# Deryn E. Fogg

Department of Chemistry, and Centre for Catalysis Research & Innovation University of Ottawa

10 Marie Curie, Ottawa, ON K1N 6N5

Tel: 613/562-5800 6057 Email: dfogg At uottawa Dot ca

https://mysite.science.uottawa.ca/dfogg/

## **Research Interests**

Sustainable synthesis; mechanism and design in homogeneous catalysis; mechanistic insights into catalyst decomposition; olefin metathesis and tandem catalysis

MALDI-TOF mass spectrometry as a tool for insight in organometallic chemistry & catalysis

## **POSITIONS HELD**

2019-22 Graduate Director (Chemistry and Biomolecular Sciences, uOttawa)
2018- Professor II, Department of Chemistry, University of Bergen, Norway
2011- University Research Chair (Ottawa)

2009-2012 Associate Chair, University of Ottawa, Department of Chemistry 2007-present Full Professor, University of Ottawa, Department of Chemistry

2005-2008 Associate Director, University of Ottawa Center for Catalysis Research and Innovation

2002-2007 Associate Professor, University of Ottawa, Department of Chemistry 1997-2001 Assistant Professor, University of Ottawa, Department of Chemistry

#### **EDUCATION**

Postdoctorate, MIT (R. R. Schrock). Polymer hosts for quantum dots.

Ph.D., Inorganic Chemistry and Catalysis; University of British Columbia (B. R. James). Thesis: *Late-Transition Metal Catalysts for Imine Hydrogenation*.

M.Sc., Organometallic Chemistry, University of Waterloo (A.J. Carty). Thesis: *Novel Iron Group Complexes of Phosphidoxo Ligands*.

B.Sc., Honours Chemistry (Co-op), University of Waterloo.

# **HONOURS AND DISTINCTIONS**

Rio Tinto Award, Canadian Society for Chemistry (2020), for leading research in inorganic chemistry

Student-Hosted Organic Seminar Speaker, University of California Berkeley (2017)

Visiting Fellow, Magdalen College, Oxford (2015)

Fellow of the Royal Society of Canada (2014)

Fellow of the Royal Society for Chemistry (2013)

University Research Chair in Catalysis & Sustainability (2011–)

Fellow of the Canadian Institute for Chemistry (2009)

NSERC Discovery Accelerator Supplement (2007-2010; 50 awarded nationally in 2007, in all areas of science and engineering)

Strem Chemicals Award for Research in Pure or Applied Inorganic Chemistry (Canadian Society for Chemistry award, 2007)

Visiting Professorship, Spanish Ministry of Science & Education (2006)

Young Researcher of the Year (University of Ottawa, 2004)

CNC-IUPAC Travel Award (2004)

CFI Innovation Award, OIT Scholar (2002)

Ontario Innovation Trust Award (2002)

Premier's Research Excellence Award (1999-2003)

Canada Foundation for Innovation Researcher (1998)

OIT Scholar (1998)

Polanyi Prize in Chemistry (Ontario) (1997)

Union Carbide Innovation Recognition Award (1994)

I.W. Killam Fellowship (1990-92)

NSERC Postgraduate Scholarship (1988-90)

McDowell Fellowship (1988)

Ontario Graduate Scholarship (1987-88)

# **SCHOLARLY AND PROFESSIONAL ACTIVITIES**

## **Editorial and Board Positions**

2019- Editorial Board, ChemCatChem (Wiley-VCH / ChemPubSoc Europe)

2016-17 International Board, Apeiron Catalysis Symposium

2015- International Board, Japan JSPS Program: Precise Catalyst Design for Extremely Difficult Reactions

- 2014 Permanent Secretary, International Symposium on Homogeneous Catalysis (ISHC)
- 2013-19 Associate Editor, Organometallics
- 2010–13 Founding Editorial Board, Catalysis Science & Technology
- 2009-14 Under-Secretary, International Symposium on Homogeneous Catalysis
- 2009–13 Editorial Advisory Board, Organometallics
- 2009 International Advisory Board, ChemCatChem
- 2009–12 Director of Awards, CSC Board of Directors
- 2009- International Advisory Board, International Symposium on Homogeneous Catalysis
- 2008- International Advisory Board, International Symposium on Olefin Metathesis
- 2008–11 Editorial Advisory Board, Canadian Journal of Chemistry
- 2006- International Advisory Board, International Conference on Organometallic Chemistry
- 2006–08 Nominations Chair, Past Chair; Inorganic Division, Canadian Society for Chemistry
- 2004–06 Chair, Inorganic Division, Canadian Society for Chemistry
- 2002–04 Vice-Chair, Inorganic Division, Canadian Society for Chemistry

# Other Academic and Professional Service

- 2022 Conference Chair (with Vidar Jensen, co-Chair), 24th International Symposium on Olefin Metathesis, Bergen, NO
- 2020 Organizing Committee, Workshop on AI in Molecular Discovery, Bergen, NO
- 2019 Chair, Ottawa-Carleton Chemistry Institute Day (OCCI Day); graduate research symposium day
- 2019 Co-Editor, Special Issue of ChemCatChem: Women of Catalysis
- 2019 Co-organizer (with Prof. Johanna Blacquiere); Symposium on Emerging Tools and Methodologies in
- Inorganic Chemistry and Catalysis, 102nd Canadian Society for Chemistry conference, Quebec City
- 2018-19 Editor (with Guest Editor L.C. Campeau, Merck), Organometallics Special Issue on Organometallic Chemistry in the Pharmaceutical Industry
- 2018-19 NSERC Networks Grants Selection Committee
- 2017- Fellows Selection Committee, Chemistry Institute of Canada
- 2017 Editor, Organometallics / American Chemical Society Virtual Issue on Olefin Metathesis–Fundamentals and Frontiers
- 2017 Organizing Committee for Apeiron Catalysis Symposium, Cambridge MA
- 2015 Co-organizer (with Profs. Hirano Masafumi, Adam Veige); Symposium on Late Metals in Catalysis,
- Pacifichem 2015, Hawaii
- 2014 Conference Chair; 19th International Symposium on Homogeneous Catalysis, Ottawa
- Canadian Society for Chemistry Award juries: Strem Award in Pure or Applied Inorganic Chemistry; Alcan Senior Award in Inorganic Chemistry; Clara Benson Award
- 2007-10 NSERC Discovery Grants: Chemistry Evaluation Group / Grants Selection Committee 24
- 2007 Symposium on "Mechanism and Design in Homogeneous Catalysis", 90th CSC, Winnipeg
- 2006-08 Steering Committee, Inorganic Chemistry Undergraduate research Exchange program. Commissioned ICE in 2004 as Chair of the Inorganic Division of the Canadian Society for Chemistry
- 2006 Canadian Society for Chemistry Award juries: Alcan Senior Award in Inorganic Chemistry; Clara Benson Award
- 2006 Guest Editor, B.R. James "Protagonists in Chemistry" volume, Inorg. Chim. Acta
- 2004-05 Canadian Society for Chemistry Award jury: Award in Pure or Applied Inorganic Chemistry; Clara Benson Award
- 2005-08 Associate Director, Center for Catalysis Research and Innovation
- 2005-07 Host, Inorganic Chemistry undergraduate Exchange (ICE) Symposium
- 2003 Symposium on "Advanced Spectroscopic Methods for Characterization of Organometallics", 39th IUPAC Internat. Congress /86th CSC, Ottawa
- 2003 Symposium on "Mechanisms in Homogeneous Catalysis", 39th IUPAC / 86th CSC, Ottawa
- 2002 Inaugural speaker, Science Lectures for Members of Provincial Parliament, Queen's Park, ON (Chair: J.M.
- Flaherty, Minister of Enterprise, Opportunity & Innovation)
- 2001- Advisory Board, Center for Catalysis Research & Innovation
- 2001 Symposium on "Ruthenium Chemistry and Catalysis", 84th CSC, Montreal
- 2000-09 Chair, "Bacon and Eggheads" Science Lectures for Parliamentarians (Past Chair, 2010)
- 2000 Founding member, Univ. of Ottawa Center for Catalysis Research & Innovation
- 1999 Review Panel, Ontario Center of Excellence (Materials & Manufacturing Ontario)
- Speaker, Partnership Group for Science & Engineering, "Science & Technology as a Vehicle for Economic Growth in Canada", National Press Club (televised)

