

Olafs Daugulis

EDUCATION

- 1999 Ph.D. in Chemistry (University of Wisconsin–Madison)
Research Advisor: Professor Edwin Vedejs
- 1991 Degree in Chemical Engineering (Riga Technical University, Latvia)

PROFESSIONAL EXPERIENCE

- 2014– Professor and R. A. Welch Chair in Chemistry (University of Houston)
- 2009–2014 Associate Professor of Chemistry (University of Houston)
- 2003–2009 Assistant Professor of Chemistry (University of Houston)
- 2000–2003 Postdoctoral Associate (University of North Carolina–Chapel Hill)
Research Advisor: Professor Maurice Brookhart
- 1994–1999 Research Assistant (University of Wisconsin–Madison)
- 1993–1994 Teaching Assistant (University of Wisconsin–Madison)
- 1991–1993 Research Assistant (Riga Technical University, Latvia)

HONORS AND AWARDS

- 1991 Graduated with Honors Diploma, Riga Technical University, Riga, Latvia
- 1996 S. C. Slifkin Scholarship, University of Wisconsin–Madison
- 2006 Synthesis-Synlett Journal Award
- 2007 NSF Career Award (declined in favor of NIH funding)
- 2008 A. P. Sloan Fellowship
- 2008 Camille Dreyfus Teacher-Scholar Award
- 2009 UH Excellence in Research and Scholarship Award at Assist. Prof. level
- 2010 UH Teaching Excellence Award
- 2011 Elected as a Foreign Member of Latvian Academy of Science
- 2013 Norman Hackerman Award in Chemical Research
- 2014 ACS Cope Scholar Award
- 2018 Nankai University Organic Lectureship, Tianjin, China
- 2018 Elected as AAAS Fellow
- 2019 Honorary Doctorate, Riga Technical University, Riga, Latvia

PEER-REVIEWED PUBLICATIONS OF WORK PERFORMED ELSEWHERE

1. "Enantioselective Acylations Catalyzed by Chiral Phosphines" Vedejs, E.*; Daugulis, O.; Diver, S. T. *J. Org. Chem.* **1996**, 58, 430-431.
2. "Dual Activation in the Esterification of Hindered Alcohols with Anhydrides using MgBr₂ and a Tertiary Amine" Vedejs, E.*; Daugulis, O. *J. Org. Chem.* **1996**, 58, 5702-5703.

3. "Generation of the 1,3-Phosphasilolene Skeleton from Ortho-Silylated Biarylphosphonates" Vedejs, E.*; Daugulis, O.; Diver, S. T.; Powell, D. R. *J. Org. Chem.* **1998**, *63*, 2338-2341.
4. "Chiral Phosphines as Enantioselective Acylating Agents; Phosphorus Configuration and the Search for Reactive Catalysts" Vedejs, E.*; Daugulis, O. *Latvijas Kimijas Zurnals* **1999**, *1*, 31.
5. "2-Aryl-4,4,8-trimethyl-2-phospha-bicyclo[3.3.0]octanes—Reactive Chiral Phosphine Catalysts for Enantioselective Acylation" Vedejs, E.*; Daugulis, O. *J. Am. Chem. Soc.* **1999**, *121*, 5813-5814.
6. "Enantioselective Acyl Transfer Using Chiral Phosphine Catalysts" Vedejs, E.*; Daugulis, O.; MacKay, J. A.; Rozners, E. *Synlett* **2001**, *10*, 1499-1505.
7. "Phosphinidene-Palladium Complexes for the Polymerization and Oligomerization of Ethylene" Daugulis, O.; Brookhart, M.*; White, P. S. *Organometallics* **2002**, *21*, 5935-5943.
8. "Polymerization of Ethylene with Cationic Palladium and Nickel Catalysts Containing Bulky Nonenolizable Imine-Phosphine Ligands" Daugulis, O.; Brookhart, M.* *Organometallics* **2002**, *21*, 5926-5934.
9. "Ethylene Polymerization Using Tetramethyl(2-methylthioethyl)cyclopentadienyl Complexes of Cobalt" Daugulis, O.; Brookhart, M.*; White, P.S. *Organometallics* **2003**, *22*, 4699-4704.
10. "A Comparison of Monocyclic and Bicyclic Phospholanes as Acyl Transfer Catalysts" Vedejs, E.*; Daugulis, O.; Harper, L. A.; MacKay, J. A.; Powell, D. R. *J. Org. Chem.* **2003**, *68*, 5020-5027.
11. "A Highly Enantioselective Phospha-bicyclooctane (PBO) Catalyst for the Kinetic Resolution of Benzylic Alcohols" Vedejs, E.*; Daugulis, O. *J. Am. Chem. Soc.* **2003**, *125*, 4166-4173.
12. "Desymmetrization of meso-Hydrobenzoin Using Chiral, Nucleophilic Phosphine Catalysts" Vedejs, E.*; Daugulis, O.; Tuttle, N. *J. Org. Chem.* **2004**, *69*, 1389-1392.
13. "Decarbonylation of Aryl Ketones Mediated by Bulky Cyclopentadienylrhodium bis-Ethylene Complexes" Daugulis, O.; Brookhart, M.* *Organometallics* **2004**, *23*, 527-534.

