

1 Academic History

1. Associate Professor, Dalhousie University 2023–
2. Assistant Professor, Dalhousie University 2018–2023
3. PDF, Douglas Stephan Group, University of Toronto 2017–2018
4. PDF, Ian Manners Group, University of Bristol 2015–2017
5. PhD (*summa cum laude*), Neil Burford Group, University of Victoria 2010–2015
6. BSc (*summa cum laude*), Gary Schrobilgen, McMaster University 2006–2010

2 Honours

1. Dalhousie University Research Chair 2024–2029
2. Undergraduate Teaching Award (Departmental, elected by undergraduates for teaching) 2023
3. Alfred P. Sloan Foundation Fellowship (International, sole Canadian awardee in Chemistry) 2023
4. CNC-IUPAC Travel Award (National) 2023
5. Dalhousie Faculty of Science Killam Prize (University) 2023
6. Co-Chair of the NSERC CREATE Selection Committee (National) 2022–2023
7. Canadian Society for Chemistry Working for Inclusion, Diversity, Equity Spotlight (National) 2022
8. Dalhousie President’s Research Excellence Award - Early Career (University) 2021
9. Profiled in Chemical Communications ‘Emerging Investigators’ Issue (International) 2020
10. Invited to Dalton Transactions ‘New Talent: Americas’ Issue (International) 2020
11. Lindau Nobel Laureate Meeting Participant (National) 2017
12. Governor General’s Gold Medal (University) 2017
13. York Postdoctoral Fellowship (Offer Declined, University) 2017–2019
14. Banting Postdoctoral Fellowship (National) 2015–2017
15. NSERC Postdoctoral Fellowship (Replaced by Banting, see above, National) 2015–2017
16. Donald Wagg Graduate Scholarship (University) 2013
17. Dr. Julius F. Schleicher Graduate Scholarship (University) 2014
18. Department of Chemistry - Outreach Award (University) 2012
19. Vanier Canada Graduate Scholarship (National) 2012–2015
20. NSERC Canada Graduate Scholarship - D3 (Replaced by Vanier, see above, National) 2012–2015
21. NSERC Canada Graduate Scholarship - M (National) 2011

3 Research Funding

1. NetZero Emerging Concepts & Technologies Grant: \$ 75,000 2023
2. MITACS Globalink Research Award: \$ 6,000 2023
3. SpringBoard Atlantic Proof of Concept Fund: \$ 20,000 2023
4. Alfred P. Sloan Fellowship: \$ 105,000 CAD 2023
5. NSERC-FRQNT NOVA Grant: \$ 225,000 CAD (3 Joint Applicants) 2023
6. NSERC Research Tools & Instruments: \$ 110,000 CAD (Principal Applicant) 2021
7. American Chemical Society Petroleum Research Fund: \$ 141,000 CAD 2021
8. NSERC Discovery Grant: \$ 170,000 CAD 2018
9. CFI John Evans Leaders Fund: \$ 250,000 CAD 2018
10. Dalhousie Startup Funding: \$ 130,000 CAD 2018

4 Patents

1. S. S. Chitnis, M. Shayan, ‘Phosphorus-Nitrogen Cage Based Hybrid Inorganic-Organic Polymers’, United States Provisional Patent, Filed: April 13, **2023**, No. 63/495,993.