## Outreach (past 6 years)

- Ottawa Science Teachers Council Professional Development Day presentation; "The Roots of Chemistry: The Arts of Distillation" (postponed)
- Ottawa Science Teachers Council Professional Development Day presentation; "Catalyzing Change: Training Chemists for a Sustainable Future"
- 2019 CBC Radio "All in a Day"; Element of Surprise program: Ruthenium (Nov. 5)

- 2019 CBC Radio "All in a Day"; Element of Surprise program: Sex, Death, & Vanadium (Mar. 5)
- 2019 CBC Radio "All in a Day"; Element of Surprise: Cadmium Pigments, Poisons... and Cellphones? (Apr. 23)
- 2019 CNational Research Council / CNC-IUPAC) Global event "Empowering Women in Chemistry"; panel

discussion on mentoring and equity, diversity and inclusion (EDI), (Feb. 12)

- "Olefin Metathesis and Sustainability in Chemical Manufacturing", interview with Amsterdam-based trade journal for professionals in chemistry & life sciences
- 2018 Public Lectures to Inaugurate uOttawa's STEM Building, Ottawa 2018-09-20
- New Year issue of Organometallics: Organometallic Chemistry in pharma R&D (co-edited with LC Campeau,

Executive Director, Head of Process & Discovery Process Chemistry, Merck Rahway)

- 2018 Mentor, Student-Industry Networking Event, 99th CSC, Halifax, NS, June 7, 2016
- Mentor, graduate student-organized Student-Industry Networking Event, XIX International Symposium on Homogeneous Catalysis, Ottawa (part of conference Student Ancillary Program)

# Academic Service (University of Ottawa)

- 2019-20 Chair, Graduate Program Review Committee, Department of Chemistry & Biomolecular Sciences (CBS)
- 2019 Graduate Director, Department of Chemistry & Biomolecular Sciences (CBS)
- 2019-21 Chair, Grad Recruitment Committee; Vice-Chair, 2021-
- 2016-19 Research Chairs Selection Committee (Canada Research Chairs; University Research Chairs); Office of the VP Research
- 2016-19 Canada 150 Research Chairs Evaluation Committee, Office of the VP Research
- 2016-18 Associate Director, Strategic Initiatives, Center for Catalysis Research & Innovation (CCRI)
- 2016-19 Departmental Communications Committee
- 2014-15 Search Committee, Director of Center for Catalysis Research & Innovation (CCRI)
- 2009-12 Associate Chair, Department of Chemistry
- 2009-12 Chair, Space Committee, Department of Chemistry
- 2007-08 Chair, Search Committee, Director of Center for Catalysis Research & Innovation (CCRI)
- 2007-19 Steering & Management Committee, CCRI
- 2006-07 Canada Research Chair / University Research Chair Selection Committee
- 2006-07 Chair of Canada Research Chair Selection Committee Catalysis Cluster (Member, 2003-07)
- 2007-09 Member, NMR Facility Management Committee, Faculty of Science (Chair, 2000-2004, 2006-07)
- 2006-08 Department Tenure and Promotion Committee
- 2006-07 Search Committees, Faculty Positions in Organic Chemistry, Biopharmaceutical Chemistry
- 2006-08 Associate Director, Center for Catalysis Research & Innovation (CCRI
- 2004-05 Department Tenure and Promotion Committee
- 2004-05 Vision 2010: University Strategic Plan Committee
- 2003-05 Vice-Rector's Interdisciplinary Initiatives Selection Committee
- 2003-04 Search Committees, Faculty positions in Inorganic Chemistry and Organic Chemistry; Chair of Chemical Engineering; NMR Technical Staff position
- 2002–07 Faculty and Departmental Space Allocation Committees
- 2001-02 Search Committee, Director of Center for Catalysis Research & Innovation (interim)
- 1999-01 Departmental Curriculum Committee
- 2001-02 Departmental Five-Year Plan Committee
- 2000-02 University Strategic Infrastructure Working Group
- 1999-01 Faculty Council
- 1999-0 Faculty of Science Glassblowing Committee
- 1999-02 University Scholarships Committee
- 1998-00 NMR Committee, Faculty of Science

# **RESEARCH PUBLICATIONS AND PATENTS** (past 7 years)

Names of trainee co-workers appear in red, in order of their experimental and intellectual contribution to the work described. Where more than one principal author is present, the name of the lead contributor appears last.

- D.L. Nascimento, M. Foscato, G. Occhipinti, V. R. Jensen,\* D.E. Fogg.\* "Bimolecular Coupling in Olefin Metathesis: Correlating Structure and Decomposition for Leading and Emerging Ruthenium-Carbene Catalysts." *J. Am. Chem. Soc.* **2021**, accepted.
- C.O. Blanco, D.L. Nascimento, D.E. Fogg.\* "Routes to High-Performing Ru-Iodide Catalysts for Olefin Metathesis: Phosphine Lability Is Key to Efficient Halide Exchange." *Organometallics.* **2021**, accepted.
- C.O. Blanco, J. Sims, A.Y. Goudreault, D.L. Nascimento, S. N. Steinmann, C. Michel,\* D.E. Fogg.\* "The Impact of Water on Olefin Metathesis Catalyzed by Ruthenium Complexes of N-Heterocyclic or Cyclic Alkyl Amino Carbenes." *ACS Catal.* **2021**, 11, 893-899.
- D.L. Nascimento, I. Reim, M. Foscato, V.R. Jensen, D.E. Fogg.\* "Challenging Metathesis Catalysts with Nucleophiles and Brønsted Base: Examining the Stability of State-of-the-Art Ruthenium Carbene Catalysts to Attack by Amines." *ACS Catal.* **2020**, 10, 11623–11633.
- L.J. Jongkind, M. Rahimi, D. Poole, S.J. Ton, D.E. Fogg,\* J.N. Reek.\* "Encapsulation of Ruthenium Olefin Metathesis Catalysts in a Self-Assembled Resorcinarene Capsule." *ChemCatChem.* **2020**, 12, 4019–4023.