PEER-REVIEWED PUBLICATIONS FROM THE UNIVERSITY OF HOUSTON

14. "Catalytic Coupling of Haloolefins with Anilides" Zaitsev, V. G.; Daugulis, O.* *J. Am. Chem. Soc.* **2005**, *127*, 4156-4157.
15. "Anilide *ortho*-Arylation Using C-H Activation Methodology" Daugulis, O.*; Zaitsev, V. G. *Angew. Chem., Int. Ed.* **2005**, *44*, 4046-4048.
16. "Catalytic Coupling of C-H and C-I Bonds Using Pyridine as a Directing Group" Shabashov, D.; Daugulis, O.* *Org. Lett.* **2005**, *7*, 3657-3659.
17. "Highly Regioselective Arylation of sp³ C-H Bonds Catalyzed by Palladium Acetate" Zaitsev, V. G.; Shabashov, D.; Daugulis, O.* *J. Am. Chem. Soc.* **2005**, *127*, 13154-13155.
18. "Monomeric Ag(I) β -Diketiminato Complexes" Chiong, H. A.; Daugulis, O.* *Organometallics* **2006**, *25*, 4054-4057.
19. "*ortho*-Arylation of Benzamides" Shabashov, D.; Daugulis, O.* *Org. Lett.* **2006**, *8*, 4947.
20. "Direct Palladium-Catalyzed *ortho*-Arylation of Benzylamines" Lazareva, A.; Daugulis, O.* *Org. Lett.* **2006**, *8*, 5211-5213.
21. "Regioselective Functionalization of Unreactive C-H Bonds" Daugulis, O.*; Zaitsev, V. G.; Shabashov, D.; Pham, Q.-N.; Lazareva, A. *Synlett*, **2006**, *15*, 3382-3388. Invited account about our work at the University of Houston.
22. "Palladium-Catalyzed Arylation of Electron-Rich Heterocycles with Aryl Chlorides" Chiong, H. A.; Daugulis, O.* *Org. Lett.*, **2007**, *9*, 1449-1451.

23. "Two Methods for Direct *ortho*-Arylation of Benzoic Acids" Chiong, H. A.; Pham, Q.-N.; Daugulis, O.* *J. Am. Chem. Soc.*, **2007**, *129*, 9879-9884.
24. "Palladium-Catalyzed Anilide *ortho*-Arylation and Subsequent One-Pot Cyclization to Phenanthridines" Shabashov, D.; Daugulis, O.* *J. Org. Chem.* **2007**, *72*, 7720-7725.
25. "Copper-Catalyzed Arylation of Heterocycle C-H Bonds" Do, H.-Q.; Daugulis, O.* *J. Am. Chem. Soc.* **2007**, *129*, 12404-12405.
26. "Copper-Catalyzed Arylation and Alkenylation of Polyfluoroarene C-H Bonds" Do, H.-Q.; Daugulis, O.* *J. Am. Chem. Soc.* **2008**, *130*, 1128-1129.
27. "Carbon-Hydrogen Bond Functionalization Approach for the Synthesis of Fluorenones and *ortho*-Arylated Benzonitriles" Shabashov, D.; Maldonado, J. R. M.; Daugulis, O.* *J. Org. Chem.* **2008**, *73*, 7818-7821.
28. "Direct Transition-Metal-Free Intramolecular Arylation of Phenols" Bajracharya, G.; Daugulis, O. *Org. Lett.*, **2008**, *10*, 4625-4628.
29. "A General Method for Copper-Catalyzed Arylation of Arene C-H Bonds" Do, H.-Q.; Khan, R. K. M.; Daugulis, O.* *J. Am. Chem. Soc.* **2008**, *130*, 15185-15192.
30. "A Simple Base-Mediated Halogenation of Acidic sp² C-H Bonds under Noncryogenic Conditions" Do, H.-Q.; Daugulis, O.* *Org. Lett.* **2009**, *11*, 421-423.
31. "Palladium (II) Acetate-Butyl-di-1-Adamantylphosphine Catalyzed Arylation of Electron-Rich Heterocycles. Preparation of 5-Phenyl-2-Isobutylthiazole" Lazareva, A.; Chiong, H. A.; Daugulis, O.* *Org. Synth.* **2009**, *86*, 105.
32. "Palladium- and Copper-Catalyzed Arylation of Carbon-Hydrogen Bonds" Daugulis, O.*; Do, H.-Q.; Shabashov, D. *Acc. Chem. Res.* **2009**, *42*, 1074-1086. Invited review about our chemistry.
33. "Copper-Catalyzed Arene C-H Bond Cross-Coupling" Do, H.-Q.; Daugulis, O.* *Chem. Commun.* **2009**, 6433-6435.
34. "Direct Conversion of Carbon-Hydrogen to Carbon-Carbon Bonds by First Row Transition Metal Catalysis" Kulkarni, A. A.; Daugulis, O.* *Synthesis* **2009**, 4087-4109. Invited review.
35. "In Situ Generation and Trapping of Aryllithium and Arylpotassium Species by Halogen, Sulfur, and Carbon Electrophiles" Popov, I.; Do, H.-Q.; Daugulis, O.* *J. Org. Chem.* **2009**, *74*, 8309-8313.
36. "An Aromatic Glaser-Hay Reaction" Do, H.-Q.; Daugulis, O.* *J. Am. Chem. Soc.* **2009**, *131*, 17052-17053.
37. "Palladium and Copper Catalysis in Regioselective, Intermolecular Coupling of C-H and C-X Bonds" Daugulis, O. *Topics in Current Chemistry* **2010**, *292*, 57-84. Invited review.
38. "Nickel, Manganese, Cobalt, and Iron-Catalyzed Deprotonative Arene Dimerization" Truong, T.; Alvarado, J.; Tran, L. D., Daugulis, O.* *Org. Lett.* **2010**, *12*, 1200-1203.
39. "Evolution of Catalysts Directed by Genetic Algorithms in a Plug-Based Microfluidic Device Tested with Oxidation of Methane by Oxygen" Kreutz, J. E.; Shukhaev, A.; Du, W.; Druskin, S.; Daugulis, O.*; Ismagilov, R. F.* *J. Am. Chem. Soc.* **2010**, *132*, 3128-3132.
40. "Auxiliary-Assisted Palladium-Catalyzed Arylation and Alkylation of sp² and sp³ Carbon-Hydrogen Bonds" Shabashov, D.; Daugulis, O.* *J. Am. Chem. Soc.* **2010**, *132*, 3965-3972.
41. "A General Method for Copper-Catalyzed Arylation of Acidic Arene C-H Bonds. Preparation of 2-Chloro-5-(3-Methylphenyl)Thiophene" Alvarado, J.; Do, H.-Q.; Daugulis, O.* *Org. Synth.* **2010**, *87*, 184-191.
42. "Copper-Catalyzed Cyanation of Heterocycle Carbon-Hydrogen Bonds" Do, H.-Q.; Daugulis,