5 Publications

1. T. J. Hannah, S. S. Chitnis,* ‘Ligand-enforced Geometric Constraints and Associated Reactivity in P-block Compounds’, Chem. Soc. Rev., **2024**, In Press. (Review, Invited)
2. J. Bedard, S. S. Chitnis,* ‘Three-Dimensional Synthons for Cage-Dense Inorganic Polymers & Materials’, Chem. Mater., **2023**, *35*, 8338–8352. (Full Article, Invited)
3. M. A. Land, J. Ren, N. J. Roberts, K. L. Bamford, M. Shayan, A. Kutulska, T. George, J. D. Masuda, and S. S. Chitnis,* ‘An Improved Synthesis of PN-adamantanoid Cages P₄(NR)₆ and a Mechanistic Study of their Fourfold Oxidation’, Chem. Asian J., **2023**, *18*, e202300561. (Full Article, Emerging Investigators Issue, VIP)
4. T. J. Hannah, and S. S. Chitnis,* ‘N1-(2-aminophenyl)-1,2-benzenediamine’, **2023**, EROS, In Press. (Short Review)
5. J. Bedard, T. G. Linford-Wood, B. C. Thompson, U. Werner-Zwanziger, K. M. Marczenko, R. A. Musgrave, S. S. Chitnis,* ‘A Robust, Divalent, Phosphaza-bicyclo[2.2.2]octane Connector Provides Access to Cage-dense Inorganic Polymers and Networks’, J. Am. Chem. Soc., **2023**, *145*, 7569–7579. (Full Paper)
6. T. J. Hannah, W. M. McCarvell, T. Kirsch, T. Hynes, J. Mayho, K. Bamford, C. Vos, C. M. Kozak, T. George, J. D. Masuda, and S. S. Chitnis,* ‘Planar Bismuth Triamides: A Tunable Platform for Main Group Lewis Acidity and Polymerization Catalysis’, Chem. Sci., **2023**, *14*, 4549–4563. (Full Article)
7. N. L. Oldroyd, S. S. Chitnis, E. A. LaPierre, V. T. Annibale, H. T. G. Walsgrove, D. P. Gates, and I. Manners*, ‘Ambient Temperature Carbene-Mediated Depolymerization: Stoichiometric and Catalytic Reactions of N-Heterocyclic- and Cyclic(Alkyl)Amino Carbenes with Poly(N-Methylaminoborane)’, J. Am. Chem. Soc., **2022**, *144*, 23179–23190. (Full Paper)
8. J. Bedard, N. J. Roberts, M. Shayan, K. Bamford, U. Werner-Zwanziger, K. Marczenko, S. S. Chitnis,* ‘(PNSiMe₃)₄(NMe)₆: A Robust Tetravalent Phosphaza-adamantane Scaffold for Molecular and Macromolecular Construction’, Angew. Chem. Int. Ed., **2022**, *61*, e202204851. (Full Paper, *Highlighted in ChemistryViews Magazine*)
9. R. E. H. Kuveke, L. Barwise, Y. van Ingen, K. Vashisth, N. J. Roberts, S. S. Chitnis,* J. L. Dutton,* C. D. Martin,* R. L. Melen,* ‘An International Study Evaluating Elemental Analysis’, ACS Cent. Sci., **2022**, *8*, 855–863. (Full Paper, *‘In Focus’ Article, Highlighted in ‘First Reactions’, Top 10 Most Read Articles of the Year, Highlighted in Science Magazine’s In the Pipeline Blog, Highlighted in ChemistryWorld, Highlighted in C&E News*)

