

A. PERSONAL DATA**Name:** William Scott Hopkins**Date of Birth:** 25 June 1979**Degrees:**

B.Sc. (Honour's Chemistry)	University of New Brunswick	Year: 2001
Ph.D. (Spectroscopy)	University of New Brunswick	Year: 2006

Awards and Honours:

Year	Award / Honour
2021	<i>NSERC Chemistry (1504) Evaluation Group Chair [physical/analytical]</i>
2020	<i>NSERC Chemistry (1504) Evaluation Group In-coming Chair [physical/analytical]</i>
2019	<i>Angewandte Chemie Int Ed Cover Article</i>
2019	<i>NSERC Chemistry (1504) Evaluation Group Member</i>
2019	University of Waterloo Outstanding Performance Award
2018	<i>The Journal of Physical Chemistry A Cover Article</i>
2017	<i>ACS Central Science Cover Article</i>
2017	<i>Early Researcher Award (Province of Ontario)</i>
2016	<i>European Journal of Organic Chemistry Cover Article</i>
2016	JACS paper highlighted in <i>Chemical & Engineering News</i>
2016	<i>Journal of the American Chemical Society Cover Article</i>
2015	<i>Physical Chemistry Chemical Physics Cover Article</i>
2015	<i>Analyst Cover Article</i>
2015	<i>Molecular Physics Cover Article</i>
2015	<i>The Journal of Physical Chemistry A Cover Article</i>
2015	University of Waterloo Outstanding Performance Award
2014	<i>The Journal of Physical Chemistry A Cover Article</i>
2014	University of Waterloo Periodic Table Teaching Award
2013	University of Waterloo University Research Chair
2012	Fibre-optic Pickup highlighted in <i>Nature Photonics</i>
2009	<i>Chemical Physics Letters</i> Editor's Choice
2008	Ramsay Memorial Fellow (Oxford University)
2008	New Hall College Fellow (University of Cambridge)
2006	Queen's University Postdoctoral Travel Award
2005	University of New Brunswick Board of Governors Award
2005	University of New Brunswick Chemistry Graduate Student Award
1997	University of New Brunswick Entrance Scholarship
1997	Humber – St. Barbe Electoral District Scholarship

Post Ph.D. Degree Employment Record

Years	Position or Rank	Institution
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2017 –	Associate Professor	University of Waterloo
2011 – 2017	Assistant Professor	University of Waterloo
2011	Research Associate	Oxford University
2008 – 2010	Ramsay Memorial Fellow	Oxford University
2008 – 2010	Quantum Chemistry Supervisor	Magdalen College, Oxford
2008 – 2009	Director of Studies (Chemistry)	New Hall, University of Cambridge
2007 – 2008	Postdoctoral Fellow	University of Cambridge
2006 – 2007	Postdoctoral Fellow	Queen's University (Kingston)

B. RESEARCH AND SCHOLARSHIP

Research Topics

My research is generally concerned with determining the structures and physicochemical properties of gas phase clusters. We employ a variety of experimental techniques to measure cluster properties, then utilize high level quantum chemical calculations to model the cluster systems.

Articles in Refereed Journals (*Corresponding Author)

Submitted (Hopkins students in bold)

78. Piccolo K, McNeil B, **Crouse J, Lim SJ**, Bickers SC, Hopkins WS, Dieckmann T* Ligand Specificity and Affinity in the Sulforhodamine B Binding RNA Aptamer, **2020 (Under Review)**
77. **Lecours MJ**, Steinmetz V, Liuni P, Wilson DK, Fillion E, Hopkins WS,* Coupling Time-resolved Electrospray Ionization with Trapped Ion Spectroscopy to Determine Reaction Mechanisms, **2020 (Under Review)**
76. **Sinclair GS**, Claridge RCM, Kukor AJ, Hopkins WS, Schipper DJ* Non-Covalent Conformational Locking of Conjugated Polymers through Thiazole-*N*-Oxide S-O Interactions, **2020 (Under Review)**
75. Kalfe A, **Bowman Z**, Le Blanc JCY, Liu C, Hopkins WS,* Campbell JL* Separating Chiral Isomers of Amphetamine and Methamphetamine using Chemical Derivatization and Differential Mobility Spectrometry, **2020 (Under Review)**

Published (Hopkins students in bold)