- O.* *Org. Lett.* **2010**, *12*, 2517-2519.
43. "Iron-Catalyzed Heterocycle and Arene Deprotonative Alkylation" Tran, L. D.; Daugulis, O.* *Org. Lett.* **2010**, *12*, 4277-4279.
 44. "Palladium-Catalyzed Indole, Pyrrole, and Furan Arylation by Aryl Chlorides" Nadres, E. T.; Lazareva, A.; Daugulis, O.* *J. Org. Chem.* **2011**, *76*, 471-483.
 45. "Base-Mediated Intermolecular sp^2 C-H Bond Arylation via Benzyne Intermediates" Truong, T.; Daugulis, O.* *J. Am. Chem. Soc.* **2011**, *133*, 4243-4245.
 46. "Copper-Catalyzed Arylation of 1H-Perfluoroalkanes" Popov, I.; Lindeman, S.; Daugulis, O.* *J. Am. Chem. Soc.* **2011**, *133*, 9286-9289.
 47. "Transition-Metal-Free Alkynylation of Aryl Chlorides" Truong, T.; Daugulis, O.* *Org. Lett.* **2011**, *13*, 4172-4175.
 48. "A General Method for Copper-Catalyzed Arene Cross-Dimerization" Do, H.-Q.; Daugulis, O.* *J. Am. Chem. Soc.* **2011**, *133*, 13577-13586.
 49. "Intermolecular Direct Arylation of Five-Membered Ring Heterocycles by Non-Activated Aryl Chlorides" Daugulis, O. *Chem. Heterocycl. Compd.* **2012**, 21-26. Invited review.
 50. "Heterocycle Synthesis via Direct C-H/N-H Coupling" Nadres, E. T.; Daugulis, O.* *J. Am. Chem. Soc.* **2012**, *134*, 7-10.
 51. "Nonnatural Amino Acid Synthesis by Carbon-Hydrogen Bond Functionalization Methodology" Tran, L. D.; Daugulis, O.* *Angew. Chem., Int. Ed.* **2012**, *51*, 5188-5191.
 52. "Copper-Catalyzed Homodimerization of Nitronates and Enolates under an Oxygen Atmosphere" Do, H.-Q.; Tran-Vu, H.; Daugulis, O.* *Organometallics* **2012**, *31*, 7816-7818.
 53. "Directed Functionalization of C-H Bonds – now also *meta*-Selective" Truong, T.; Daugulis, O.* *Angew. Chem., Int. Ed.* **2012**, *51*, 11677-11679. Highlight.
 54. "Copper-Promoted Sulfenylation of sp^2 C-H Bonds" Tran, L. D.; Popov, I.; Daugulis, O.* *J. Am. Chem. Soc.* **2012**, *134*, 18237-18240.
 55. "Direct Intermolecular Aniline Arylation via Benzyne Intermediates" Truong, T.; Daugulis, O.* *Org. Lett.* **2012**, *14*, 5964-5967.
 56. "Divergent Reaction Pathways for Phenol Arylation by Arynes: Synthesis of Helicenes and 2-Arylphenols" Truong, T.; Daugulis, O.* *Chem. Sci.* **2013**, *4*, 531-535.
 57. "Directed Amination of Non-Acidic Arene C-H Bonds by a Copper-Silver Catalytic System" Tran, L. D.; Roane, J.; Daugulis, O.* *Angew. Chem., Int. Ed.* **2013**, *52*, 6043-6046.
 58. "Copper-Catalyzed, Directing Group-Assisted Fluorination of Arene and Heteroarene C-H Bonds" Truong, T.; Klimovica, K.; Daugulis, O.* *J. Am. Chem. Soc.* **2013**, *135*, 9342-9345.
 59. "Superhydrophobic Perfluorinated Metal-Organic Frameworks" Chen, T.-H.; Popov, I.*; Zenasni, O.; Daugulis, O.; Miljanić, O.* *Chem. Commun.* **2013**, *49*, 6846-6848.
 60. "Synthesis of Highly Branched Polyethylene Using "Sandwich" (8-p-Tolyl Naphthyl α -Diimine)Nickel(II) Catalysts" Zhang, D.; Nadres, E. T.; Brookhart, M.*; Daugulis, O.* *Organometallics* **2013**, *32*, 5136-5143.
 61. "Scope and Limitations of Auxiliary-Assisted, Palladium-Catalyzed Arylation and Alkylation of sp^2 and sp^3 C-H Bonds" Nadres, E. T.; Santos, G. I. F.; Shabashov, D.; Daugulis, O.* *J. Org. Chem.* **2013**, *78*, 9689-9714.
 62. "Copper-Catalyzed Carboxylation of Aryl Iodides with Carbon Dioxide" Tran-Vu, H.; Daugulis, O.* *ACS Catalysis* **2013**, *3*, 2417-2420.

