Curriculum Vitae
Jin-Quan Yu

APPOINTMENT

The Scripps Research Institute
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2021	Bristol Myers Squibb Endowed Chair in Chemistry
2012	Frank and Bertha Hupp Professor of Chemistry
2010	Professor of Chemistry, The Scripps Research Institute
2007	Associate Professor of Chemistry, The Scripps Research Institute
2004	Assistant Professor of Chemistry, Brandeis University
2003	Royal Society Research Fellow, University of Cambridge, UK

EDUCATION

2001 – 2002	Postdoctoral Fellow *Advisor*: Professor E. J. Corey Harvard University, Cambridge, Massachusetts
1994 – 1999	Ph.D. in Organic Chemistry *Advisor*: Professor J. B. Spencer Cambridge University, Cambridge, United Kingdom
1988 – 1990	M.S. in Organic Chemistry *Advisor*: Professor S. D. Xiao Guangzhou Institute of Chemistry Chinese Academy of Sciences, Guangzhou, China
1982 – 1987	B.S. in Chemistry *Thesis Advisor*: Professors L. X. Dai, B. Q. Wu, East China Normal University Shanghai Institute of Organic Chemistry

Chinese Academy of Sciences, Shanghai, China

AWARDS AND HONORS

2025	5th Akira Suzuki Award, Japan
2024	Award for Creativity in Molecular Design and Synthesis, ACS North Jersey Section, New Jersey
2024	Chemical Pioneer Award – American Institute of Chemists
2024	IPMI Henry J. Albert Award, BASF
2024	Yamada-Koga Prize, Tokyo University
2024	Tishler Prize, Harvard University
2023	Morris S. Kharasch Lecturer, University of Chicago
2022	Hamilton Award, University of Nebraska-Lincoln
2022	ACS Gabor A. Somorjai Award for Creative Research in Catalysis
2021	Bristol Myers Squibb Endowed Chair in Chemistry
2019	Member of the American Academy of Arts and Sciences
2017	Pedler Award, Royal Society of Chemistry, UK
2016	MacArthur Fellowship, USA
2016	Yao-Zeng Huang Organometallic Chemistry Prize, China
2015	Elias J. Corey Award, USA
2014	N. C. Yang Memorial Lectureship award for world-wide Chinese Chemists, China
2013	Raymond and Beverly Sackler Prize in the Physical Sciences, Israel
2012	Fellow of American Association for the Advancement of Science
2012	Fellow of the Royal Society of Chemistry
2012	Mukaiyama Award, Society of Organic Synthesis, Japan
2012	ACS Cope Scholar Award, USA
2012	Bristol-Myers Squibb Award
2011	Novartis Early Career Award in Organic Chemistry
2010	Hirata Memorial Lectureship Medal, Nagoya, Japan
2009	Distinguished Faculty Award of Chinese-American Chemistry & Chemical Biology Professors Association
2008	Eli Lilly Grantee Award
2008	Amgen Young Investigator's Award
2008	Sloan Research Fellowship, USA
2006	Journal Award for *Synlett & Synthesis*

2004	Camille and Henry Dreyfus New Faculty Award, USA
2003	Royal Society University Research Fellowship
1998	Fellowship of St John's College, University of Cambridge (JRF)
1994	Sino-British Scholarship by British Council and Education Ministry of China
1990	President Award for Outstanding Students of Chinese Academy of Sciences

PUBLICATIONS (up to July 2025: 348 publications, total citation: 55300, *h*-index: 123.)

Graduate and Postdoctoral Training:

1. "Highly Selective Hydration of *α*-pinene over H-Mordenites Pretreated with Quaternary Ammonium Salts" Yu, J.-Q.; Zhou, P.; Xiao, S.-D. *Chinese J. Chem.* **1995**, *13*, 280.
2. "Study on Selective Alkylation of Guaiacol with Camphene over H-Mordenite" Liu, B.; Yu, J.-Q.; Eng, A.; Zhou, P.; Xiao, S. *Chin. J. Org. Chem.* **1995**, *15*, 318.
3. "Stereoselective Deoxygenation of *myo*-Inositol Monotosylates with Lithium Triethylborohydride" Yu, J.-Q.; Spencer, J. B. *J. Org. Chem.* **1996**, *61*, 3234.
4. "First Evidence that the Mechanism of Catalytic Hydrogenation with Homogeneous Palladium and Rhodium Catalysts is Strongly Influened by Substrate Polarity" Yu, J.-Q.; Spencer, J. B. *J. Am. Chem. Soc.* **1997**, *119*, 5257.
5. "Regioselective Hydrometalation of Alkenes Reveals the Amphipolar Nature of the Pd−H Bond in Heterogeneous Hydrogenation" Yu, J.-Q.; Spencer, J. B. *J. Org. Chem.* **1997**, *62*, 8618.
6. "Discovery that Quinoline and Triphenylphosphine Alter the Electronic Properties of Hydrogenation Catalysts" Yu, J.-Q.; Spencer, J. B. *Chem. Commun.* **1998**, 1103.
7. "Rational Design of Benzyl-Type Protecting Groups Allows Sequential Deprotection of Hydroxyl Groups by Catalytic Hydrogenolysis" Gaunt, M. J.; Yu, J.-Q.; Spencer, J. B. *J. Org. Chem.* **1998**, *63*, 4172.
8. "Heterogeneous Transfer Hydrogenation Involves Pairwise Hydrogen Transfer from the Same Position of Two Molecules of Formic Acid" Yu, J.-Q.; Spencer, J. B. *Chem. Commun.* **1998**, 1935.
9. "New Insight into the Mechanism of Catalytic Hydrogenation Allows the Key Intermediate in Asymmetric Hydrogenation to be Predicted" Yu, J.-Q.; Spencer, J. B. *Tetrahedron* **1998**, *54*, 15821.
10. "Preferential Hydrogenolysis of NAP Esters Provides a New Orthogonal Protecting Group Strategy for Carboxylic Acids" Gaunt M. J.; Boschetti C. E.; Yu, J.-Q.; Spencer, J. B. *Tetrahedron Lett.* **1999**, *40*, 1803.

11. "Direct Comparison Between the Mechanism of Hydrometalation and *β*-elimination in Heterogeneous and Homogeneous Hydrogenation" Yu, J.-Q.; Whitney, P.-S.; Spencer, J. B. *J. Mol. Catal. A: Chem.* **1999**, *146*, 199.

12. "Evidence for Direct Hydride Delivery from Formic Acid in Transfer Hydrogenation" Yu, J.-Q.; Spencer, J. B. *Chem. Eur. J.* **1999**, *5*, 2237.

13. "Selective Hydrogenolysis of Novel Benzyl Carbamate Protecting Groups" Papageorgiou E. A.; Gaunt, M. J.; Yu, J.-Q.; Spencer, J. B. *Org. Lett.* **2000**, *2*, 1049.

14. "Sequential Removal of the Benzyl-type Protecting Groups PMB and NAP by Oxidative Cleavage Using CAN and DDQ" Wright, J. A.; Yu, J.-Q.; Spencer, J. B. *Tetrahedron Lett.* **2001**, *42*, 4033.

15. "Convenient Syntheses of 2-deoxy-*scyllo*-inosose and 2-deoxy-*scyllo*-inosamine: Two Key Intermediates on the Biosynthetic Pathway to Aminoglycoside Antibiotics" Yu, J.-Q.; Spencer, J. B. *Tetrahedron Lett.* **2001**, *42*, 4219.

16. "Evidence that Availability of Allylic Hydrogen Governs the Regioselectivity of Wacker Oxidation" Gaunt, M. J.; Yu, J.-Q.; Spencer, J. B. *Chem. Commun.* **2001**, 1844.

17. "Convenient Preparation of *trans*-Arylalkenes via Palladium(II)-catalyzed Isomerization of *cis*-Arylalkenes" Yu, J.-Q.; Gaunt, M. J.; Spencer, J. B. *J. Org. Chem.* **2002**, *67*, 4627.

18. "Diverse Pathways for the Palladium(II)-Mediated Oxidation of Olefins by *tert*-Butylhydroperoxide" Yu, J.-Q.; Corey, E. J. *Org. Lett.* **2002**, *4*, 2727.

19. "Biosynthesis of Aminoglycoside Antibiotics: Cloning, Expression and Characterization of an Aminotransferase Involved in the Pathway to 2-deoxystreptamine" Huang, F.; Li, Y.; Yu, J.-Q.; Spencer, J. B. *Chem. Commun.* **2002**, 2860.

20. "A General, Polymer-Supported Acid Catalyzed Hetero-Michael Addition" Wabnitz, T. C.; Yu, J.-Q.; Spencer, J. B. *Synlett* **2003**, *7*, 1070.