74. Risticvic S, Souza-Silva EA, Gionfriddo E, DeEll JR, Cochran J, Hopkins WS, Pawliszyn J,* Application of in vivo solid phase microextraction (SPME) in capturing metabolome of apple (*Malus domestica* Borkh.) fruit, *Scientific Reports*, **2020**, 10(1), 1 – 11
73. **Crouse J, Haack A**, Benter T, Hopkins WS,* Understanding non-traditional differential mobility behavior: a case study of the tricarbastannatrane cation, $N(CH_2CH_2CH_2)_3Sn^+$, *J. Am. Soc. Mass Spectrom.*, **2020**, 31(4), 796-802
72. **Ieritano C**, Featherstone J, Guna M, Campbell JL, Hopkins WS,* How Hot are Your Ions in Differential Mobility Spectrometry?, *J. Am. Soc. Mass Spectrom.*, **2020**, 31(3), 582-593
71. **Coughlan NJA, Carr PJJ, Walker SC, Zhou C**, Guna M, Campbell JL, Hopkins WS,* Measuring electronic spectra of differential mobility-selected ions in the gas phase, *J. Am. Soc. Mass Spectrom.*, **2020**, 31(2), 405-410
70. **Haack A, Crouse J**, Schleuter F-J, Benter T, Hopkins WS,* A First Principles Model of Differential Mobility Spectrometry: The Effect of Ion-Solvent Clustering, *J. Am. Soc. Mass Spectrom.*, **2019**, 30(12), 2711 - 2725
69. Hopkins WS,* *et al.*, Establishing a Canadian Free Electron Laser Research Program, *Can. J. Phys.* **2019**, 97(12), vii - x

68. **Coughlan NJA**, Liu C, **Lecours MJ**, Campbell JL, Hopkins WS,* Preferential ion microsolvation in mixed-modifier environments observed using differential mobility spectrometry, *J. Am. Soc. Mass Spectrom.*, **2019** <https://doi.org/10.1007/s13361-019-02332-1>
67. Cheng M, Rivas N, **Lim SJ**, Pichugin K, Petruk AA, Klinkova A, Smith R, Hopkins WS,* Sciaini GS,* Trapping a Photoelectron behind a Repulsive Coulomb Barrier in Solution, **2019**, *J. Phys. Chem. Letters*, 10(19), 5742–5747
66. Chidley T, Jameel I, Rizwan S, Peixoto PA, Pouységu L, Quideau S, Hopkins WS, Murphy GK,* Blue LED Irradiation of Iodonium Ylides Gives Diradical Intermediates in an Efficient Metal-free Cyclopropanation with Alkenes, *Angew. Chem. Int. Ed.*, **2019**, 58(47), 16959-16965 (**Cover Article**)
65. **Ieritano C**, Campbell JL,* Hopkins WS,* Unravelling the factors that drive separation in differential mobility spectrometry: A case study of regioisomeric phosphatidylcholine adducts, *Int. J. Mass Spectrom.* **2019**, 444, 116182
64. **Zhou C**, **Ieritano C**, Hopkins WS,* Augmenting Basin-Hopping with Techniques from Unsupervised Machine Learning, *Frontiers in Chemistry* **2019**, 7, 519
63. Carr PJJ, Warneke J, Featherstone J, Loire E, Hopkins WS,* The Structure of Proton-bound Tetraethylammonia $B_{12}X_{12}^{2-}$ (X = F, Cl) Clusters, *Mol. Phys.*, **2019**, 1–8 (**Invited**)