- A.Y. Goudreault, D.M. Walden, A.G. Botti, S.N. Steinmann, C. Michel,\* D.E. Fogg.\* "Hydroxide-Induced Catalyst Deactivation in Olefin Metathesis." *ACS Catal.* **2020**, 10, 3838–3843.
- D.L. Nascimento, D.E. Fogg.\* "Origin of the Breakthrough Productivity of Ruthenium-CAAC Catalysts in Olefin Metathesis." *J. Am. Chem. Soc.* **2019**, 141, 19236–19240.
- S.J. Ton, D.E. Fogg.\* "Impact of Oxygen on Olefin Metathesis by Leading and Emerging Ruthenium-Carbene Catalysts: An Unexpected Robustness-Reactivity Correlation." *ACS Catal.* **2019**, 9, 11329–11334.
- D.L. Nascimento, A. Gawin, R. Gawin, P.A. Guńka, J. Zachara, K. Skowerski, D.E. Fogg.\* "An Unprecedentedly Reactive Ruthenium-Indenylidene Catalyst." *J. Am. Chem. Soc.* **2019**, 141, 10626–10631.
- C.S. Day, D.E. Fogg.\* "High-Yield Synthesis of a Long-Sought, Labile Ru-NHC Reagent." *Organometallics* **2018**, 37, 4551-4555; ACS Editor's Choice; #1 research paper downloaded for Dec/Jan.
- S.A. Rufh, A.Y. Goudreault, M. Foscato, V.R. Jensen, D.E. Fogg.\* "Rapid Decomposition of Olefin Metathesis Catalysts by a Truncated N-Heterocyclic Carbene." *ACS Catal.* **2018**, 8, 11822–11826.
- G.A. Bailey, C.S. Higman, C.S. Day, D.E. Fogg.\* "Bimolecular Coupling as a Vector for Decomposition of Fast-Initiating Olefin Metathesis Catalysts." *J. Am. Chem. Soc.* **2018**, 140, 6931-6944.
- D. L. Nascimento, E.C. Davy, D.E. Fogg.\* "Merrifield Resin-Assisted Routes to "Second-Generation" Metathesis Catalysts." Catal. Sci. Technol. **2018**, 8, 1535-1544.
- C.S. Higman, B.J. Ireland, S.A. Audorsch, R. McDonald, D.E. Fogg.\* "Chelate-Assisted Ring-Closing Metathesis: A Strategy for Macrocyclization at Ambient Temperature." *J. Am. Chem. Soc.* **2018**, 140, 1604-1607.
- G.A. Bailey, J.A. Lummiss, M. Foscato, G. Occhipinti, V.R. Jensen, D.E. Fogg.\* "Decomposition of Olefin Metathesis Catalysts by Brønsted Base: Metallacyclobutane Deprotonation as a Primary Deactivating Event." *J. Am. Chem. Soc.* **2017**, 139, 16446-16449.
- C.S. Higman, S.A. Rufh, R. McDonald, D.E. Fogg.\* "Synthesis and Dynamic Behaviour of a Dimeric Ruthenium Benzylidene Complex Bearing a Truncated N-Heterocyclic Carbene Ligand." J. Organomet. Chem. (special issue in honour of John Gladysz), **2017**, 847, 162-166. Highlighted in All Things Metathesis blog.
- A. G. Santos, G.A. Bailey, E. N. dos Santos, D. E. Fogg. "Overcoming Catalyst Decomposition in Acrylate Metathesis: Polyphenol Resins as Enabling Agents for Phosphine-Stabilized Metathesis Catalysts." ACS Catal. 2017, 7, 3181–3189; selected for ACS Editor's Choice Open Access. (A = Equal contributions).
   W.L. McClennan, S.A. Rufh, J.A.M. Lummiss, D.E. Fogg. "A General Decomposition Pathway for Phosphine-
- W.L. McClennan, S.A. Rufh, J.A.M. Lummiss, D.E. Fogg.\* "<u>A General Decomposition Pathway</u> for Phosphine-Stabilized Metathesis Catalysts: Lewis Donors Accelerate Methylidene Abstraction." *J. Am. Chem. Soc.* **2016**, 138, 14668-14677.
- C.S. Higman, A.E. Lanterna, M.L. Marin, J.C. Scaiano\*, D.E. Fogg.\* "Nanoparticle Formation in Metathesis Catalysis." *ChemCatChem*, **2016**, <u>8</u>, <u>2446-2449 (front cover)</u>.
- G.A. Bailey, D.E. Fogg.\* "Confronting Neutrality: Maximizing Success in the Analysis of Transition-Metal Catalysts by MALDI Mass Spectrometry." ACS Catalysis. **2016**, 6, 4962–4971.
- J.A.M. Lummiss, F.A. Perras, R. McDonald, D.L. Bryce,\* D.E. Fogg.\* "Sterically-driven olefin metathesis: The impact of alkylidene substitution on catalyst activity." *Organometallics.* **2016**, 35, 691–698.
- C.S. Higman, M.P. Araujo, D.E. Fogg.\* "Olefin Isomerization-Metathesis: Ensuring Process Orthogonality in the One-Pot Transformation of Essential-Oil Phenylpropenoids into High-Value Antioxidants." *Catal. Sci. Technol.* **2016**, 6, 2077–2084. Back cover.
- C.S. Higman, J.A.M. Lummiss, D.E. Fogg.\* "Olefin Metathesis at the Dawn of Uptake in Pharmaceutical and Specialty Chemicals Manufacturing." *Angew. Chem, Int. Ed.* **2016**, 55, 3552-3565. Invited review.
- J.A.M. Lummiss, vC.S. Higman, D.L. Fyson, R. McDonald, D.E. Fogg.\* "The Divergent Effects of Strong NHC Donation in Catalysis." *Chem. Sci.* **2015**, *6*, 6739-6746.
- G.A. Bailey, D.E. Fogg,\* "Acrylate Metathesis via the Second-Generation Grubbs Catalyst: Unexpected Pathways Enabled by a PCy3-Generated Enolate." *J. Am. Chem. Soc.* **2015**, *137*, 7318–7321.
- B.J. Ireland, B.T. Dobigny, D.E. Fogg,\* "Decomposition of a Phosphine-Free Metathesis Catalyst by Amines and Other Nitrogen Bases." *ACS Catalysis* **2015**, *5*, 4690-4698.
- J.M. Bates, <sup>†</sup> J.A.M. Lummiss, <sup>†</sup> G.A. Bailey, D.E. Fogg.\* Operation of the Boomerang Mechanism in Olefin Metathesis Reactions Promoted by the Second-Generation Hoveyda Catalyst. *ACS Catalysis*, 2014, 4, 2387-2394. <sup>†</sup>Equal contributions.
- J.A.M. Lummiss, B.J. Ireland, J. Sommers, D.E. Fogg.\* Amine-Mediated Degradation in Olefin Metathesis. *ChemCatChem*, 2014, 6, 459-463.
- J.A.M. Lummiss, W.L. McClennan, R. McDonald, D.E. Fogg.\* Donor-Induced Deactivation of the Grubbs Catalysts: An Intercepted Intermediate. *Organometallics*, 2014, 33, 6738–6741.
- J.A.M. Lummiss, A.G. Botti R. McDonald, D.E. Fogg.\* Isotopic Probes for Ru-Catalyzed Olefin Metathesis. *Cat. Sci. Tech.*, 2014, *4*, 4210-4218. (invited; "Mechanistic Studies in Catalysis" issue). "Hot paper"; featured in RSC blog; selected for inside cover.
- B.J. van Lierop, † J.A.M. Lummiss, † D.E. Fogg,\* "Ring-Closing Metathesis. In *Olefin Metathesis: Theory & Practice*, K. Grela, Ed. (Wiley: Weinheim); 85 pages. †Equal contributions.
- B.J. van Lierop, D.E. Fogg.\* On the Compatibility of Ruthenium Metathesis Catalysts with Secondary Phosphines. *Organometallics*, **2013**, *32*, 7245–7248.
- C.S. Higman, L. Plais, D.E. Fogg.\* Isomerization During Olefin Metathesis: Assessment of Potential Culprits. *ChemCatChem*, **2013**, *5*, 3548–3551.

• B.J. Ireland, R. McDonald, D.E. Fogg.\* Controlling the Coordination Mode of the Arylamide Ligand. *Organometallics*, **2013**, 32, 4723–4725.

## 2012

- J.A.M. Lummiss, K.C. Oliveira, A.M.T. Pranckevicius, A.G. Santos, E.N. dos Santos\*, D.E. Fogg,\* "Chemical Plants: High-Value Molecules from Essential Oils." *J. Am. Chem. Soc.*, **2012**, *134*, 18889-18891. Highlighted in ACS Press Release and podcast.
- B.J. van Lierop, A.M. Reckling, J.A.M. Lummiss, D.E. Fogg,\* "Clean, Convenient, High-Yield Access to Second-Generation Ru Metathesis Catalysts from Commercially Available Precursors", *ChemCatChem*, 2012, 4, 2020-2025; selected as cover article.
- S. Monfette, J. Marleau-Gillette, J.C. Conrad, R. McDonald, D. E. Fogg,\* "A Ru-Isocyanate Initiator for Fast, Living Ring-Opening Metathesis Polymerization at Ambient Temperatures." *Dalton Trans.*, 2012, *41*, 14476-14479.
- J.A.M. Lummiss, N.J. Beach, J.C. Smith, D.E. Fogg,\* "Targeting an Achilles Heel in Olefin Metathesis: A Strategy for High-Yield Synthesis of Second-Generation Grubbs Methylidene Catalysts." *Catal. Sci. & Tech.*, 2012, 2, 1630-1632 [designated as Hot Article]
- N.J. Beach, J.A.M. Lummiss, J.M. Bates, D.E. Fogg,\* "Reactions of Grubbs Catalysts with Excess Methoxide: Formation of Novel Methoxyhydride Complexes." *Organometallics*, 2012, *31*,2349-2536 [highlighted in "All Things Metathesis"].

#### 2011

- A.G.D. Grotevendt, J.A.M. Lummiss, M.L. Mastronardi, D.E. Fogg\*, "Ethylene-Promoted vs. Ethylene-Free Enyne Metathesis." *J. Am. Chem. Soc.*, 2011, 133, 15918-15921.
- J.M. Blacquiere, C.S. Higman, R. McDonald, D.E. Fogg\*, "A reactive Ru-binaphtholate building block with self-tuning hapticity." *J. Am. Chem. Soc.*, 2011, 133, 14054–14062.
- J.M. Blacquiere, C.S. Higman, S. I. Gorelsky, N.J. Beach, S.J. Dalgarno, D.E. Fogg\*, "Unprecedentedly Strong Binding of N2 at Ruthenium", *Angew. Chem., Int. Ed.* 2011, *50*, 916-919.
- S. Monfette, J.C. Conrad, K.D. Camm, D.E. Fogg\*, "Expanding the "ROMP Toolbox" for tissue engineering: Assessing the design criteria for Ru-pseudohalide initiators", *Polym. Prepr.*, 2011, 52, 113-114.
- •S. Monfette, J.M. Blacquiere, D.E. Fogg\*, "The Future, Faster: Roles for High-Throughput Catalysis in Accelerating Discovery in Organometallic Catalysis", *Organometallics*, 2011, 30, 36–42 (invited contribution for "The Future of Organometallic Chemistry").