21. "Transfer Hydrogenation Using Recyclable Polyurea-Encapsulated Palladium: Efficient and Chemoselective Reduction of Aryl Ketones" Yu, J.-Q.; Wu, H.-C.; Ramarao, C.; Spencer, J. B.; Ley, S. V. *Chem. Commun.* **2003**, 678.

22. "A Mild, Catalytic, and Highly Selective Method for Oxidation of *α,β*-enones to 1,4-enediones" Yu, J.-Q.; Corey, E. J. *J. Am. Chem. Soc.* **2003**, *125*, 3232.

23. "Evidence that Proton can be the Active Catalyst in Lewis Acid Mediated Hetero-Michael Additions" Wabnitz, T. C.; Yu, J.-Q.; Spencer, J. B. *Chem. Eur. J.* **2004**, *10*, 484.

24. "$Pd(OH)_2$/C-Mediated Selective Oxidation of Silyl Enol Ethers by *tert*-Butylhydroperoxide, a Useful Method for the Conversion of Ketones to *α,β*-Enones or *β*-Silyloxy-*α,β*-enones" Yu, J.-Q.; Wu, H- C.; Corey, E. J. *Org. Lett.* **2005**, *7*, 1415.

25. "Catalyst-Induced Changes in a Substituted Aromatic: A Combined Approach via Experiment and Theory" Tan, Y. P.; Khatua, S.; Jenkins, S. J.; Yu, J.-Q.; Spencer, J. B.; King, D. A. *Surf. Sci.* **2005**, *589*, 173.

26. "Recyclable Polyurea-Microencapsulated Pd(0) Nanoparticles: An Efficient Catalyst for Hydrogenolysis of Epoxides" Ley, S. V.; Mitchell, C.; Pears, D.; Ramarao, C.; Yu, J.-Q.; Zhou, W. *Org. Lett.* **2003**, *5*, 4665.

27. "Stereospecific Deoxygenation of Phosphine Oxides with Retention of Configuration Using Triphenylphosphine or Triethyl Phosphite as an Oxygen Acceptor" Wu, H.-C.; Yu, J.-Q.; Spencer, J. B. *Org. Lett.* **2004**, *6*, 4675.

Independent Career:

28. "Palladium-Catalyzed Asymmetric Iodination of Unactivated C–H Bonds under Mild Conditions" Giri, R.; Chen, X.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2005**, *44*, 2112.

29. "Pd-Catalyzed Stereoselective Oxidation of Methyl Groups by Inexpensive Oxidants under Mild Conditions: A Dual Role for Carboxylic Anhydrides in Catalytic C—H Bond Oxidation" Giri, R.; Liang, J.; Lei, J.-G.; Li, J.-J.; Wang, D.-H.; Chen, X.; Naggar, I. C.; Guo, C.; Foxman, B. M.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2005**, *44*, 7420.

30. "Catalytic and Stereoselective Iodination of Prochiral C—H Bonds" Giri, R.; Chen, X.; Hao, X.-S.; Li, J.-J.; Liang, J.; Fan, Z.-P.; Yu, J.-Q. *Tetrahedron: Asymmetry* **2005**, *16*, 3502. Invited contribution to a special issue on asymmetric oxidation.

31. "Palladium-catalyzed Alkylation of Aryl C—H Bonds with sp^3 Organotin Reagents Using Benzoquinone as a Crucial Promoter" Chen, X.; Li, J.-J.; Hao, X.-S.; Goodhue, C. E.; Yu, J.-Q. *J. Am. Chem. Soc.* **2006**, *128*, 78.

32. "Cu(II)-catalyzed Functionalizations of Aryl C—H Bonds Using O_2 as an Oxidant" Chen, X.; Hao, X.-S.; Goodhue, C. E.; Yu, J.-Q. *J. Am. Chem. Soc.* **2006**, *128*, 6790.

33. "Palladium-catalyzed Alkylation of sp^2 and sp^3 C—H Bonds with Methylboroxine and Alkylboronic Acids: Two Distinct C—H Activation Pathways" Chen, X.; Goodhue, C. E.; Yu, J.-Q. *J. Am. Chem. Soc.* **2006**, *128*, 12634.

34. "Converting *gem*-dimethyl Groups into Cyclopropanes *via* Pd-catalyzed Sequential C–H Activation and Radical Cyclization" Giri, R.; Wasa, M.; Breazzano, S. P.; Yu, J.-Q. *Org. Lett.* **2006**, *8*, 5685.

35. "Palladium-catalyzed Oxidation of *Boc*-protected *N*-methylamines with IOAc as the Oxidant: A *Boc* Directed sp^3 C–H Bond Activation" Wang, D.-H.; Hao, X.-S.; Wu, D.-F.; Yu, J.-Q. *Org. Lett.* **2006**, *8*, 3387.

36. "σ-Chelation-directed C—H Functionalizations using Pd(II) and Cu(II) Catalysts: Regioselectivity, Stereoselectivity and Catalytic Turnover" Giri, R.; Chen, X.; Yu, J.-Q. *Org. Biomol. Chem.* **2006**, *4*, 4041. Invited review on an emerging area. Top ten most downloaded OBC articles in Nov. 2006.

37. "Palladium-catalyzed Methylation and Arylation of sp^2 and sp^3 C—H Bonds in Simple Carboxylic Acids" Giri, R.; Maugel, N.; Li, J.-J.; Wang, D.-H.; Breazzano, S. P.; Saunders, L. B.; Yu, J.-Q. *J. Am. Chem. Soc.* **2007**, *129*, 3510.

38. "Synthesis and Crystal Structure of a Novel Ag(I) 1D Coordination Polymer with a 2-oxazoolinyl-containing Tripodal Ligand" Huang, Y.-Q.; Zhou, X.-Y.; Shen, Z.-L.; Liu, G.-X.; Yu, J.-Q.; Sun, W.-Y. *Acta. Chim. Sinica* **2007**, *65*, 1381.

39. "Silver(I) Complexes with Oxazoline-containing Tripodal Ligands: Structure Variation *via* Counter Anions and Reaction Conditions" Huang, Y.-Q.; Shen, Z.-L.; Okamura, T.; Wang, Y.; Wang, X.-F.; Sun, W.-Y.; Yu, J.-Q.; Ueyama, N. *Dalton Trans.* **2008**, 204.

40. "Iodine Monoacetate as a C–H functionalization reagent" Giri, R.; Yu, J.-Q. In *e-EROS Encyclopedia of Reagents for Organic Synthesis* **2008**.

41. "Remote C–H Bond Functionalization Reveals the Distance-Dependent Isotope Effect" Li, J.-J.; Giri, R.; Yu, J.-Q. *Tetrahedron* **2008**, *64*, 6979. In honor of J. Hartwig's Tetrahedron Young Investigator award.

42. "Dehydrogenation of Inert Alkyl Groups via Remote C–H Activation: Converting a Propyl Group into π-allylic Complex" Giri, R.; Maugel, N.; Foxman, B. M.; Yu, J.-Q. *Organometallics* **2008**, *27*, 1667.

43. "Pd(II)-Catalyzed Cross-coupling of sp^3 C—H Bonds with sp^2 and sp^3 Boronic Acids Using Air as the Oxidant" Wang, D.-H.; Wasa, M.; Giri, R.; Yu, J.-Q. *J. Am. Chem. Soc.* **2008**, *130*, 7190.

44. "Pd(II)-Catalyzed Enantioselective Activation of C(sp^2)—H and C(sp^3)—H Bonds Using Monoprotected Amino Acids as Chiral Ligands" Shi, B.-F.; Maugel, N.; Zhang, Y.-H.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2008**, *47*, 4882.

45. "Pd(II)-Catalyzed Mono-Selective *ortho* Halogenation of C—H Bonds Assisted by Counter Cations: A Complementary Method to Directed *ortho*-Lithiation" Mei, T.-S.; Giri, R.; Maugel, N.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2008**, *47*, 5215.

46. "Synthesis of Indolines and Tetrahydroisoquinolines from Arylethylamines by Pd^{II} -Catalyzed C—H Activation Reaction" Li, J.-J.; Mei, T.-S.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2008**, *47*, 6452.

47. "Synthesis of *β*-, *γ*-, and *δ*-Lactams via Pd(II)-Catalyzed C—H Activation Reactions" Wasa, M.; Yu, J.-Q. *J. Am. Chem. Soc.* **2008**, *130*, 14058.

48. "Synthesis of 1,2 and 1,3-Dicarboxylic Acids via Pd(II)-Catalyzed Carboxylation of Aryl and Vinyl C—H Bonds" Giri, G.; Yu, J.-Q. *J. Am. Chem. Soc.* **2008**, *130*, 14082.

