STEPHEN NEWMAN

Associate Professor and Tier 2 Canada Research Chair
Centre for Catalysis Research and Innovation
Department of Chemistry and Biomolecular Sciences
10 Marie Curie, University of Ottawa
Ottawa, Ontario, Canada, K1N 6N5
Office: DRO408. Lab: BSC429
Phone: (1) 613 562 5800 x6264
Email: stephen.newman@uottawa.ca
www.newmanlab.ca
Last updated: 9-Oct-24

EDUCATION

Ph.D.	Chemistry. University of Toronto, 2012. *Research Advisor: Mark Lautens.*
B.Sc.	Chemistry (Honours). Dalhousie University, 2008. *Research Advisor: D. Jean Burnell.*

EMPLOYMENT HISTORY

2024–present	***Full Professor***, University of Ottawa
2019–2024	***Associate Professor***, University of Ottawa
2014–2019	***Assistant Professor***, University of Ottawa
2012–2014	***NSERC Postdoctoral Fellow***, Massachusetts Institute of Technology (*with K. Jensen*)

PRIZES & HONOURS

Keith Fagnou Award	2024
Tier 2 Canada Research Chair in Sustainable Catalysis	2014–2024
Christian Detellier Award for Excellence in Teaching/Mentorship	2023
JSPS Invitational Fellowships for Research in Japan	2022
uOttawa Early Career Researcher Award	2020
CNC-IUPAC Travel Award	2019
Ontario Early Researcher Award	2018
John Charles Polanyi Prize	2016
Nova Domus CHEMEDPHO Visiting Professorship, KU Leuven	2016
Thieme Chemistry Journal Awardee	2015
NRF Global Young Scientist Summit, MIT PDF representative	2014
UofT Chair's Doctoral Medal	2013
NSERC Postdoctoral Fellowship	2012
CAGS/Proquest Distinguished Dissertation Award Nominee	2012
Boehringer Ingelheim Prize, University of Toronto	2011
NSERC Michael Smith Foreign Study Supplement (*with F. Glorius, WWU Muenster*)	2011
Integriertes Graduiertenkolleg Sonderforschungsbereich Travel Fund	2011
NSERC Canadian Graduate Scholarship (CGS-D)	2010
NSERC Canadian Graduate Scholarship (CGS-M)	2008
University Silver Medal, Dalhousie University	2008
University Medal in Chemistry, Dalhousie University	2008
CSC Silver Medal, Dalhousie University	2007

NSERC Undergraduate Student Research Award 2006, 2007
Frederick S. Fountain Scholarship 2004

SCIENTIFIC PUBLICATIONS

59. St. Onge, P.; Nugraha, H.; Newman, S. G. Hydroalkylation of Vinylarenes via Transition-Meta-Free In-Situ Generation of Benzylic Nucleophiles using Tetramethyldisiloxane and KOtBu. *Submitted*. Preprint DOI: 10.26434/chemrxiv-2024-5rwk3-v2

58. Isbrandt, E. S.; Newman, S. G. 1,5-Diaza-3,7-diphosphacyclooctanes (P_2N_2): An Underappreciated Ligand Class for Nickel- and Palladium-Catalyzed Heck-Type Cross-Couplings. *Synlett*. **2024**, *35*, *in press.* DOI: 10.1055/s-0043-1775400
Invited Synpacts article

57. Chen, Z.; Isbrandt, E. S.; Newman, S. G. Regioselective Synthesis of α-Vinyl Boronates via a Pd-Catalyzed Mizoroki–Heck Reaction. *Org. Lett.* **2024**, *26*, 7723. DOI: 10.1021/acs.orglett.4c02866

56. Cook, A.; Kassymbek, A.; Vaezghaemi, A.; Barbery, C.; Newman, S. G. An S_N1-approach to cross-coupling: Deoxygenative arylation facilitated by the β-silicon effect. *J. Am. Chem. Soc.* **2024**, *146*, 19929. DOI: 10.1021/jacs.4c03197
Highlighted in Org. Process Res. Dev. (DOI: 10.1021/acs.oprd.4c00352)
Highlighted in Synfacts (DOI: 10.1055/s-0039-1690557)

55. Thomas, G. T.; Isbrandt, E. S.; Newman, S. G. Synthesis of secondary benzylic alcohols by reductive arylation of aldehydes: α-Phenyl-6-quinolinemethanol. *Org. Synth.* **2024**, *101*, 1. DOI**:** 10.15227/orgsyn.101.0001

54. Kassymbek, A.; Troyano, F. J. A.; Dimakos, V.; Canterbury, D. P.; Monfette, S.; Roosen, P. C.; Newman, S. G. Understanding and Controlling the Mizoroki-Heck Reaction of Cyclic Enones. *ACS Catal.* **2024**, *14*, 8193. DOI: 10.1021/acscatal.4c00854
"Homogeneous catalysis paper of the month" by Sinocompound (https://tinyurl.com/busyffbw)
Highlighted in Org. Process Res. Dev. (DOI: 10.1021/acs.oprd.4c00313)