## 2010

- N.J. Beach, K.D. Camm, D.E. Fogg,\* "Hydrogenolysis versus Methanolysis of First- and Second-Generation Grubbs Catalysts: Rates, Speciation, and Implications for Tandem Catalysis." *Organometallics*, 2010, 29, 5450-5455 (invited: special issue in honour of Dietmar Seyferth).
- S. Monfette, M. Eyholzer, D.M. Roberge,\* D.E. Fogg\*, "Getting RCM off the bench: Reaction–reactor matching transforms metathesis efficiency in the assembly of large rings", *Chem. Eur. J.*, 2010, *16*, 11720-11725.
- J.M. Blacquiere, R. McDonald, D.E. Fogg\*, "Integrating the Schrock and Grubbs Catalysts: Ru-binaphtholate catalysts for olefin metathesis", *Angew. Chem., Int. Ed.* 2010, *49*, 3807-3810.
- S. Monfette, A.K. Crane, J.A. Duarte Silva, G.A. Facey, E.N. dos Santos, M.H. Araujo, D.E. Fogg,\* "Monitoring Ring-Closing Metathesis: Limitations on the Utility of Routine 1H NMR Spectroscopic Methods", *Inorg. Chim. Acta* (special issue in honour of Paul Pregosin), 2010, 363, 481–486.
- S. Monfette, D.E. Fogg\*, "Ring-Closing Metathesis Synthesis of Medium and Large Rings: Challenges and Implications for Sustainable Synthesis", in *Green Metathesis Chemistry*, NATO Adv. Chem. Series; V. Dragutan, E. Finkelshtein, Eds., 2010.

# 2009

- M.W. Kotyk, S.I. Gorelsky, J.C. Conrad, C. Carra, D.E. Fogg\*, "Geometric and Electronic Structure of a C1-Symmetric Ru-Aryloxide Metathesis Catalyst: An Experimental and Computational Study", *Organometallics*, 2009, 28, 5424-5431.
- K. Merrett, W. Liu, D. Mitra, K.D. Camm, C.R. McLaughlin, Y. Liu, M.A. Watsky, F. Li, M. Griffith, D.E. Fogg\*, "A Wholly Synthetic Polymer-Recombinant Human Collagen Hybrid: ROMP Neoglycopolymers As Biomimetic Crosslinking Agents in Corneal Tissue Engineering", *Biomaterials*, 2009, *30*, 5403-5408.
- S.A. Klassen, R. Boehme, S.D. Derrick, K. Moock, A. E. Baker, D.E. Fogg, R.T. Boeré, P. W. Dibble\*, "Stable phenylene- and biphenylene-bis(isobenzofuran)s." *Can. J. Chem.* 2009, 87, 738-744
- S. Monfette, D.E. Fogg\*, "Equilibrium Ring-Closing Metathesis", *Chem. Rev.* 2009, *109*, 3783–3816 (invited review: thematic issue on "Carbenes").
- S. Monfette, K.D. Camm, S. Gorelsky, D.E. Fogg\*, "Electronic Effects of the Anionic Ligand in Ru-Catalyzed Olefin Metathesis", *Organometallics*, 2009, *28*, 944–946.
- N.J. Beach, J.M. Blacquiere, S.D. Drouin, D.E. Fogg\*, "Carbonyl-Amplified Catalyst Performance: Balancing Lifetime against Activity for Five-Coordinate Ruthenium Hydride and Hydridocarbonyl Catalysts", *Organometallics*, 2009, *28*, 441–447.
- S. Monfette, J.A. Duarte Silva, S.I. Gorelsky, S.J. Dalgarno, E.N. dos Santos, M.H. Araujo, Deryn E. Fogg\*, "Dissecting Out the Effect of Ru-OAr Bonding in a Five-Coordinate Complex of Ruthenium (II)", *Can. J. Chem.*, (special issue in honour of Dick Puddephatt); 2009, *87*, 361-367.

## 2008

- J.M. Blacquiere, T. Jurca, J. Weiss, D.E. Fogg\*, "Time as a Dimension in High-Throughput Homogeneous Catalysis", *Adv. Syn. Catal.* 2008, *350*, 2849-2855.
- D.E. Fogg\*, "Inside the Black Box: Perspectives on Transformations in Olefin Metathesis and Tandem Catalysis", *Can. J. Chem.*, 2008, 86, 931-941 (Strem Award lecture; cover article).
- C.N. Rowley, H.M. Foucault, T.K. Woo, D.E. Fogg\*, "The Mechanism of Olefin Hydrogenation Catalyzed by RuHCl(L) (PR3)2 Complexes (L=CO, PR3)", *Organometallics*, 2008, *27*, 1661-1663.
- N.J. Beach, U.L. Dharmasena, S.D. Drouin, D.E. Fogg\*, "Versatile Ruthenium Hydridocarbonyl Catalysts Containing Electron-Rich Ancillary Ligands", *Adv. Synth. Catal.* 2008, *350*, 773-777.
- M.D. Eelman, J.M. Blacquiere, M.M. Moriarty, D.E. Fogg\*, "MALDI Mass Spectrometry as a Tool for Insight in Organotransition-Metal Catalysis", *Angew. Chem., Int. Ed.*, 2008, *47*, 303-306 (<u>VIP Paper</u>; inside cover).

#### 2007

- K.D. Camm, N. Martinez Castro, Y. Liu, P. Czechura, D.E. Fogg,\* "Tandem ROMP-Hydrogenation with Third-Generation Grubbs Catalysts." *J. Am. Chem. Soc.*, 2007, 129, 4168-4169.
- J.C. Conrad, M.D. Eelman, J.A. Duarte Silva, S. Monfette, H.H. Parnas, J.L. Snelgrove, D.E. Fogg,\* "Oligomers as Intermediates in Ring-Closing Metathesis", *J. Am. Chem. Soc.* 2007, 129, 1024-1025.
- D.E. Fogg,\* H. Foucault,, "Ring-Opening Metathesis Polymerization." *Comprehensive Organometallic Chemistry III*, R.H. Crabtree and D.M.P. Mingos, Eds., Elsevier: Oxford 2007.
- K. D. Camm, D.E. Fogg,\* "From Drug Cocktails to Tissue Engineering: Synthesis of ROMP Polymers for Biological Applications", *NATO Adv. Chem. Ser.* Y. Imamoglu, V. Dragutan, Eds. (invited); 2007, p. 285-303.
- S. Monfette, J.C. Conrad, J.M. Blacquiere, N. Beach, D.E. Fogg,\* "Ru-Aryloxide Catalysts for Olefin Metathesis." *NATO Adv. Chem. Ser.* Y. Imamoglu, V. Dragutan, Eds. (invited); 2007, p. 79-89.

#### 2006

- H.M. Foucault, D.L. Bryce\*, D.E. Fogg\*, "A Chelate-Stabilized Ruthenium(σ-Pyrrolato) Complex: Resolving Ambiguities in Nuclearity and Coordination." *Inorg. Chem.* 2006, *45*, 10293-10299.
- P. de Frémont, E.D. Stevens, M.D. Eelman, D.E. Fogg, S.P. Nolan, "Gold(I) NHC Complexes Bearing Biologically Compatible Moieties." *Organometallics*, 2006, *25*, 5824-5828
- M.D. Eelman, M.M. Moriarty, D.E. Fogg\*, "Mass Spectrometric Analysis of Organometallics: Ionization Mechanisms and the Probability of Survival." *Educ. Adv. Chem.* (invited), 2006, 10, 213-234.
- J.C. Conrad, J.L. Snelgrove, M.D. Eeelman, S. Hall, D.E. Fogg\*, "Ru-Aryloxide Catalysts in Olefin Metathesis." *J. Mol. Catal. A* (olefin metathesis issue: invited), 2006, 254, 105-110.
- M.U. Delgado-Jaime, J.C. Conrad, D.E. Fogg, P. Kennepohl\*, "Exploring the Electronic Structure of Ru Catalysts using X-ray Absorption." (special issue in honour of B.R. James), *Inorg. Chim. Acta* 2006, *359*, 3042-3047.
- S. Monfette, D.E. Fogg\*, "Ruthenium metathesis catalysts containing chelating aryloxide ligands." *Organometallics* 2006, 25, 1940-1944.
- J.C. Conrad, K.D. Camm, D.E. Fogg\*, "Ru-Aryloxide Metathesis Catalysts with Enhanced Lability." *Inorg. Chim. Acta* (invited; special issue in honour of Gerard van Koten), 2006, *359*, 1967-1973.
- J.C. Conrad, D.E. Fogg,\* "Ring-Closing Metathesis: Advances, Limitations, and Opportunities", *Current Organic Chemistry* (invited review), 2006, *10*, 185-202.
- D.E. Fogg, K.D. Camm, "Tandem ROMP-Hydrogenation Catalysis"; U.S. Provisional Patent, US 60/824,345.