49. "Versatile Pd(II)-Catalyzed C—H Activation/Aryl-Aryl Coupling of Benzoic and Phenyl Acetic Acids" Wang, D.-H.; Mei, T.-S.; Yu, J.-Q. *J. Am. Chem. Soc.* **2008**, *130*, 17676. PMCID: PMC2630538

50. "Cu(II)-Mediated Oxidative Dimerization of 2-Phenylpyridine Derivatives" Chen, X.; Dobereiner, G.; Hao, X.-S.; Giri, R.; Maugel, N.; Yu, J.-Q. *Tetrahedron* **2009**, *65*, 3085. In honor of J. Du Bois' Tetrahedron Young Investigator award.

51. "Pd(II)-Catalyzed Olefination of Electron-Deficient Arenes Using 2,6-Dialkyl Pyridine Ligands" Zhang, Y.-H.; Shi, B.-F.; Yu, J.-Q. *J. Am. Chem. Soc.* **2009**, *131*, 5072. Highlighted in *C&EN News*. PMCID: PMC2667208

52. "Versatile $Pd(OTf)_2 \cdot 2H_2O$-Catalyzed *ortho*-Fluorination Using NMP as a Promoter" Wang, X.; Mei, T.-S.; Yu J.-Q. *J. Am. Chem. Soc.* **2009**, *131*, 7520. Highlighted in *C&EN News*.

53. "Possible Origin of Electronic Effects in Rh(I)-Catalyzed Enantioselective Hydrogenation" Wu, H.-C.; Hamid, S. A.; Yu, J.-Q.; Spencer, J. B. *J. Am. Chem. Soc.* **2009**, *131*, 9604.

54. "Pd(II)-Catalyzed C–H Activation/C–C Cross-Coupling Reactions: Versatility and Practicality" Chen, X.; Engle, K. M.; Wang, D.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2009**, *48*, 5094.

55. "$Pd(0)/PR_3$-Catalyzed Intermolecular Arylation of sp^3 C–H Bonds" Wasa, M.; Engle, K. M.; Yu, J.-Q. *J. Am. Chem. Soc.* **2009**, *131*, 9886.

56. "Pd(II)-Catalyzed *ortho*-Alkylation of Benzoic Acids with Alkyl Halides" Zhang, Y.-H.; Shi, B.-F.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2009**, *48*, 6097.

57. "Pd(II)-Catalyzed Amination of C–H Bonds Using Single-Electron or Two-Electron Oxidants" Mei, T.-S.; Wang, X.; Yu, J.-Q. *J. Am. Chem. Soc.* **2009**, *131*, 10806.

58. "Pd(II)-Catalyzed Hydroxylation of Arenes Using 1 atm O_2 or Air" Zhang, Y.-H.; Yu, J.-Q. *J. Am. Chem. Soc.* **2009**, *131*, 14654. Highlighted in *C&EN News*.

59. "Transition Metal-Catalyzed C–H Activation Reactions: Diastereoselectivity and Enantioselectivity" Giri, R.; Shi, B.-F.; Engle, K. M.; Maugel, N.; Yu, J.-Q. *Chem. Soc. Rev.* **2009**, *38*, 3242.

60. "Pd(II)-Catalyzed Enantioselective C—H Olefination of Diphenylacetic Acids" Shi, B.-F.; Zhang, Y.-H.; Lam, J. K.; Wang, D.-H.; Yu, J.-Q. *J. Am. Chem. Soc.* **2010**, *132*, 460.

61. "Synthetic Applications of Pd(II)-Catalyzed C–H Carboxylation and Mechanistic Insights: Expedient Routes to Anthranilic Acids, Oxazolinones and Quinazolinones" Giri, R.; Lam, J. K.; Yu, J.-Q. *J. Am. Chem. Soc.* **2010**, *132*, 686.

62. "Ligand-Enabled Reactivity and Selectivity in a Synthetically Versatile Aryl C–H Olefination" Wang, D.-H.; Engle, K. M.; Shi, B.-F.; Yu, J.-Q. *Science* **2010**, *327*, 315.

63. "Pd(0)/PR_3-Catalyzed Arylation of Nicotinic and Isonicotinic Acid Derivatives" Wasa, M.; Worrell, B. T.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2010**, *49*, 1275.

64. "Pd(II)-Catalyzed *ortho*-Trifluoromethylation of Arenes Using TFA as a Promoter" Wang, X.; Truesdale, L.; Yu, J.-Q. *J. Am. Chem. Soc.* **2010**, *132*, 3648.

65. "Pd(II)-Catalyzed Olefination of sp^3 C–H Bonds" Wasa, M.; Engle, K. M.; Yu, J.-Q. *J. Am. Chem. Soc.* **2010**, *132*, 3680.

66. "Pd(II)-Catalyzed Hydroxyl-Directed C–H Olefination Enabled by Mono-Protected Amino Acid Ligands" Lu, Y.; Wang, D.; Engle, K. M.; Yu, J.-Q. *J. Am. Chem. Soc.* **2010**, *132*, 5916.

67. "Pd(II)-Catalyzed C–H Acetoxylation of Phenylalanine and Ephedrine Derivatives with $MeCOO^tBu/Ac_2O$" Vickers, C.; Mei, T.-S.; Yu, J.-Q. *Org. Lett.* **2010**, *12*, 2511.

68. "Amide-Directed Arylation of sp^3 C–H Bonds Using Pd(II) and Pd(0)/(II) Catalysis" Wasa, M.; Yu, J.-Q. *Tetrahedron* **2010**, *66*, 4811. In honor of B. M. Stoltz's Tetrahedron Young Investigator award.

69. "Metal-Organic Frameworks with Oxazoline-Containing Tripodal Liand: Structure Changes via Reaction Medium and Metal-to-Ligand Ratio" Huang, Y.-Q.; Sheng, Z.-L.; Zhou, X.-Y.; Okamura, T.-a.; Su, J.; Fan, J.; Sun, W.-Y.; Yu, J.-Q.; Ueyama, N. *CrystEngComm.* **2010**, *12*, 4328.

70. "Expedient Drug Synthesis and Diversification via *ortho*-C–H Iodination Using Recyclable PdI_2 as the Precatalyst" Mei, T.; Wang, D.; Yu, J.-Q. *Org. Lett.* **2010**, *12*, 3140.

71. "Constructing Multiply Substituted Arenes Using Sequential Pd(II)-Catalyzed C–H Olefination" Engle, K. M.; Wang, D.-H.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2010**, *49*, 6169.

72. "Pd(II)-Catalyzed Hydroxyl-Directed C–H Activation/C–O Cyclization: Expedient Construction of Dihydrobenzofurans" Wang, X.; Lu, Y.; Dai, H.; Yu, J.-Q. *J. Am. Chem. Soc.* **2010**, *132*, 12203.

73. "Ligand-Accelerated C–H Activation Reactions: Evidence for a Switch of Mechanism" Engle, K. M.; Wang, D.-H.; Yu, J.-Q. *J. Am. Chem. Soc.* **2010**, *132*, 14137.

74. "Pd(II)-Catalyzed Carbonylation of sp^3 C–H Bonds: A New Entry to 1,4-Dicarbonyl Compounds" Yoo, E. J.; Wasa, M.; Yu, J.-Q. *J. Am. Chem. Soc.* **2010**, *132*, 17378.

75. "Syntheses, Crystal Structures and Properties of Silver(I) and Copper(II) Complexes with an Oxazoline-Containing Tetradentate Ligand" Huang, Y.Q.; Liu, G.-X.; Zhou, X.-Y.; Okamura, T.-a.; Su, J.; Fan, J.; Sun, W.-Y.; Yu, J.-Q.; Ueyama, N. *New. J. Chem.* **2010**, *34*, 2436.

76. "Cross-coupling of C(sp^3)–H Bonds with Organometallic Reagents *via* Pd(II)/Pd(0) Catalysis" Wasa, M.; Engle, K. M.; Yu, J.-Q. *Isr. J. Chem.* **2010**, *50*, 605.

77. "Bystanding F^+ Oxidants Enable Selective Reductive Elimination from High-Valent Metal Centers in Catalysis," Engle, K. M.; Mei, T.-S., Wang, X.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2011**, *50*, 1478.

78. "C–H Functionalization in Organic Synthesis" Davies H. M.; Du Bois J.; Yu J.-Q. *Chem. Soc. Rev.* **2011**, *40*, 1855.

79. "Highly Convergent Total Synthesis of (+)-Lithospermic Acid via a Late-Stage Intermolecular C–H Olefination" Wang, D.-H.; Yu, J.-Q. *J. Am. Chem. Soc.* ***2011***, *133*, 5767.

