lecturer, KlosterSeeon, Germany
2000	Astra-Zeneca Lecture Stockholm, Sweden

2001	Carl Ziegler Lecture Mülheim, Germany
2001	Gerhard Closs Lectureship, University of Chicago
2002	Roche Lecturer, University of Colorado
2003	Karcher Lectureship, University of Oklahoma
2004	Sasol Lectureship, University of Ottawa
2004	Eli Lilly Lecturer, Colorado State University
2004	Novartis Lectureship Series
2004	Methylgene Lecturer, University of Montreal
2005	2005 Merck Frosst Lecturer, University of Victoria
2005	Frank Burnett Dains Memorial Lecture, University of Kansas
2005	Stuart Rosenfeld Lecture, Smith College
2006	Dalton Lecture, University of California, Berkeley
2006	Eli Lilly Symposium, Harvard University
2007	Clark Lecturer, West Virginia University
2008	Frontiers in Chemical Research Lecturer, Texas A&M University
2008	Frontiers In Chemistry, Wayne State University, Michigan
2008	Gassman Lecturer, University of Minnesota, Minneapolis
2009	Peter C. Reily Lectureship, Notre Dame, Indiana
2009	UC Irvine-Novartis Lectureship, California
2009	Schulich Visiting Professor Lectureship, Technion-Israel Institute of Technology
2009	RSC Joseph Chatt Lectureship, United Kingdom
2009	Visiting Miller Professor Lecture, University of California, Berkeley
2010	Heck Lectureship, University of Delaware
2011	Hutchison Lecturer, University of Rochester
2011	Richard A. Walton Lecturer, Purdue University
2012	Moses Gomberg Lecturer, University of Michigan
2012	Behringer-Simon Lecture, Swiss Federal Institute of Technology (ETH) Zürich

Invited Seminars

1. 05/07/93 New England Workshop on Organometallic Chemistry, New Haven, CT, "Transition Metal Boryl Complexes: Unusual Metal-Ligand Interactions"
2. 07/15/93 Organometallic Gordon Conference, Newport, RI, "Transition Metal Boryl Complexes: Unusual Metal-Ligand Interactions"
3. 08/23/93 American Chemical Society Meeting, Session on Main Group Organometallic Chemistry: Novel Structures and Reactivity, Chicago, IL, "Covalent Main Group-Transition Metal Bonds: Synthesis, Structure, and Reactivity of Late Metal-Boryl Complexes"
4. 11/18/93 Dartmouth College Chemistry Seminar, Hanover, NH, "The Chemistry of Compounds Containing Reactive Metal-Boron and -Nitrogen Bonds"
5. 03/11/94 Miles Pharmaceutical Division, West Haven, CT, "Chemistry at Transition Metal-Boron and -Nitrogen Bonds: Applications to Catalytic Hydroboration, Hydroamination, and Hetero Cross Couplings"
6. 03/14/94 American Chemical Society Meeting, Awards Symposium in Honor of Stephen J. Lippard and Tobin J. Marks, San Diego, CA, "Catalytic and Stoichiometric Formation of Carbon-Nitrogen Bonds"

7. 05/24/94 DuPont Central Research and Development, Wilmington, DE, "Transition Metals, Boron, Nitrogen, and Sulfur. Fundamentals to Homogeneous Catalysis"
8. 10/13/94 Rutgers University, Newark, NJ, "Transition Metals, Boron, Nitrogen, and Sulfur. Fundamentals to Homogeneous Catalysis"
9. 11/02/94 Massachusetts Institute of Technology, Cambridge, MA, "Transition Metals, Boron, Nitrogen, and Sulfur. Fundamentals to Homogeneous Catalysis"
10. 11/17/94 Brown University, Providence, RI, "Transition Metals, Boron, Nitrogen, and Sulfur. Fundamentals to Homogeneous Catalysis"
11. 02/09/95 New York Academy of Sciences, New York, NY, "Transition Metals, Boron, Nitrogen, and Sulfur. Fundamentals to Homogeneous Catalysis"
12. 02/13/95 Cornell University, Ithaca, NY, "Transition Metals, Boron, Nitrogen, and Sulfur. Fundamentals to Homogeneous Catalysis"
13. 03/07/95 Stanford University, Stanford, CA, "Transition Metals, Boron, Nitrogen, and Sulfur. Fundamentals to Homogeneous Catalysis"
14. 03/09/95 University of California, Davis, CA, "Transition Metals, Boron, Nitrogen, and Sulfur. Fundamentals to Homogeneous Catalysis"
15. 03/10/95 University of California, Berkeley, CA, "Transition Metals, Boron, Nitrogen, and Sulfur. Fundamentals to Homogeneous Catalysis"
16. 04/07/95 American Chemical Society Meeting, Symposium on Transition Metal-Catalyzed Coupling Chemistry, Anaheim, CA, "Mechanism of Carbon-Heteroatom Bond Forming Coupling Reactions: A Novel Reductive Elimination Reaction"
17. 04/13/95 University of Pittsburgh, Pittsburgh, PA, "The Organometallic Chemistry of Transition Metal-Boryl, -Amido, and -Thiolato Complexes: From Bonding Principles to Catalytic Applications"
18. 04/14/95 University of West Virginia, Morgantown WV, "The Organometallic Chemistry of Transition Metal-Boryl, -Amido, and -Thiolato Complexes: From Bonding Principles to Catalytic Applications"
19. 05/05/95 Hoescht-Celanese, Corpus Christi, TX, "The Organometallic Chemistry of Transition Metal-Boryl, -Amido, and -Thiolato Complexes: From Bonding Principles to Catalytic Applications"
20. 05/12/95 Union Carbide, Charleston, WV, Innovative Recognition Award Symposium: "The Organometallic Chemistry of Transition Metal-Boryl, -Amido, and -Thiolato Complexes: From Bonding Principles to Catalytic Applications"
21. 07/07/95 Organometallic Gordon Conference, Newport, RI, "Mechanism of Carbon-Heteroatom Bond Forming Coupling Reactions: A Novel Reductive Elimination Reaction"
22. 10/10/95 Boehringer-Ingelheim, Ridgefield, CT, "Palladium-Catalyzed Amination and Thiation of Aromatic Halides"

23. 11/13/95 DuPont Central Research, Wilmington, DE, "Recent Results in the Catalytic Amination of Aryl Halides"
24. 11/14/95 University of Pennsylvania, Philadelphia, PA, "Catalytic and Stoichiometric Organometallic Chemistry involving Compounds with Covalent Metal-Heteroatom Bonds"
25. 01/10/96 Guelph-Waterloo Centre for Graduate Work in Chemistry, Waterloo, Ontario "Catalytic and Stoichiometric Organometallic Chemistry involving Compounds with Covalent Metal-Heteroatom Bonds"
26. 01/11/96 University of Toronto, Toronto, Ontario "Catalytic and Stoichiometric Organometallic Chemistry involving Compounds with Covalent Metal-Heteroatom Bonds"
27. 01/12/96 University of Chicago, Chicago, IL, "Catalytic and Stoichiometric Organometallic Chemistry involving Compounds with Covalent Metal-Heteroatom Bonds"
28. 02/05/96 University of Hamburg, Hamburg, Germany, "Transition Metal Boryl Complexes and Reactions of Organometallic Compounds with Boranes"
29. 02/06/96 University of Göttingen, Göttingen, Germany "Transition Metal Boryl Complexes and Reactions of Organometallic Compounds with Boranes"
30. 02/07/96 University of Bielefeld, Bielefeld, Germany, "Transition Metal Boryl Complexes and Reactions of Organometallic Compounds with Boranes"
31. 02/09/96 University of Heidelberg, Heidelberg, Germany, "Transition Metal Boryl Complexes and Reactions of Organometallic Compounds with Boranes"
32. 02/12/96 University of Aachen, Aachen, Germany, "Transition Metal Boryl Complexes and Reactions of Organometallic Compounds with Boranes"
33. 02/13/96 University of Essen, Essen, Germany, "Transition Metal Boryl Complexes and Reactions of Organometallic Compounds with Boranes"
34. 02/14/96 University of Würzburg, Würzburg, Germany "Transition Metal Boryl Complexes and Reactions of Organometallic Compounds with Boranes"
35. 02/15/96 University of Munich, Munich, Germany, "Transition Metal Boryl Complexes and Reactions of Organometallic Compounds with Boranes"
36. 02/16/96 University of Bayreuth, Bayreuth, Germany, "Transition Metal Boryl Complexes and Reactions of Organometallic Compounds with Boranes"
37. 02/22/96 University of California, Irvine, CA, "Catalytic and Stoichiometric Organometallic Chemistry involving Compounds with Covalent Metal-Heteroatom Bonds"
38. 02/23/96 University of California, San Diego, CA, "Catalytic and Stoichiometric Organometallic Chemistry involving Compounds with Covalent Metal-Heteroatom Bonds"
39. 02/26/96 California Institute of Technology, Pasadena, CA, "Catalytic and Stoichiometric Organometallic Chemistry involving Compounds with Covalent Metal-Heteroatom Bonds"