63. "Copper-Catalyzed Etherification of Arene C-H Bonds" Roane, J.; Daugulis, O.* *Org. Lett.* **2013**, *15*, 5842-5845.
64. "Secondary Alkene Insertion and Precision Chain-Walking: A New Route to Semicrystalline "Polyethylene" from α -Olefins by Combining Two Rare Catalytic Events" Vaidya, T.; Klimovica, K.; LaPointe, A. M.; Keresztes, I.; Lobkovsky, E. M.; Daugulis, O.*; Coates, G. W.* *J. Am. Chem. Soc.* **2014**, *136*, 7213-7216.
65. "A General Method for Functionalized Polyaryl Synthesis via Aryne Intermediates" Truong, T.; Mesgar, M.; Le, K. K. A.; Daugulis, O.* *J. Am. Chem. Soc.* **2014**, *136*, 8568-8576.
66. "Cobalt-Catalyzed, Aminoquinoline-Directed sp^2 C-H Bond Alkenylation by Alkynes" Grigorjeva, L.; Daugulis, O.* *Angew. Chem., Int. Ed.* **2014**, *53*, 10209-10212.
67. "Cobalt-Catalyzed, Aminoquinoline-Directed Coupling of sp^2 C-H Bonds with Alkenes" Grigorjeva, L.; Daugulis, O.* *Org. Lett.* **2014**, *16*, 4684-4687. ACS Editors Choice for August 22.
68. "Cobalt-Catalyzed Direct Carbonylation of Aminoquinoline Benzamides" Grigorjeva, L.; Daugulis, O.* *Org. Lett.* **2014**, *16*, 4688-4690.
69. "Thermally robust and porous noncovalent organic framework with high affinity for fluorocarbons and Freons" Chen, T.-H.; Popov, I.; Kaveevivitchai, W.; Chuang, Y.-C.; Chen, Y.-S.; Daugulis, O.; Jacobson, A. J.; Miljanić, O.* *Nat. Comm.* **2014**, *5*, 5131.
70. "Living Polymerization of Ethylene and Copolymerization of Ethylene/Methyl Acrylate Using "Sandwich" Diimine Palladium Catalysts" Allen, K.; Campos, J.; Daugulis, O.; Brookhart, M.* *ACS Catalysis* **2015**, *5*, 456-464.
71. "Synthesis of Branched Ultra-High-Molecular-Weight Polyethylene Using Highly Active Neutral, Single-Component Ni(II) Catalysts" Chen, Z.; Mesgar, M.; White, P.; Daugulis, O.*; Brookhart, M.* *ACS Catalysis* **2015**, *5*, 631-636.
72. "Macrocyclic Embrace: Encapsulation of Fluoroarenes by m-Phenylene Ethynylene Host" Popov, I.; Chen, T.-H.; Belyakov, S.; Daugulis, O.; Wheeler, S. E.; Miljanić, O. S.* *Chem. Eur. J.* **2015**, *21*, 2750-2754.
73. "Cobalt-Promoted Dimerization of Aminoquinoline Benzamides" Grigorjeva, L.; Daugulis, O.* *Org. Lett.* **2015**, *17*, 1204-1207.
74. "Bidentate, Monoanionic Auxiliary-Directed Functionalization of Carbon-Hydrogen Bonds" Daugulis, O.*; Roane, J.; Tran, L. D. *Acc. Chem. Res.* **2015**, *48*, 1053-1064. Invited review about our work.
75. "Cobalt-Catalyzed, Aminoquinoline-Directed Functionalization of Phosphinic Amide sp^2 C-H Bonds" Nguyen, T. T.; Grigorjeva, L.; Daugulis, O.* *ACS Catalysis* **2016**, *6*, 551-554.
76. "A Career in Catalysis: Maurice Brookhart" Daugulis, O.; MacArthur, A.*; Rix, F.; Templeton, J. *ACS Catalysis* **2016**, *6*, 1518-1532. Account about research career of Prof. M. Brookhart.
77. "A General Method for Aminoquinoline-Directed, Copper-Catalyzed sp^2 CH Bond Amination" Roane, J.; Daugulis, O.* *J. Am. Chem. Soc.* **2016**, *138*, 4601-4607.
78. "Synthesis of Branched Polyethylene with "Half-Sandwich" Pyridine-imine Nickel Complexes" Chen, Z.; Allen, K.; White, P.; Daugulis, O.*; Brookhart, M.* *Organometallics* **2016**, *35*, 1756-1760.
79. "Silyl Aryl Halides Can Replace Triflates As Aryne Precursors" Mesgar, M.; Daugulis, O.* *Org. Lett.* **2016**, *18*, 3910-3913.
80. "Synthesis and Properties of "Sandwich" Diimine-Coinage Metal Ethylene Complexes" Klimovica, K.; Kirschbaum, K.; Daugulis, O.* *Organometallics* **2016**, *35*, 2938-2943.