80. "Hydroxyl-Directed C–H Carbonylation Enabled by Mono-*N*-Protected Amino Acid Ligands: An Expedient Route to 1-Isochromanones" Lu, Y.; Leow, D.; Wang, X.; Engle, K. M.; Yu, J.-Q. *Chem. Sci.* **2011**, *2*, 967.

81. "Divergent C–H Functionalizations Directed by Sulfonamide Pharmacophores: Late-Stage Diversification as a Tool for Drug Discovery" Dai, H.-X.; Stepan, A.F.; Plummer, M.; Zhang, Y.-H.; Yu, J.-Q. *J. Am. Chem. Soc.* **2011**, *133*, 7222.

82. "Ligand-Promoted C-3 Selective C–H Olefination of Pyridines with Pd Catalysts" Ye, M.; Gao, G.-L.; Yu, J.-Q. *J. Am. Chem. Soc.* **2011**, *133*, 6964.

83. "Pd(II)-Catalyzed Intermolecular C–H Amination with Alkylamines" Yoo, E. J.; Ma, S.; Mei, T.; Chan, K. S. L.; Yu, J.-Q. *J. Am. Chem. Soc.* **2011**, *133*, 7652.

84. "Ligand Accelerated Cross-Coupling of C(sp^2)–H Bonds with Organoboron Reagents," Engle, K. M.; Thuy-Boun, P. S.; Dang, M.; Wang, D.-H.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2011**, *133*, 18183.

85. "Palladium(II)-Catalyzed Selective Monofluorination of Benzoic Acids Using a Practical Auxiliary: A Weak-Coordination Approach" Chan, K. S. L.; Wasa, M; Wang, X.; Yu, J.-Q. *Angew. Chem. Int. Ed.* **2011**, *50*, 9081.

86. "Improved Syntheses of Phosphine Ligands by Direct Coupling of Diarylbromophosphine with Organometallic Reagents" Liu, L.; Wu, H.-C.; Yu, J.-Q. *Chem. Eur. J.* **2011**, *17*, 10828.

87. "Pd(II)-Catalyzed *para*-Selective C–H Arylation of Monosubstituted Arenes" Wang, X.; Leow, D.; Yu, J.-Q. *J. Am. Chem. Soc.* **2011**, *133*, 13864.

88. "Pd(II)-Catalyzed Cross-Coupling of C(sp^2)–H Bonds and Alkyl-, Aryl- and Vinyl-Boron Reagents via Pd(II)/Pd(0) Catalysis" Wasa, M; Chan, K. S. L.; Yu, J.-Q. *Chem. Lett.* **2011**, *40*, 1004.

89. "Ligand-Promoted C-3-Selective Arylation of Pyridines with Pd Catalysts: Gram-Scale Synthesis of (±)-Preclamol" Ye, M.-C.; Gao, G.-L.; Edmunds, A. J. F.; Worthington, P. A.; Morris, J. A.; Yu, J.-Q. *J. Am. Chem. Soc.* **2011**, *133*, 19090.

90. "Pd(II)-Catalyzed Enantioselective C–H Activation of Cyclopropanes" Wasa, M; Engle, K. M.; Lin, D.; Yoo, E. J.; Yu, J.-Q. *J. Am. Chem. Soc.* **2011**, *133*, 19598.

91. "Pd-Catalyzed Oxidative *ortho*-C–H Borylation of Arenes" Dai, H.-X.; Yu, J.-Q. *J. Am. Chem. Soc.* **2012**, *134*, 134.

92. "Key Mechanistic Features of Enantioselective C–H Bond Activation Reactions Catalyzed by [(Chiral Mono-*N*-Protected Amino Acid)-Pd(II)] Complexes" Musaev, D. G.; Kaledin A. L.; Shi B.-F.; Yu, J.-Q. *J. Am. Chem. Soc.* **2012**, *134*, 1690.

93. "Weak Coordination as a Powerful Means for Developing Broadly Useful C–H Functionalization Reactions" Engle, K. M.; Mei, T.-S.; Wasa, M; Yu, J.-Q. *Acc. Chem. Res.* **2012**, *45*, 788.

94. "Mechanistic Rationalization of Unusual Kinetics in Pd-Catalyzed C–H Olefination" Baxter, R. D.; Sale, D.; Engle, K. M.; Yu, J.-Q.; Blackmond, D. G. *J. Am. Chem. Soc.* **2012**, *134*, 4600.

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336. "Catalyst-Controlled Chemoselective γ-C(sp^3)−H Lactonization of Carboxylic Acid: Methyl versus Methylene" Yan, J.; Hu, L.; Lu, Y.; Yu, J.-Q. *J. Am. Chem. Soc.* **2024**, *146*, 29311.

337. "Total synthesis of (−)-cylindrocyclophane A facilitated by C−H functionalization" Bosse, A.T.; Hunt, L,R.; Suarez, C.A.; Casselman, T.D.; Goldstein, E.L.; Wright, A.C.; Park, H.; Virgil, S.C.; Yu, J.-Q.; Stoltz, B.M.; Davies, H.M.L. *Science* **2024**, *386*, 641.

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343. "Enantioselective β-C(sp^3)–H Nucleophilic Tosylation of Native Amides: A Synthetic Platform for Chiral Methyl Stereocenters" Ouyang, Y.; Phan, D.Q.; Chekshin, N.; Li, Y.-H.; Qiao, J.X.; Eastgate, M.D.; Yu, J.-Q. *J. Am. Chem. Soc.* **2025**, *147*, 19559.

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BOOKS AND CHAPTERS

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2. Sun, W.-Y.; Bai, Z.-S.; Yu, J.-Q. In *Silver in Organic Chemistry*; Marmata, M., Eds.; John Wiley & Sons, Inc., Hoboken, NJ, USA, 2001; Vol. 42.

3. Engle, K. M.; Yu, J.-Q. In *Organic Chemistry: Breakthroughs and Perspectives*; John Wiley & Sons, Inc., **2011**.

4. Wasa, M.; Chan, K. S. L.; Yu, J.-Q. In *Asymmetric Synthesis-The Essential II*; John Wiley & Sons, Inc., **2011**.

5. Wu, Q.-F.; Chen, G.; He, J.; Yu, J.-Q. (**2020**). Catalytic, Enantioselective, C–H Functionalization to Form Carbon–Carbon Bonds. *In Organic Reactions*. doi:10.1002/0471264180.or100.11.

PATENTS (up to December 2023, 36 patents):

Patents filed as a student

1. New method for one-pot synthesis of optically active α-terpineol ZL90 1 04026.6 (Granted on 7 April 1995)
2. New method for manufacturing n-bornel, ZL92 1 12124.5 (Granted on 18 Sept 1994)
3. Hydroxyl protecting groups and their use, REP - O5785GB
4. Asymmetric synthesis and optical resolution methods, PJF - P7281GB

Patents filed with Brandies University

5. New method for asymmetric hydroxylation and iodination of C–H bonds, PCT/US05/27713
6. Cu(II)-catalyzed functionalization of aryl C–H bonds using O_2 as an oxidant, US provisional serial No: 60/192,901
7. Palladium-catalyzed C–H oxidation of *N*-methyl carbamates, US provisional serial No: 60/812,770
8. Palladium-catalyzed alkylation of sp^2 and sp^3 C–H bonds with organoboron reagents, US provisional: pending
9. Palladium-catalyzed carboxylate-directed C–H functionalizations

Patents filed with The Scripps Research Institute

10. Versatile Pd(II)-Catalyzed C–H Activation/Aryl-Aryl Coupling of Aryl Acids, US provisional serial No: 61/120,698
11. Pd(II)-Catalyzed Olefination of Electron Deficient Arenes, US provisional serial No: 61/159,050