40. 03/24/96 American Chemical Society National Meeting, New Orleans, LA, "Hydrocarbon Functionalization by Transition Metal Boryl Complexes"
41. 03/25/96 American Chemical Society National Meeting, New Orleans, LA, "N-H Bond Activation by Late Transition Metal Compounds"
42. 05/16/96 Union Carbide, Charleston, WV, Innovative Recognition Award Symposium: "Further Organometallic Chemistry of Transition Metal-Boryl, -Amido, and -Thiolato Complexes"
43. 06/07/96 NSF Workshop in Organometallic Chemistry: Orcas Island, WA, "Organometallic Chemistry of Metal Amide and Boryl Complexes"
44. 07/08/96 Ecole Polytechnique, Palaiseau, France, "Palladium Catalyzed Amination of Aryl Halides: Rational Catalyst Selection Through Mechanistic Understanding"
45. 07/09/96 Université de Rennes, Rennes, France, "Palladium Catalyzed Amination of Aryl Halides: Rational Catalyst Selection Through Mechanistic Understanding"
46. 07/11/96 Université de Strasbourg, Strasbourg, France, "Palladium Catalyzed Amination of Aryl Halides: Rational Catalyst Selection Through Mechanistic Understanding"
47. 07/16/96 Session Lecture, International Meeting on Boron Chemistry, Heidelberg, Germany, "Hydrocarbon Functionalization by Late Metal Boryls and Chemistry of Titanocene-Bound Catecholborane"
48. 08/25/96 American Chemical Society Meeting, Orlando FL, "Catecholborane Bound to Titanocene. A New Class of X-H Sigma Complex"
49. 10/01/96 Organic Seminar, University of Florida, Gainesville, FL, "Palladium Catalyzed Amination of Aryl Halides: Rational Catalyst Selection Through Mechanistic Understanding"
50. 10/15/96 Connecticut College, New London, CT, "Transition Metal-Catalyzed Nucleophilic Aromatic Substitution"
51. 11/19/96 University of Washington, Seattle, WA, "A Rational Approach to Palladium-Catalyzed Amination of Aryl Halides"
52. 11/20/96 University of California, Los Angeles, CA, "A Rational Approach to Palladium-Catalyzed Amination of Aryl Halides"
53. 11/21/96 University of Southern California, Los Angeles, CA, "Catalytic and Stoichiometric Formation of Carbon-Heteroatom Bonds by Transition Metals"
54. 12/02/96 University of Rochester, Rochester, NY, "Catalytic and Stoichiometric Formation of Carbon-Heteroatom Bonds by Transition Metals"
55. 12/16/96 Union Carbide Catalyst Skills Center, South Charleston, WV, "Catalytic and Stoichiometric Formation of Carbon-Heteroatom Bonds by Transition Metals"
56. 03/17/97 University of Wisconsin, Madison, WI, "Catalytic and Stoichiometric Formation of Carbon-Heteroatom Bonds by Transition Metals"
57. 03/19/97 University of Arkansas, Fayetteville, AK, "Catalytic and Stoichiometric Formation of Carbon-Heteroatom Bonds by Transition Metals"

58. 03/20/97 DuPont Central Research, Wilmington, DE, "Metal-Mediated Formation of C-N Bonds"
59. 04/15/97 Invited lecture for session on "Recent Developments in Organopalladium Chemistry," American Chemical Society Meeting, San Francisco, CA, "Synthetic and Mechanistic Aspects of Palladium-Catalyzed Amination and Alkoxylation of Aryl Electrophiles"
60. 06/18/97 Lilly Research Laboratories, Indianapolis, IN, "Palladium Catalyzed Arylation of Amines, Alcohols, and Ketones: Fundamentals and Applications"
61. 09/03/97 University of Connecticut, Storrs, CT, Departmental Seminar "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
62. 10/01/97 Michigan State University, Lansing, MI, Departmental Seminar "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
63. 10/02/97 Notre Dame University, South Bend, IN, Departmental Seminar "Late Metal Boryl and Early Metal Borane Complexes: Alkane Functionalization and sigma-Complexes"
64. 10/17/97 General Electric Research and Development, Schenectady, NY, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
65. 11/12/97 Fifth Chemical Congress of North America, Cancún, Mexico, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
66. 11/12/97 Fifth Chemical Congress of North America, Cancún, Mexico, "Metal Mediated B-C Bond Formation: Metal Boryl and Borane Complexes"
67. 11/25/97 Shell Chemical, Houston, TX, "Hydrocarbon Functionalization with Transition Metal Boryl Complexes"
68. 02/26/98 Department of Chemistry, University of North Carolina, Chapel Hill, NC, "Late Metal Boryl and Early Metal Borane Complexes: Alkane Functionalization and New sigma-Complexes"
69. 03/05/98 Princeton University, Princeton, NJ, Departmental Seminar "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
70. 03/11/98 Department of Chemistry, Stanford University, Stanford, CA, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
71. 04/18/98 Monsanto Organic Symposium, University of Illinois, Urbana-Champaign, IL, "Metal Mediated Aromatic Amination, Thiation, and Etheration: Fundamentals and Applications"
72. 04/27/98 North Jersey American Chemical Society Section "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"

73. 05/08/98 Merck Pharmaceuticals, West Point, PA, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
74. 05/21/98 American Cyanamide, Princeton NJ, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
75. 06/04/98 Department of Energy Symposium, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
76. 06/12/98 Plenary Lecture, Nozaki Conference, Hokkaido, Japan, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
77. 06/14/98 Tsukuba Research Center, Tsukuba, Japan, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
78. 06/15/98 Ajinomoto, Kawasaki, Japan, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
79. 06/16/98 Tosoh Company, Yokkachi, Japan, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
80. 07/09/98 Zeneca Pharmaceuticals, Cheshire, England, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
81. 07/12/98 Keynote Lecture, International Conference on Homogeneous Catalysis, St. Andrews, Scotland, "Metal Mediated Aromatic Amination, Thiation, and Etheration: Fundamentals and Applications"
82. 08/25/98 Cope Scholar Award Seminar, American Chemical Society Meeting, Boston, MA
83. 09/30/98 RW Johnson, Spring House, PA, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
84. 10/06/98 University of Illinois Department of Chemistry, Urbana, IL, R.C. Fuson Visiting Scholar "Synthetic Aspects of Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones", "Mechanistic Aspects of Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones", "Late Metal Boryl and Early Metal Borane Complexes: Alkane Functionalization and New σ -Complexes"
85. 11/04/98 Pfizer Pharmaceuticals, Groton CT, "Palladium and Nickel-Catalyzed Chemistry of Amines, Alcohols and Ketones. Fundamentals and Applications"
86. 12/11/98 Department of Chemistry, University of Virginia, Charlottesville, VA, "Organometallic Chemistry of Catalytic Carbon-Heteroatom and Carbon-Carbon Bond Formation"
87. 12/15/98 Department of Chemistry, Boston College, Boston, MA, "Organometallic Chemistry of Catalytic Carbon-Heteroatom and Carbon-Carbon Bond Formation"
88. 01/11/99 University of California, San Diego, CA, "Two Complementary Approaches to Catalyst Discovery"

89. 02/04/99 Zeneca Pharmaceuticals, Wilmington, DE, "Organometallic Chemistry of Catalytic Carbon-Heteroatom and Carbon-Carbon Bond Formation"
90. 02/11/99 Department of Chemistry, SUNY Stony Brook, Stony Brook, NY, "Organometallic Chemistry of Catalytic Carbon-Heteroatom and Carbon-Carbon Bond Formation"
91. 02/19/99 Department of Chemistry, University of Miami, Miami, FL, "Alkane Functionalization by Metal-Boryl Complexes"
92. 02/22/99 Symyx, Santa Clara, CA, "Two Complementary Approaches to Catalyst Discovery"
93. 03/01/99 Johnson Matthey, Cherry Hill, NJ, "Two Complementary Approaches to Catalyst Discovery"
94. 03/12/99 Bristol-Meyers Squibb, Princeton NJ, "New Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Reactions"
95. 03/21/99 American Chemical Society Meeting, Symposium on C-H Activation, Anaheim CA "Alkane Functionalization by Metal-Boryl Complexes"
96. 03/22/99 American Chemical Society Meeting, Symposium on the Synthesis of Novel Polymeric Materials "Palladium Catalyzed Amination for the Synthesis of Triarylamine Polymers"
97. 04/10/99 Organometallics Conference, Taipei, Taiwan, "Organometallic Chemistry of Catalytic Carbon-Heteroatom and Carbon-Carbon Bond Formation"
98. 05/06/99 ETH, Zurich, Switzerland, "Two Complementary Approaches to Catalyst Discovery"
99. 05/11/99 München Chemical Society, München, Germany, "Two Complementary Approaches to Catalyst Discovery"
100. 05/30/99 Conference on Transition Metals in Catalysis, Toronto, Ontario, Canada, "Organometallic Chemistry of Catalytic Carbon-Heteroatom and Carbon-Carbon Bond Formation"
101. 07/18/99 IUPAC Conference on Organo-Metallic Chemistry Directed Towards Organic Synthesis "New Classes of Palladium-Catalyzed Arylation Reactions"
102. 09/16/99 Rensselaer Polytechnic Institute, Troy, NY, "Selective Alkane Functionalization"
103. 10/08/99 Mini symposium on Organometallic Chemistry, The Danish Chemical Society, Copenhagen, Denmark
104. 10/26/99 University of Michigan, Ann Arbor, MI, "Selective Alkane Functionalization"
105. 10/27/99 Pharmacia & Upjohn, Kalamazoo, MI, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
106. 11/12/99 National Academy of Sciences, Frontiers of Science Conference, "Introduction to Combinatorial Chemistry in Catalysis and Materials Science"
107. 11/28/99 Rhone-Poulenc, Raleigh-Durham NC, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"