81. "Mechanistic Studies of Pd(II)-Catalyzed Copolymerization of Ethylene and Vinylalkoxysilanes: Evidence for a β -Silyl Elimination Chain Transfer Mechanism" Chen, Z.; Liu, W.; Daugulis, O.*; Brookhart, M.*. *J. Am. Chem. Soc.* **2016**, *138*, 16120-16129.
82. "Oligomerization of Ethylene Using a Diphosphine Palladium Catalyst" Bézier, D.; Daugulis, O.*; Brookhart, M.* *Organometallics* **2017**, *36*, 443-447.
83. "Alkene Isomerization By "Sandwich" Diimine-Palladium Catalysts" Kocen, A.; Klimovica, K.; Brookhart, M.*; Daugulis, O.* *Organometallics* **2017**, *36*, 787-790.
84. "Palladium-Catalyzed Pyrazole-Directed sp^3 C-H Bond Arylation for the Synthesis of beta-Phenethylamines" Gulia, N.; Daugulis, O.* *Angew. Chem., Int. Ed.* **2017**, *56*, 3630-3634.
85. "Palladium-Catalyzed, Aminoquinoline-Directed Arylation of Phosphoramidate and Phosphinic Amide sp^3 C-H Bonds" Nguyen, T. T.; Daugulis, O.* *Chem. Commun.* **2017**, *53*, 4609-4611.
86. "Aminoquinoline-Directed, Cobalt-Catalyzed Carbonylation of Sulfonamide sp^2 C-H Bonds" Nguyen, T. T.; Grigorjeva, L.; Daugulis, O.* *Chem. Commun.* **2017**, *53*, 5136-5138.
87. "Understanding the Insertion Pathways and Chain Walking Mechanisms of α -Diimine Nickel Catalysts for α -Olefin Polymerization: A ^{13}C NMR Spectroscopic Investigation" O'Connor, K. S.; Lamb, J. R.; Vaidya, T.; Keresztes, I.; Klimovica, K.; LaPointe, A. M.; Daugulis, O.; Coates, G. W.* *Macromolecules* **2017**, *50*, 7010-7027.
88. "Polymerization of Ethylene Catalyzed by Phosphine-Iminophosphorane Palladium Complexes" Bézier, D.; Daugulis, O.*; Brookhart, M.* *Organometallics* **2017**, *36*, 2947-2951.
89. "Synthesis of 1,2-Bis-(Trifluoromethylthio)arenes via Aryne Intermediates" Mesgar, M.; Daugulis, O.* *Org. Lett.* **2017**, *19*, 4247-4250.
90. "Palladium-Catalyzed Alkene Chain-Running Isomerization" Kocen, A. L.; Brookhart, M.*; Daugulis, O.* *Chem. Commun.* **2017**, *53*, 10010-10013.
91. "Nickel-Catalyzed Copolymerization of Ethylene and Vinyltrialkoxysilanes: Catalytic Production of Cross-linkable Polyethylene and Elucidation of the Chain Growth Mechanism" Chen, Z.; Leatherman, M. D.; Daugulis, O.*; Brookhart, M.* *J. Am. Chem. Soc.* **2017**, *139*, 16013-16022.
92. "Cobalt-Catalyzed Coupling of Benzoic Acid C-H Bonds with Alkynes, Styrenes, and 1,3-Dienes" Nguyen, T. T.; Grigorjeva, L.; Daugulis, O.* *Angew. Chem., Int. Ed.* **2018**, *57*, 1688-1691.
93. "Dissecting Porosity in Molecular Crystals: Influence of Geometry, Hydrogen Bonding, and $[\pi \cdots \pi]$ Stacking on the Solid-State Packing" Le, H. T. M.; Chen, T.-H.; Yu-Sheng Chen, Y.-S.; Daugulis, O.; Hashim, M. I.; Hsu, C.-W.; Jacobson, A. J.; Kaveevivitchai, W.; Liang, X.; Makarenko, T.; Miljanić, O. Š.*; Popov, I.; Wang, X.; Wu, C.-H.; Wu, J. I. *J. Am. Chem. Soc.* **2018**, *140*, 6014-6026.
94. "Synthesis of Unsymmetrical 2,6-Diarylanilines by Palladium-Catalyzed C-H Bond Functionalization Methodology" Kwak, S. H.; Gulia, N.; Daugulis, O.* *J. Org. Chem.* **2018**, *83*, 5844-5850.
95. "New Hindered Amide Base for Aryne Insertion into Si-P, Si-S, Si-N, and C-C Bonds" Mesgar, M.; Nguyen-Le, J.; Daugulis, O.* *J. Am. Chem. Soc.* **2018**, *140*, 13703-13710.
96. "A Highly Active Ni(II)-Triadamantylphosphine Catalyst for Ultrahigh-Molecular-Weight Polyethylene Synthesis" Kocen, A. L.; Brookhart, M.*; Daugulis, O.* *Nature Commun.* **2019**, *10*, 438.
97. "Solvation-Dependent Switching of Solid-state Luminescence of a Fluorinated Aromatic Tetrapyrazole" Zhang, Z.; Lieu, T.; Wu, C.-H.; Wang, X.; Wu, J. I.-C.; Daugulis, O.; Miljanic, O.* *Chem. Commun.* **2019**, *55*, 9387-9390.