62. **Ieritano C**, **Crouse J**, Campbell JL, Hopkins WS,* A parallelized molecular collision cross section package with optimized accuracy and efficiency, *Analyst*, **2019**, 144, 1669-1670
61. **Walker S**, **Anwar A**, **Psutka JM**, **Crouse J**, Liu C, Le Blanc JCY, Montgomery J, Goetz GH, Janiszewski JS,* Campbell JL,* Hopkins WS,* Determining Molecular Properties with Differential Mobility Spectrometry and Machine Learning, *Nat. Commun.*, **2018**, 9, 5096
60. **Ieritano C**, Featherstone J, **Carr PJJ**, Marta RA, Loire E, McMahon TB, Hopkins WS,* The Structures and Properties of Anionic Tryptophan Complexes, *Phys. Chem. Chem. Phys.*, **2018**, 20(41), 26532-26541
59. **De Vlugt IJS**, **Lecours MJ**, **Carr PJJ**, **Anwar A**, Marta RA, Fillion E, Steinmetz V, Hopkins WS,* Infrared-Driven Charge-Transfer in Transition Metal-containing $B_{12}X_{12}^{2-}$ (X = H,F) Clusters, *J. Phys. Chem. A.*, **2018**, 122(35), 7051-7061
58. **Psutka JM**, Dion-Fortier A, Dieckmann T, Campbell JL,* Segura PA,* Hopkins WS,* Identifying Fenton-Reacted Trimethoprim Transformation Products Using Differential Mobility Spectrometry, *Anal. Chem.*, **2018**, 90(8), 5352-5357
57. **Carr PJJ**, **Lecours MJ**, **Zhan C**, Burt M, Marta R, Steinmetz V, Fillion E, Hopkins WS,* Mode-Selective Laser-Control of Palladium Catalyst Decomposition, *J. Phys. Chem. Lett.*, 9(1), 157-162 **2018**
56. **Fu W**, Hopkins WS,* Applying Machine Learning to Vibrational Spectroscopy, *J. Phys. Chem. A.*, 122(1), 167-171 **2017**
55. **Walker S**, **Mark A**, **Verbuyst B**, Bogdanov B, Campbell JL, Hopkins WS,* Characterizing the Tautomers of Protonated Aniline Using Differential Mobility Spectrometry and Mass Spectrometry, *J. Phys. Chem. A.*, **2017**, 122(15), 3858-3865 (**Cover Article**)
54. **Anwar A**, **Psutka J**, **Walker S**, Dieckmann T, Campbell JL,* Hopkins WS,* Separating Tautomers of Protonated Nucleobases with Differential Mobility Spectrometry *Int. J. Mass Spectrom.*, **2017**, 429, 174-181
53. Liu C, LeBlanc JCY, Schneider B, Shields J, Federico J, Zhang H, Stroh J, Kauffman G, Kung D, **Ieritano C**, **Shepherdson E**, **Verbuyst M**, **Melo L**, **Hasan M**, **Naser D**, Janiszewski JS,* Hopkins WS,* Campbell JL,* Correction to “Assessing Physicochemical Properties of Drug Molecules via Microsolvation Measurements with Differential Mobility Spectrometry”, *ACS Central Science*, **2017**, 3(2), 101-109 (**Author added post publication**)
52. Liu C, LeBlanc JCY, Schneider B, Shields J, Federico J, Zhang H, Stroh J, Kauffman G, Kung D, **Ieritano C**, **Shepherdson E**, **Verbuyst M**, **Melo L**, **Hasan M**, **Naser D**, Janiszewski JS,* Hopkins WS,* Campbell JL,* Assessing Physicochemical Properties of Drug Molecules via Microsolvation