53. Cook, A.; Newman, S. G. Alcohols as Substrates in Transition Metal-Catalyzed Arylation, Alkylation and Related Reactions. *Chem. Rev.* **2024**, *124,* 6078. DOI: 10.1021/acs.chemrev.4c00094.
Preprint DOI: 10.26434/chemrxiv-2023-7k37p

52. Isbrandt, E. S.; Chapple, D. E.; Tu, N. P. T.; Dimakos, V.; Beardall, A. M. M.; Boyle, P. D.; Rowley, C.; Blacquiere, J. M.; Newman, S. G. Controlling Reactivity and Selectivity in the Mizoroki-Heck Reaction: High Throughput Evaluation of 1,5-Diaza-3,7-diphosphacyclooctane Ligands. *J. Am. Chem. Soc.* **2024**, *146*, 5650. DOI: 10.1021/jacs.3c14612
Preprint DOI: 10.26434/chemrxiv-2023-t9p7j

51. Zheng, Y.-L.; Daneshfar, O.; Li, J.-Y.; Masson-Makdissi, J.; Pinault-Masson, E.; Newman, S. G. Nickel-Catalyzed Transesterification of Methyl Esters. *Synlett* **2024**, *35*, 908. DOI: 10.1055/s-0042-1751485
Invited contribution in dedication to the 20th anniversary of the start of Prof. Keith Fagnou's independent academic career

50. Newman, S. G. (Editor). *Enabling Tools and Techniques for Organic Synthesis: A Practical Guide to Experimentation, Automation, and Computation*. Wiley, **2023**. ISBN: 9781119855637.

49. Cook, A.; Bezaire, M.; Newman, S. G. Nickel-catalyzed Desulfonylative Olefination of β-Hydroxysulfones. *Org. Chem. Front.* **2023,** *10*, 1399. DOI: 10.1039/D2QO01999J
Invited contribution to the Frontiers Emerging Investigator Series

48. St. Onge, P.; Khan, S. I.; Cook, A.; Newman, S. G. Reductive Cleavage of C(sp^2)-CF_3 bonds in Trifluoromethylpyridines. *Org. Lett.* **2023**, *25*, 1030**.** DOI: 10.1021/acs.orglett.3c00258
Highlighted in Org. Process Res. Dev. (DOI: 10.1021/acs.oprd.3c00103)

47. Cook, A.; St. Onge, P.; Newman, S. G. Deoxygenative Suzuki-Miyaura Arylation of Tertiary Alcohols through Silyl Ethers, *Nature Synth.* **2023**, DOI: 10.1038/s44160-023-00275-w.
Preprint DOI: 10.26434/chemrxiv-2022-f6jvp
Highlighted in 8 news outlets (https://www.nature.com/articles/s44160-023-00275-w/metrics)
Highlighted in Synform (DOI: 10.1055/s-0040-1720618)

46. Dimakos, V.; Newman, S. G. Evolving Progress in Ester Activation Driven by High Throughput Experimentation. *The Power of High-Throughput Experimentation: Case Studies from Drug Discovery, Drug Development, and Catalyst Discovery.* **2022.** ACS Symposium Serie. Eds. M. Emmert, M. Jouffroy, D. Leitch. DOI: 10.1021/bk-2022-1420.ch009

45. Daneshfar, O.; Newman, S. G. Esters as Viable Acyl Cross-Coupling Electrophiles. *Amide Bond Activation: Concepts and Reactions.* **2022**. Wiley-VCH. Ed. M. Szostak. DOI: 10.1002/9783527830251

44. Dimakos, V.; Canterbury, D. P.; Monfette, S.; Roosen, P. C.; Newman, S. G. A Morita–Baylis–Hillman Inspired Cross-Coupling Strategy for the Direct α-Arylation of Cyclic Enones. *ACS Catal.* **2022**, 12, 11557-11562. DOI: 10.1021/acscatal.2c03448

43. Nasim, A.; Thomas, G. T.; Ovens, J. S.; Newman, S. G. Reductive 1,2-Arylation of Isatins. *Org. Lett.* **2022**, *24,* 7232-7236. DOI: 10.1021/acs.orglett.2c03042
Highlighted in SynFacts (DOI: 10.1055/s-0039-1690557)
Highlighted on Organic Chemistry Portal (www.organic-chemistry.org/abstracts/lit8/676.shtm)