98. "1,2-Bis(arylthio)arene Synthesis via Aryne Intermediates" Mesgar, M.; Nguyen-Le, J.; Daugulis, O.* *Chem. Commun.* **2019**, 55, 9467-9470.
99. "1-Aminopyridinium Ylides as Monodentate Directing Groups for sp³ C-H Bond Functionalization" Le, K. K. A.; Nguyen, H.; Daugulis, O.* *J. Am. Chem. Soc.* **2019**, 141, 14728-14735.
100. "N-Aminopyridinium Ylide-Directed, Copper-Promoted Amination of sp² C-H Bonds" Kwak, S. H.; Daugulis, O.* *J. Org. Chem.* **2019**, 84, 13022-13032.
101. "Ethylene Polymerization With Ni(II) Diimine Complexes Generated from 8-Halo-1-naphthylamines. The Role of Equilibrating Syn/Anti Diastereomers in Determining Polymer Properties" Wang, B.; Daugulis, O.*; Brookhart, M.* *Organometallics* **2019**, 38, 4658-4668.

Average Citations per article: 138.9; h-index: 55 (as of 11/28/2019 according to Web of Science)

INVITED ORAL PRESENTATIONS WHILE AT THE UNIVERSITY OF HOUSTON

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|--|-----------------------|
| 1. Baltic Organic Symposium, Riga, Latvia | June 2004 |
| 2. Brandeis University, Waltham, MA | October 2005 |
| 3. Northeastern University, Boston, MA | October 2005 |
| 4. University of Chicago, Chicago, IL | May 2006 |
| 5. University of California-Berkeley, Berkeley, CA | August 2006 |
| 6. Rutgers University, Piscataway, NJ | November 2006 |
| 7. University of North Carolina-Chapel Hill, Chapel Hill, NC | November 2006 |
| 8. North Carolina State University, Raleigh, NC | November 2006 |
| 9. University of Illinois-Chicago, Chicago, IL | November 2006 |
| 10. Merck, Rahway, NJ | February 2007 |
| 11. NSF Workshop on Organic Synthesis and Natural Products Chemistry, Estes Park, CO | June 2007 |
| 12. Marquette University, Milwaukee, WI | September 2007 |
| 13. University of Wisconsin-Madison, Madison, WI | September 2007 |
| 14. Florida State University, Tallahassee, FL | November 2007 |
| 15. UT-Arlington, Arlington, TX | February 2008 |
| 16. University of Michigan, Ann Arbor, MI | April 2008 |
| 17. Wayne State University, Detroit, MI | April 2008 |
| 18. Canadian Society for Chemistry, Edmonton, Canada | May 2008 |

19. Scripps Research Institute, La Jolla, CA May **2008**
20. University of California-San Diego, San Diego, CA June **2008**
21. ACS NERM, Burlington, VT July **2008**
22. Syngenta, Basel, Switzerland October **2008**
23. University of Arkansas, Fayetteville, AR December **2008**
24. Abbott Labs, Chicago, IL May **2009**
25. University of Guanajuato, Guanajuato, Mexico May **2009**
26. Walden Symposium, Riga, Latvia October **2009**
27. University of Maryland, College Park, MD April **2010**
28. RWTH Aachen, Germany May **2010**
29. University of Cologne, Germany May **2010**
30. TU Dortmund, Germany May **2010**
31. University of Münster, Germany May **2010**
32. SUNY-Binghamton, Binghamton, NY October **2010**
33. University of Pennsylvania, Philadelphia, PA October **2010**
34. Temple University, Philadelphia, PA October **2010**
35. Amgen, Thousand Oaks, CA November **2010**
36. UC-Santa Barbara, CA November **2010**
37. Pacificchem, Honolulu, HI December **2010**
38. Texas A&M University, College Station, TX April **2011**
39. University of Ottawa, Ottawa, Canada July **2011**
40. University of Wisconsin-Madison, WI July **2011**
41. Sun Yat Sen University, Guangzhou, China August **2011**
42. South China University of Technology, Guangzhou, China August **2011**.
43. Shanghai Institute for Organic Chemistry, Shanghai, China August **2011**
44. Symposium "New Frontiers in Organic Chemistry", Beijing, China September **2011**
45. Walden Symposium, Riga, Latvia September **2011**