10. Saurabh S. Chitnis,* Jason Dutton,* Caleb Martin,* Rebecca Melen,* ‘Are elemental analysis guidelines appropriate?’, *ChemistryWorld*, **2022**, September 28, 2022. (Magazine Article, *Invited Opinion Piece*)
11. T. Hynes, J. D. Masuda, and S. S. Chitnis,* ‘Mesomeric Tuning at Planar Bi centres: Unexpected Dimerization and Benzyl C-H Activation in [CN₂]Bi Complexes’, *ChemPlusChem*, **2022**, *87*, e202200244. (Full Paper, *Invited contribution to the Pnictogen Elements Chemistry Special Issue*)
12. N. J. Roberts, E. R. Johnson,* and S. S. Chitnis,* ‘Dispersion stabilizes metal-metal bonds in the 1,8-bis(silylamido) naphthalene ligand environment’, *Organometallics*, **2022**, *41*, 2180–2187. (Full Paper)
13. D. A. Resendiz-Lara, V. T. Annibale, A. W. Knights, S. S. Chitnis, and Ian Manners*, ‘High Molar Mass Poly (alkylphosphinoboranes) via Iron-Catalyzed Dehydropolymerization’, *Macromolecules*, **2021**, *54*, 71.
14. K. M. Marczenko, S. S. Chitnis*, ‘Aminobismuthination of CO₂’, *ChemRxiv*, **2021**, Preprint. (Communication)
15. T. Hynes, S. S. Chitnis,* ‘Antimony and Bismuth Complexes in Organic Synthesis’, *Comp. Organomet. Chem.*, Elsevier Science Reference Book, **2020**, In Press. (Book Chapter, *Invited Contribution*)
16. J. W. M. MacMillan, K. M. Marczenko, E. R. Johnson,* S. S. Chitnis,* ‘Hydrostibination of acetylenes: A radical mechanism’, *Chem. Eur. J.*, **2020**, *26*, 17134–17142. (Full Paper, *Selected by Editors as ‘Hot Paper’*)
17. K. M. Marczenko, S. S. Chitnis*, ‘Bismuthanylstibanes’, *Chem. Commun.*, **2020**, *56*, 8015–8018. (Communication, *Invited contribution to the 2020 Emerging Investigators Issue & Journal Cover*)
18. K. M. Marczenko, S. Jee, S. S. Chitnis, ‘High Lewis acidity at planar, trivalent, neutral, bismuth centres’, *Organometallics*, **2020**, *39*, 4287–4296. (Full Paper, *Invited contribution to the 2020 Main Group Elements special issue*)
19. M. W. Drover,* S. S. Chitnis,* ‘So you want to develop a virtual lecture series? Lessons learned from the Global Inorganic Discussion Weekday (GIDW) – a Canadian initiative’, *Can. J. Chem.*, **2020**, *98*, 737–740. (Full Paper, *Invited Perspective*)
20. M. B. Kindervater, T. Hynes, K. M. Marczenko, S. S. Chitnis*, ‘Squeezing Bi: PNP and P₂N₃ Pincer Complexes of Bismuth(III)’, *Dalton Trans.*, **2020**, *46*, 16072–16076. (Communication, *Invited contribution to the 2020 New Talent: Americas Issue*)
21. K. M. Marczenko, J. A. Zurakowski, K. L. Bamford, J. W. M. MacMillan, S. S. Chitnis*, ‘Hydrostibination’, *Angew. Chem. Int. Ed.*, **2019**, *58*, 18096–18101. (Full Paper, *Highlighted in Nachrichten aus der Chemie*)
22. K. M. Marczenko, J. A. Zurakowski, M. B. Kindervater, S. Jee, T. Hynes, N. J. Roberts, S. Park, U. Werner-Zwanziger, M. Lumsden, D. N. Langelaan, S. S. Chitnis*, ‘Periodicity in Structure, Bonding, and Reactivity for P-Block Complexes of a Geometry-Constraining Triamide Ligand’, *Chem. Eur. J.*, **2019**, *25*, 16414–16424. (Full Paper)
23. K. M. Marczenko, C. L. Johnson, S. S. Chitnis*, ‘Synthesis of a Perfluorinated Phenoxyphosphorane and Conversion to its Hexacoordinate Anions’, *Chem. Eur. J.*, **2019**, *25*, 8865–8874. (Full Paper)
24. M. Kindervater, K. M. Marczenko, U. Werner-Zwanziger, S. S. Chitnis*, ‘A redox-confused Bi^(I/III) trisamide with a T-shaped planar ground state’, *Angew. Chem. Int. Ed.*, **2019**, *58*, 7850–7855. (Communication, *Highlighted in Nachrichten aus der Chemie Review*)
25. N. Oldroyd, S. S. Chitnis, V. T. Annibale, M. Arz, H. A. Sparkes, I. Manners, ‘Metal-free dehydropolymerisation of phosphine-boranes using cyclic (alkyl)(amino)carbenes as hydrogen acceptors’, *Nature Comm.*, **2019**, *10*, 1370.
26. M. Xu, A. R. Jupp, M. S. E. Ong, K. I. Burton, S. S. Chitnis, D. W. Stephan, ‘Synthesis of Urea Derivatives from CO₂ and Silylamines’, *Angew. Chem. Int. Ed.*, **2019**, *58*, 5707–5711.
27. A. Knights, S. S. Chitnis, I. Manners, ‘Photolytic, Radical-Mediated Hydrophosphination: A Convenient Post-Polymerisation Modification Route to P-Di(organosubstituted) Polyphosphinoboranes [RR’PBH₂]_n’, *Chem. Sci.*, **2019**, *10*, 7281–7289.
28. A. Waked, S. S. Chitnis, D. Stephan, ‘P(V) Dications: Carbon-based Lewis acid initiators for Hydrodefluorination’, *Chem. Commun.*, **2019**, *55*, 8971–8974.
29. R. J. Andrews, S. S. Chitnis, D. W. Stephan, ‘Carbonyl and olefin hydrosilylation mediated by an air-stable phosphorus(III) dication under mild conditions’, *Chem. Commun.*, **2019**, *55*, 5599–5602.