108. 12/03/99 University of Maryland at College Park, MD, "Selective Alkane Functionalization"
109. 12/08/99 Louisiana State University, Baton Rouge, LA, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
110. 12/09/99 Cambridge Healthtech Institute, New Orleans, LA, Engineered Catalysis conference "High Throughput Methods For Analysis of C-C and C-N Bond-Forming Processes"
111. 01/19/00 Bristol-Meyers Squibb, Wallingford, CT, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
112. 01/26/00 Roche, Newark, NJ, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
113. 02/10/00 University of Alabama, Tuscaloosa, AL, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
114. 02/25/00 University of Connecticut, Storrs, CT, "Palladium-Catalyzed Synthesis of Arylamine Macromolecules"
115. 02/28/00 Colloquium at Brandeis University, Waltham, MA, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
116. 03/06/00 Ninth Biennial Lilly Grantee Symposium in Organic Chemistry, Indianapolis, IN, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
117. 03/12/00 Columbia University, New York, NY, Departmental Colloquium, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
118. 03/26/00 American Chemical Society National Meeting, San Francisco, CA, Transition Metals in Polymers and Polymerization, "Palladium-Catalyzed Synthesis of Arylamine Macromolecules"
119. 03/26/00 American Chemical Society National Meeting, San Francisco, CA, Combinatorial Catalyst Discovery, "High Throughput Screening for Carbon-Heteroatom and Carbon-Carbon Bond Forming Reactions"
120. 04/16/00 IBC USA Conferences and Sepracor, Naples, FL, New Synthetic Methods, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
121. 04/18/00 Florida Catalysis Conference, Palm Coast, FL, "Metal-Catalyzed Carbon-Heteroatom Bond Formation"
122. 04/27/00 University of Toronto, Toronto, Canada, "Regiospecific Functionalization of Alkanes"
123. 04/28/00 University of Toronto, Toronto, Canada, "New Classes of Transition Metal-Catalyzed Amine, Alcohol, Ketone and Amide Arylations. Mechanism, Methodology and Macromolecules"
124. 06/02/00 Second Annual Boston College-ArQule Symposium on Combinatorial Chemistry "High Throughput Screening for Carbon-Heteroatom and Carbon-Carbon Bond Forming Reactions"

125. 06/13/00 BP-Amoco, Naperville, IL, "Regioselective Functionalization of Alkanes"
126. 06/14/00 Union Carbide, Charleston, WV, "Regioselective Functionalization of Alkanes"
127. 06/20/00 SK Energy and Chemicals, Newark, NJ, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
128. 07/04/00 BASF, Ludwigshafen, Germany, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
129. 07/05/00 LudwigMaximillian University, Munich, Germany, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
130. 07/07/00 Frontiers of Chemistry Symposium, Munich, Germany, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
131. 07/16/00 Gordon Research Conference on Organic Reactions and Processes, Roger Williams University, Bristol, RI, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
132. 07/30/00 Gordon Research Conference on Organometallic Chemistry, Salve Regina University, "Selective Alkane Functionalization"
133. 09/08/00 University of Kentucky, Lexington, KY, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
134. 09/23/00 IASOC-2000: New Challenges of Organic Synthesis in the 21st Century, University of Napoli, Ischia, Italy, "Palladium-Catalyzed C-N, C-O, and C-C Bond Forming Processes and How They Work"
135. 10/06/00 M.I.T. Symposium for Steven Lippard's 60th Birthday, Cambridge, MA, "Selective Alkane Functionalization"
136. 10/18/00 ACS Short-Course on "Chemical Discovery: Catalyst Discovery"
137. 10/20/00 Bristol Myers-Squibb Process Research, New Brunswick, NJ, "High Throughput Screening for Carbon-Heteroatom and Carbon-Carbon Bond Forming Reactions"
138. 10/25/00 Catalytica, Inc., Mountain View, CA, "Transition Metal-Catalyzed Hydroamination"
139. 10/27/00 Department of Chemistry, Stanford University, Stanford, CA, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
140. 10/28/00 Department of Chemistry, University of California, Berkeley, CA, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
141. 11/08/00 Exxon-Mobile, Annandale, NJ, "Selective Alkane Functionalization"
142. 11/10/00 Department of Chemistry, University of Rhode Island, Kingston, RI, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
143. 11/17/00 Department of Chemistry, University of Minnesota, Twin Cities, MN, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
144. 11/27/00 Department of Chemistry, Amherst College, Amherst, MA, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"

145. 12/04/00 Department of Chemistry, University of Upsala, Upsala, Sweden "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
146. 12/05/00 Department of Chemistry, University of Stockholm, Stockholm, Sweden "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
147. 12/16/00 Pacifichem 2000 Symposium on Inorganometallic Chemistry of Group 13-16 Elements, Honolulu, HI, "Selective Alkane Functionalization"
148. 12/17/00 Pacifichem 2000 Symposium on "Selective Transformations with Later Transition Metals", Honolulu, HI
149. 12/18/00 Pacifichem 2000 Symposium on "Synthesis of Heterocycles", Honolulu HI, "Palladium-Catalyzed Aromatic and Saturated Carbon-Heteroatom Bond Formation"
150. 01/12/01 Connecticut Organic Symposium, New Haven, CT, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
151. 02/06/01 Department of Chemistry, University of Houston, TX, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
152. 02/07/01 Department of Chemistry, Texas A&M University, College Station, TX, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
153. 03/05/01 Department of Chemistry, University of Bristol, England, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
154. 03/06/01 Department of Chemistry, University of Southampton, England, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
155. 03/07/01 Department of Chemistry, University College of London, England, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
156. 03/08/01 Department of Chemistry, Merck, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
157. 03/29/01 Department of Chemistry, Northeastern University, Boston, MA, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
158. 04/12/01 Chemistry Departmental Colloquium, Purdue University, West Lafayette, IN, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
159. 04/29/01 Burgenstock Meeting on Stereochemistry "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
160. 05/07/01 Chemistry Department, University of Bern, Switzerland, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
161. 05/08/01 Chemistry Department, University of Freiburg, Switzerland, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
162. 05/09/01 Chemistry Department, University of Genève, Switzerland, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
163. 05/10/01 Chemistry Department, University of Basel, Switzerland, "Transition Metal-Catalyzed Carbon-Heteroatom Bond Formation"

164. 05/11/01 Chemistry Department, University of Basel, Switzerland, "Regioselective Functionalization of Alkanes"
165. 05/17/01 Johnson Matthey Symposium on "Catalysis in Organic Synthesis" "Transition Metal-Catalyzed Carbon-Heteroatom Bond Formation"
166. 05/30/01 Aventis Pharmaceuticals "Discovering and Understanding Transition Metal-Catalyzed Reactions"
167. 06/10/01 National Organic Symposium, Bozeman, MT, "Transition Metal-Catalyzed Carbon-Heteroatom Bond Formation"
168. 07/01/01 Physical Organic Gordon Conference "Mechanistic Aspects of Transition Metal-Catalyzed Carbon-Heteroatom Bond Formation"
169. 07/02/01 Combinatorial Chemistry Gordon Conference "Efficient Discovery and Optimization of Metal-Catalyzed Reactions"
170. 07/27/01 Post-OMCOS Meeting, Kyoto, Japan, "Transition Metal-Catalyzed Carbon-Heteroatom Bond Formation"
171. 08/08/01 Schering Plough, "Transition Metal-Catalyzed Carbon-Heteroatom Bond Formation"
172. 08/27/01 ACS Meeting Symposium on Reactive M-N Bonds "Transition Metal-Catalyzed C-N Bond-Formation"
173. 08/27/01 ACS Meeting Symposium on Homogeneous Catalysis in the Petrochemical Industry "Catalytic, Regioselective Alkane Functionalization"
174. 09/24/01 Harvard University, Cambridge MA, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
175. 10/05/01 University of Nebraska, NE, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
176. 10/11/01 BASF "Recent Trends in Palladium-Catalyzed Processes"
177. 10/17/01 ACS Short Course on "Accelerated Chemical Discovery: From Drugs to Catalysts"
178. 11/05/01 Carl Ziegler Lectureship, Max Planck Institute, Mulheim Germany
179. 11/09/01 Bayer AG, Leverkusen, Germany "Discovering and Understanding Transition Metal-Catalyzed Reactions"
180. 11/19/01 Gerhard Closs Lecturer, University of Chicago, Chicago, IL, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
181. 01/19/02 Pharmacia "Discovering and Understanding New Palladium-Catalyzed Reactions"
182. 01/10/02 Michigan State University, East Lansing, MI, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
183. 01/22/02 McGill University, Montreal, Canada, "Discovering and Understanding Transition Metal-Catalyzed Reactions"