46. Cornell University, Ithaca, NY September **2011**
47. Pennsylvania State University, University Park, PA October **2011**
48. UTSW–Dallas, Dallas, TX November **2011**
49. Boston University, Boston, MA July **2012**
50. Boston College, Boston, MA July **2012**
51. Macalester College, St. Paul, MN September **2012**
52. TexSyn Symposium UT-Austin, Austin, TX May **2013**
53. Symposium “Bioheterocycles-2013”, Riga, Latvia May **2013**
54. University of New Mexico, Albuquerque, NM October **2013**
55. Texas Tech University, Lubbock, TX October **2013**
56. ACS SWRM, Baylor, TX November **2013**
57. West Virginia University, Morgantown, WV November **2013**
58. 247th ACS National Meeting, Dallas, TX March **2014**
59. Modern Synthetic Methods and Chiral USA, Orlando, FL May **2014**
60. 248th ACS National Meeting, San Francisco, CA (x2) August **2014**
61. Texas Christian University, Fort Worth, TX August **2014**
62. University of North Texas, Denton, TX August **2014**
63. UIPUI, Indianapolis, IN September **2014**
64. Colorado State University, Ft. Collins, CO September **2014**
65. ICIQ, Tarragona, Spain October **2014**
66. University of Lyon-1, Lyon, France October **2014**
67. SUNY-Buffalo, Buffalo, NY November **2014**
68. UT-San Antonio, San Antonio, TX February **2015**
69. 249th ACS National Meeting, Denver, CO March **2015**
70. High Throughput Chemistry & Chemical Biology Gordon Conference, New London, NH June **2015**
71. Texas A&M University, College Station, TX (student invitation) December **2015**

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| 72. UT-Arlington, Arlington, TX | March 2016 |
| 73. Organic Reactions and Processes Gordon
Research Conference, Stonehill College, MA | July 2016 |
| 74. University of Heidelberg, Germany | October 2016 |
| 75. University of Mainz, Germany (GDCH Speaker) | November 2016 |
| 76. University of Göttingen, Germany | November 2016 |
| 77. University of Konstanz, Germany | November 2016 |
| 78. University of Basel, Switzerland | November 2016 |
| 79. RWTH-Aachen, Germany | November 2016 |
| 80. Lamar University, Beaumont, TX | April 2017 |
| 81. Walden Symposium, Riga, Latvia | June 2017 |
| 82. ExxonMobil, Baytown, TX | September 2017 |
| 83. Nankai University, Tianjin, China | May 2018 |
| 84. Sichuan University, Chengdu, China | May 2018 |
| 85. Zhejiang University, Hangzhou, China | May 2018 |
| 86. Nanjing University, Nanjing, China | May 2018 |
| 87. SIOC, Shanghai, China | May 2018 |
| 88. Fudan University, Shanghai, China | May 2018 |
| 89. Shanghai University, Shanghai, China | May 2018 |
| 90. HCMC University of Technology, HCMC, Vietnam | May 2018 |
| 91. HCMC University of Science, HCMC, Vietnam | May 2018 |
| 92. UNC-Chapel Hill, Chapel Hill, NC | October 2018 |
| 93. Duke University, Durham, NC | October 2018 |
| 94. Wayne State University Frontiers seminar, Detroit MI | March 2019 |
| 95. CERM, Midland, MI | June 2019 |
| 96. University of Toledo, Toledo, OH | September 2019 |
| 97. Penn State, College Station, PA | September 2019 |

98. Dartmouth College, Dartmouth, NH October **2019**
99. Riga Technical University, Riga, Latvia October **2019**
100. Baltic Organic Symposium, Vilnius, Lithuania to be presented in June **2020**
101. Beilstein conference on Earth-Abundant 3d Metal Catalysis, Mainz, Germany to be presented in July **2020**
102. 5th International Symposium on C-H Activation, Göttingen, Germany to be presented in July **2020**

RESEARCH MENTORING

Ph.D./M.S. Candidates

- Hendrich Chiong (PhD 2007; Celanese, Florence KY) Fall 2003–Fall 2007
- Dmitry Shabashov (PhD 2010; Millipore Sigma OH) Summer 2005–Spring 2010
- Anna Lazareva (MS 2008; ExxonMobil, Baytown TX) Fall 2006–Fall 2008
- Hien-Quang Do (PhD 2011; Dow Freeport, TX) Fall 2006–Summer 2011
- Enrico Nadres (PhD 2012; 3V Sigma, Georgetown, SC) Fall 2007–Summer 2012
- Dieu Ly Tran (PhD 2013; Millipore Sigma OH) Fall 2008–Spring 2013
- Thanh Truong (PhD 2013; Professor, VNU-HCM, Vietnam) Summer 2009–Summer 2013
- Ilya Popov (PhD 2014; ORNL) Summer 2009–Spring 2014
- Tran Vu Hung (PhD 2015; PD at UH) Fall 2010–Fall 2015
- Kristīne Kļimoviča (PhD 2016; 3M Minneapolis MN) Fall 2011–Fall 2016
- James Roane (PhD 2016; Merck South San Francisco CA) Fall 2011–Fall 2016
- Ky Khac Anh Le (MS 2017; ExxonMobil Baytown TX) Summer 2013–Summer 2017
- Milad Mesgar (PhD 2017; Momentive WV) Fall 2012–Fall 2017
- Tung Nguyen (PhD 2018; Asst. Prof., VNU-HCM, Vietnam) Fall 2013–Summer 2018
- Andrew Kocen (PhD 2019; PD at Cornell) Fall 2014–Summer 2019
- Tran Hai Quan Fall 2015–present
- Sehun Kwak Fall 2015–present
- Julius Heidlas Fall 2016–present