12. Pd(0)/PR_3-Catalyzed Intermolecular Arylation of β-sp^3 C–H Bonds Of Carboxyamides, US provisional serial No: 61/222,300
13. Pd(II)–Catalyzed Amination of C–H Bonds Using One-electron or Two-electron Oxidants, US provisional serial No: 61/225,106
14. Pd(II)-Catalyzed Hydroxylation Of Arenes With O_2 or Air, US provisional serial No: 61/245,408
15. Palladium-catalyzed *ortho*-fluorination of aminomethyl(hetero)arenes. WO 2010115098 (Granted on 7 Oct 2010)
16. Process for Pd(II)-catalyzed hydroxylation of arenes with O_2 or air, WO 2011037929 (Granted on 31 March 2011)
17. Ligand Promoted C-3 Selective Arylation of Pyridines with Pd Catalysts, US provisional serial No: 61/551,752
18. Activation of Remote *meta*-C–H Bonds Assisted by an "end-on" Template, US provisional serial No: 61/622,363
19. Palladium(II)-Catalyzed Selective Fluorination of Benzoic Acids and Derivatives, US provisional serial No: 13/546,616
20. Pd-Catalyzed *ortho*-C–H Iodination using Molecular Iodine as the Sole Oxidant, US provisional serial No: 61/842,062
21. Conformation-Induced Remote C–H Activation of Amines, US provisional serial No: 61/914,571
22. Ligand-controlled C(sp^3)–H Arylation and Olefination in Synthesis Of Unnatural Chiral α-Amino Acids, US provisional serial No: 61/946,165
23. Arylation and Olefination in Synthesis of Unnatural Chiral Alpha- Amino Acids WO: 2015131100 (Granted on 3 September 2015)
24. Room temperature Enantioselective C–H Iodination *via* Kinetic Resolution, US provisional serial No: 62/051,133
25. Ligand enabled *meta*-C–H Activation using a Transient Mediator WO: 2016123361 (Granted on 4 August 2016) US:10,611,723 (Granted 7 April 2020)
26. Pd(II)-Catalyzed Enantioselective β-Methylene C(sp^3)–H Bond Activation, US provisional serial No: 62/311,039 WO: 2017165304 (Granted 28 September 2017)
27. A versatile Ligand for Palladium-Catalyzed *meta*-C–H functionalizations, US provisional serial No: 62/324,087 WO: 2017184589 (Granted 26 October 2017) US: 10,696,635 (Granted 30 June 2020)
28. Pd - Catalyzed Gamma – C(sp^3) – Arylation of Free Amines Using a Transient Directing Group US provisional serial No: 62/411,978 WO:2018080897 (Granted 3 May 2018) US:10,759,743 (Granted 1 September 2020)
29. Remote Heteroarylalkenylation with Catalytic Bifunctional Template US provisional serial No: 62/458,750 WO: 2018152107 (Granted 23 August 2018) US: 10,858,383 (Granted 8 December 2020)
30. Directed Beta-C(sp^3)-H Iodination and Arylation of Keytones US provisional serial No: 62/546,166 WO: 2019204477 (Granted 21 February 2019) US: 10,875,822 (Granted 29 December 2020)

31. Pd(II)-Catalyzed Enantioselective C-H Arylation of Free Carboxylic Acid US provisional serial No: 62/659,866 WO: 2019204477 (Granted 24 October 2019) US: 11,021,427 (Granted 1 June 2021)
32. Ligand-Enabled Beta-C(sp^3)-H Lactonization for Beta-C-H Functionalizations US provisional serial No: 62/854,807 WO:2020243754 (Granted 3 December 2020)
33. Exploiting Chemical Diversity Through C-H Activation and DNA-Encoding US provisional serial No: 62/940,063 WO:2021108411 (Granted 3 June 2021)
34. Rapid Construction of Tetralin, Chromane, and Indane Motifs Via Cyclative C-H/C-H Coupling: Four-Step Total Synthesis of (±)-Russujaponol F US provisional serial No: 63/112,464
35. A Tautomeric Ligand Enables Biomimetic C–H Hydroxylation With Molecular Oxygen US provisional serial No: 63/124,544
36. Ligand-Controlled Divergent Dehydrogenative Reactions of Aliphatic Acids US provisional serial No: 63/203,241

NAMED AND PLENARY LECTURESHIPS AND VISITING PROFESSORSHIPS

- CCB Max Tischler Prize Lecturer, Harvard University October 2023
- BMS named Lecturer, Princeton University, October 2023
- Kharasch Lecturer, University of Chicago April 2023
- Rosenblum Lecturer at Brandeis University, March 2023
- Distinguished Lecturer, "Lectures in Modern Chemistry Series," University of British Columbia, British Columbia, Canada, May 2019
- Victor J. Chambers Memorial Lectureship, University of Rochester, Rochester, NY, May 6, 2019.
- Keynote Speaker, ACS Symposium on Applied Synthesis, Connecticut College, New London, CT, September 13, 2018.
- Plenary Lecture, 7th EuCheMS Congress, Royal Society of Chemistry, Cambridge, UK, August 26-30, 2018
- Distinguished Speaker, 35th Annual Herbert C. Brown Lectures, Purdue University, April 13, 2018.
- 57th Annual Friend E. Clark Lecturer, West Virginia University, Morgantown, WV, March 6-7, 2018
- Plenary Lecturer, 10th National Organic Chemistry Conference of Chinese Chemical Society, December 19-22, 2017, Shenzhen, China
- Keynote Speaker, 12th Annual Biomedical Forum, SABPA OC/LA, Irvine, California, April 29, 2017
- Keynote Speaker, Dongrun-Yau Science Award for Chemistry, Tsinghua University, Beijing, China, December 2016
- Keynote Speaker, 2016 NESACS Process Chemistry Symposium, Boston, MA, October 20, 2016.
- Keynote Speaker, ACS Green Chemistry & Engineering Conference, Advancing Sustainable Solutions by Design, Portland, OR, June 14-16, 2016.
- Pfizer Lecturer, Harvard University, April 27, 2016
- Japan Society for the Promotion of Science (JSPS), Overseas Fellowship Lecture Tour, November 1 – 17, 2015
- Boehringer Ingelheim Guest Lecturer at Boston College, Boston, MA, August 5th & 7th, 2015
- Abbvie Scholar Symposium, Chicago, IL, August 14, 2015

- Boehringer-Ingelheim Lectureship, Boston College, Boston, Aug 5th, 2015.Bristol Synthesis Symposium, Bristol, UK, April 14, 2015.
- Sigma-Aldrich Guest Lecturer, Mexico City, Mexico, May 13, 2015
- E.J. Corey Award, ACS Meeting, Denver, CO, March 23, 2015
- Nankai University Lectureship on Organic Chemistry, Tianjin, China, Fall 2014.
- Keynote Speaker, 19th International Symposium on Homogenous Catalysis, (ISHC-XIX), Ottawa, Canada, July 6-11, 2014.
- Andy Derome Lecturer, Oxford University, Spring, 2014.
- Rice University, Turner Lecturer, Houston, TX, January 15, 2014.
- French Chemical Society Meeting, Plenary Lecture, Palaiseau, France, September 17-19, 2013.
- Keynote Speaker, Cope Scholar Symposium, ACS Northwestern Regional, Corvallis, OR, July 21-23, 2013.
- National Organic Chemistry Symposium (NOS), Plenary Lecture, Seattle, WA, June 23-27, 2013.
- Welch Conference "Advances in Transition Metal Catalyzed Reaction," Houston, TX, October 22-23, 2012.
- Universities of Switzerland Tour, Guest lecturer, Geneva, Lausanne, Bern, Basel, Switzerland, September 22 – October 2, 2012.
- SSOCJ: Mukaiyama Award Symposium, Tokyo, Japan, September 6, 2012.
- 2012 ACS Cope Scholar Awards Symposium, Philadelphia, PA, August 21, 2012.
- 7th International Conference on Organic Synthesis, Plenary Lecture, Tallinn, Estonia, July 5, 2012.
- Universities of Israel Tour, Visiting Professor, June 24-30, 2012.
- Bristol-Myers Squibb, 2012 Grant in Synthetic Organic Chemistry Award Symposium, Lawrenceville, NJ, April 18-20, 2012.
- 26th Annual William S. Johnson Symposium Lecture, Stanford University, October 7, 2011.
- Novartis Early Career Lecture, Basal Switzerland, September 19-21, 2011.
- *EUCHEM* Stereochemistry, "Bürgenstock Conference," Brunnen, Switzerland, May 1-7, 2011.
- MIT-Boehringer Ingelheim Lecturer in Organic Chemistry, MIT, Cambridge, MA, March 10, 2011.
- Srere Lectureship, University of Texas Southwestern Medical Center, Dallas, TX, November 7-8, 2010.
- Chiral Chemistry Lectureship, Tianjin, China, October 15, 2010.
- Novartis Lectureship, Harvard University, Cambridge, MA, May 24, 2010.
- J B Spencer Memorial Lectureship, Cambridge University, UK, April 23, 2010.
- Novartis Lectureship, University of Pennsylvania, PA, March 17, 2010.
- Padwa Lectureship, Columbia University, March 11, 2010.
- Morningside Lectureship, Beijing University, January 10, 2010.
- Bristol-Myers Squibb Lectureship, Colorado State University, October 26, 2009.
- Visiting Scholar Lectureship, Chinese University of Hong Kong, October 12-16, 2009.
- Visiting Scholar Lectureship, Tokyo University of Science, Tokyo, Japan, October 5-10, 2009.
- Aldrich Lectureship, University of California, Berkeley, CA, October 28, 2008.
- Distinguished Lectureship, Genomics Institute of the Novartis Research Foundation, San Diego, CA, 2008.