# 2005

- J.C. Conrad, H.H. Parnas, J.L. Snelgrove, D.E. Fogg,\* "Highly Efficient Ru-Pseudohalide Catalysts for Olefin Metathesis." *J. Am. Chem. Soc.* 2005, *127*,11882-11883.
- S.D. Drouin, S. Monfette, D. Amoroso, G.P.A. Yap, D.E. Fogg,\* "Simultaneous Observation of Doubly- and Triply-Chloride Bridged Isomers...." Organometallics, 2005, 24, 4721-4728.
- S.D. Drouin, H. M. Foucault, G.P.A. Yap, D. E. Fogg\*, "New Pseudohalide Ligands in Ru-Catalyzed Olefin Metathesis: A Robust, Air-Activated Iminopyrrolato Catalyst." *Can. J. Chem.* (special issue in honour of Howard Alper), 2005, 83, 748.
- U. Dharmasena, H. M. Foucault, E.N. dos Santos, D.E. Fogg,\* S. P. Nolan, "N-Heterocyclic Carbenes as Activating Ligands in Hydrogenation and Isomerization of Unactivated Olefins." *Organometallics*, 2005, 24,1056.
- J.L. Snelgrove, J. Conrad, M. Eelman, M.M. Moriarty, G.P.A. Yap, D. E. Fogg\*, "Inhibiting s-p Isomerization of Aryloxide in Late Transition Metal Complexes." *Organometallics*, 2005, *24*, 103-109.
- D.E. Fogg, Y. Liu, M. Griffith, "Saturated Neoglycopolymers as Collagen Cross-linking Agents"; US Provisional Pat. filed May/05 (converted Patent App., US 11/442,755, 2006).

## **INVITED LECTURES**

# 2021

Imperial College, London, UK, May 20 University of Pennsylvania, Philadelphia, PA, May 4 University of Potsdam, Potsdam, Germany, April 26 Rio Tinto Award Lecture, 104th CSC, Montreal

#### 2020

Gordon Conf. on Physical Organic Chemistry [postponed to 2023]

[postponed] 29th International Conf. on Organometallic Chemistry (ICOMC-19), Shanghai (keynote lecture)

[postponed] ACS National Meeting, Award Symposium honouring Dan Mindiola

[postponed] Rio Tinto Award Lecture, 103rd CSC, Winnipeg, MB (keynote lecture)

## 2019

- 175. 19th Norwegian Catalysis Society, Houm Lecture, Bergen, NO; Dec. 5
- 174. University of Western Ontario, London, ON; Nov. 20
- 173. "Sustainable Catalysis" Symposium in honour of Hans de Vries, Stratingh Institute for Chemistry, University of Groningen, Aug. 30
- 172. Leibniz Institute for Catalysis (LIKAT), Rostock, Germany, Aug. 29
- 171. 23rd International Symposium on Olefin Metathesis, Barcelona, Jun. 30 (plenary lecture)
- 170. 102nd CSC meeting, Symposium on New Directions in Catalysis, Quebec City, Jun. 30
- 169. Ottawa Science Teachers Council, Ottawa, Apr. 12
- 168. ACS National Meeting, I&EC Fellow Award Symposium honouring Tom Baker, Orlando FL, Mar. 31
- 167. State University of New York Buffalo, Buffalo NY, Mar. 29
- 167. German Catalysis Society Meeting, Weimar, Germany, Mar. 13 (plenary lecture).

#### 2018

Symposium Celebrating the 30th Anniversary of the Discovery of Stable Carbenes, Toulouse, FR, Nov. 30.

Telluride Workshop on Accelerating Reaction Discovery. Telluride, Colorado, July 30-Aug. 3

21st International Symposium on Homogenous Catalysis (ISHC-XXI), Amsterdam, July 8-13.

Materia, Inc., Pasadena CA, Jan. 29.

## 2017

University of California - Berkeley, Berkeley CA, Dec. 5.

Einstein Workshop 2017, Berlin, Nov. 9-10.

Technical University of Berlin, Berlin, Nov. 8.

Gordon Research Conference on Organic Reactions & Processes ("Catalysis and Mechanism: Enabling Efficiency in Synthesis"), Stonehill College, Easton, MA, July 23-28.

46th IUPAC World Chemistry Congress, Sao Paulo, Brazil, July 9-14 (keynote lecture).

22nd International Symposium on Olefin Metathesis (ISOM-22), Zurich, July 9-12

Swedish National Meeting on Inorganic Chemistry (Oorgandagarna), Nynäshamn, Sweden, Jun 12-14

100th CSC, Symposium "New developments in transition metal-alkyl chemistry, Toronto, May 28-June 1

Centre for Catalysis Research & Innovation Board Symposium, Ottawa, May 15

2nd Apeiron Catalysis Symposium, Cambridge MA, April 10

## 2016

Munster-Toronto International Research Training Group, University of Munster, Germany, Sept. 19–20

University of Kyoto, Kyoto, Japan, July 16

JSPS Symposium on "Precise Design and Formation of Catalysts for Molecular Transformations", Osaka, Japan, July 9 42nd International Conference on Coordination Chemistry, Brest, France, July 5

99th CSC, Symposium on "Sustainable Materials and Catalysis in Green Chemistry, Halifax, June 4-9

uOttawa Center for Catalysis Research & Innovation (CCRI) 10th Anniversary Symposium. Selected to represent the CCRI; Ottawa, May 11

University of British Columbia - Okanagan, Kelowna BC, Apr. 4

# 2015

Symposium on Transition Metal Complexes of N-Heterocyclic and Mesoionic Carbenes. Pacifichem 2015, Hawaii (Dec. 13-18)

5th Latin American Symposium on Coordination and Organometallic Chemistry (Silqcom), Rio de Janeiro, Brazil (Oct. 18-23)

21st International Symposium on Olefin Metathesis (ISOM-21), Graz, Austria (July 12-16)

Symposium on "Recent Developments in Transition Metal-Catalyzed Synthesis, 98th CSC (June 13-17)

Oxford University (June 5)

CARISMA meeting, COST Action group, Tarragona, Spain (Mar. 17-20; plenary)

Laboratoire de Chimie de Coordination, Université Toulouse, Toulouse, France (Mar. 13; Paul Sabatier Lecture)

Université Rennes, Rennes, France (Mar. 27)

ESPCI ParisTech, Paris (Feb. 20)

Université Rouen, Rouen, France (Feb. 6)

Université Pierre et Marie Curie, Paris (Jan. 19)

#### 2014

Molecular Complexity in Modern Chemistry (MCMC-2014), Moscow (Sept. 13-19)

Tokyo Metropolitan University, Tokyo, Japan (July 18)

26th International Conference on Organometallic Chemistry (ICOMC-26), Sapporo, Japan (July 13-18)

Japan-Canada Workshop on Molecular Activation, Ottawa (July 5-6)

St Lawrence University, Canton, NY, July 4-6)

SUNY Potsam, Potsdam NY, July 4-6

Gordon Conference on Inorganic Chemistry (June 8-13)

Symposium on NHC Ligands in Catalysis, 97th Canadian Society for Chemistry (CSC) conference, Vancouver BC (June 1-5)

Symposium on Modern Characterization Methods in Inorganic Chemistry, 97th Canadian Society for Chemistry (CSC) conference, Vancouver BC (June 1-5)

#### 2013

Case Western Reserve, OH (Oct. 31)

XX Internat. Symposium on Olefin Metathesis (ISOM-20), Nara, Japan (July 14-19)

University of Florida, Gainesville, FL (Mar. 28)

University of Bergen, Bergen, Norway (Mar. 3)

Ryerson University, Toronto ON (Feb. 15)

York University, Toronto ON (Feb. 14)

McMaster University, Hamilton ON (Feb. 7)

# 2012

BASF-CaRLa 5th Winter School on Homogeneous Catalysis, Heidelberg, Germany (Mar. 3-9)