42. Dimakos, V.; Newman, S. G. Rapid Access to β-Amino Aldehydes by a Ni/Ir Dual-Catalyzed Homologation Reaction. *Chem Catal.* **2021**, *1*, 1354. *Invited preview article*. DOI: 10.1016/j.checat.2021.11.008

41. Cook, A.; MacLean, H.; St-Onge, P.; Newman, S. G. Nickel-Catalyzed Reductive Deoxygenation of Diverse C-O Bond-Bearing Functional Groups. *ACS Catal.* **2021**, *11*, 13337. DOI: 10.1021/acscatal.1c03980

40. Isbrandt, E. S.; Nasim, A.; Zhao, K.; Newman, S. G. Nickel-Catalyzed Aldehyde and Alcohol Arylation Reactions Facilitated by a 1,5-Diaza-3,7-diphosphacyclooctane Ligand. **2021**. *J. Am. Chem. Soc*. **2021**, *143*. 14646. DOI: 10.1021/jacs.1c05661
Highlighted on Organic Chemistry Portal (www.organic-chemistry.org/abstracts/lit8/117.shtm)

39. Freure, G. P. R.; Skrotzki, E. A.; Lavertu, J.-D. E.; Newman, S. G. Palladium-Catalyzed Cross-Coupling of Superbase-Generated C(sp^3) Nucleophiles. *ACS Catal.* **2021**, *11,* 12258*.* DOI: 10.1021/acscatal.1c03180
Highlighted as an 'Editors Choice' article (pubs.acs.org/page/policy/editorchoice/index.html)
Ranked 'Most read article' (>10,000 views)

38. Zheng. Y.-L. Xie, P.-P.; Daneshfar, O.; Houk, K. N.; Hong, X.; Newman, S. G. Direct Synthesis of Ketones from Methyl Esters by Nickel-Catalyzed Suzuki–Miyaura Coupling. *Angew. Chem. Int. Ed.* **2021**, *24*, 13476. DOI: 10.1002/anie.202103327
A "top downloaded article" by ACIE for 2021

37. Skrotzki, E.; Vanadavasi, J. K.; Newman, S. G. Ozone-Mediated Amine Oxidation and Beyond: A Solvent Free, Flow-Chemistry Approach. *J. Org. Chem.* **2021**, *86,* 14169. DOI: 10.1021/acs.joc.1c00768
Invited contribution on 'Enabling Techniques for Organic Synthesis' (pubs.acs.org/toc/joceah/86/20)
Highlighted on Organic Chemistry Portal (organic-chemistry.org/abstracts/lit8/170.shtm)

36. Zheng, Y.-L.; Newman, S. G. Cross-Coupling Reactions with Esters, Aldehydes, and Alcohols. *Chem. Commun.* **2021**, *57*, 2591. DOI: 10.1039/D0CC08389E

35. Cook, A.; Clément, R.; Newman, S. G. Reaction Screening in Multiwell Plates: High-Throughput Optimization of a Buchwald-Hartwig Amination. *Nat. Prot.* **2021**, *16*, 1152. DOI: 10.1038/s41596-020-00452-7

34. Cook, A.; Prakash, S.; Zheng, Y.-L.; Newman, S. G. Exhaustive Reduction of Esters Enabled by Nickel Catalysis. *J. Am. Chem. Soc.* **2020**, *142*, 8109. DOI: 10.1021/jacs.0c02405
Highlighted on Organic Chemistry Portal (organic-chemistry.org/Highlights/2020/12October.shtm)
Highlighted in ChemistryViews
(www.chemistryviews.org/details/news/11239192/Exhaustive_Reduction_of_Aryl_Esters_/)

33. Sullivan, R. J.; Newman, S. G. Reaction Cycling for Kinetic Analysis in Flow. *J. Org. Chem. **2020**, 85,* 5464. DOI: 10.1021/acs.joc.0c00216
Highlighted in Org. Process Res. Dev. (DOI: 10.1021/acs.oprd.0c00344)

32. Kashani, S. K.; Jessiman, J. E.; Newman, S. G. Exploring Homogeneous Conditions for Mild Buchwald–Hartwig Amination in Batch and Flow. *Org. Process Res. Dev.* **2020**, *24,* 1984. DOI: 10.1021/acs.oprd.0c00018

31. Zheng, Y.-L.; Newman, S. G. Ni-Catalyzed Domino Heck-Type Reactions using Methyl Esters as Cross-Coupling Electrophiles. *Angew. Chem. Int. Ed.* **2019**, *58*, 18159. DOI: 10.1002/anie.201911372

30. Sullivan, R. J.; Freure, G. P. R.; Newman, S. G. Overcoming Scope Limitations in Cross-Coupling of Diazo Nucleophiles by Manipulating Catalyst Speciation and Using Flow Diazo Generation. *ACS Catal.* **2019**, *9*, 5623. DOI: 10.1021/acscatal.9b01180
Highlighted in SynFacts (DOI: 10.1055/s-0039-1690557)