INVITED LECTURES

- Invited speaker, Rosenblum Lecture, Brandeis University, March 2023
- Guest Speaker Batsheva de Rothschild Symposium, Tel Aviv, Israel, October 22-26, 2022
- Guest Speaker, ACS Fall Organic Chemistry Symposium, Chicago, Illinois, August 2022
- Guest Speaker, ACS Spring Organic Chemistry Symposium, San Diego, CA, March 2022
- Guest Speaker, CSCB Annual Symposium December 2021
- Guest Speaker, Torkil Holm Symposium, 2020 "Visions in Chemistry," Copenhagen, Denmark, January 31 – February 1, 2020.
- Guest Lecturer, 47th Naito Conference on "C-H Bond Activation and Transformation," Sapporo, Hokkaido, Japan, July 2-5, 2019.
- Invited Speaker, Boston University's 17th Annual Symposium on Molecular Discovery: From Chemical Synthesis to Biological Applications, June 7, 2019.
- Guest Lecturer, New York University, New York, NY, May 3, 2019.
- Seminar Speaker, Genentech Discovery Seminar Series, San Francisco, CA, December 11, 2018.
- Guest Lecturer, Shanghai School of Life Science & Technology, Shanghai, China, November 23, 2018.
- Guest Speaker, ACS Fall Organic Chemistry Symposium, Princeton University, Princeton, NJ, October 25, 2018
- Invited Speaker, 2018 MacArthur Fellows Forum, Chicago, Illinois, October 11-13, 2018
- Invited Speaker, 2018 Graduate Research Symposium, ACS, Division of Organic Chemistry, Indiana University at Bloomington, Indiana, July 26-29, 2018
- Invited Speaker, Gordon Research Conference on Stereochemistry, Salve Regina University, Newport, Rhode Island, July 22-27, 2018
- Invited Speaker, 30th International Symposium on Chirality (ICSD-30), Princeton University, Princeton, NJ, June 10-13, 2018,
- Closs Lecture, University of Chicago, Chicago, Illinois, May 22, 2018
- Invited Lecturer, UC Berkeley, Department of Chemistry, Berkeley, California, May1, 2018.
- Guest Speaker, The Royal Swedish Academy of Sciences, Jan-Erling Bäckvall's 70th Anniversary Symposium, Stockholm, Sweden, January 24, 2018.
- Guest Speaker, Pfizer Groton Campus, Groton, Connecticut, October 2017.
- Invited Speaker, 2017 Organic Reactions & Processes, Gordon Research Conference, J Stonehill College, Easton, MA, July 2017
- University of California, Los Angeles, Invited Speaker, May 2017
- MacArthur Fellows Meeting, Racine, Wisconsin, Invited Guest Recipient, May 2017.
- ACS Meeting, HC Brown Award, Invited Speaker, San Francisco, California, April 2017.
- Royal Society of Chemistry, "Late Stage Functionalization for Synthesis and Medicines," Oxford, UK, Guest Speaker, December 2016
- Lilly Chemistry Symposium "Chemistry the Central Science" Guest Lecturer, Madrid, Spain, October 2016
- Invited Speaker, 2016 Frontiers Symposium at University of Illinois-Urbana-Champaign, October 2016
- Invited Guest Speaker, 2016 Mogan Mountain International Conference on Green Pharmaceuticals, Shanghai, China, September 2016
- Guest Speaker, Janssen Research & Development, La Jolla, CA, August 2016
- Guest Speaker, RSC C–H Functionalization Conference, Late Stage Functionalization for Synthesis and Medicines, Oxford, UK, December 5, 2016
- Invited Lecturer, 5th Eli Lilly Chemistry Symposium, Chemistry, The Central Science," El Escorial, Madrid, October 27-28, 2016.

- Invited Lecturer, 2016 Frontiers Symposium, University of Illinois at Urbana-Champaign, October 15, 2016
- 20th International Symposium on Homogeneous Catalysis, Invited Lecturer, Kyoto, Japan, July 10-15, 2016
- Invited Lecturer, Alaska Section of the Northwest Region of the American Chemical Society (NORM), Anchorage, AK, June 27, 2016
- Invited Lecturer, AstraZeneca, Waltham, MA, April 26, 2016
- Guest Lecturer, ISACS19: Challenges in Organic Chemistry, Irvine, CA, March 20, 2016
- Invited Lecturer, GlaxoSmithKline, Collegeville, PA, March 8, 2016
- 251st American Chemical Society National Meeting & Exposition, Invited Lecturer, "Green Chemistry: Enhancing Organic Synthesis in Pharma," and the "Gabor A. Somorjai Award for Creative Research in Catalysis," in honor of Prof. Donna G. Blackmond, San Diego, CA March 14-16, 2016
- Guest Speaker, Pfizer, La Jolla, CA, February 11, 2016
- 2015 International Chemical Congress of the Pacific Basin Societies, PacifiChem, Invited Lecturer, Honolulu, HI, December 18, 2015
- Invited Lecturer, Gilead Sciences Seminar, Foster City, CA, September 22, 2015
- Invited Lecturer, Albemarle Performance Chemicals, Baton Rouge, LA, September 9, 2015
- Guest Lecturer, 24th International Symposium, "Synthesis in Organic Chmistry," Cambridge, UK, July 21, 2015
- 12th International Symposium, "The Synthesis & Apllications of Isotopically Labelled Compounds," Bristol-Myers Squibb, Princeton, NJ, June 9, 2015
- Guest Lecturer, 12th International Symposium on Activation of Dioxygen & Homogeneous Oxidation Catalysis, Madison, WI, June 25, 2015
- Bristol Synthesis Meeting, Invited Lecturer, Bristol, UK, April 14, 2015
- "Frontiers in Chemistry Colloquium," Invited Lecturer, Wayne State University, February 9, 2015
- Guest Lecturer, workshop on "Next Generation Catalysis: Innovation in Cross-Coupling, C–H Functionalization and High-Pressure Reactions," Berlin, Germany, February 27, 2015
- Guest Lecturer, Natural Products Symposium, Nanjing University, September 22, 2014
- Tetrahedron Prize Award Symposium, ACS National Meeting, San Francisco, CA, August 11, 2014.
- ICIQ Conference, Invited speaker, Tarragona, Spain, July 16-18th 2014.
- "The Future of Asymmetric Catalysis," Conference, Invited Lecturer, Telluride, CO, June 24-28, 2014.
- University of Iowa, Invited Lecturer, April 15, 2014.
- ACS National Meeting, Invited Speaker, Dallas, TX, March 16-20, 2014.
- Indiana University, Guest Lecturer, Bloomington, Indiana, November 12, 2013.
- 2012 Novartis Early Career Award, Cambridge, MA, November 5, 2013.
- DuPont Crop Protection, Invited Speaker, Newark, NJ, October 23, 2013.
- Merck & Co., Guest Lecturer, Whitehouse Station, NJ, October 22, 2013.
- TSRI – Florida Campus, Guest Lecturer, Jupiter, Florida, October 17, 2013.
- Beijing Institute Symposium, Invited Lecturer, Beijing, China, September 15, 2013.
- Academia Sinica, Invited Guest Lecturer, Taipei, Taiwan, September 12, 2013.
- ACS Organic Chemistry Division, Invited Guest speaker, Indianapolis, IN, September 10, 2013.
- Northwestern University, Invited speaker, Chicago, Illinois, May 9, 2013.
- BMS Symposium, Guest speaker, Lawrenceville, NJ, April 18, 2013.