184. 01/24/02 Cornell University, Ithaca, NY, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
185. 01/29/02 Rutgers University, Piscataway, NJ, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
186. 02/07/02 ETH, Zurich, Switzerland, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
187. 02/26/02 University of Colorado, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
188. 03/06/02 Kodak, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
189. 03/07/02 University of New Orleans, New Orleans, LA, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
190. 03/19/02 Wyeth Ayerst, Princeton, NJ, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
191. 04/04/02 University of Massachusetts at Amherst, MA, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
192. 04/07/02 C-H Activation Symposium, ACS Meeting, Orlando, FL, "Regioselective Functionalization of Alkanes"
193. 04/19/02 Albany Molecular, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
194. 04/23/02 University of Wisconsin, Madison, WI, "New Palladium-Catalyzed Coupling Processes"
195. 04/24/02 University of Wisconsin, Madison, WI, "Regioselective Functionalization of Alkanes"
196. 05/02/02 University of Montreal, Canada, Symposium on Organic Synthesis
197. 05/08/02 DuPont Pharmaceuticals, Wilmington, DE, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
198. 05/17/02 University of Toronto, Canada, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
199. 05/22/02 Pharmacia, St. Louis, MO, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
200. 05/31/02 Roche Biosciences, Menlo Park, CA, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
201. 06/01/02 Robert G. Bergman 60th Birthday Symposium, "Regiospecific Functionalization of Alkanes"
202. 06/03/02 Canadian National Chemical Society Meeting, Vancouver, Canada, "Enantioselective Hydroamination"
203. 06/04/02 Canadian National Chemical Society Meeting, Vancouver, Canada, "Regiospecific Functionalization of Alkanes"

204. 06/09/02 Crompton Corp., Middlebury, CT, "Transition Metal-Catalyzed, Regiospecific Functionalization of Alkanes"
205. 09/03/02 International Symposium on Homogeneous Catalysis, Taragonna, Spain
206. 09/12/02 ORCHEM Conference, Frankfurt, Germany, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
207. 09/16/02 Pfizer Symposium, University of California, Irvine, CA, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
208. 09/26/02 ACS Short Course on Accelerated Chemical Discovery "Combinatorial Catalyst Discovery"
209. 10/14/02 Chiral USA, Boston, MA, "Asymmetric Hydroamination and Related Chemistry"
210. 11/06/02 Stanford University, Stanford, CA, "Catalysis without Functional Groups"
211. 11/21/02 Princeton University, Princeton, NJ, "Discovery and Understanding of New Transition Metal-Catalyzed Reactions"
212. 12/11/02 Dow Chemicals, Midland, MI, "Transition Metal-Catalyzed Saturated Carbon-Heteroatom Bond Formation"
213. 01/26/03 WCMBC, Steamboat Springs, CO, "Catalytic, Regiospecific Functionalization of Alkanes and Arenes"
214. 02/06/03 University of Pittsburgh, PA, "Enantioselective Metal-Catalyzed Carbon-Nitrogen Bond Formation"
215. 02/16/03 Gordon Conference, Ventura, CA, "Inorganic Chemistry of Organic Methods"
216. 03/13/03 University of Oklahoma, Norman, OK, Karcher Lecturer, "Catalytic, Regiospecific Functionalization of Alkanes and Arenes"
217. 03/14/03 Array Biopharma, Boulder, CO, "Discovery, development and Understanding of New Palladium-catalyzed Coupling Reactions"
218. 03/17/03 Johnson & Johnson Pharmaceutical Research Institute, La Jolla, CA, "Discovery, Development and Understanding of New Palladium-Catalyzed Coupling Reactions"
219. 03/23/03 ACS Organic Symposium, New Orleans, LA, "Discovery and Understanding of New Transition Metal-Catalyzed Reactions"
220. 04/10/03 Swarthmore College, Swarthmore, PA, "Catalytic, Regiospecific Functionalization of Alkanes and Arenes"
221. 05/09/03 Brown University, Providence, RI, "Enantioselective Metal-Catalyzed Carbon-Nitrogen Bond Formation"
222. 06/25/03 BoehringerIngelheimPharma KG, Biberach, Germany, "Discovery, Development and Understanding of New Transition Metal-Catalyzed Reactions"
223. 06/26/03 Heidelberg Forum of Molecular Catalysis, Heidelberg, Germany, "Discovery, Development and Understanding of New Transition Metal-Catalyzed Reactions"

224. 07/06/03 Organometallic Chemistry in Organic Synthesis, Toronto, Canada, "Discovering and Understanding Transition Metal-Catalyzed Reactions"
225. 07/22/03 ISHHC 11, Evanston, IL, "Catalytic Regiospecific Functionalization of Alkanes and Arenes"
226. 08/19/03 Merck Research Laboratories, West Point, PA, "Discovery and Understanding of New Palladium-Catalyzed Coupling Reactions"
227. 08/20/03 DSM Pharmaceuticals, Greenville, NC, "Discovery and Understanding of New Transition Metal-Catalyzed Arylation and Allylation Reactions"
228. 08/28/03 Case Western Reserve University, Cleveland, OH, "Metal-Catalyzed Regioselective Functionalization of Alkanes and Arenes"
229. 10/16/03 ACS Short Course, Boston, MA, "Catalyst Discovery"
230. 10/31/03 Simon's Rock College, Great Barrington, MA, "Metal-Catalyzed Regioselective Functionalization of Alkanes and Arenes"
231. 11/07/03 SUNY at Buffalo, "Catalytic Regioselective Functionalization of Alkanes and Arenes"
232. 11/17/03 ACS 2003 Baekeland Award Symposium, *recipient*, Morristown, NJ, "Discovery and Understanding of New Transition Metal-Catalyzed Nucleophilic Substitution"
233. 12/15/03 AstraZeneca, Alderley Park, UK, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
234. 12/16/03 Sheffield Stereochemistry 2003, Sheffield, UK, "Discovery and Understanding of New Transition Metal-Catalyzed Reactions"
235. 01/13/04 Schering-Plough, Union, NJ, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
236. 02/12/04 Sasol Lecturer University of Ottawa, Canada, "New Transition Metal-Catalyzed Substitution Reactions"
237. 02/13/04 Sasol Lecturer University of Ottawa, Canada, "Catalytic Regiospecific Functionalization of Alkanes and Arenes"
238. 02/23/04 Indiana University, Bloomington, IN, "New Transition Metal-Catalyzed Substitution Reactions"
239. 03/01/04 ACS ProSpectives, Tampa, FL, "New Transition Metal-Catalyzed Substitution Reactions"
240. 03/08/04 Colorado State University, Fort Collins, CO, "New Transition Metal-Catalyzed Substitution Reactions"
241. 03/19/04 Novartis Horsham Research Centre, W. Sussex, England, "New Transition Metal-Catalyzed Substitution Reactions"
242. 03/28/04 ACS National Meeting, Anaheim, CA, "Mechanisms of Enantioselective Carbon-Heteroatom Bond Forming Reactions"
243. 04/06/04 BoehringerIngelheim Pharmaceuticals, Inc., Ridgefield, CT, "New Transition Metal-Catalyzed Substitution Reactions"

244. 04/30/04 Yale Science Forum, Yale University, New Haven, CT, "Molecular Design of Catalysts"
245. 05/03/04 California Institute of Technology, Pasadena, CA, "Discovery and Development of New Transition Metal-Catalyzed Reactions"
246. 05/12/04 Eastman Chemical Co., Kingsport, TN, "New Metal-Catalyzed Nucleophilic Substitution Reactions"
247. 05/22/04 Catalysis Symposium, Boston College, Boston, MA, "Transition Metal-Catalyzed Synthesis of Amines and Ethers"
248. 05/25/04 OBES Catalysis Contractors Conference, Rockville, MD, "Chemistry of Complexes with Transition Metal-Heteroatom Bonds: Novel Insertion Chemistry and Macromolecule Synthesis"
249. 06/04/04 Vicuron Pharmaceuticals, Inc., Fremont, CA, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
250. 06/08/04 Novartis, Vienna, Austria, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
251. 06/09/04 Novartis, Basel, Switzerland, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
252. 06/22/04 Astra-Zeneca, Montréal, Canada, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
253. 07/12/04 Organometallic Gordon Conference, Newport, RI, "Organometallic Chemistry of Carbon-Heteroatom Bond Formation"
254. 07/30/04 Proctor and Gamble Symposium on Organic Synthesis, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
255. 08/03/04 Thieme-IUPAC Award Lecture, Nagoya, Japan, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
256. 09/16/04 University of Pittsburgh, Pittsburgh, PA, "A Synergy of Synthetic Organic and Organometallic Chemistry"
257. 10/27/04 University of Glasgow, Scotland, "A Synergy of Synthetic Organic and Organometallic Chemistry"
258. 10/29/04 Forum on Asymmetric Synthetic Technology, Edinburgh, Scotland, "A Synergy of Synthetic Organic and Organometallic Chemistry"
259. 11/10/04 MethylGene Lecture, University of Montreal, Canada, "Development of Transition Metal-Catalyzed Substitution Reactions by a Synergy of Organic Organometallic Synthesis"
260. 01/19/05 Student-Invited Lecture, Lehigh University, Bethlehem, PA, "A Synergy of Synthetic Organic and Organometallic Chemistry"
261. 02/11/05 Frank Burnett Dains Memorial Lecture, University of Kansas, Lawrence, KS, "A Synergy of Synthetic Organic and Organometallic Chemistry"
262. 02/23/05 Emory University, Atlanta, GA, "A Synergy of Synthetic Organic and Organometallic Chemistry"