## 2011

International Symposium on Catalysis and Fine Chemicals 2011, Nara, Japan (keynote lecture; Dec. 4-8)

"21st-Century Catalysis Science & Applications", Entretiens Jacques Cartier (Lyons); Ottawa (Sept. 29)

Dalhousie University, Halifax NS (Aug. 8)

XIX International Symposium on Olefin Metathesis, Rennes, France (Jul. 10-15)

XIX EuCheMS Conference on Organometallic Chemistry, Toulouse, France (Jul. 3-7)

Symposium on "Organometallic Reagents in Organic Synthesis", 94th Canadian Society for Chemistry conference, Montreal CSC (Jun. 5-9)

University of Washington, Seattle (Apr. 26)

Symposium on "New Synthetic Developments in Polyolefins and Metathesis Based Materials", 241st American Chemical Society Conference, Anaheim FL (Mar. 27-31)

#### 2010

XXIV International Conference on Organometallic Chem., Taiwan (Jul. 20)

Queen's University (April 9)

Argonne National Laboratory (March 5)

Northwestern University, Evanston IL (March 4)

# 2009

University of Lethbridge, Lethbridge AB (Sept. 14)

SACIQ XIII (Symposium Annuel de Chimie Inorganique du Québec), Stoneham, Québec (plenary lecture; August 21)

Gordon Conference on Organometallic Chemistry, Salve Regina University, Newport, RI (July 12-17)

92nd Canadian Society for Chemistry conference, Hamilton (May 30-June 3)

Yale University (April 28)

## 2008

NATO Advanced Study Institute: Green Metathesis Chemistry, Bucharest, Romania (2 keynote lectures; July 22 & 24) Universität Konstanz, Konstanz, Germany (July 18)

91st Canadian Society for Chemistry conference, Edmonton AB (May 24-28)

University of Wisconsin - Madison (April 30)

Durham University (April 18)

Memorial University of Newfoundland (March 14)

McGill University, Chemical Society Lecture Series (March 11)

## 2007

University of Victoria, Victoria, BC (Nov. 29)

Simon Fraser University, Lectures in Modern Chemistry series (Nov. 28)

University of British Columbia, Lectures in Modern Chemistry series (Nov. 27)

St. Mary's Univ., Halifax, NS (Oct. 19)

Mt. Allison Univ., Sackville, NB (Oct. 18)

Mt. St. Vincent Univ., Antigonish, NS (Oct. 16)

17th Int'l Symposium on Olefin Metathesis, Pasadena, CA (session lecture, July 29-Aug. 3)

Lonza AG, Visp, Switzerland (June 11)

University of Zurich, Zurich, Switzerland (June 5)

Strem Chemical/CSC Award Lecture, 90th Canadian Society for Chemistry conference, Winnipeg, MB (CSC award lecture, May 26-30)

# 2006

Univ. of Toronto, Toronto ON (Dec. 6)

Univ. of Western Ontario, London ON (Sept. 20)

NATO Advanced Study Institute: New Frontiers in Metathesis Chemistry, Antalya, Turkey (2 senior session lectures; 4-16 Sept)

15th Int'l Symp. on Homogeneous Catalysis, Sun City, South Africa (session lecture; Aug 13-18)

37th Int'l Conf. on Coordination Chemistry, Cape Town, SA (keynote; Aug 20-25)

XXII Int'l Conf. on Organometallic Chemistry, Zaragoza, Spain (session lecture; Jul 23-28)

Univ. Calgary (July 5)

Univ. Strasbourg (June 28)

Univ. Cologne (June 26)

Dutch Nat'l Research School on Catalysis Controlled by Chemical Design (June 23)

Univ. Utrecht (May 4)

ETH Zurich (Apr. 19)

EFPL Lausanne (Apr. 18)

French National Meeting on Inorganic / Coordination Chemistry, "Journées de la Division de Chimie de Coordination",

Toulouse, Apr. 3-5; *plenary*)

University Rovira e Virgili, Tarragona, Spain (Mar. 16)

Institute of Chemical Research of Catalonia (ICIQ), Tarragona, Spain (Mar. 15)

Universidad de Sevilla, Seville, Spain (Mar. 3)

Universidad de Castilla-La Mancha, Ciudad Real, Spain (Mar. 2)

2nd Spanish Symposium on Transition-Metal Catalysis, Zaragoza (Feb. 23-24)

Universidad de Oviedo, Ovideo, Spain (Feb. 9)

Universidad de Zaragoza, Zaragoza, Spain (Feb. 3)

Dutch Nat'l Combinatorial Chemistry Sympos., Utrecht, NL (Jan 18-19)

#### 2005

3rd Cape Organometallic Symposium, Cape Town, South Africa (plenary)

Univ. Witswatersrand, Johannesburg, SA

Sastech R&D, Sasol, Sasolburg, SA

Univ. Potchefstroom, Potchefstroom SA

5th International School on Molecular Catalysis, Poznan-Rosnowko, Poland (session lecture)

16th International Symposium on Olefin Metathesis, Poznan, Poland (session lecture)

Pre-OMCOS Symposium, Paris (session lecture)

West Coast Inorganic Discussion Weekend, Victoria BC (plenary)

# 2004

DSM Pharma, Netherlands

Concordia Univ., Montreal, PQ

Queen's Univ., Kingston ON

Mt. Allison Univ., Sackville NB

St. Mary's Univ., Halifax NS

87th CSC, London, Symposium on Late Metals in Catalysis

228th National ACS, Philadelphia; Symposium on NHC Ligands in Catalysis

14th International Symposium on Homogeneous Catalysis, Munich (contributed)

36th International Congress on Coordination Chemistry, Merida, Mexico (contributed)

XII National Brazilian Meeting on Inorganic Chemistry (plenary)

# 2003

Yale University, New Haven CT University of New Orleans, New Orleans LA Queen's University, Kingston ON Marquette University, Milwaukee WI

#### 2002

13th International Symposium on Homogeneous Catalysis, Tarragona, Spain Canada-Korea Bilateral Workshop: Frontiers in Advanced Materials, Ottawa

Dow Chemical Co., Midland, MI

85th Canadian Society for Chemistry, Vancouver

inaugural "Research and Innovation" lecture for members of Provincial Parliament; sponsored by the Ministry of Enterprise, Opportunity and Innovation and the Ontario Council on University Research.

#### 2001

Dalhousie University, Halifax NS
University of New Brunswick, Fredericton NB
University of British Columbia, Vancouver BC
University of Victoria, Victoria BC
Symyx Inc., CA
14th International Symposium on Olefin Metathesis, Boston, MA
84th CSC, Montreal

#### 2000

Santen Pharmaceuticals, Osaka, Japan
Ophthamology Department, Tokyo Dental College, Tokyo, Japan
National Research Council of Canada, Ottawa
St. Mary's University, Halifax, NS
University of Connecticut, Storrs, CT
University of Toronto; Photonics Research Ontario, Toronto, ON
83rd CSC, Calgary AB (contributed)
30th Canadian High Polymer Forum, Aylmer PQ (contributed)
219th National ACS Meeting, San Francisco (contributed)

#### 1999

Partnership Group for Science and Engineering: Science and Technology as a Vehicle for Economic Growth in Canada, Ottawa, ON 10th Ottawa-Carleton Chemistry Institute Spring Symposium, Ottawa University of Windsor, Windsor, ON

82nd CSC, Toronto (contributed)

#### **RESEARCH SUPERVISION**

Graduate students

Pedro da Silva (Ph.D.)

Harrison Max (M.Sc.)

Christian Blanco (Ph.D.; Yu Scholar; International Scholar)

Xinrui Ou (M.Sc.; Yu Scholar)

Nathan Lu (M.Sc.)

Daniel Nascimento (Ph.D.; International Ontario Graduate Scholar)

Eliza-Jayne Boisvert (Ph.D.) Immanuel Reim (Ph.D.; Bergen)

# Undergraduate researchers

Samantha Cormier (2020-21; 3rd year Undergrad Research Opportunities Scholar)

Lyra Evans (2021; 4th year honours thesis student)

Ryan Hannon (2020-21; 4th year honours thesis student)

# Previously supervised graduate students

Alex Goudreault (M.Sc.; nominated for University Thesis Prize). Now Sales Associate, Thermo Fisher Scientific) Andrew White (M.Sc.; awaiting defense)

Stephanie Ton (M.Sc.; nominated for University Thesis Prize). Now Ph.D. candidate, University of Aarhus, Denmark (Skydstrup group)

Craig Day (M.Sc.) Now BIST Ph.D. Scholar, ICIQ, Tarragona, Spain (Ruben Martin group)

Gwen Bailey (Ph.D.; NSERC-CGS scholar; University Thesis Prize). Now Resnick Fellow and NSERC PDF, Caltech (Agapie group)

Stephanie Rufh (M.Sc.; nominated for University Thesis Prize). Now Ontario University of Technology)

Billy McClennan (M.Sc. 2016; nominated for University Thesis Prize). Now Operations and Marketing Manager, Humon, Cambridge MA.