29. Verheyen, T.; Turnhout, L. v.; Vandavasi, J. K.; De Borggraeve, W. M.; Newman, S. G. Ketone Synthesis by a Nickel-Catalyzed Dehydrogenative Cross-Coupling of Primary Alcohols. *J. Am. Chem. Soc.* **2019**, *141*, 6869. DOI: 10.1021/jacs.9b03280

28. Zheng, Y.-L.; Newman, S. G. Methyl Esters as Cross-Coupling Electrophiles: Direct Synthesis of Amide Bonds. *ACS Catal.* **2019**, *9*, 4426. DOI: 10.1021/acscatal.9b00884

27. Isbrandt, E. S.; Sullivan, R. J.; Newman, S. G. High Throughput Strategies for the Discovery and Optimization of Catalytic Reactions. *Angew. Chem. Int. Ed.* **2019**, *58*, 7180. DOI: 10.1002/anie.201812534

26. Ben Halima, T.; Masson-Makdissi, J.; Newman, S. G. Nickel-Catalyzed Amide Bond Formation from Methyl Esters. *Angew. Chem. Int. Ed.* **2018**, *57*, 12925. DOI: 10.1002/anie.201808560

25. Masson-Makdissi, J.; Vandavasi, J. K.; Newman, S. G. Switchable Selectivity in the Pd-Catalyzed Alkylative Cross-Coupling of Esters. *Org. Lett.* **2018**, *20*, 4094. DOI: 10.1021/acs.orglett.8b01646
Highlighted on Organic Chemistry Portal (organic-chemistry.org/abstracts/lit6/413.shtm)

24. Sullivan, R. J.; Newman, S. G. Flow assisted synthesis of heterocycles at high temperatures. *Topics in Heterocyclic Chemistry: Flow Chemistry for the Synthesis of Heterocycles.* **2018**. Springer. Eds. E. Van der Eycken, U. Sharma. DOI: 10.1007/7081_2018_18

23. Vandavasi, J. K.; Newman, S. G. A High Throughput Approach to Discovery: Heck-Type Reactivity with Aldehydes. *Synlett*. **2018**, *29*, 2081. DOI: 10.1055/s-0037-1610161
Invited Synpacts article
Highlighted in Org. Process Res. Dev. (DOI: 10.1021/acs.oprd.8b00352)

22. Kashani, S. K.; Sullivan, R. S.; Andersen, M.; Newman, S. G. Overcoming Solid Handling Issues in Continuous Flow Substitution Reactions through Ionic Liquid Formation. *Green Chem.* **2018**, *20*, 1748. DOI: 10.1039/C8GC00618K

21. Sullivan, R. J.; Newman, S. G. Chiral Auxiliary Recycling in Continuous Flow: Automated Recovery and Reuse of Oppolzer's Sultam. *Chem. Sci.* **2018**, *9*, 2130. DOI: 10.1039/C7SC05192A
Highlighted in Org. Process Res. Dev. (DOI: 10.1021/acs.oprd.8b00061)

20. Vandavasi, J. K.; Hua, X.; Ben Halima, H.; Newman, S. G. A Nickel-Catalyzed Carbonyl-Heck Reaction. *Angew. Chem. Int. Ed.* **2017**, *56*, 15441.DOI: 10.1002/anie.201710241

19. Isbrandt, E. S.; Vandavasi, J. K.; Zhang, W.; Jamshidi, M. P.; Newman, S. G. Catalytic Deuteration of Aldehydes with D_2O. *Synlett* **2017**, *28*, 2851. DOI: 10.1055/s-0036-1588540
Invited contribution in dedication to Prof. Victor Snieckus on the occasion of his 80th birthday

18. Ben Halima, T.; Vanadavasi, J. K.; Shkoor, M.; Newman, S. G. A Cross-Coupling Approach to Amide Bond Formation from Esters. *ACS Catal.* **2017**, *7*, 2176. DOI: 10.1021/acscatal.7b00245

17. Ben Halima, T.; Zhang, W.; Yalaoui, I.; Hong, X.; Fang, Y.-F.; Houk, K. N.; Newman, S. G. Palladium-Catalyzed Suzuki–Miyaura Coupling of Aryl Esters. *J. Am. Chem. Soc.* **2017**. *139*, 1311. DOI: 10.1021/jacs.6b12329
Highlighted in Organic Chemistry Frontiers (DOI: 10.1039/C7QO00068E)
Highlighted in SynFacts (DOI: 10.1055/s-0036-1590050)
Web of Science "Highly Cited Paper" (top 1% of chemistry)