263. 02/24/05 Georgia Tech University, Atlanta, GA, "A Synergy of Synthetic Organic and Organometallic Chemistry"
264. 03/09/05 University of Illinois, Urbana, IL, "A Synergy of Synthetic Organic and Organometallic Chemistry"
265. 04/04/05 University of Victoria, BC, Canada, "A Synergy Between Synthetic Organic and Organometallic Chemistry"
266. 04/05/05 University of Washington, WA, "Activation and Functionalization of C-H and N-H Bonds"
267. 04/14/05 Penn State University, University Park, PA, "Synergy Between Organometallic Synthesis and Organic Methods"
268. 04/25/05 Brandeis University, Waltham, MA, "Synergy Between Organometallic and Organic Synthesis"
269. 05/04/05 Bayer Research Center, West Haven, CT, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
270. 05/19/05 Johnson & Johnson R&D, Springhouse, PA, "Development and Understanding of Transition Metal Coupling Reactions"
271. 05/23/05 MARM Symposium, Rutgers University, NJ, "A Synergy between Synthetic and Organometallic Chemistry"
272. 06/02/05 ICSN Symposium, Gif, France, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
273. 07/13/05 MSM & Chiral USA, Princeton, NJ, "Principles in the Development of New Catalytic Synthetic Methods"
274. 07/18/05 Pfizer, St. Louis, MO, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
275. 09/09/05 Iowa State University, Ames, IA, "Development and Understanding of Transition Metal Catalyzed Reactions"
276. 09/22/05 FAST 2005, Cambridge, UK, "Simple Iridium Catalysts for Allylation Reactions"
277. 10/05/05 University of Loughborough, UK, "Discovery and Understanding of New Transition Metal-Catalyzed Processes"
278. 10/06/05 AstraZeneca R&D, Loughborough, UK, "Developments and Mechanism of Transition Metal-Catalyzed Substitution Reactions"
279. 10/31/05 Smith College, Northampton, MA, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
280. 11/10/05 University of Alberta, Calgary, Canada, "Regioselective, Functionalization of Aryl and Alkyl C-H Bonds"
281. 11/11/05 BSOC Symposium, Banff, Canada, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
282. 11/18/05 DuPont Crop Protection, Wilmington, DE, "Transition Metal-Catalyzed Substitution Reactions"

283. 01/13/06 Queen's University, Ontario, Canada, "A Synergy between Synthetic Organic and Organometallic Chemistry"
284. 01/24/06 FMC Corporation, Princeton, NJ, "A Synergy between Synthetic Organic and Organometallic Chemistry"
285. 02/10/06 AstraZeneca R&D, Waltham, MA, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
286. 02/20/06 University of Chicago, "A Synergy between Synthetic Organic and Organometallic Chemistry"
287. 02/21/06 University of Michigan, Chicago, IL, "A Synergy between Synthetic Organic and Organometallic Chemistry"
288. 03/06/06 Exelexis, S. San Francisco, CA, "A Synergy between Synthetic Organic and Organometallic Chemistry"
289. 03/07/06 Symyx, Santa Clara, CA, "A Synergy between Synthetic Organic and Organometallic Chemistry"
290. 03/10/06 University of California, Berkeley, CA, "The Organometallic Chemistry of Metal-Heteroatom Bonds"
291. 03/28/06 ACS Award in Organometallic Chemistry Lecture, Atlanta, GA, "Organometallic Chemistry of Synthetic Methods"
292. 04/03/06 Harvard University, Cambridge, MA, "Organometallic Chemistry of Carbon-Heteroatom Bonds"
293. 05/01/06 Lilly Research Laboratories, Indianapolis, IN, "Discovery and Understanding of Transition Metal-Catalyzed Substitution Reactions"
294. 05/10/06 Merck, Rahway, NJ, "Discovery and Understanding of New Transition Metal-Catalyzed Substitution Reactions"
295. 05/11/06 Ohio State University, Columbus, OH, "Organometallic Chemistry of Metal-Heteroatom Bonds"
296. 06/19/06 Gordon Research Conference on Stereochemistry, Smithfield, RI, "Enantioselective Substitution Reactions"
297. 06/30/06 Reaction Mechanisms Conference, Baltimore, MD, "Organometallic Chemistry of Synthetic Methods"
298. 07/16/06 Gordon Research Conference on Reaction Processes, Smithfield, RI, "Transition Metal-Catalyzed Substitution Reactions"
299. 07/24/06 ICOMC, Zaragoza, Spain, Plenary Lecture, "The Organometallic Chemistry of Carbon-Heteroatom Bonds"
300. 09/26/06 Abbott Laboratories, North Chicago, IL, "Transition Metal-Catalyzed Substitution Reactions"
301. 12/06/06 UC Riverside, Riverside, CA, "The Organometallic Chemistry of Carbon-Heteroatom Bonds"
302. 12/07/06 Amgen, Thousand Oaks, CA, "Transition Metal-Catalyzed Substitution Reactions"

303. 01/26/07 Connecticut Organic Symposium, New Haven, CT, "Discovery and Understanding of Transition Metal-Catalyzed Reactions"
304. 03/12/07 Phi Lambda Upsilon 47th Friend E. Clark Lecture, West Virginia University, Morgantown, WV, "Catalyst Design in Chemistry and Beyond"
305. 03/13/07 Phi Lambda Upsilon 47th Friend E. Clark Lecture, West Virginia University, Morgantown, WV, "Organometallic Chemistry of Metal-Heteroatom Bonds"
306. 04/8/07 Southern Illinois University, Carbondale, IL, "Organometallic Chemistry of Metal-Heteroatom Bonds"
307. 04/19/07 FAST 2007, Cambridge, UK, "Enantioselective Palladium- and Iridium-Catalyzed Substitution Reactions"
308. 05/07/07 University of Pennsylvania, Philadelphia, PA, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
309. 05/14/07 First Idecate Conference on Catalysis, Porquerolles, France, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
310. 05/16/07 Rennes University, France, "Catalytic, Selective Functionalization of C-H Bonds"
311. 05/21/07 Plenary Lecture, GECOM-CONCOORD Symposium, Plancoët, France, "Organometallic Chemistry of Metal-Heteroatom Bonds"
312. 06/28/07 Tetrahedron Young Investigator in Organic Synthesis Award Lecture, Berlin, Germany, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
313. 08/14/07 Plenary Lecture, ICHAC, University of California, Riverside, CA, "Organometallic Chemistry of Metal-Heteroatom Bonds"
314. 08/20/07 Fall 2007 ACS Meeting, Symposium Lecture, Boston, MA, "Development and Understanding of Metal-Catalyzed Substitution Reactions"
315. 09/18/07 Organic Division, French Chemical Society Meeting, Palaiseau, France, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
316. 09/27/07 Pittcon Lecture, University of Pittsburgh, PA, "Catalyst Design in Chemistry and Beyond"
317. 09/28/07 Pittcon Lecture, University of Pittsburgh, PA, "Organometallic Chemistry of Metal-Heteroatom Bonds"
318. 10/12/07 Roche Biosciences, Palo Alto, CA, "Catalytic, Selective Functionalization of C-H Bonds"
319. 10/12/07 22nd Annual W.S. Johnson Symposium in Organic Chemistry, Stanford University, CA, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
320. 10/26/07 Organic Chemistry Seminar, Hoffmann-LaRoche, Nutley, NJ, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
321. 10/26/07 Organic Chemistry Seminar, Princeton University, NJ, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
322. 11/09/07 Organic Chemistry Seminar, University of Texas at Austin, TX, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"

323. 11/15/07 Plenary Lecture, International Conference on Synergistic Effects for Creation of Functional Molecules, Tokyo, Japan, "Organometallic Chemistry of Carbon-Heteroatom Bonds"
324. 11/16/07 Organic Synthesis Lecture, Symposium in Optically Active Compounds, Tokyo, Japan, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
325. 1/17/08 Small Molecule Drug Discovery, Antigua, West Indies, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
326. 02/12/08 Cambridge Majors Laboratories, Germantown, WI, "Transition Metal-Catalyzed Substitution Reactions"
327. 02/18/08 Frontiers in Chemical Research, Texas A&M University, College Station, TX, "Selective C-H Bond Functionalization"
328. 02/19/08 Frontiers in Chemical Research, Texas A&M University, College Station, TX, "Iridium-Catalyzed Enantioselective Allylation"
329. 02/20/08 Frontiers in Chemical Research, Texas A&M University, College Station, TX, "Palladium-Catalyzed Processes"
330. 03/17/08 Frontiers in Chemistry Departmental Seminar, Wayne State University, Detroit, MI, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
331. 04/2/08 Rylander Award, Richmond, VA, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
332. 04/14/08 Gassman Lecture, University of Minnesota, Minneapolis, MN, "New Catalytic Coupling Processes"
333. 04/15/08 Gassman Lecture, University of Minnesota, Minneapolis, MN, "Catalytic Hydroamination of Alkenes"
334. 04/16/08 Gassman Lecture, University of Minnesota, Minneapolis, MN, "Regioselective Functionalization of Alkanes"
335. 04/18/08 Comps Lecture, Carleton College, Northfield, MN, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
336. 05/1/08 Student-Invited Lecture, Columbia University, NY, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
337. 05/2/08 Merck Pharmaceuticals, West Point, PA "New Palladium-Catalyzed Coupling Processes"
338. 06/10/08 Plenary Lecture, French-American Chemical Society Meeting, Santa Barbara, CA, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
339. 06/30/08 Plenary Lecture, BalticumOrganicumSynthetum Conference, Vilnius, Lithuania, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
340. 07/15/08 Belgian Organic Synthesis Symposium, Gent, Belgium, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
341. 07/18/08 International Catalysis Award Lecture, Seoul, Korea, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"