- Measurements with Differential Mobility Spectrometry, *ACS Central Science*, **2017**, 3(2), 101-109 **(Cover Article)**
51. **Lecours MJ**, Marchand A, Anwar A, Guetta C, Hopkins WS, Gabelica V,* What stoichiometries determined by mass spectrometry tell us about the ligand binding mode to G-quadruplex nucleic acids, *Biochimica et Biophysica Acta (BBA) – General Subjects*, **2017**, 1861(5), 1353-1361 **(Invited)**
 50. **Lecours MJ**, Marta RA, Steinmetz V, Keddie N, Fillion E, O'Hagan D,* McMahon TB,* Hopkins WS,* The Interaction of B₁₂F₁₂²⁻ with All-*cis* 1,2,3,4,5,6-Hexafluorocyclohexane in the Gas Phase, *J. Phys. Chem. Letters*, **2017**, 8, 109-113
 49. **Fu W, Carr PJJ, Lecours MJ**, Burt M, Marta R, Steinmetz V, Fillion E, McMahon TB, Hopkins WS,* Intramolecular Cation- π Interactions in Protonated Phenylalanine Derivatives, *Phys. Chem. Chem. Phys.*, **2017**, 19(1), 729-734
 48. **Sinclair, G. S.**, Tran, R., Tao, J., Hopkins, W. S.,* Murphy, G. K.,* Borosilicate-Activation of (Difluoroiodo)toluene in *gem*-Difluorination of Diazo Compounds, *Eur. J. Org. Chem.*, **2016**, 27, 4603-4606 **(Cover Article)**
 47. **Simidzija, P., Lecours, M. J.**, Marta, R. A., Steinmetz, V., McMahon, T. B., Fillion, E.,* Hopkins, W. S.,* Changes in Tricarbostannatrane Transannular N–Sn Bonding Upon Complexation Reveals Lewis Base Donicity, *Inorg. Chem.*, **2016**, 55, 9579-9585
 46. **Fu, W., Xiong, J., Lecours, M. J., Carr, P. J. J.**, Marta, R. A., Fillion, E., McMahon, T. B., Steinmetz, V., Hopkins, W. S.,* The Structures of Proton-bound Dimers of Glycine with Phenylalanine and Pentafluorophenylalanine, *J. Mol. Spectrosc.*, **2016**, 330, 194-199 **(Invited)**
 45. Ziegler, B., **Lecours, M. J.**, Marta, R. A., Featherstone, J., Fillion, E., Hopkins, W. S., Steinmetz, V., Keddie, N., O'Hagan, D.,* McMahon, T. B.,* Janus Face Aspect of All-*cis* 1,2,3,4,5,6-Hexafluorocyclohexane Dictates Remarkable Anion and Cation Interactions in the Gas Phase, *J. Am. Chem. Soc.*, **2016**, 138, 7460-7463 **(Communication; Cover Article)**
 44. Campbell, J. L.,* **Yang, A. M.-C., Melo, L. R.**, Hopkins, W. S.,* Studying Gas-Phase Interconversion of Tautomers Using Differential Mobility Spectrometry, *J. Am. Soc. Mass Spectrom.*, **2016**, 27, 1277-1284
 43. **Ieritano, C., Carr, P. J. J, Hasan, M.**, Burt, M., Marta, R. A., Steinmetz, V., Fillion, E., McMahon, T. B., Hopkins, W. S.* The Structures and Properties of Proton- and Alkali-bound Cysteine Dimers, *Phys. Chem. Chem. Phys.*, **2016**, 18, 4704 - 4710
 42. Liu, C., Le Blanc, J. C. Y., Shields, J., Janiszewski, J. S., **Ieritano, C., Ye, G. F., Hawes, G. F.**, Hopkins, W. S.,* Campbell, J. L.,* Using differential mobility spectrometry to measure ion solvation: An examination of the roles of solvents and ion structures in separating quinoline-based drugs, *Analyst*, **2015**, 140, 6897 – 6903 **(Cover Article)**
 41. Hopkins, W. S.,* **Carr, P. J. J., Huang, D.**, Bishop, K. P., Burt, M., McMahon, T. B., Steinmetz, V., Fillion, E., Infrared-driven Charge-transfer in Transition Metal B₁₂F₁₂ Clusters, *J. Phys. Chem. A*, **2015**, 119(31), 8469 – 8475 **(Cover Article)**
 40. Hopkins, W. S.,* Determining the Properties of Gas-phase Clusters, *Molecular Physics*, **2015**, 113(21), 3151 – 3158 **(Invited, Cover Article)**
 39. Hopkins, W. S.,* Marta, R. A., McMahon, T. B.,* Mode-specific fragmentation of amino acid-containing clusters, *Physical Chemistry Chemical Physics*, **2015**, 17(43), 28548 – 28555 **(Cover Article)**
 38. Burt, M., Wilson, K., Marta, R. A., **Hasan, M.**, Hopkins, W. S., McMahon, T. B.,* Assessing the Impact of Anion-II Effects on Phenylalanine Zwitterion Formation using IRMPD Spectroscopy, *Physical Chemistry Chemical Physics*, **2014**, 16(44), 24223 – 24234
 37. Campbell, J. L.,* **Zhu, M.**, Hopkins, W. S.,* Ion-Molecule Clustering in Differential Mobility Spectrometry: Lessons Learned from Tetraalkylammonium Cations and Their Isomers, *International Journal of Mass Spectrometry*, **2014**, 25(9), 1583 – 1591