30. S. S. Chitnis, J. H. W. LaFortune, H. Cummings, L. L. Liu, R. Andrews, D. W. Stephan, 'Phosphorus Coordination Chemistry in Catalysis: Air Stable P(III) Dications as Lewis Acids for the Allylation of C-F Bonds', *Organometallics*, **2018**, *37*, 4540-4544. (Cover Article)
31. S. S. Chitnis, F. Krischer, D. W. Stephan, 'Catalytic hydrodefluorination of C-F bonds by an air-stable P(III) Lewis acid', *Chem. Eur. J.*, **2018**, *24*, 6543-6546.
32. K. Bamford, S. S. Chitnis, Z. Qu, D. W. Stephan, 'Interactions of CF Bonds with Hydridoboranes: Reduction, Borylation and Friedel-Crafts Alkylation', *Chem. Eur. J.*, **2018**, *24*, 16014-16018.
33. L. Wu, S. S. Chitnis, J. Haijun, V. T. Annibale, I. Manners, 'Non-Metal Catalysed Heterodehydrocoupling of Phosphines and Hydrosilanes: Mechanistic Studies of B(C₆F₅)₃-Mediated Formation of P-Si Bonds', *J. Am. Chem. Soc.*, **2017**, *139*, 16780-16790.
34. S. S. Chitnis, H. A. Sparkes, N. E. Pridmore, V. T. Annibale, A. M. Oliver and I. Manners, 'Addition of a Cyclophosphine to Nitriles: An Inorganic 'Click' Reaction Featuring Protio-, Organo-, and Main Group Catalysis', *Angew. Chem. Int. Ed.*, **2017**, *56*, 9536-9540. (*Highlighted in CEN. Highlighted in SYNFACTS*).
35. S. S. Chitnis, R. A. Musgrave, H. A. Sparkes, N. E. Pridmore, V. T. Annibale, and I. Manners, 'Influence of Ring Strain and Bond Polarization on the Ring Expansion of Phosphorus Homocycles', *Inorg. Chem.*, **2017**, *56*, 4521-4537
36. S. S. Chitnis, K. Vos, N. Burford, R. McDonald, and M. J. Ferguson, 'Distinction Between Coordination and Phosphine Ligand Oxidation: Interactions of Di- and Tri-phosphines with Pn³⁺ (Pn = P, As, Sb, Bi)', *Chem. Commun.*, **2016**, 685-688.
37. K. L. Bamford, S. S. Chitnis, R. L. Stoddard, J. S. McIndoe, and N. Burford, 'Bond Fission in Monocations: Diverse Fragmentation Pathways for Phosphinophosphonium Cations', *Chem. Sci.*, **2016**, *7*, 2544-2552.
38. S. Yogendra, S. S. Chitnis, F. Hennesdorf, M. Bodensteiner, R. Fischer, N. Burford, and J. J. Weigand, 'Condensation Reactions of Chlorophosphanes with Chalcogenides', *Inorg. Chem.*, **2016**, *55*, 1854-1860.
39. A. P. M. Robertson, S. S. Chitnis, S. Chhina, H. J. Cortes, B. O. Patrick, H. A. Jenkins, and N. Burford, 'Complexes of Trimethylsilyl Trifluoromethanesulfonate with Nitrogen, Oxygen and Phosphorus Donors', *Can. J. Chem.*, **2016**, *94*, 424-429.
40. S. S. Chitnis, A. P. M. Robertson, N. Burford, B. O. Patrick, R. McDonald, and M. J. Ferguson, 'Bipyridine Complexes of E³⁺ (E = P, As, Sb, Bi): Strong Lewis Acids, Sources of E(OTf)₃ and Synthons for E^I and E^V Cations', *Chem. Sci.*, **2015**, *6*, 6545-6555.
41. S. S. Chitnis, N. Burford, J. J. Weigand, and R. McDonald, 'Reductive Catenation of Phosphine-Antimony Complexes', *Angew. Chem. Int. Ed.*, **2015**, *54*, 7828-7832.
42. S. S. Chitnis, A. P. M. Robertson, N. Burford, J. J. Weigand, and R. Fischer, 'Synthesis and Reactivity of *Cyclo*-tetra (stibinophosphonium) Tetracations: Redox and Coordination Chemistry of Phosphine-Antimony Complexes', *Chem. Sci.*, **2015**, *6*, 2559-2574.
43. A. P. M. Robertson, S. S. Chitnis, H. Jenkins, R. McDonald, M. J. Ferguson, and N. Burford, 'Establishing the Coordination Chemistry of Antimony(V) Cations: Systematic Assessment of Ph₄Sb(OTf) and Ph₃Sb(OTf)₂ as Lewis Acceptors', *Chem. Eur. J.*, **2015**, *21*, 7902-7913.
44. S. S. Chitnis, and N. Burford, 'Phosphine complexes of lone-pair bearing acceptors', *Dalton Trans.*, **2015**, *44*, 17-29.
45. S. S. Chitnis, M. Whalen, and N. Burford, 'Influence of Charge and Coordination Number on Bond Dissociation Energies, Distances and Vibrational Frequencies for the Phosphorus-Phosphorus Bond', *J. Am. Chem. Soc.*, **2014**, *136*, 12498-12506.
46. S. S. Chitnis, N. Burford, R. McDonald, and M. J. Ferguson, 'Prototypical Phosphine Complexes of Antimony(III)', *Inorg. Chem.*, **2014**, *53*, 5359-5372.
47. S. S. Chitnis, N. Burford, A. Decken, and M. J. Ferguson, 'Coordination Complexes of Bismuth Triflates with THF and Diphosphine Ligands', *Inorg. Chem.*, **2013**, *52*, 7242-7248.
48. S. S. Chitnis, Y-Y. Carpenter, N. Burford, R. McDonald and M. J. Ferguson, 'Assembly of a *cyclo*-tetrastibino-tetraphosphonium Tetracation by Reductive Elimination', *Angew. Chem. Int. Ed.*, **2013**, *52*, 4863-4866.
49. S. S. Chitnis, N. Burford, and M. J. Ferguson, '2,2-Bipyridine Complexes of Antimony: Sequential Fluoride Ion Abstraction from SbF₃ by Exploiting the Fluoride Ion Affinity of Me₃Si⁺', *Angew. Chem. Int. Ed.*, **2013**, *52*, 2042-2045.