Carolyn Higman (Ph.D.; NSERC-CGS scholar). Now Research Investigator II, Bristol-Myers Squibb

Adrian Botti (M.Sc. 2016). Now Radiation Officer, Health Canada

Benjamin Ireland (Ph.D.; NSERC-CGS scholar). Now Associate Scientist II, Gilead, Alberta

Justin Lummiss (Ph.D. 2015; nominated for University Thesis Prize). NSERC pdf (Tim Jamison, MIT). Now Director of Innovation, On Demand Pharmaceuticals, Inc., Cambridge, MA

Juliana Paula da Silva (Ph.D.; 2014-15; 1-year exchange). Now Universidade Federal do Paraná, Brazil Leonildo A. Ferreira (Ph.D.; exchange from Universidade Federal do Rio Grande do Sul, Brazil). Now pdf, UFMG Jennifer Bates (M.Sc. 2014; OGS scholar; nominated for University M.Sc. Thesis Prize). Now Technical Officer, National Research Council Canada.

Amy Reckling (M.Sc. 2013, NSERC-CSG scholar. Now Program Officer, Natural Sciences and Engineering Research Council of Canada

Joshua Marleau-Gillette (M.Sc. 2012). Now Research Associate, Iogen Corp.

Stephan Audorsch (M.Sc. exchange student 2012; Univ. Potsdam). Ph.D. Potsdam. Now Mitsubishi Polyester Film GmbH.

Nicholas Beach (Ph.D. 2012; NSERC-PGS scholar). PDF (C. Landis, Madison-Wisconsin). Now Senior Scientist, Scintrex Trace Corp.

Johanna Blacquiere (Ph.D.2011; NSERC-CGS scholar; Nominated for University Ph.D. Thesis Prize). NSERC PDF (J. Mayer, Washington. Now Associate Professor, Western University).

Sebastien Monfette (Ph.D. 2010; NSERC-CGS scholar). NSERC PDF (P. Chirik, Cornell/Princeton. Nominated for University Ph.D. Thesis Prize.) Now Senior Principal Scientist, Pfizer

Lucie Plais, M.Sc.exchange student (JCEMolChem intern), Univ. Pierre et Marie Curie (Jan. 1-May 31, 2013). Now Characterization Process Engineer, SOITEC, Grenoble

Matthew Kotyk (M.Sc. 2009; NSERC CGS scholar). Nominated for University M.Sc. Thesis Prize Now Orthodontist, Alberta

Jay Conrad (Ph.D. 2007; NSERC PGS scholar). NSERC PDF (D. MacMillan, Princeton); *Nominated for University Ph.D. Thesis Prize*. Now Assistant Professor, Department of Neurology, UC San Francisco

Heather Foucault (M.Sc. 2006). *Nominated for University M.Sc. Thesis Prize* Now Senior Science Instructor, Sanford School, Delaware

Renata Nunes (Ph.D.; 1-year research exchange from Univ. Fed. Minas Gerais, Brazil; 2006)

Joao Duarte Silva (Ph.D.; 1-year research exchange from Univ. Fed. Minas Gerais, Brazil; 2006)

Amir Jabri (M.Sc. 2005). Now Quality Control Chemist, Apotex Pharma

Ureshini Dharmesena (M.Sc. 2005). Now Senior Chemist/Evaluator, New Substances Assessment, Health Canada

Pawel Czechura (M.Sc. 2004). Now Project Manager, Agriculture and Agri-Food Canada

Jennifer Snelgrove (Ph.D. 2004). Now Chemical Technologist, Royal Military College, Kingston

Samantha Drouin (Ph.D. 2003; NSERC PGS scholar). Now Senior Patent Agent, Industry Canada)

Rachel Mainville (M.Sc. 2002). Chemist, Environment Canada

Dino Amoroso (Ph.D. 2002). Now Research Manager, Solvay

## Previously supervised postdoctoral researchers

- Dr. Carolyn Higman (Ph.D. Ottawa), 2016: short-term pdf. Now Research Investigator II, Bristol Myer Squibb, NJ
- Dr. Stephan Audorsch (Ph.D. Potsdam), 2016. Now Product Scientist, Mitsubishi Polyesters
- Dr. Emma Davy (Ph.D. Victoria), 2015. Now Assistant Professor, Quest University, BC
- Dr. Bianca van Lierop (Ph.D. Monash), 2012-14. Now Senior Engineer, Abbott Point of Care Canada
- Dr. Anne Grotevendt (Ph.D. Rostock), 2009-10. Now Staff Scientist, Universitätsmedizin Greifswald, DE
- Dr. Debbie Mitra (Ph.D. McGill), 2008-10. Now Director of Science and Technology, USC Institute for Biomedical Therapeutics, Univ. Southern California
  - Dr. Adrien Normand (Ph.D. Cardiff), 2008-09. Now Chargé de Recherche (Assist. Prof.), U. Bourgougne
  - Dr. Ken Camm (Ph.D. Leeds, UK), 2005-07. Now Sr. Development Chemist, Johnson Matthey, USA
  - Dr. Melanie Eelman (Ph.D. Dalhousie; 2004-07; NSERC pdf). Now Head Cidermaker, Annapolis Cider Co.
  - Dr. Jenn Snelgrove (Ph.D. Ottawa), 2005-06. Now Senior Chemical Technologist, RMC Kingston
  - Dr. Nemesio Martinez Castro (Ph.D. Bayreuth, Germany), 2004. Now Senior Scientist, Rhodia, US
  - Dr. Yuwen Liu (Ph.D. Japan; 2001-03). Now Now Research Fellow (Director Level), CooperVision
  - Dr. Ranga Reddy (Ph.D. Pune, India), 2001. Phage Tech, Montreal

## Previously supervised undergraduate researchers

Sambina Bevilaqua (2019-20 honours thesis)) y

Claire Courtemanche (2019 honours thesis)) y

Olivia Bezan (2018-19 honours thesis))

Maressa Bradshaw (2018-19 honours thesis)). Now nursing school

Callum Blaney (2018). Now grad student, Environmental Toxicology

Mason Guy (2017-18 USRA; 2018-19 honours student). Now grad student, UBC (Hein group)

Nehal Islam (2017-18; honours student). Now grad student, Epidemiology, McGill

Stephanie Ton (2017-18; honours student). Now Ph.D. candidate, Denmark (Skydstrup group)

Jessie Crescenzo (2017). Now Ph.D. candidate, UBC (Bertram group)

Angela (Tianyue) Dou (2016). Now Clinical Research Assistant, Hospital for Sick Children

Luke Ciparis (2016; 2nd year Undergrad Research Opportunities scholar). Now Corporate Compliance and Enforcement Officer, Health Canada, Controlled Substances and Canadbis Branch

Amrah Nasim (2016). Now Ph.D. candidate, Ottawa (Newman group)

Cynthia Chan (2016-17; 2nd year UROP scholar). Now medical school

Alexandre Goudreault (2016-17; honours thesis). M.Sc. Ottawa, 2019 (Fogg group). Now Technical Sales

Andrew White (2016-17; honours thesis student). Now Ph.D. candidate, Ottawa

Tammy Bui (2015-16; UROP Scholar). Now M.Sc. Public Health candidate, McGill.

Shaima Kaka (2015-16). Now medical school, Ottawa

Bradley Holden (2015; summer student)

Nikita Panov (2015; 4th year honours thesis). M.Sc. Ottawa (Hemmer group)

Kara Campbell (2014; 4th year honours thesis). Now User Interface Developer, Statistics Canada

Devon Fyson (2013; summer/fall research student)

Jacob Sommers (2013; 2nd year summer student). Now Ph.D. candidate, U. Montreal

Alexandre Pranckovicius (2012; summer student)

Justin Chan (2012; summer student). M.Sc. Ottawa (Giorgi group)

Goldie Silva (2011). Now Clerk, Canadian Forces Support Unit, Ottawa

Matt McCann (2011-12; 4th year honours thesis)

Melanie Mastronardi (2009-10; 4th year thesis. *Winner, Departmental Thesis Prize*. Ph.D. Toronto. Now McKinsey & Co.