342. 09/08/08 Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, China, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
343. 09/10/08 Mukiyama Award Lecture, 25th Seminar on Synthetic Organic Chemistry, Kyushu, Japan, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
344. 09/11/08 Ajinomoto AminoScience Laboratories, Kawasaki, Japan, "New Developments in Palladium-Catalyzed Cross-Coupling Reactions"
345. 09/19/08 30th Annual Princeton ACS Fall Organic Chemistry Symposium, NJ, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
346. 11/12/08 Grinnell College, IA, "Catalysts: Importance and Design"
347. 11/18/08 Graduate Colloquium, Northern Illinois University, DeKalb, IL, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
348. 01/08/09 Peking University, China, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
349. 02/03/09 Peter C. Reilly Lecture, Notre Dame University, IN, "The Status of Catalyst Design. Case Studies on C-N Bond Formation"
350. 02/04/09 Peter C. Reilly Lecture, Notre Dame University, IN, "Practical, Catalytic, Regioselective C-H Bond Functionalization"
351. 02/05/09 Peter C. Reilly Lecture, Notre Dame University, IN, "Progress on Olefin Hydroamination"
352. 02/18/09 UC Irvine-Novartis Lecture, CA, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
353. 02/26/09 47th Annual Mack Award Lecture, Ohio State University, "Catalyst Design"
354. 02/27/09 47th Annual Mack Award Lecture, Ohio State University, "Catalytic Regioselective Functionalization of Alkanes and Arenes"
355. 03/11/09 Mitsui Chemicals Catalysis Science Award Lecture, Tokyo, Japan, "Discovery and Development of New Coupling and C-H Bond Functionalization Reactions"
356. 03/17/09 Amgen, Inc., Cambridge, MA, "Recent Developments in the Coupling and C-H Bond Functionalization of Arenes"
357. 03/18/09 Student-Invited Speaker, MIT Inorganic Seminar Series, Cambridge, MA, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
358. 04/17/09 California Institute of Technology, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
359. 04/20/09 Schulich Visiting Professor Lectureship, Organic Chemistry Seminar, Technion-Israel Institute of Technology, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
360. 04/22/09 Dean's Podium Talk, Ben Gurion University of the Negev, Israel, "The Status of Catalyst Design: A Case Study of C-N Cross Coupling"

361. 04/23/09 Schulich Visiting Professor Lectureship, Schulich Colloquium, Technion-Israel Institute of Technology, "The Status of Catalyst Design: A Case Study of C-N Cross Coupling"
362. 05/06/09 2009-2010 RSC Joseph Chatt Lectureship, University of York, UK, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
363. 05/07/09 2009-2010 RSC Joseph Chatt Lectureship, University of Manchester, UK, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
364. 05/09/09 Plenary Lecture, 19th Lakeland Heterocyclic Symposium, UK, "Catalytic Organometallic Carbon Heteroatom Bond Formation: C-H Bond Functionalization and Allylic Substitution Relevant to Heterocyclic Chemistry"
365. 05/11/09 Sygenta, Jealott's Hill, UK, "Recent Developments in the Coupling and C-H Bond Functionalization of Arenes"
366. 06/02/09 Plenary Lecture, 92nd Canadian Chemistry Conference, Hamilton, Ontario, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
367. 06/18/09 10th International Isotope Society Meeting, Chicago, "Isotopes as Part of Catalytic Selective C-H Bond Functionalization"
368. 06/24/09 18th EuCheMS Conference on Organometallic Chemistry, Göteborg, Sweden, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
369. 07/13/09 Organometallic Chemistry Gordon Research Conference, Newport, RI, "Organometallic Chemistry of Synthetic Methods"
370. 07/27/09 Natural Products Gordon Research Conference, Tilton, NH, "Discovery and Understanding of Transition Metal-Catalyzed Reactions for Organic Synthesis"
371. 08/04/09 22nd International Congress on Heterocyclic Chemistry, St. John's, Canada, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
372. 10/27/09 2009 Welch Conference on Chemical Research, Houston, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
373. 11/17/09 Visiting Miller Professor Lecture, University of California, Berkeley, "Organometallic Chemistry of Synthetic Methods"
374. 02/05/10 Beling Lecture Series, Illinois Wesleyan University, "Catalysts by Design"
375. 02/11/10 University of California, Los Angeles, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
376. 02/12/10 Roche Lectureship, Scripps Research Institute, FL, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
377. 03/03/10 11th Netherlands Catalysis and Chemistry Conference, Noordwijkerhout "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
378. 03/04/10 16th PAC-Symposium, Amsterdam, "Making Sense of Homogeneous Catalysis—Understanding the Formation of Carbon-Heteroatom Bonds with Organometallic Catalysis"
379. 03/23/10 Spring 2010 ACS Meeting, Symposium Lecture, San Francisco, CA, "Organometallic Chemistry of Synthetic Methods"

380. 03/25/10 Lectures in Modern Chemistry, University of British Columbia, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
381. 04/16/10 Symposium on Organotransition Metal Chemistry, University of Illinois, Urbana, IL, "A Perspective on Twenty Years of Organometallics and Contributions to the Past Ten"
382. 05/05/10 Howard Lecture, University of Sydney, "Catalytic Regioselective Functionalization of Alkanes and Arenes"
383. 05/06/10 Howard Lecture, University of New South Wales, "Development and Understanding of Cross-Coupling Reactions"
384. 06/02/10 DoE BES Contractors' Meeting, Annapolis, "Chemistry of Complexes with Transition Metal-Heteroatom Bonds: Novel Insertion Chemistry and X-H Bond Activation"
385. 06/18/10 Sepracor, Marlborough, MA, "Discovery and Development of Transition Metal-Catalyzed Reactions"
386. 06/21/10 Heterocyclic Compounds Gordon Research Conference, Newport, RI, "Catalytic Processes for the Derivatization of Heterocycles"
387. 06/24/10 BMS, Wallingford, CT "Discovery and Understanding of Transition Metal-Catalyzed Reactions"
388. 07/14/10 1st International Conference on Molecular & Functional Catalysis, Singapore, "Recent Developments in the Transition Metal Catalyzed Borylation of C-H and C-X Bonds"
389. 07/15/10 Nanyang Technological University, Singapore, "Iridium-Catalyzed Enantioselective Allylic Substitution"
390. 08/22/10 Fall 2010 ACS Meeting, Symposium in Memory of Keith Fagnou, Boston, MA, "Mechanistic Aspects of Cross-Coupling Reactions that form C-C Bonds"
391. 08/22/10 Fall 2010 ACS Meeting, JOC 75th Anniversary Session, Boston, MA, "Catalytic Organometallic Carbon-Heteroatom Bond Formation"
392. 08/23/10 Fall 2010 ACS Meeting, Commemoration of the Founding of the ACS Journal Organometallics, Boston, MA, "Organometallic Chemistry of Synthetic Methods"
393. 08/23/10 Fall 2010 ACS Meeting, Inorganic Chemistry Symposium, Boston, MA, "Catalytic, Selective C-H Bond Functionalizations with Main Group Reagents"
394. 09/24/10 GSK Chemistry Symposium, Durham, NC, "Discovery and Understanding of Transition Metal-Catalyzed Reactions"
395. 09/30/10 Philadelphia Organic Chemists' Club, "Understanding Transition Metal-Catalyzed Reactions"
396. 10/26/10 PKU-Lilly Symposium, Beijing, China, "Discovery and Understanding of New Transition Metal-Catalyzed Reactions"
397. 11/04/10 Loyola University, Chicago, IL, "Catalyst by Design"