Thien Lieu	Fall 2016–present
Hanh Nguyen	Fall 2016–present
Irvin Romero	Fall 2018–present
Sabrina Aderibigbe	Fall 2019–present
Thanh Le Van	Fall 2019–present

Undergraduate Students

Quynh-Nhu Pham	Fall 2005–Summer 2006
Rana Kashif Khan (BMS in Cambridge, MA)	Fall 2006–Spring 2008
Roman Demerzhan	Spring 2007–Spring 2008
Rachel Lee	Spring 2007–Fall 2007
Jesus Rigoberto Molina Maldonado	Fall 2007
Akinyele Monsurat	Spring 2008–Summer 2008
Joseph Alvarado (Cleveland Clinic)	Summer 2009–Summer 2010
Reuben Santhan-Oommen	Fall 2010–Summer 2012
Ismael Palacios	Spring 2011–Spring 2013
Anayelsi Salinas Gomez	Summer 2011
Alexander Garcia Lopez	Summer 2011
Rojin Belganeh (Director of Frontier Laboratories North America)	Summer 2012
Laura Avena	Summer 2012
Loary Inclan	Fall 2013–Summer 2016
Justin Nguyen-Le (Custom Solutions Group)	Summer 2016–Spring 2019
Hiep Quang Ha	Fall 2018–Summer 2019
Vu Thanh Pham	Fall 2018–Summer 2019
Andrew Martinez	Summer 2019–present

Postdoctoral Associates

Vladimir Zaitsev (UH lab coordinator)	Fall 2003–Summer 2005
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Anatolii Andreiko	Fall 2005–Summer 2006
Gan Bajracharya (faculty position in Nepal)	Fall 2007–Fall 2008
Amol Kulkarni (Assoc. Prof. at Howard University)	Fall 2008–Summer 2010
Liene Grigorjeva (Researcher at OSI, Latvia)	Fall 2013–Summer 2016
Nurbey Gulia (University of Wroclaw)	Fall 2014–Summer 2016
Mateusz Janeta	Summer 2019–present

Visiting Faculty

Miguel Angel Vázquez Guevara (U of Guanajuato, Mexico)	Summer 2010
Oleg Ozerov (Texas A&M College Station)	Fall 2019

Students Earning Degrees under the Direction of Dr. Daugulis:

- Hendrich A. Chiong, PhD in Organic Chemistry 2007
Thesis title: Structural and Catalytic Studies on Palladium and Silver Complexes
- Rana Kashif M. Khan, Undergraduate Senior Honors Thesis 2007
Thesis title: Palladium-Catalyzed C-C Bond Formation Reactions
- Anna Lazareva, MS in Organic Chemistry 2008.
Thesis title: Palladium-Catalyzed Arylation of Heterocycles with Aryl Chlorides
- Dmitry Shabashov, PhD in Organic Chemistry 2010
Thesis title: Palladium-Catalyzed Formation of C-C Bonds Through C-H Bond Activation
- Hien-Quang Do, PhD in Organic Chemistry 2011
Thesis title: Copper-Catalyzed Direct Conversion of Arene C-H Bonds to C-C Bonds
- Enrico T. Nadres, PhD in Organic Chemistry 2012
Thesis title: Palladium-Catalyzed C-H Bond Functionalization of Heterocycles and Amines
- Ly Dieu Tran, PhD in Organic Chemistry 2013
Thesis title: Investigations in Iron, Copper and Palladium-Catalyzed C-H Bond Functionalization
- Thanh Truong, PhD in Organic Chemistry in 2013.
Thesis title: Carbon-Carbon and Carbon-Heteroatom Bond Formation Through C-H Bond Functionalization
- Ilya Popov, PhD in Organic Chemistry in 2014
Thesis title: Synthetic and Methodological Studies in Copper and Palladium-Catalyzed Carbon-Carbon and Carbon-Heteroatom Bond Formation

10. Hung Tran-Vu, PhD in Organic Chemistry in 2015.

Thesis title: Carboxylic Acid Synthesis from Carbon Dioxide via First-Row Transition-Metal Catalysis and Copper-Promoted C(sp³)-H Functionalization

11. James Roane, PhD in Organic Chemistry in 2016

Thesis title: Copper Promoted C-H Bond Functionalization with Heteroatom Nucleophiles Enabled by a Removable Auxiliary

12. Kristine Klimovica, PhD in Organic Chemistry in 2017

Thesis Title: “Sandwich” Diimine Group 11 Metal and Nickel Complexes: Synthesis, Characterization, and Applications

13. Ky Khac Anh Le, MS in Organic Chemistry in 2017

Thesis Title: Palladium-Catalyzed C(sp³)-H Arylation Using Pyridinium Ylide As A Removable Directing Group

14. Milad Mesgar, PhD in Organic Chemistry in 2017

Thesis Title: New Methods in Aryne Chemistry

15. Tung Thanh Nguyen, PhD in Organic Chemistry 2018.

Thesis Title: Palladium and Cobalt-Catalyzed Functionalization of sp² and sp³ Carbon-Hydrogen Bonds

16. Andrew Kocen, PhD in Organic Chemistry 2019.

Thesis Title: Polymerization and Isomerization of Olefins using Late-Transition Metal Complexes