- Texas A & M University, College Station, Texas, April 2013.
- ACS-"H. C. Brown Award Symposium," New Orleans, LA, April 8, 2013.
- University of South Florida, Tampa Bay, FL, March 21, 2013.
- GRC on "Inorganic Reaction Mechanism," Galveston, TX, March 4, 2013.
- Ohio State University, Invited speaker, Columbus, Ohio, January 22, 2013.
- National University of Singapore, Guest speaker, Singapore, January 14, 2013.
- 1st IBN International Symposium, Biopolis, Singapore, January 11, 2013.
- Duke University, Guest speaker, Durham, NC, November 15, 2012.
- Yale University, Guest speaker, New Haven, CT, October 25, 2012.
- Gordon Research Conference on Green Chemistry, Guest speaker, Lucca, Italy, July 22-26, 2012.
- French American Chemical Society, FACS XIV, Guest Lecturer, Nantasket, MA, June 9, 2012.
- Sunovion Pharmacuticals, Boston, MA, June 8, 2012.
- 2012 West Regional Meeting of the NOBCChE, Cal State Los Angeles, Los Angeles, CA June 1, 2012.
- Argonne National Laboratory, Chicago, IL, May 25, 2012.
- Royal Society of Chemistry "Advances in Synthesis and Medicinal Chemistry," Welwyn Garden City, UK, May 1, 2012.
- Glaxo Smith-Kline Research & Development, Stevenage, Herts, UK, April 26-27, 2012.
- BMS, "Chemistry as a Life Science Symposium," Rutgers University, Newark, NJ, March 16, 2012.
- Brigham Young University, Provo Utah, Chemistry Department Lecturer, January 26, 2012.
- University of Chicago, Illinois, Chemistry Department Colloquium Speaker, January 9, 2012.
- Glaxo-Smith Kline, King of Prussia, Pennsylvania, Guest Lecturer, December 12, 2011.
- SABPA, ACS San Diego section, and Pfizer La Jolla, Green Chemistry Seminar, December 1, 2011.
- University of Minnesota, Minneapolis, MN, Seminar Presentation, November 1, 2011.
- SIOC, Chinese Academy of Sciences, Guest Lecture, October 16-21, 2011.
- 26th Annual William S. Johnson Symposium, Stanford University, Stanford, CA, October 7, 2011.
- Vertex Pharmaceuticals, Lecture Series Presentation, October 4, 2011.
- Bristol-Myers Squibb Pharmaceutical Research Institute, Seminar Presentation, September 6-10, 2011.
- 4th International Symposium on "Advances in Synthetic and Medicinal Chemistry," St. Petersburg, Russia, August 25, 2011.
- GRC – "Organometallic Chemistry," Newport, RI, July 10-13, 2011.
- 14th Annual San Diego MedChem Symposium, University of California, San Diego, July 15, 2011.
- 11th Tetrahedron Symposium, "Frontiers in Organic & Bioorganic Chemistry," Barcelona, Spain, June 25-26, 2011.
- GCR – "High Throughput Chemistry & Chemical Biology," New London, NH, June 20-21, 2011.
- Allergan Lecturer, University of California at Irvine, Irvine, California, June 16, 2011.
- Gilead Sciences, Foster City, CA, May 24, 2011.
- Stauffer Symposium, "Function-Oriented Synthesis: From New Reactions to New Medicines," University of Southern California, Los Angeles, CA, April 26, 2011.
- Merck Research Laboratories, Boston, MA, April 21, 2011.
- Novartis Institutes for BioMedical Research, Cambridge, MA, April 20, 2011.
- Organic Chemistry Seminar, University of Texas, Austin, TX, April 8, 2011.

- 20th Symposium Optically Active Compounds: Yamada-Koga Prize, Tokyo, Japan, October 29, 2010.
- McGill University, Montreal, Quebec, Canada, December 6, 2010.
- Princeton University, Princeton, New Jersey, December 3, 2010.
- Merck Research Laboratories, Rahway, New Jersey, & Boston, MA, December 1, 2010.
- Abbott Process R&D, North Chicago, IL, October 8, 2010.
- Glaxo Smith Klein, Philadelphia, Pennsylvania, September 16, 2010.
- University at Buffalo, The State University of New York, New York, September 17, 2010.
- Boston College, Boston, MA, September 14, 2010.
- Emory University, Atlanta, Georgia, September 4, 2010.
- ACS Meeting, Boston, MA, August 22, 2010.
- ETH, Department of Chemistry, Zürich, Switzerland, August 11, 2010.
- Syngenta, London, England, UK, August 9, 2010.
- CENTC Summer School, "Emerging Perspectives in Catalysis," Seattle, Washington, July 21, 2010.
- "Natural Products" Gordon Research Conference, Tilton, New Hampshire, July 27, 2010.
- "Heterocyclic Compounds" Gordon Research Conference, Newport, RI, June 22, 2010.
- Pfizer-TSRI Joint meeting, Groton, CT, May 3, 2010.
- University of Washington, Seattle, WA, March 31, 2010.
- 14th Biennial Lilly Grantee, Symposium, Lilly, Indianapolis, March 1, 2010.
- University of Illinois, Chicago, IL, February 2, 2010.
- University of Wisconsin, Madison, WI, January 26, 2010.
- Shanghai Institute of Material Medica, Chinese Academy of Sciences, China, January 8-13, 2010.
- University of Nanjing, China, January 1-7, 2010.
- University of Colorado at Boulder, CO, November 30, 2009.
- University of California, Los Angeles, CA, November 5, 2009.
- California State University, Long Beach, CA, November 4, 2009.
- Colorado State University, Ft. Collins, CO, October 25, 2009.
- Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, October 12-23, 2009.
- The University of Tokyo, Japan, October 10, 2009.
- Tokyo Institute of Technology, Japan, October 9, 2009.
- Waseda University, Tokyo, Japan, October 7, 2009.
- Keio University, Tokyo, Japan, October 6, 2009.
- University of Arkansas, Fayetteville, AK, September 21, 2009.
- Merck Research Laboratories, West Point, PA, August 5, 2009.
- ROCCAT Meeting, Muenster, Germany, June 18, 2009.
- Genentech, Small Molecule Discovery Chemistry, South San Francisco, CA, May 11, 2009.
- Schering Plough Research Institute, Kenilworth, NJ, April 15, 2009.
- Novartis Pharmaceutical Company, Newark, NJ, April 14, 2009.
- Emory University, Atlanta, GA, April 4, 2009.
- ACS Award Symposium for Synthetic Organic Chemistry, Salt Lake City, UT, March 21, 2009.
- University of California, Santa Cruz, CA, September 29, 2008.
- Amgen Young Investigators Award, Thousand Oaks, CA, September 18, 2008.
- ACS Meeting on Medicinal Chemistry, San Diego, CA, July 28, 2008.
- Wyeth Pharmaceuticals, Guest Speaker, Cambridge, MA, July 10, 2008.
- Amgen, Cambridge, MA, July 9, 2008.

- Northeastern Regional Meeting of the ACS on Green Chemistry, Burlington, VT, June 30, 2008.
- Johnson and Johnson, San Diego, CA, April 9, 2008.
- University of Illinois at Urbana-Champaign, Urbana, IL, February 6, 2008.
- Bristol-Myers Squib, New Haven, CT, February 3, 2008.
- The University of Texas Southwestern Medical Center at Dallas, TX, October 16, 2007.
- Pfizer, La Jolla, CA, October 1, 2007.
- Merck & Co., Whitehouse Station, NJ, March, 2007.
- Eli Lilly, Indianapolis, ID, July, 2007.
- National Fresenius Award Symposium, ACS National Meeting, Chicago, IL, March 2007.
- The University of Chicago, IL, March, 2007.
- California Institute of Technology, Pasadena, CA, 2007.
- University of Houston, TX, 2007.
- Rice University, Houston, TX, 2007.
- Forum on Asymmetric Synthesis & Technologies, Johnson Matthey Catalyst, Cambridge, UK, 2007.
- Novartis Pharmaceutical Company, East Hanover, NJ, 2006.
- Boston University, Boston, MA, 2006.
- University of California, San Diego, CA, 2006.
- The Scripps Research Institute, La Jolla, CA, 2006.
- Boston College, Boston, MA, 2006.
- Brown University, Providence, RI, 2006.
- University of Massachusetts Boston, MA, 2006.
- NSF Workshop, Arlington, VA, 2006.
- Hong Kong University of Science and Technology, Hong Kong, 2006.
- Chinese University of Hong Kong, 2006.
- Polytechnic University of Hong Kong, Hong Kong, 2006.
- Forum on Asymmetric Synthesis & Technologies, Johnson Matthey Catalyst, Cambridge, UK, 2005.
- Shanghai Institute of Organic Chemistry, Shanghai Institute of Medical Material, PR, China, 2004.
- Beijing University, Nanjing University, Zhejiang University, PR China, 2004.
- Synetix Chiral Technologies, Johnson Matthey Catalyst, Cambridge, UK, 2003.
- University of Cambridge, Cambridge, UK, 2002.
- The University of Akron, Akron, OH 2001.
- Pfizer Symposium in Cambridge, UK, 2000.
- Guangzhou Institute of Chemistry, Chinese Academy of Sciences, PR China, 1998.
- Chinese Academy of Sciences, PR China, 1998.

FUNDING

- NIH grant, 1 R01 GM102265, 2012 –2024, “Catalyst-controlled Site-selective C–H Functionalizations of Arenes and Heteroarenes”
- NIH grant, 1 R01 GM084019, 2008 – 2013, “Development of Carboxyl- and Amide-directed C–H Activation/C-C Coupling Reactions”
- NIH grant, 2 R01 GM084019, 2013 – 2024, “Ligand-promoted Enantioselective and Remote C-H Activation Reactions”

- NSF grant, CHE-1465292, 2015 – 2018, " Development of Positional Selective C-H Activation Reactions"
- NSF grant, CHE-1700982, 2010 – 2022, "CCI Center in Selective C-H Functionalization"
- Syngenta, UK, 2011 – 2013, "Pd-catalyzed C–H Functionalization of Pyridines and Applications to bis-Pyridine Synthesis"
- Bristol-Myers Squibb, 2012 – "Unrestricted Grant in Synthetic Organic Chemistry"
- Novartis Institute for Biomedical Research, Inc., 2010 – "Novartis Early Career Award Fellowship"
- Industrial collaboration grants: 2013 – 2018 – Bristol-Myers Squibb; Vertex Pharma; Eisai Inc., Sigma-Aldrich; Boehringer-Ingelheim, Vividion Therapeutics.