50. E. MacDonald, L. Doyle, S. S. Chitnis, U. Werner-Zwanziger, N. Burford, and A. Decken, 'Me₃P Complexes of P-block Lewis Acids SnCl₄, [SnCl₃]¹⁺, and [SnCl₂]²⁺', *Chem. Commun.*, **2012**, *48*, 7922-7924.
51. S. S. Chitnis, E. MacDonald, N. Burford, U. Werner-Zwanziger, and R. McDonald, 'P-P Menschutkin Preparation of Prototypical Phosphinophosphonium Salts', *Chem. Commun.*, **2012**, *48*, 7359-7361.
52. S. S. Chitnis, B. Peters, E. Conrad, N. Burford, R. McDonald, and M. J. Ferguson, 'Structural Diversity for Phosphine Complexes of Stibonium and Stibinidenium Cations', *Chem. Commun.*, **2011**, *47*, 12331-12333.
53. F. Lollmahomed, W. J. Leigh, L. A. Huck, S. S. Chitnis, and C. R. Harrington, 'Time-Resolved Spectroscopic Studies of the Reactivities of Transient Germylenes in Methanol and Tetrahydrofuran Solution', *Organometallics*, **2009**, *28*, 1484-1494.

6 Presentations

Since July 2018: 33 talks, 1 international plenary lecture, 24 invited talks

1. 'The new chemistry of old PN cages' – York University, November 24, **2024**, Toronto. (Invited, Upcoming)
2. 'Geometrically-unlocked reactivity and functionality in main group amides' – International Conference on Organometallic Chemistry, July **2024**, Agra. (Invited Keynote, Upcoming)
3. 'Geometrically-unlocked reactivity and functionality in main group amides' – Baylor University, September 8, **2023**, Waco. (Invited)
4. 'Geometrically-unlocked reactivity and functionality in main group amides' – Texas A&M University, September 6, **2023**, College Station. (Invited)
5. 'New strategies towards fossil-fuel-free materials' – Clean Technologies Research Institute, August 22, **2023**, Halifax. (Invited)
6. 'The new chemistry of old PN cages' – Canadian Society for Chemistry Conference, **2023**, Vancouver. (Main Group Chemistry Symposium)
7. 'The new chemistry of old PN cages' – RSC Dalton Conference, April 18, **2023**, Coventry. (Invited, **Plenary Speaker**)
8. 'The new chemistry of old PN cages' – University of Birmingham, April 17, **2023**, Birmingham. (Invited)
9. 'Exploring the 'bonding via antibonding orbitals' concept using geometrically constrained phosphonium cations' – American Chemical Society Fall Meeting, **2022**, Chicago. (Invited at the 'F. A. Cotton Award' Symposium)
10. 'Exploring Flatland at Bi: NNN and NCN ligand complexes of Bi(III) centres' – American Chemical Society Fall Meeting, **2022**, Chicago. (Invited at the 'International Crossroads of Organometallic and Group V Chemistry' Symposium)
11. 'PN Cages as modular synthons for inorganic macromolecule synthesis' – American Chemical Society Fall Meeting, **2022**, Chicago. (Invited at the 'Mark Scholar Young Award' Symposium)
12. '1,8-bis(silylamido)naphthalenes: tunable dianionic ligands for new structures and reactivity in main group chemistry' – Canadian Society for Chemistry Conference, **2022**, Calgary. (Invited at the Ligand Design Symposium)
13. 'Geometrical control of main-group element reactivity and molecular and macromolecular scales' – University of Calgary, April 8, **2022**, Calgary. (Invited)
14. 'Geometric control of main-group element reactivity at the molecular and macromolecular scales' – University of Toronto, Jan 14, **2022**. (Invited)
15. 'Geometric control of main-group element reactivity at the molecular and macromolecular scales' – University of British Columbia, Nov 10, **2021**. (Invited)
16. 'Geometric control of main-group element reactivity at the molecular and macromolecular scales' – Simon Fraser University, Nov 9, **2021**. (Invited)
17. 'Geometric control of main-group element reactivity at the molecular and macromolecular scales' – University of Victoria, Nov 8, **2021**. (Invited)
18. 'Phosphorus-nitrogen cages as platforms for geometrically unique polymers and materials' – Mt. Allison University, Sept 29 **2021**, Halifax. (Invited)