398. 12/08/10 Inaugural KAUST Symposium on Catalysis, Saudi Arabia, "Discovery and Understanding of Transition Metal-Catalyzed Reactions"
399. 01/25/11 10th Winter Conference on Medicinal and Biochemistry Chemistry, Steamboat Springs, CO, "Catalytic Chemistry of Arenes"
400. 03/07/11 12th Annual Florida Heterocyclic and Synthetic IUPAC-Sponsored Conference (FLOHET), Gainesville, FL, "Catalytic Transformations of Arenes"
401. 03/08/11 Student-Invited Speaker, Scripps Florida Distinguished Lecture Series, Jupiter, FL, "Catalytic Transformations of Arenes"
402. 03/09/11 Invited Speaker, Emory University, Atlanta, GA "Catalytic Transformations of Arenes"
403. 03/24/11 Student Hosted Colloquium, University of Southern California, Los Angeles, "Selective Catalytic Functionalization of Aryl and Alkyl C-H Bonds"
404. 03/30/11 Spring 2011 ACS Meeting, Division of Organic Chemistry, Anaheim, CA, "Catalytic Modification of Arenes"
405. 04/27/11 AstraZeneca, Alderly Park, UK "Catalytic Modification of Arenes"
406. 04/28/11 11th Bristol Synthesis Meeting, Bristol, UK "Catalytic Modification of Arenes"
407. 06/06/11 Canadian Society for Chemistry Conference, Keith Fagnou Memorial Symposium "Catalytic Modification of arenes"
408. 06/16/11 Cambridge Major Laboratories, Milwaukee, WI "Catalytic Modification of Arenes"
409. 06/28/11 CHAOS23, Czech Republic "Catalytic Modification of Arenes"
410. 07/01/11 Technical University of Berlin, Einstein Fellowship Lecture "The State of Catalyst Design"
411. 07/21/11 ICIQ Summer School, Tarragona, Spain "The State of Catalyst Design"
412. 07/22/11 ICIQ Summer School, Tarragona, Spain "Selective Functionalization of Aliphatic and Aromatic C-H Bonds"
413. 07/25/11 Spanish National Meeting, Madrid, Spain "Selective Functionalization of Aliphatic and Aromatic C-H Bonds"
414. 08/27/11 NSF Workshop on Catalysis "The State of Catalyst Design"
415. 08/28/11 ACS National Meetings, Denver, CO, Symposium on Catalysis Needs for Drug Discovery, Development, and Commercialization "Perspectives from summarizing twenty-two years of organometallic catalysis"
416. 08/29/11 ACS National Meetings, Denver, CO, Symposium on Frontiers in C-H Activation and Functionalization "Selective Functionalization of Aliphatic and Aromatic C-H Bonds"
417. 08/30/11 ACS National Meetings, Denver, CO, Symposium on Recycling Carbon: Catalyzed Conversion of Non-food Biomass to Fuels and Chemicals "Catalytic reductions of aromatic C-O bonds"

418. 09/12/11 University of Washington, Seattle, WA, Hydrocarbon Amination for Fine Chemical Synthesis, Overview of CENTC Research in the Area
419. 09/15/11 International Conference on the Interface of Homogeneous and Heterogeneous Catalysis, Berlin, Germany, Plenary Lecture "Catalytic Transformations of Arenes"
420. 10/05/11 Department of Energy, Washington D.C., Catalysis Lab Coordination Meeting
421. 10/12/11 Merck & Co., Inc., Rahway, NJ, "Catalytic Modification of Arenes"
422. 10/13/11 Merck & Co., Inc., Boston, MA, "Catalytic Modification of Arenes"
423. 11/02/11 Royal Society of Chemistry, London, England, "Catalytic Modification of Arenes"
424. 11/14/11 Energy Biosciences Institute, Berkeley, CA, "Catalytic Carbon-Oxygen Bond Cleavage for Upgrading Biomass"
425. 11/17/11 R. A. Walton Lecture, Purdue University, West Lafayette, IN, "Selective Functionalization of Alkyl Aryl C-H Bonds"
426. 11/28/11 GlaxoSmithKline, Durham, NC, Catalysis Short Course Parts 1 and 2
427. 11/29/11 GlaxoSmithKline, Durham, NC, Catalysis Short Course Parts 3 and 4
428. 12/13/11 Gilead Sciences, Inc., Foster City, CA, "Catalytic Functionalization of Aryl and Alkyl C-H Bonds"
429. 03/06/12 University of California, Davis, CA, "Catalytic Modification of Arenes and Alkanes"
430. 03/26/12 ACS National Meetings, San Diego, CA, ACS Award in Pure Chemistry, "Inorganic Chemistry of Synthesis Methods"
431. 04/09/12 Cambridge Major Laboratories, Foster City, CA, Chemistry Trends in the Pharmaceutical Market Symposium "Catalytic C-H Bond Functionalization and Coupling Reactions"
432. 04/11/12 Moses Gomberg Lecture, University of Michigan, Ann Arbor, MI, "Catalytic Functionalization of Alkanes and Arenes"
433. 04/23/12 Behringer-Simon Lecture, Swiss Federal Institute of Technology (ETH) Zürich, Switzerland, "Catalytic Modification of Arenes"

Ph.D. Theses:

1. Marquard, Seth September 2011, "Reductive Elimination to Form sp^3 -C-N Bonds" Ph.D. dissertation, University of Illinois at Urbana-Champaign, IL.
2. Carrow, Brad P. January 2011. "Mechanistic Studies on Palladium-Catalyzed Coupling Reactions." Ph.D. dissertation, University of Illinois at Urbana-Champaign, IL.
3. Vo, Giang D. September 2010. "Development and Mechanistic Investigation of the Palladium-Catalyzed α -Arylation of Aldehydes and *N*-Arylation of Ammonia." Ph.D. dissertation, University of Illinois at Urbana-Champaign, IL.

4. Pouy, Mark P. October 2009. "Studies on Iridium-Catalyzed Allylic Substitution." Ph.D. dissertation, Yale University, New Haven, CT.
5. Murphy, Jaclyn M. May 2009. "The Synthesis of Organoboron Compounds by Metal-Catalyzed C-H Borylation of Alkanes and Arenes." Ph.D. dissertation, Yale University, New Haven, CT.
6. Johns, Adam M. 2007. "Advances in Palladium-Catalyzed Hydroamination: Improvements in Rates, Scope, and Regioselectivity, Thermodynamic Measurements, and Mechanistic Investigations." Ph.D. dissertation, Yale University, New Haven, CT.
7. Barrios-Landeros, Fabiola. 2007. "Oxidative Addition of Haloarenes by Pd(O) Complexes of Bulky Alkyl Phosphines: Synthesis of Intermediates and Mechanistic Studies." Ph.D. dissertation, Yale University, New Haven, CT.
8. Shen, Qilong. December 2007. "A Highly Reactive, General, and Long-Lived Catalyst for Palladium-Catalyzed Amination of Heteroaryl and Aryl Halides." Ph.D. dissertation, Yale University, New Haven, CT.
9. Shekar, Shashank. 2006. "Understanding the Mechanisms of Carbon-Carbon and Carbon-Nitrogen Bond Forming Processes in Catalytic Reactions." Ph.D. dissertation, Yale University, New Haven, CT.
10. Zhao, Jing. 2004. "Beta-Hydrogen Elimination from Late Transition Metal Alkoxide Complexes, N-H Bond Forming Reductive Elimination, and N-H Oxidative Addition to Late Transition Metal Complexes," Ph.D. dissertation, Yale University, New Haven, CT.
11. Culkin, Darcy A. 2004. "Synthesis and Reactivity of Palladium Complexes of Functionalized Alkyls. Selection of Catalysts for the alpha-Arylation of Nitriles and Amides," Ph.D. dissertation, Yale University, New Haven, CT.
12. Krug, Christopher P. 2004. "Novel Insertion Reactions of Aldehydes, Imines and Alkenes of Aryl Amido Complexes of Rhodium(I) and Nickel(II)," Ph.D. dissertation, Yale University, New Haven, CT.
13. Stambuli, James P. 2003. "Discovery and Development of transition Metal Catalysts for Carbon-Carbon and Carbon-Heteroatom Bond Formation: Isolation and Reactivity of Catalytic Intermediates," Ph.D. dissertation, Yale University, New Haven, CT.
14. Roy, Amy H. 2003. "Oxidative Addition of Aryl Halides and Sulfonates to Palladium(0) and Reductive Elimination of Aryl Halides and Diaryl Ethers from Palladium(II): Mechanistic Investigation and Synthetic Applications," Ph.D. dissertation, Yale University, New Haven, CT.
15. Anastasi, Natia. 2002. "Borylation of Arenes Catalyzed by Transition Metal Complexes," Ph.D. dissertation, Yale University, New Haven, CT.
16. Alcazar-Roman, Luis. 2001. "Mechanism of the Palladium-Catalyzed Amination of Aryl Halides: Kinetic Studies of the Oxidative Addition of Aryl Halides and Sulfonates to

Phosphine Complexes of Pd(0) and of the Catalytic Reaction of Amines with Aryl Halides and Base,” Ph.D. dissertation, Yale University, New Haven, CT.

17. Waltz, Karen M. 2000. “Functionalization of Hydrocarbons by Transition-Metal Boryl Complexes,” Ph.D. dissertation, Yale University, New Haven, CT.
18. Muhoro, Clare N. 1999. “Titanocene Borane Sigma Complexes and the Catalytic Hydroboration of Alkenes and Alkynes by Titanium(II) Complexes,” Ph.D. dissertation, Yale University, New Haven, CT.
19. Mann, Grace. 1999. “Palladium-Mediated C-S, C-N, and C-O Bond Formation: Reductive Elimination and Catalytic Reactions,” Ph.D. dissertation, Yale University, New Haven, CT.
20. Louie, Janis. 1998. “Palladium-Catalyzed Aryl Amination: Mechanism, Methodology, and Synthetic Applications,” Ph.D. dissertation, Yale University, New Haven, CT.
21. Driver, Michael S. 1997. “Late Transition Metal Amido and Pyrrolyl Complexes: Reductive Eliminations, Nitrogen-Hydrogen Bond Activations, and Catalytic Aminations,” Ph.D. dissertation, Yale University, New Haven, CT.