16. Hua, X.; Masson-Makdissi, J.; Sullivan, R. J.; Newman, S. G. Inherent Vs Apparent Chemoselectivity in the Kumada-Corriu Cross-Coupling Reaction. *Org. Lett. **2016**, 18,* 5312. DOI: 10.1021/acs.orglett.6b0263116
Highlighted in SynFacts (DOI: 10.1055/s-0036-1589681)
Highlighted on Organic Chemistry Portal (organic-chemistry.org/abstracts/lit5/632.shtm)

15. Newman, S. G.; Lee, K.; Cai, J.; Green, W. G.; Jensen, K. F. Continuous Thermal Oxidation of Alkenes with Nitrous Oxide in a Packed Bed Reactor. *Ind. Eng. Chem. Res.* **2015**, *54*, 4166. DOI: 10.1021/ie504129e

14. Jensen, K. F.; Reizman, B. J.; Newman, S. G. Tools for Chemical Synthesis in Microsystems. *Lab Chip* **2014**, *14*, 3206. DOI: 10.1039/c4lc00330f

13. Newman, S. G.; Gu, L.; Lesniak, C.; Victor, G.; Meschke, F.; Abahmane, L.; Jensen, K. F**.** Rapid Wolff–Kishner Reductions in a Silicon Carbide Microreactor. *Green Chem.* **2014**, *16,* 176. DOI: 10.1039/c3gc41942h

12. Le, C. M.; Petrone, D. A.; Newman, S. G.; Lautens, M. Pd(0)-Catalyzed Carboiodination: Early Developments and Recent Advancements. **2014**, 274. *RSC Catalysis Series 21. New Trends in Cross-Coupling: Theory and Applications.* Ed: Colacot, T. J.

11. Newman, S. G.; Jensen, K. F. The Role of Flow in Green Chemistry and Engineering. *Green Chem*. **2013**, *15,* 1456*.* DOI: 10.1039/c3gc40374b
Web of Science "Highly Cited Paper" (top 1% in chemistry)

10. Keilitz, J.; Newman, S. G.; Lautens, M. Enantioselective Rh-Catalyzed Domino Transformations of Alkynylcyclohexadienones with Organoboron Reagents. *Org. Lett.* **2013**, *15*, 1148. DOI: 10.1021/ol400363f

9. Lan, Y.; Liu, P.; Newman, S. G.; Lautens, M.; Houk, K. N. Theoretical Study of Pd(0)-Catalyzed Carbohalogenation of Alkenes: Mechanism and Origins of Reactivities and Selectivities in Alkyl Halide Reductive Elimination from Pd(II) Species. *Chem. Sci.* **2012**, *3*, 1987. DOI: 10.1039/c2Sc20103h

8. Newman, S. G.; Howell, J. M.; Nicolaus, N.; Lautens, M. Palladium-Catalyzed Carbohalogenation: Bromide to Iodide Exchange and Domino Processes. *J. Am. Chem. Soc.* **2011**, *133*, 14916. DOI: 10.1021/ja206099t

7. Newman, S. G.; Lautens, M. Palladium-Catalyzed Carboiodination of Alkenes: Carbon-Carbon Bond Formation with Retention of Reactive Functionality. *J. Am. Chem. Soc.* **2011**, *133*, 1778. DOI: 10.1021/ja110377q

6. Newman, S. G.; Bryan, C. S.; Perez, D.; Lautens, M. The Use of Bromotrichloromethane in Chlorination Reactions. *Synthesis* **2011**, 342. DOI: 10.1055/s-0030-1258368

5. Zhong, Y.-L., Bulger, P. G., Newman, S. G., Lautens, M. A Practical and Scalable Synthesis of N-Halo Compounds. *Org. Syn.* **2010**, *87*, 8.

4. Newman, S. G.; Lautens, M. The Role of Reversible Oxidative Addition in Selective Palladium(0)-Catalyzed Intramolecular Cross-Couplings of Polyhalogenated Substrates: Synthesis of Brominated Indoles. *J. Am. Chem. Soc.* **2010**, *132*, 11416. DOI: 10.1021/ja1052335

3. Newman, S. G.; Aureggi, V.; Bryan, C. S.; Lautens, M. Intramolecular Cross-Coupling of gem-Dibromoolefins: a Mild Approach to 2-Bromo Benzofused Heterocycles. *Chem. Commun*. **2009**, 5236. DOI: 10.1039/b912093a

2. Lee, D.; Newman, S. G.; Taylor, M.S. Boron-Catalyzed Direct Aldol Reactions of Pyruvic Acids. *Org. Lett.* **2009**, *11*, 5486. DOI: 10.1021/ol902322r

1. Newman, S. G.; Taylor, A.; Boyd, R. J. Factors Controlling Extremely Strong AAA-DDD Triply Hydrogen-Bonded Complexes. *Chem. Phys. Lett.* **2008**, *450*, 210. DOI: 10.1016/j.cplett.2007.11.018