36. Lecours, M. J., Chow, W. C. T., Hopkins, W. S.,* Density Functional Theory Study of $\text{Rh}_n\text{S}^{0,\pm}$ and $\text{Rh}_{n+1}^{0,\pm}$ ($n = 1-9$), *Journal of Physical Chemistry A*, **2014**, *118*(24), 4278 – 4287 (**Cover Article**)
35. Hopkins, W. S.,* Hasan, M., Burt, M., Marta, R. A., Fillion, E., McMahon, T. B., Persistent Intramolecular C–H•••X (X = O or S) Hydrogen-Bonding in Benzyl Meldrum's Acid Derivatives, *Journal of Physical Chemistry A*, **2014**, *118*(21), 3795 – 3803
34. Hopkins, W. S.,* Marta, R. McMahon, T. B.,* Proton-bound 3-cyanophenylalanine trimethylamine clusters: Isomer-specific fragmentation pathways and evidence of gas-phase zwitterions, *Journal of Physical Chemistry A*, **2013**, *117*(41), 10714 – 10718
33. Hopkins, W. S., Mackenzie, S. R.,* Dissociation dynamics of the low-lying Rydberg states of Xe_2 : a velocity map imaging study, *Molecular Physics*, **2012**, *110*(9), 1 – 11
32. Forthomme, D., Linton, C.,* Read, A., Tokaryk, D. W., Adam, A. G., Downie, L. E., Granger, A. D., Hopkins, W. S., Unravelling the Visible Spectrum of Strontium Monomethoxide, *J. Mol. Spectrosc.*, **2011**, *270*(2), 108 – 115
31. Hopkins, W. S., Lipciuc, M. L., Gardiner, S. H., Vallance, C.,* RG^+ formation following photolysis of NO-RG via the A – X transition: a velocity map imaging study, *J. Chem. Phys.*, **2011**, *135*(3), 034308-1 – 034308-9
30. Hamilton, S. M., Hopkins, W. S., Harding, D. J., Walsh, T. R., Grune, P., Haertelt, M., Fielicke, A., Meijer, G., Mackenzie, S. R.,* Infrared Induced Reactivity of N_2O on the Surface of Isolated Size-Selected Rhodium Clusters, *J. Phys. Chem. A*, **2011**, *115*(12), 2489 – 2497
29. Hopkins, W. S., Woodham, A. P., Plowright, R. J., Wright, T. G., Mackenzie, S. R.,* Xe^+ formation following photolysis of Au-Xe: a velocity map imaging study, *J. Chem. Phys.*, **2011**, *134*(9), 094311-1 – 094311-7
28. Hermes, A. C., Hamilton, S. M., Hopkins, W. S., Harding, D. J., Kerpel, C., Meijer, G., Fielicke, A., Mackenzie, S. R.,* Effects of Coadsorbed Oxygen on the Infrared Driven Decomposition of N_2O on Isolated Rh_5^+ Clusters, *J. Phys. Chem. Lett.*, **2011**, *2*(24), 3053 – 3057
27. Hopkins, W. S., Mackenzie, S. R.,* Imaging Wavefunctions in Dissociative Photoionization, *J. Chem. Phys.*, **2011**, *135*(8), 081104-1 – 081104-3
26. Hopkins, W. S., Woodham, A. P., Tonge, N. M., Ellis, A. M., Mackenzie, S. R.,* Photodissociation dynamics of $\text{Li}(\text{NH}_3)_4$: a velocity map imaging study, *J. Phys. Chem. Lett.*, **2011**, *2*(3), 257 – 261
25. Harding, D. J., Grune, P., Haertelt, M., Meijer, G., Fielicke, A.,* Hamilton, S. M., Hopkins, W. S., Mackenzie, S. R.,* Neville, S., Walsh, T. R., Probing the structures of gas-phase rhodium cluster cations by far-infrared spectroscopy, *J. Chem Phys.*, **2010**, *133*(21), 214304-1 – 214304-9
24. Hopkins, W. S., Woodham, A. P., Plowright, R. J., Wright, T. G., Mackenzie, S. R.,* A velocity map imaging study of gold-rare gas complexes: Au-Ar, Au-Kr and Au-Xe, *J. Chem Phys.*, **2010**, *132*(21), 214303-1 – 214303-9
23. Harding, D. J., Walsh, T. R., Hamilton, S. M., Hopkins, W. S., Mackenzie, S. R.,* Grune, P., Haertelt, M., Meijer, G., Fielicke, A., The structure of Rh_8^+ in the gas phase, *J. Chem Phys.*, **2010**, *132*(1), 011101-1 – 011101-4
22. Hamilton, S. M., Hopkins, W. S., Harding, D. J., Walsh, T. R., Grune, P., Haertelt, M., Fielicke, A., Meijer, G., Mackenzie, S. R.,* Infrared Induced Reactivity on the Surface of Isolated Size-Selected Clusters: Dissociation of N_2O on Rhodium Clusters, *J. Am. Chem. Soc.*, **2010**, *132*(5), 1445 – 1449
21. Hopkins, W. S., Hamilton, S. M., McNaughten, P. D., Mackenzie, S. R.,* VUV photodissociation dynamics of diatomic gold, Au_2 : A velocity map imaging study at 157nm. *Chem Phys Lett*, **2009**, *483*(1-3), 10–15 (**Editor's Choice**)
20. Hopkins, W. S., Hamilton, S. M., Mackenzie, S. R.,* The electronic spectrum of vanadium monoxide across the visible: New bands and new insight, *J. Chem Phys.*, **2009**, *130*(14), 144308-1 – 144308-8
19. Loock, H.-P.,* Hopkins, W. S., Morris-Blair, C., Resendes, R., Saari, J., Trefiak, N., Recording the