Carolyn Higman (2009-10; 4th year honours thesis). Ph.D. Ottawa (Fogg group). Now Research Investigator II, Bristol-Myers Squibb.

Jonathon Moir (2008; ICE scholar; NSERC USRA). Ph.D. Toronto

Kevin Hogan (2008; NSERC USRA.) Now M.D., Ottawa General Hospital, Anatomical Pathologist.

Maureen Robinson (2006-08; 4th year honours thesis). M.Sc. Australia. Now Environmental Scientist, Golders Associates, Australia

Joseph Weiss (2007-08; 4th year honours thesis); M.Sc. Ottawa. Now Technical Sales Representative, Bruker BioSpin

Angela Crane (2007; summer research ICE scholar). Ph.D. UBC (McLachlan group). Now Program Coordinator, Dalhousie University.

Titel Jurca (2007-08; honours thesis). Ph.D. Toronto (Stephan group). Now Assistant Professor, University of Central Florida

Philippa Payne (2007; winter research term). Ph.D. UBC 2013 (Schafer group). Now Research Scientist I, Gilead Nathalie Kyer (2007; fall research term). M.Sc. Queen's

Shaun Hall (2005; winter research term). Ph.D. UVic, 2011 (Hore group). Now Staff Scientist, SNOLAB

Rylan Lundgren (2005; summer ICE scholar). Ph.D. Dalhousie, 2011 (Stradiotto group). Now Associate Professor, University of Alberta

Sebastien Monfette (2004-05; CHM 4006 honours thesis + summer research). Ph.D. Ottawa, 2010 (Fogg group). Now Research Scientist, Pfizer

Heather Foucault (2003-03; CHM 4006 honours thesis + summer research). B.Sc. 2004, M.Sc. Ottawa, 2006 (Fogg group); B.Ed. Leeds

Henrietta Parnas (2002-2004; summer research). M.Sc. McGill)

Maeve Moriarty (2002-04; CHM 4006 honours thesis + research term). B.Sc. 2004. Ph.D., RMC Kinsgston. Now Conservation Scientist, Canadian Conservation Institute

Pawel Czechura (2002; summer research, then M.Sc. (Fogg group). Ph.D., Ottawa (Ben group)

Nicola Gambarotta (2000-02; CHM 4006 honours thesis + summer research). B.Sc. 2002, M.D. Ottawa, 2005)

Jeremy Cheeseman (1999; summer research). B.Sc. 2000; Ph.D. McGill, 2005. Now Teacher, Lisgar Collegiate Institute. Ottawa

Emily Hollink (1998-99; CHM 4006 honours thesis + summer research; B.Sc. 1999; Ph.D. Windsor, 2004 (Stephan group). Now Research Scientist, Gilead

Daniel Plourde (1998-99; CHM 4006; B.Sc. 2000)

Pierre Tessier (1998; summer research term; B.Sc. 1999). Ph.D. Ottawa, 2004. Now Patent Office

Fojan Zamanian (1997-98; CHM 4006 honours thesis + summer research). B.Sc. 1998; Genentech, San

Francisco) Winner, Departmental Thesis Prize

Peter Politis (1997; summer research term; B.Sc. 1997)

Sabbatical or visiting faculty

Prof. Marcio Perez de Araujo, Universidad Federale de Paraujo, Brazil, 2014-15

Prof. S.P. Nolan, University of New Orleans, 2005-06

Prof. E. dos Santos, Universidad Federale de Minas Gerais, Brazil, 2003-04

# **EXTERNAL RESEARCH FUNDING**

2019-23 Norway Research Council Frinatek (Blue-Sky) Grant; Water-Tolerant Catalysis: Boosting Chemical Biology, Medicine, and Sustainable Chemical Manufacturing. \$2M CAD [12,124,000 NOK]

2017-22 NSERC Discovery Grant (PI), \$370,000

```
Norway Frinatek Blue-Sky Proposals, "Sustainable and Selective Metathesis: From Fundamental Insights to
New Chemicals and Pharmaceuticals" (PI V. Jensen, Bergen; with Janssen Pharmaceutica), ca. $2M CAD (one of only 2
grants awarded in the molecular sciences
2012-16 NSERC Discovery Grant (PI), $505,000
         NSERC RTI (inductively-coupled plasma mass spectrometer; PI K. Hattori), $150,000
2011
2011
         NSERC RTI (NMR console; P.I. Dave Bryce), $150,000
2011
         NSERC RTI (GPC; P.I. Tito Scaiano), $81,361
2008
         NSERC RTI (GC-FID; PI), $54,637
          NSERC Discovery Grant (PI), $320,000
2007-12
          NSERC Discovery Accelerator Supplement, $120,000
2007-10
2006-09
          NSERC Strategic: "Biomimetic Materials for Tissue Eng." (PI M. Griffith), $362,572
         CFI "Accelerated Discovery of Advanced Catalysts" (PI A. Sayari), $19,301,758. Role: Lead, homogeneous
2004
catalysis ($10M), final version, proposal defense.
2004-08 CFI Infrastructure Fund (PI), $187,091
2003
         Petroleum Research Fund SE Grant: 39th IUPAC Congress/86th CSC, $5,000
2002-06 NSERC Discovery Grant (PI), $214,320
2002
         CFI Innovation Fund: "New Materials for Tissue Engineering" (PI), $1,559,092
2002-05 NSERC Strategic Grant, "Novel Biopolymer Scaffolds for Fully-Integrated Artificial Corneas" (PI M. Griffith),
$952,200 (23%)
         NSERC Major Equipment Grant: 300 MHz NMR (PI), $283,777
2000
1999-04 Premier's Research Excellence Award (PI), $150,000
2000-02 NSERC Operating Grant (PI), $76,230
1999
         CFI New Opportunities / Ontario Innovation Trust (PI), $725,052
         NSERC Operating Grant (PI), $72,600
1998-99
1998
         NSERC Equipment (PI), $113,822
```

# **GRADUATE TEACHING**

2019	CHM 8341, Olefin Metathesis; Directed Studies
2017	CHM 8341, Olefin Metathesis
2016	CHM 8302, Experimental Methods in Inorganic Chemistry
2014	CHM 8320, Olefin Metathesis and Related Catalysis
2012	CHM 8341, Olefin Metathesis and Related Catalysis
2008	CHM 8302, Physical Methods in Inorganic Chemistry
2007	CHM 8115, Organometallic Chemistry
2005	CHM 8320, Organometallic Catalysis
2002	CHM 8115, Organometallic Chemistry

# **UNDERGRADUATE TEACHING**

	W2020	CHM 3129 Chemistry & Sustainable Synthesis (contributed for Jan)
	F2018-20	CHM 2353 Descriptive Inorganic Chemistry (+ laboratory]
	W2017	CHM 3129 Chemistry & Sustainable Synthesis
	W2016	CHM 3129 Chemistry & Sustainable Synthesis + laboratory]
	2014-15	sabbatical
	F2013	CHM 3350 Transition Metal Chemistry + laboratory; BPS 3350]
	F2010	CHM 3122 Applied Spectroscopy (with Dave Bryce); CHM 3350/BPS 3350]
	F2006-12	CHM 3350 Transition Metal Chemistry + laboratory [after F2010, also BPS 3350]
	W2007	CHM 4317 Organometallic Chemistry
	W2005	CHM 8320 Transition Metal Catalysis
	F2002-04	CHM 3150 Transition Metal Chemistry + Laboratory
	F1997-2002	CHM 3122 Applied Spectroscopy
	W1998-02	CHM 3125 Industrial and Polymer Chemistry
	W2002	CHM 4311 Organometallic Chemistry
	W2002	CHM 8115 Organometallic Catalysis
W1999-2001CHM 3116 / 3516 Inorganic Chemistry Laboratory		
	1997-present	CHM 4006 B.Sc. Honours thesis supervision

Expanding Undergraduate Research Training. In 2004, as Chair of the CSC Inorganic Division, commissioned the Inorganic Chemistry Exchange (ICE) program, with the goals of increasing the visibility of inorganic chemistry among undergraduates, attracting talented students into graduate research in inorganic chemistry, and reinforcing connections between inorganic research groups across Canada. ICE gives highly motivated undergraduates the opportunity to conduct cutting-edge research at universities across the country, and brings them together to present their results at the end of the summer. Now in its 16th year, ICE has involved nearly 150 undergraduates and over 50 faculty at 23 institutions; many ICE alumni went on to pursue graduate research in chemistry.