INVITED SEMINARS

104. University of British Colombia. Vancouver, Canada, Feb 2025.
103. University of Victoria. Victoria, Canada, Feb 2025.
102. Brock University. St. Catherines, Canada, Oct 2024.
101. McMaster University. Hamilton, Canada, Oct 2024.
100. University of Toronto. Toronto, Canada, Sept 2024.
99. Waseda University. Tokyo, Japan, Aug 2024.
98. Institute of Science Tokyo. Tokyo, Japan, Aug 2024.
97. Asymchem. Tianjin, China, Aug 2024.
96. Tianjin Normal University. Tianjin, China, Aug 2024.
95. Tianjin University of Technology. Tianjin, China, Aug 2024.
94. 6th International OM&Cat conference. Tianjin, China, Aug 2024.
93. Gordon Research Conference: Organic Reactions & Processes. Smithfield, USA, July 2024.
92. CSC Conference and Exhibition. Winnipeg, Canada, May 2024. *Award lecture*.
91. Purdue University. Indiana, USA, Mar 2024.
91. Guelph University. Guelph, Canada, Feb 2024.
90. Eurofins-Alphora. Toronto, Canada, Oct 2023.
89. University of Waterloo. Waterloo, Canada, Oct 2023.
88. KU Leuven. Leuven, Belgium, Sept 2023.
87. Université libre de Bruxelles. Brussels, Belgium, Sept 2023.
86. Janssen. Beerse, Belgium, Sept 2023.
85. University of Münster. Münster, Germany, Apr 2023.
84. Bayer AG. Wuppertal, Germany, Apr 2023.
83. Kharkiv University. Kharkiv, Ukraine/Virtual, Jan 2023.
82. RWTH Aachen University. Aachen, Germany, Sept 2022.
81. Gilead Sciences. Edmonton, Canada, Aug 2022.
80. Hokkaido University. Sapporo, Japan, Aug 2022.
79. University of Tokyo. Tokyo, Japan, July 2022.
78. Tokyo Institute of Technology. Tokyo, Japan, July 2022.
77. Nagoya University. Nagoya, Japan, July 2022.
76. Kyoto University. Kyoto, Japan, July 2022.
75. Osaka University. Osaka, Japan, July 2022.
74. 5th International OM&Cat conference. Hong Kong/Virtual, June 2022.
73. Canadian Chemical Engineering Conference (CCEC), Innovative Approaches to Address Molecular Complexity in Organic Synthesis. Calgary, Canada, June 2022.
72. Evotec A.G. & University of Bath. Bath, UK/Virtual, Feb 2022.
71. Dalhousie University. Halifax, Canada/Virtual, Jan 2022.
70. Flow Chemistry Society Annual Conference, India/Virtual, Dec 2021.
69. University of Geneva. Geneva, Switzerland/Virtual, Nov 2021.
68. 48th World Chemistry Congress & 104th Canadian Chemistry Conference and Exhibition, Sustainability through Flow Chemistry symposium. Virtual meeting. Aug 2021.
67. Vertex Pharmaceuticals. Boston/Virtual, July 2021.
66. ACS 25th Green Chemistry & Engineering Conference. Virtual meeting. June 2021.
65. ACS National Meeting, The Power of High Throughput Experimentation. Virtual meeting. Mar 2021.
64. Canadian Chemical Engineering Conference (CCEC), Catalysis symposium. Virtual meeting, Oct 2020.
63. University of Montreal. Montreal, Canada, Mar 2020.
62. 19th Norwegian Catalysis Symposium. Bergen, Norway, Nov 2019.