19. 'Hydrostibination – Discovery, Mechanism, & Application' – Canadian Society for Chemistry Conference, Aug 18, **2021**, Montreal. (Invited at the Main Group Symposium)
20. 'Functional molecules and materials via geometric thinking' – Dalhousie Belong Speaker Series: Breaking Barriers, Aug 13, **2021**, Halifax. (Invited)
21. 'Geometric design of main group element catalysts and materials' – McMaster University, July 7, **2021**, Hamilton. (Invited)
22. 'Heavy p-block hydrides: Taming the Sb-H bond for new reactivity and catalysis' – Tel Aviv University, Oct 25, **2020**. (Invited)
23. 'Distant Cousins - Exploring the Group 13/15 Diagonal Relationship' – McGill University, Sept 20, **2020**. (Invited)
24. 'Geometric tuning of electronic structure, reactivity, and bonding at Bi and Sb centres' – Main Group Seminar Series - Royal Society of Chemistry Online Webinar, April 04, **2020**. (Invited)
25. 'Bis(silyl)naphthalenediamines as bespoke ligands for isolating fragile bonds' – Canadian Society for Chemistry Conference, Winnipeg, **2020**. (Invited, Conference cancelled due to COVID-19 pandemic)
26. 'A mechanistic proposal for hydrostibination' – Canadian Society for Chemistry Conference, Winnipeg, **2020**. (Invited, Conference cancelled due to COVID-19 pandemic)
27. 'New bonds and reactivity at Bi and Sb centres' – Canadian Society for Chemistry Conference, Winnipeg, **2020**. (Invited, Conference cancelled due to COVID-19 pandemic)
28. 'New electronic structure and reactivity at Sb and Bi centres' – University of Windsor, Windsor, Feb 14, **2020**. (Invited)
29. 'New electronic structure and reactivity at Sb and Bi centres' – University of Winnipeg, Winnipeg, Oct 23, **2019**. (Invited)
30. 'New electronic structure and reactivity at Sb and Bi centres' – University of Manitoba, Winnipeg, Oct 24, **2019**. (Invited)
31. 'Orbital engineering of main group compounds for new reactivity' – Cape Breton University, Sydney, Oct 7, **2019**. (Invited)
32. 'Orbital engineering of main group compounds for new reactivity' – University of Prince Edward Island, Charlottetown, Oct 4, **2019**.
33. 'Translational Main Group Chemistry – From Fundamental to Functional' – St. Mary's University, Halifax, October **2018**.
34. 'Translational Main Group Chemistry – From Fundamental to Functional' – Mt. Alison University, Sackville, November **2018**.
35. 'Translational Main Group Chemistry – From Fundamental to Functional' – University of New Brunswick - November **2018**.
36. 'Heterolysis of Homoatomic Bonds between p-Block Elements: Catalytic Synthesis of Inorganic Rings and Polymers', – Gordon Stone Symposium, University of Bristol, Bristol, **2017**.
37. 'Catalytic Addition of P–P Bond to Nitriles and Isocyanides' – CSC, Toronto, **2017**.
38. 'Postpolymerization Functionalization of Polymeric phosphinoboranes' – CSC, Toronto, **2017**.
39. 'Ring-Opening and Ring-Expansion Chemistry of Strained Phosphacycles: Towards Polyphosphorus Polymers' – Symposium in honour of Matthias Driess, University of Bristol, Bristol, **2016**.
40. 'Coordination Chemistry of E(OTf)₃ (E = P, As, Sb, Bi).' – CSC, Ottawa, **2015**.
41. 'Synthesis and reactivity of phosphine-stabilized *catena*-antimony polycations' – American Chemical Society National Meeting, San Francisco, **2015**.
42. 'Synthesis and Reactivity of highly-charged *catena*-Antimony cations' – CSC, Vancouver, **2014**.
43. 'P-Sb Coordination Complexes' – Alberta/British Columbia Inorganic Discussion Weekend, Kelowna, **2013**.
44. 'Formation of a cyclic Tetra-(stibinophosphonium) Tetracation: *cyclo*-[Me₃PSb]₄⁴⁺' – CSC, Quebec City, **2013**.
45. 'Synthesis and Reactivity of *cyclo*-[Me₃PSb]₄⁴⁺' – Mitteldeutsches Anorganiker Nachwuchs Symposium, Dresden, **2013**.