TEACHING ACTIVITIES

My teaching activity focuses on the mechanistic aspects of fundamental chemical reactivity, and creative thinking in applying these understandings to the serendipitous discovery and rational design of important catalytic transformations. In addition, my organometallic class places an emphasis on bridging in-depth inorganic knowledge and synthetic and biological applications.

Organometallic Chemistry, The Scripps Research Institute

Organic Experiments, Brandeis University

Organometallic Chemistry in Synthesis, Brandeis University

Advanced Organic Chemistry: Bonding, Structure and Reaction Mechanism, Brandeis University

Project supervisor for Part III Organic Chemistry, Cambridge University

Chief Demonstrator for Part I and II Organic Chemistry, Cambridge University

Natural Science Supervisor for Undergraduates in St John's College, Cambridge University

RECRUITING AND COMMITTEE ACTIVITIES

I have also served on numerous Ph.D. Thesis Defense committees, student recruiting committees and communication committees in the past five years.

Thesis Committees, 2007-2024

Jason Chen	Jeremy Richter	Carlos Guerrero	Mike Frederick
Noah Burns	Thomas Maimone	Yee Hwe Lim	Christine Gelin
Timothy Newhouse	Joseph Wang	Paresma Patel	Stanislav Presolski
Jun Cindy Shi	Ian Seiple	Paul Krawczuk	David Sarlah
Jonathan Lockner	Ana Florina Voica	Adrea Zhul	Yoshihiro Ishihara
Hans Renata	Steven Breazzano	Will Gutekunst	Brady Worrell
Erin Anderson	Klaus Albertshofer	Klemmet Foo	Emily Cherney
Steve McKerrall	Christopher Hale	Sotirios Totokotsopoulos	Rodrigo Rodriguez
Diane Holte	Nicholas Simmons	Daniel Jansen	Jamal Malik
Quentin Michaudel	Kenny Wan	Martin Tabor	Nathan Wilde
Brandon Rosen	Ryan Gianatassio	Matthew Villaume	Luis Ruben Martinez
Hai Dao	Julian Lo	Artiom Cernijenko	Peter Thuy-Boun
Ming Yan	Jeremy Roach	Pei Gan	Jiajun Zhang
Yujia Wang	Yi Yang See	Qinheng Zheng	Hang Chu
Jacob Edwards	Rohan Merchant	Gencheng Li	Samantha Green

Joseph Derosa	David Hill	John Gurak	Zhen Liu
Yuzuru Kanda	Rei Matsuura	Van Tran	Mingyu Liu
Yujia Wang	Lisa Barton	Alena Vasquez	Tanner Jenkins
Lucas Oxtoby	Tucker Huffman	Rei Matsuura	Zhichen Wu

Committees

2008 – 2013	Chemistry Admissions/Recruiting Committee Member
2008 – 2010	WASC Communications Committee Member
2009 – Present	Scientific Communication Theme Committee Member

Past and Present Trainees

Former graduate students at Brandeis University

Hai-Chen Wu, Ph.D. –Professor, Institute of High Energy Physics, Beijing, China
Jiao Jie Li, Ph.D. – Assistant Professor, EWHA University, Seoul, South Korea
Jue Liang, M.S. – Massachusetts General Hospital, Boston, MA
Nathan Maugel, Ph.D. – Quality Control Supervisor, Sigma-Aldrich, Boston, MA

Former graduate students at The Scripps Research Institute:

Peter Thuy-Boun, Ph.D., The Scripps Research Institute, Dennis Wolan Laboratory
Kelvin Chan, Ph.D. - Deputy Manager, Investments (Biomedical Sciences), EDBI Pte Ltd., & Board Member, JR Biotek Foundation
Ling Chu, Ph.D. – Postdoctoral Fellow, Yale University, Alana Schepartz Group, New Haven, CT
Casper Engelin, Ph.D. – Chemical Engineer, Novo Nordisk, Copenhagen, Denmark
Keary Engle, Ph.D. – Assistant Professor, The Scripps Research Institute
Marcus Farmer, Ph.D. – Postdoctoral Fellow, Princeton University, Paul Chirik Group
Guo-Lin Gao, Ph.D. – Associate Professor, HarBin University, China
Ramesh Giri, Ph.D. – Assistant Professor, Dept. of Chem. & Chem. Bio., University of New Mexico
Jian He, Ph.D. – Postdoctoral Fellow, Caltech, Jonas Peters Laboratory, Pasadena, CA
Anna Homs, Ph.D. – R & D Project Leader, Ferrer Interquim, Barcelona, Spain
Jonathan Lam, Ph.D. – Scientist, Medicinal Chemistry, Amgen, Cambridge, MA
Tao Liu, Ph.D. – Research Scientist, Eli Lilly, Lilly Biotechnology Center, San Diego, CA
Yi (Emma) Lu, Ph.D. – Associate Professor, Nanjing University, Nanjing, China
Jamal Malik, Ph.D. – Postdoctoral Fellow, Max-Planck Institute for Colloids & Interfaces, Seeberger Laboratory, München, Germany
Masayuki Wasa, Ph.D. – Assistant Professor, Boston College
Tiansheng Mei, Ph.D. – Professor, Shanghai Institute of Organic Chemistry, Shanghai, China
Waqar Rauf, Ph.D. – Senior Scientist, National Institute for Biotechnology and Genetic Engineering, Faisalabad, Pakistan
Timothy Reichart, Ph.D. – Postdoctoral Fellow, U.S. Army Natick Soldier Research Center, Natick, MA
Anthony Silvestri, Ph.D., The Scripps Research Institute, Phil Dawson Laboratory
Ri-Yuan Tang, Ph.D. – Associate Professor, South China Agricultural University, Guangzhou, China
Chris Vickers, Ph.D. – Postdoctoral Fellow, Salk Institute, Alan Saghatelian Lababoratory

Donghui Wang, Ph.D. – Professor, Shanghai Institute of Organic Chemistry, Shanghai, China
Masayuki Wasa, Ph.D. – Assistant Professor, Boston College, Chestnut Hill, MA
Brady Worrell, Ph.D. –University of Colorado, Boulder, Colorado, Christopher Bowman Laboratory
Yanqiao Chen, Ph.D. – Researcher, Amgen,
Zhe Zhuang, Ph.D. – Postdoctoral Fellow, Stanford University
Alastair Herrone, Ph.D. – Research Scientist, Gilead, Foster City, CA

Current graduate students at The Scripps Research Institute:

Taiwei Chang	Nikita Chekshin	Chi-Yu Chen
Hannah Hashimoto	Donghyeon Kim	Yihao Li
Yukun Lin	Yuxin Ouyan	Yilin Lu
Quang Dung Phan	Jielun Yan	Zijun Zhang

Current postdoctoral fellows at The Scripps Research Institute:

Mohammed Hoque (Ph.D, Center of Biomedical Research, Lucknow, India)
Liang Hu (Ph.D., Hunan University, Hunan,China)
Peng Lu (Ph.D., Zhejiang University, Hangzhou, China)
Bedayuti Pati (Ph.D., National Institute of Science Education and Research, Padanpur, India)
Tao Sheng (Ph.D., Nanjing Agricultural University, Nanjing, China)
Rahul Shukla (Ph.D., Indian Institute of Technology, Bombay, India)
Daniel Strassfeld (Ph.D., Harvard University, Cambridge, Maryland, USA)
Sanshan Wang (Ph.D., Peking University, Beijing, China)
Ziyu Zhang (Ph.D., Nankai University, Tianjin, China)
Tao Zhang (Ph.D., Nankai University, Tianjin, China)
Haiwei Zao (Ph.D., Shanghai Institute of Organic Chemistry, Shanghai, China)
Wei Zhou (Ph.D., Institute of Chemical Research of Catalonia, Tarragona, Spain)
Shupeng Zhou (Ph.D., Changzhou University, Changzhou, China)
Lan Zhou (Ph.D., Wuhan University, Wuhan, China)

Social activities and hobby

President of Chinese Student and Scholar Association, UK, 1998
Chairman of Chinese Society of Chemical Science and Technology, UK, 1997
Badminton, Cambridge University Cuppers (Champion 2001, 2003)