61. Queen's University. Kingston, Canada, Nov 2019.
60. 20th IUPAC International Symposium on Organometallic Chemistry Directed Towards Organic Synthesis (OMCOS). Heidelberg, Germany, July 2019.
59. Canadian Chemistry Conference and Exhibition, Emerging Tools and Methodologies in Inorganic Chemistry. Quebec City, Canada, June 2019.
58. Canadian Chemistry Conference and Exhibition, Symposium in Honour of Mark Lautens' 60th Birthday. Quebec City, Canada, June 2019.
57. University of Windsor. Windsor, Canada, May 2019.
56. Green Chemistry Initiative Annual Symposium. Toronto, Canada, May 2019.
55. Ruhr-Universität Bochum. Bochum, Germany, Dec 2018.
54. Max-Planck-Institut für Kohlenforschung. Mülheim, Germany, Dec 2018.
53. Heidelberg University. Heidelberg, Germany, Dec 2018.
52. BASF SE. Ludwigshafen, Germany, Dec 2018.
51. SelectBio Flow Chemistry Congress. Miami, USA, Nov 2018.
50. Saint Mary's University. Halifax, Canada, Sept 2018.
49. Acadia University. Wolfville, Canada, Sept 2018.
48. Dalhousie University. Halifax, Canada, Sept 2018.
47. St. Francis Xavier University. Antigonish, Canada, Sept 2018.
46. Mount Alison University. Sackville, Canada, Sept 2018.
45. ACS National Meeting. Young Investigator's Symposium. Boston, USA, August 2018.
44. ACS National Meeting. Flow Chemistry Symposium. Boston, USA, August 2018. *Contributed*
43. Gordon Research Conference: Organic Reactions & Processes. Easton, USA, July 2018. *Contributed*
43. Innovation Day Lecture, Apotex Pharmachem. Brandtford, Canada, June 2018
42. CSC Conference and Exhibition. Edmonton, Canada, May 2018.
41. 14th Organic & Bio-organic Young Investigator Workshop. Edmonton, Canada, May 2018.
40. York University. Toronto, Canada, May 2018.
39. Shanghai Institute of Organic Chemistry (SIOC), Shanghai, China. November 2017.
38. Nanjing University. Nanjing, China, November 2017.
37. University of Science and Technology of China. Hefei, China, November 2017.
36. Wuhan University. Wuhan, China, November 2017.
35. Huazhong University of Science & Technology. Wuhan, China, November 2017.
34. Central China Normal University. Wuhan, China, November 2017.
33. Continuous Flow Science Annual Symposium, Montreal, Canada, Sept 2017.
32. Eli Lilly Summer Seminar Series. Indianapolis, USA, Aug 2017.
31. Gordon Research Conference: Organic Reactions & Processes. Easton, USA, July 2017. *Contributed*
30. Aix Marseille University. Marseille, France, July 2017.
29. Université Grenoble Alpes. Grenoble, France, July 2017.
28. École Polytechnique Fédérale de Lausanne (EPFL). Lausanne, Switzerland, July 2017.
27. Novartis International AG. Basel, Switzerland, July 2017.
26. Universität Basel. Basel, Switzerland, June 2017.
25. Université Claude Bernard Lyon 1. Lyon, France, June 2017.
24. École Normale Supérieure de Lyon. Lyon, France, June 2017.
23. Lean for Government Professional Development Day: Continuous Flow Science in the Chemical Industry. Ottawa, Canada, June 2017.
22. CSC Conference and Exhibition. Toronto, Canada, May 2017.
21. Delmar Chemicals. Montreal, Canada, Jan 2017.
20. Paraza Pharma. Montreal, Canada, Jan 2017.
19. Vertex Pharmaceuticals. Laval, Canada, Jan 2017.

18. Apotex Pharmachem Inc. Brandtford, Canada, Dec 2016.
17. Alphora Research, Inc. Mississauga, Canada, Nov 2016.
16. Xerox Research Centre of Canada. Mississauga, Canada, Nov 2016.
15. Belgian Organic Synthesis Symposium. Antwerp, Belgium, July 2016. *Contributed*
14. SYNDELGE Scientific Workshop. Ghent University, Belgium, July 2016.
13. University of Glasgow, Scotland, July 2016.
12. University of Leuven, Belgium, June 2016.
11. OCCI day, Carleton University. Ottawa, Canada, June 2016.
10. CSC Conference and Exhibition. Halifax, Canada, June 2016.
9. uOttawa New Professors Lecture Program. Ottawa, Canada, December 2015.
8. CSC Conference and Exhibition. Ottawa, Canada, June 2015.
7. Microfluidic Professional Course: Chemical Synthesis in Flow. Toronto, Canada, May 2015.
6. Gordon Research Conference: Org. Reactions & Processes. Smithfield, USA, July 2013. *Contributed*
5. ACS National Conference and Exhibition. Philadelphia, USA, August 2012. *Contributed*
4. CSC Conference and Exhibition. Montreal, Canada, June 2011. *Contributed*
3. Pacifichem. Honolulu, USA, Dec 2010. *Contributed*
2. CSC Conference and Exhibition. Toronto, Canada, May 2010. *Contributed*
1. International Congress on Heterocyclic Chemistry. St. John's, Canada, Aug 2009. *Contributed*