46. ‘Prototypical phosphine complexes of $[\text{SbX}_n]^{(3-n)+}$ (X = Halogen, n = 0, 1, 2, 3)’ – CSC, Quebec City, **2013**.
47. ‘Structural diversity and reactivity of new phosphine-stabilized antimony centers’ – CSC, Calgary, **2012**.
48. ‘Cationic Inter-Pnictogen Chemistry: Accessing Coordinate Bi-Pn and P-Sb bonds’ – Atlantic Inorganic Discussion Weekend, Mactaquac, **2011**.
49. ‘Cationic Inter-Pnictogen Chemistry: Accessing rare interpnictogen bonds’ – CSC, Montreal, **2011**.

7 Teaching

1. CHEM 2101: Introductory Inorganic Chemistry Winter 2023
2. CHEM 4101/5101: Advanced Main Group Chemistry Winter 2022
3. CHEM 2301: Physical Chemistry I Fall 2021
4. CHEM 6155: Topics in Main Group Chemistry Fall 2020
5. CHEM 4101/5101: Advanced Main Group Chemistry Winter 2020
6. CHEM 1011: Concepts in Chemistry Winter 2019

8 Service

8.1 Conferences and Symposia

1. *Co-Organizer – Main Group Symposium, CCCE* (International) 2022
Description: Fundraising (\$ 2,500), abstract reviews, and scheduling of 69 speakers over 3 days.
2. *Sole Conference Organizer – Inorganic Chemistry Exchange* (National) 2022
Description: Fundraising (\$ 6,000), organizing accommodations, meals, and scheduling talk for 24 undergraduate researchers from across Canada.
3. *Co-Founder – Global Inorganic Discussion Weekday (GIDW)* (International) 2020–2021
Description: I co-founded a new virtual conference series (GIDW: Global Inorganic Discussion Weekend) in March 2020 to bring the inorganic committee together to discuss chemistry on a weekly basis. These events have been discussed in Science magazine, ChemistryWorld, the Virtual Inorganic Pedagogical Electronic Resource (VIPeR) blog, and university media.
4. *GIDW Twitter Poster Competition Co-Organizer* (International) 2020
In July 2020, I also co-organized a GIDW poster competition that included 200 presenters from 20 countries. We awarded 30 prizes globally using ca.
5. *Sole Conference Organizer – Inorganic Chemistry Exchange* (National) 2020
Description: Fundraising (\$ 3,000), organizing and scheduling talk for 20 undergraduate researchers from across Canada in a remote format (Zoom).

8.2 Reviewing Activities

1. NSERC Collaborate Research And Training Experience (CREATE) National Panel 2020–2023
2. Grant Reviewing: NSERC DG, CFI JELF, US-Israel Binational Science Fund, ACS PRF 2019–
3. NSERC Canada Graduate Scholarship University Review Committee 2019–

8.3 External Examiner

1. Nayanthara Asoka, PhD, York University 2023
2. Blaine Fiss, PhD, McGill University 2022

8.4 Other Committees

1. CSC Inorganic Division – Director-At-Large – Awards Liaison 2023–
2. CSC Board of Directors – Director-At-Large 2021–
3. Appointments & Nominations Committee 2022–
4. Glassblower Search Committee 2022–
5. Department of Chemistry EDI Committee 2021–
6. Department of Chemistry Graduate Students Committee 2018–
7. Faculty of Science Nominations Committee 2018–
8. Supervisory Committees of 13 graduate students (besides my own) 2019–

9 Trainees

In Progress: 3 x PDF, 3 x PhD, 1 x MSc, 3 x BSc

Graduated: 1 x PDF, 1 x PhD, 2 x MSc, 8 x BSc

Key trainee awards: 1 x Leffek Prize for top PhD thesis in department, 1 x Governor General’s Gold Medal for top MSc thesis in Faculty, 3 x John Carstairs Arnell Prize for top BSc Honours thesis in department, 2 x CSC Inorganic Division Award for Undergraduate Research in Inorganic Chemistry

Triagency awards for proposals written with me: 2 x NSERC CGSD3, 1 x NSERC PGSD3, 1 x Vanier CGS, 4 x NSERC CGSM (Total Value = ca. \$ 500,000)

Provincial/University awards for proposals written with me: 4 x NS Graduate Scholarship, 3 x Killam Doctoral Scholarship. (Total Value = ca. \$ 300,000)

9.1 Current

1. Erin Welsh: Postdoctoral Researcher 11/2023–
2. Maryam Abdollahi: Postdoctoral Researcher 06/2023–
3. Michael Land: Postdoctoral Researcher 05/2023–
NSERC PDF
4. William Howlett: PhD candidate 05/2023–
5. Joseph Bedard: PhD candidate 01/2020–
NSERC PGS-D3, Sumner Fellowship
6. Tyler Hannah: PhD candidate 09/2021–
Nova Scotia Graduate Scholarship, NSERC CGS-D3
7. Tamina Kirsch: MSc candidate 05/2023–
Nova Scotia Graduate Scholarship, MITACS Globalink Fellowship
8. Soleil Campbell: Summer Researcher, 05/2023–
NSERC USRA
9. Jincheng Ren: Summer Researcher, 05/2023–
Faye Sobey Summer Research Award
10. Arjun Mane: Summer Researcher, 05/2023–
MITACS Globalink Intern