Publications:

1. Hartwig, J.F.; Jones, M. Jr; Moss, R.A.; Lawrynowicz, W. “A Photochemical Source of Dibromo- and Dichlorocarbene. A Cautionary Tale Regarding the Stereochemistry of Dibromocarbene Addition Reactions” *Tetrahedron Lett.* **1986**, *27*, 5907.
2. Sato, T.; Konosu, M.; Hartwig, J.F. “Adsorption of Butachlor to Soils” *J. Agric. and Food Chem.* **1987**, *35*, 397.
3. Hartwig, J.F.; Andersen, R.A.; Bergman, R.G. “Synthesis of a Highly Reactive (Benzyne)ruthenium Complex: C-C, C-H, N-H, and O-H Activation Reactions” *J. Am. Chem. Soc.* **1989**, *111*, 2717.
4. Hartwig, J.F.; Bergman, R.G.; Andersen, R.A. “Mechanism of the Carbon-Carbon Cleavage of Acetone by the Ruthenium Benzyne Complex (PM₃)₄Ru(h²-C₆H₄): Formation and Reactivity of an Oxametallacyclobutane Complex” *J. Am. Chem. Soc.* **1990**, *112*, 3432.
5. Hartwig, J.F.; Andersen, R.G.; Bergman, R.G. “Synthesis of Ruthenium Enolate (PMe₃)₄Ru(Me)(OC(CH₂)Me) as an Equilibrium Mixture of Oxygen- and Carbon-Bound Transition-Metal Enolates. Thermal Elimination of Methane to Form an h⁴-oxatrimethylenemethane complex.” *J. Am. Chem. Soc.* **1990**, *112*, 5670-5671.
6. Hartwig, J.F.; Andersen, R.A.; Bergman, R.G. “A Phosphorus-Carbon Bond Cleavage Reaction of Ruthenium Coordinated Trimethylphosphine in (PMe₃)₄Ru(OC₆H₄Me)₂” *J. Organomet. Chem.* **1990**, *394*, 417. F.G.A. Stone Anniversary Issue.
7. Hartwig, J.F.; Bergman, R.G.; Andersen, R.A. “Structure, Synthesis, and Chemistry of Ruthenium Complex (PMe₃)₄Ru(eta²-Benzyne). Reactions with Arenes, Alkenes, and Heteroatom-Containing Organic Compounds. Synthesis and Structure of a Monomeric Hydroxide Complex.” *J. Am. Chem. Soc.* **1991**, *113*, 3404.

8. Hartwig, J.F.; Andersen, R.A.; Bergman, R.G. "Synthesis and Chemistry of Ruthenium Hydrido Aryloxides and Arylamides. An Investigation of Structure, Nitrogen-Hydrogen and Oxygen-Hydrogen Elimination Processes, Proton-Catalyzed Exchange Reactions, and Relative Ru-X Bond Strengths." *Organometallics* **1991**, *10*, 1875.
9. Hartwig, J.F.; Andersen, R.A.; Bergman, R.G. "Alkyl, Aryl, Hydrido, and Acetate Complexes of (DMPM)₂Ru [DMPM=*bis*(dimethylphosphino)methane]: Reductive Elimination and Oxidative Addition of Carbon-Hydrogen Bonds." *Organometallics* **1991**, *10*, 1710.
10. Hartwig, J.F.; Andersen, R.A.; Bergman, R.G. "Inter- and Intramolecular C-H Bond Forming and Cleavage Reactivity of Two Different Types of Poly(trimethylphosphine)-ruthenium Intermediates." *J. Am. Chem. Soc.* **1991**, *113*, 6492.
11. Hartwig, J.F.; Bergman, R.G.; Andersen, R.A. "Insertion Reactions of CO and CO₂ with Ruthenium Benzyl Arylamido, and Aryloxo Complexes: A Comparison of the Reactivity of Ruthenium-Carbon, Ruthenium-Nitrogen, and Ruthenium-Oxygen Bonds." *J. Am. Chem. Soc.* **1991**, *113*, 6499.
12. Hartwig, J.F.; Bergman, R.G.; Andersen, R.A. "Oxygen- and Carbon-Bound Ruthenium Enolates: Migratory Insertion, Reductive Elimination, β -Hydrogen Elimination, and Cyclometallation Reactions." *Organometallics* **1991**, *10*, 3326.
13. Hartwig, J.F.; Bergman, R.G.; Andersen, R.A. "Structure and Reactions of Oxametallacyclobutanes and Oxometallocyclobutenes of Ruthenium." *Organometallics* **1991**, *10*, 3344.
14. Hartwig, J.F.; Lippard, S.J. "DNA Binding Properties of [Pt(NH₃)(C₆H₁₁NH₂)(Cl)₂], a Metabolite of an Orally Active Platinum Anticancer Drug" *J. Am. Chem. Soc.* **1992**, *114*, 5646.
15. Hartwig, J.F.; Pil, P.M.; Lippard, S.J. "Synthesis and DNA Binding Properties of a Cisplatin Analogue Containing a Tethered Dansyl Group" *J. Am. Chem. Soc.* **1992**, *114*, 8292.
16. Burn, M.J.; Fickes, M.G.; Hartwig, J.F.; Hollander, F.J.; Bergman, R.G. "Synthesis of Monomeric Ruthenium Hydroxo Complexes (PMe₃)₄Ru(R)(OH) (R=H, Me) and a Unique Dimeric Ruthenium Hydroxo Water Complex [*trans*-Ru(H)(OH)(DMPE)₂·H₂O]₂" *J. Am. Chem. Soc.* **1993**, *115*, 5875.
17. Hartwig, J.F.; Huber, S. "Transition Metal Boryl Complexes: Structure and Reactivity of CpFe(CO)₂Bcat and CpFe(CO)₂BPh₂" *J. Am. Chem. Soc.* **1993**, *115*, 4908.
18. Hartwig, J.F.; Bhandari, S. "Addition of Catecholborane to a Ruthenium-Alkyl: Evidence for sigma-Bond Methathesis with a Low Valent, Late Transition Metal" *J. Am. Chem. Soc.* **1994**, *116*, 1839.
19. Hartwig, J.F.; Huber, S. "A Continuum Resulting from Equilibrium between Two Structural Extremes in Tungstenocene and Niobocene Boryl and Hydridoborate Complexes. pi-Bonding in a d² Boryl System and the First d⁰ Boryl Complex" *J. Am. Chem. Soc.* **1994**, *116*, 3661.
20. Rablen, P.D.; Hartwig, J.F.; Nolan, S.P. "First Transition Metal-Boron Bond Energy and Quantitation of Large Differences in Sequential BDEs in Boranes" *J. Am. Chem. Soc.* **1994**, *116*, 4121.

21. Paul, F.; Patt, J.; Hartwig, J.F. "Palladium-Catalyzed Formation of Carbon-Nitrogen Bonds. Reaction Intermediates and Catalyst Improvements in the Hetero Cross-Coupling of Arylhalides and Tin Amides" *J. Am. Chem. Soc.* **1994**, *116*, 5969.
22. Barañano, D.; Hartwig, J.F. "Carbon-Heteroatom Reductive Elimination: Mechanism and Electronic Effects" *J. Am. Chem. Soc.* **1995**, *117*, 2937.
23. Driver, M.S.; Hartwig, J.F. "A Rare Low Valent Alkylamido Complex, a Diphenylamido Complex and Their Reductive Elimination of Amines by Three-Coordinate Intermediates" *J. Am. Chem. Soc.* **1995**, *117*, 4708.
24. Paul, F.; Patt, J.; Hartwig, J.F. "Structural Characterization and Simple Synthesis of Bis-*o*-TolylphosphinePalladium(0). Spectroscopic and Structural Characterization of the Dimeric Palladium(II) Complexes Obtained by Oxidative Addition of Aryl Bromides and their Reactivity with Amines" *Organometallics* **1995** *14*, 3030.
25. Hartwig, J.F.; Paul, F. "Dissociative Oxidative Addition of Aryl Bromides with 14-electron Bis-*o*-TolylphosphinePalladium(0)" *J. Am. Chem. Soc.* **1995**, *117*, 5373.
26. Louie, J.; Hartwig, J.F. "Synthesis of Arylamines from Aryl Halides: Mechanistic Studies Lead to Coupling in the Absence of Tin" *Tetrahedron Lett.* **1995**, *36*, 3609.
27. He, X.; Hartwig, J.F. "Boryls of the Classic Iron Carbonyl System. The First Anionic Boryl Complex, a Rare Bis-Boryl Complex, and Their Structural and Reaction Chemistry," *Organometallics* **1995**, *15*, 400.
28. Louie, J.; Hartwig, J.F. "Transmetalation involving Organotin Aryl, Thiolate, and Amides. An Unusual Type of Dissociative Ligand Substitution Reaction" *J. Am. Chem. Soc.* **1995**, *117*, 11598.
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