OTHER ACTIVITIES

Professional service

- **Pacifichem**, 2025
  Symposium organizer – Enabling tools for organic synthesis
- **Research Foundation – Flanders** (**FWO) Review College**, 2021-2024
  Panel member
- **Ontario Early Researcher Award**, 2019-2023
  Selection committee
- **30th Quebec/Ontario Mini-Symposium for Synthetic and Bioorganic Chemistry**, 2019
  Organizer & co-chair
- **100th Canadian Chemistry Conference and Exhibition**, 2017
  Symposium organizer – Transition metal catalysis for organic synthesis
- **24th Canadian Symposium on Catalysis**, 2016
  Organizing committee
- **98th Canadian Chemistry Conference and Exhibition**, 2015
  Organizing committee & student volunteer co-ordinator
- **22nd IUPAC International Conference on Physical Organic Chemistry**, 2014
  Organizing committee & session chair
- **Scientific Writer – Thieme Publisher**, 2009-2012
  Over 100 articles contributed to journal Synfacts
- **Journal (e.g. J. Am. Chem. Soc.; Angew.; Chem. Sci.; Nature.; Science) & grant (NSERC DG, CRD; FWO Belgium; Ontario ERA) reviewer. 2020 Chem Sci 'Outstanding Reviewer.' 2022 ACIE 'top 10%' reviewer.**
  >30 reviews/year

Institutional service

- **Department Tenure & Promotion Committee**. 2022–present
- **Department Admission Scholarship Committee**. 2022–present

- **Faculty of Science Research Committee**. 2019–present
- **Departmental Scholarship Adjudication Committee**. 2016–present
- **Departmental Recruitment Committee**. 2016–present
- **uOttawa Catalysis Centre (CCRI) – Outreach coordinator**. 2016–present
- **Departmental Library Representative**. 2016–present
- **Departmental Safety Committee**. 2014–present
- **University Emergency Response Plan (ERP) Committee**. 2016–2019

Teaching

- **CHM8304D: Modern tools and techniques in organic synthesis**. 2025
- **CHM3120: Intermediate organic chemistry**. 2024
- **CHM3120: Intermediate organic chemistry**. 2023
- **CHM8304A: Transition metal catalyzed reactions in organic synthesis**. 2023
- **CHM3120: Intermediate organic chemistry**. 2022
- **CHM1321: Organic chemistry I**. 2022
- **CHM1321: Organic chemistry I**. 2021
- **CHM8304A: Transition metal catalyzed reactions**. 2020
- **CHM1321: Organic chemistry I**. 2020
- **CHM8304D: Modern tools and techniques in organic synthesis**. 2019
- **CHM8257: Organic chemistry graduate seminar series**. 2019–2020
- **CHM4328: Transition metal catalyzed reactions in organic synthesis**. 2019
- **BPS4900A: Medicinal chemistry seminar course**. 2018–2019
- **CHM4328: Transition metal catalyzed reactions in organic synthesis**. 2018
- **BPS4900A: Medicinal chemistry seminar course**. 2017–2018
- **BPS4900A: Medicinal chemistry seminar course**. 2016–2017
- **CHM8304D: Sustainable chemical synthesis through catalysis**. 2016
- **LOMAC Summer School, KU Leuven: Modern C-H functionalization**. 2016
- **CHM4328: Transition metal catalyzed reactions in organic synthesis**. 2016
- **CHM4328: Transition metal catalyzed reactions in organic synthesis**. 2015

MEDIA/INTERVIEWS

11. “Optimizing Chemical Reactions.” *On modern strategies available for synthetic chemists to choose experiments when optimizing challenging reactions.* Chemical Reviews, Apr 10, 2024. DOI: 10.1021/acs.chemrev.4c00231
10. “Cross-coupling technique cracks open alcohols for chemical synthesis.” *On the use of alcohols as feedstocks in transition metal catalysis.* Chemistry World, Mar 26, 2024.
9. “Deoxygenative Suzuki–Miyaura Arylation of Tertiary Alcohols through Silyl Ethers.” *On the development of new methods to harness alcohols in catalysis.* Synform: People, Trends, and Views in Chemical Synthesis, Jan 2024. DOI: 10.1055/s-0040-1720618
8. “Medicinal chemistry methods miniaturized for high-throughput experimentation.” *On the value of small-scale parallel reactions for drug discovery*. C&EN News, July 2 2023.

7. “The smaller the better.” *On the use of flow chemistry to streamline chemical manufacturing*. uOttawa Research Perspectives magazine, Dec 10 2020.
6. “Element of Surprise: Nickel.” *On the relevance of nickel to everyday life.* CBC News, Aug 11 2020.
5. “Automation for the people: Training a new generation of chemists in data-driven synthesis.” *On the importance of data-driven synthesis*. C&EN News, Oct 27 2019.
4. “Glass beads help robots deliver minuscule amounts of reagents.” *On the miniaturizing of chemical reactions.* C&EN News, Mar 27 2019.
3. “Acoustic robot races through chemical reactions.” *On the importance of new technology for high throughput reaction screening*. C&EN News, Mar 11 2019.
2. “Element of Surprise: Palladium.” *On the relevance of palladium to everyday life.* CBC News, Feb 4 2019.
1. “Eye on the Prize.” *On the award-winning research that lead to the 2016 John Charles Polanyi Prize.* Ottawa Citizen, Dec 24 2016.