9.2 Alumni

Thesis

1. Toren Hynes: MSc 01/2021–12/2022
Current position: PhD Student – Dalhousie U (NSGS, PGSM, Killam, Governor General’s Gold Medal)
2. Katherine Marczenko, PhD 09/2018–08/2021
Current position: Asst. Professor at Carleton University (NSGS, Vanier CGS, Killam, Sumner, Leffek Prize)

3. Marcus B. Kindervater, MSc 09/2018–08/2020
Current position: Process Chemistry Scientist at BioVectra (Charlottetown, PEI)
4. Maxwell Lohoar, BSc-Hons 09/2022–04/2023
Current position: MSc Student - U of Calgary
5. Mitchell Maceachern, BSc-Hons 09/2022–04/2023
6. Sam Dudra, BSc-Hons 09/2021–04/2022
Current Position: MSc Student – U of Toronto
7. Samantha Jee, BSc-Hons 09/2020–04/2021
Current Position: MSc Student – McGill (Best Honours Thesis Award)
8. Steve Sequeira, BSc-Hons 09/2020–04/2021
Current Position: MSc Student – Dalhousie U
9. Toren Hynes, BSc-Hons 09/2019–04/2020
Current Position: MSc Student – Dalhousie U (Best Honours Thesis Award)
10. Joshua MacMillan, BSc-Hons 09/2019-04/2020
Current Position: PhD Student – Dalhousie U (Best Honours Thesis Award)
11. Chloe-Louise Johnson, BSc-Hons 09/2018–04/2019
Current Position: PhD Student – York U (UK, Award for Best Thesis Presentation)

Non-Thesis

1. Tom Linford-Wood: Visiting PhD Student (UK) 08/2022–12/2022
Current position: Scientist at Johnson Matthey (UK)
2. Dr. Mohsen Shayan: Postdoctoral Researcher 12/2021–02/2023
Current position: Scientist at TLC Standards, Newmarket, Ontario
3. Nicholas Murphy: Sobey Award Summer Researcher 05/2022–08/2022
Current Position: BSc Student at Dalhousie
4. Anastasiia Kutulska: Dingle Award Summer Researcher 05/2022–08/2022
Current Position: BSc Student at Dalhousie
5. Hafsa Abbasi: NSERC USRA Summer Researcher 05/2022–08/2022
Current Position: BSc Student at Dalhousie
6. Michael MacCarville: Inorganic Chemistry Exchange Summer Researcher 05/2022–08/2022
Current Position: BSc Student at Western University
7. Tamina Kirsch: MITACS Summer Researcher (Germany) 07/2022–09/2022
Current Position: MSc Student – Dalhousie
8. Jacqueline Mayho: MITACS Summer Researcher (UK) 07/2022–09/2022
Current Position: BSc Student – Cardiff University
9. Warren VandeVen: Inorganic Chemistry Exchange Summer Research 06/2020–08/2020
Current Position: MSc Student – Simon Fraser University
10. Maxwell Lohoar: Volunteer researcher 01/2022–04/2022
11. Toren Hynes: Summer Research 05/2019–08/2019
Current Position: PhD Student – Dalhousie
12. Nicholas Roberts: Summer Research, Volunteer, Experiential Training Course 03/2019–03/2022
Current Position: BSc Student – Dalhousie, Winner of the CSC AURIC Award for 2023
13. Nicholas Murphy: Undergraduate Volunteer 01/2020–03/2020
Current Position: BSc Student – Dalhousie
14. Junyi Li: Undergraduate Volunteer 05/2019-08/2019
Current Position: Student – Dalhousie
15. Joshua MacMillan: Summer Research 05/2019-08/2019
Current Position: PhD Student – Dalhousie, NSERC CGS-D3, Killam

16. Sam Jee: Summer Research 05/2019-08/2019
Current Position: MSc Student – McGill, NSERC CGS-M
 17. Joseph A. Zurakowski: Inorganic Chemistry Exchange Summer Research05/2019-08/2019
Current Position: PhD Student – U of Windsor, Winner of the CSC AURIC Award, Vanier CGS
 18. Fatemeh Shahriari: Undergraduate Experiential Learning Student09/2019–12/2020
Current Position: Undergraduate Student – Dalhousie
 19. Ciaran Crouse: Summer Research07/2018–08/2018
 20. Jessica Albert: Summer Research 07/2018–08/2018
-