sound of musical instruments with FBGs: the photonic pickup, *Applied Optics*, **2009**, *48*(14), 2735 – 2741

18. Linton, C.,* Ross, A. J., Adam, A. G., Crozet, P., Downie, L. E., Granger, A. D., Hopkins, W. S., Isotopic study of the $B^2A_1 - X^2A_1$ transition of calcium monomethoxide using laser excitation and population depletion spectroscopy, *J. Mol Spectrosc.*, **2008**, *250*(2), 98 – 105
17. Hopkins, W. S., Looock, H.-P., Cronin, B., Nix, M. G. D., Devine, A. L., Dixon, R. N., Ashfold, M. N. R., Yin, H.-M., Rowling, S. J., Bull, A., Kable, S. H.,* Quantitative (J, N, K) Product State Distributions near the Triplet Threshold for the Reaction $H_2CO \rightarrow H + HCO$ Measured by Rydberg Tagging and Laser-Induced Fluorescence, *J. Phys Chem A.*, **2008**, *112*(39), 9283 – 9289
16. Hopkins, W. S., Looock, H.-P.,* Cronin, B., Devine, A. L., Nix, M. G. D., Dixon, R. N., Ashfold, M. N. R.,* State-selective photodissociation dynamics of formaldehyde: Near threshold studies of the $H + HCO$ product channel, *J. Chem Phys*, **2007**, *127*(6), 064301-1 – 064301-11
15. Adam, A. G.,* Hopkins, W. S., Sha, W., Tokaryk, D. W. High Resolution Laser Spectroscopy of the Titanium Monohalides, TiCl and TiBr. *J. Mol Spectrosc.*, **2006**, *236*(1), 42 – 51
14. Balfour, W. J.,* Li, R., Adam, A. G., Hopkins, W. S. Laser-induced Fluorescence Spectroscopy of Rhodium Monosulphide. *J. Mol Spectrosc.*, **2005**, *234*(2), 211 – 215
13. Ram, R. S., Hopkins, W. S., Adam, A. G., Bernath, P.F.,* Laser and Fourier Transform Emission Spectroscopy of TaCl. *J. Mol Spectrosc.*, **2005**, *232*(2), 358 – 368
12. Tokaryk, D. W.,* Adam, A. G., Hopkins, W. S., High Resolution Laser Spectroscopy of the $\tilde{A}^2\Pi - \tilde{X}^2\Sigma^+$ Transition of MgCCH. *J. Mol Spectrosc.*, **2005**, *230*(1), 54 – 61
11. Crozet, P.,* Ross, A. J., Linton, C., Adam, A. G., Hopkins, W. S., LeRoy, R. J., Geometry of the $CaOCH_3$ Radical from Isotope Effects in the $\tilde{A}^2E - \tilde{X}^2A_1$ Transition. *J. Mol Spectrosc.*, **2005**, *229*(2), 224 – 230
10. Adam, A. G.,* Hopkins, W. S., Tokaryk, D. W. High Resolution Visible Laser Spectroscopy of HfF. *J. Mol Spectrosc.*, **2004**, *225*(1), 1 – 7

Books & Book Chapters

09. Hopkins W. S., An Introduction to Spectroscopy and Quantum Structure, Cambridge Scholars, (commissioned) **2020**
08. Hopkins W. S., Chapter 4: Dynamic Clustering and Ion Microsolvation, In Comprehensive Analytical Chemistry Vol 83: Ion Mobility Spectrometry, Elsevier, Pg. 83 – 122 **January 2019**
07. Hopkins W. S., An Introduction to Spectroscopy and Quantum Structure, TopHat, **September 2017**

Technical Reports

06. Campbell, J. L., Hopkins W. S., Predicting molecular properties using differential mobility spectrometry (Invention Disclosure for Patent Application) **27 July 2017**
05. Hopkins, W. S., Microsolvation studies of gas phase ions and development of next generation mass spectrometric techniques, *AB Sciex Technical Report*, AB Sciex, **2013**
04. Hopkins, W. S., Hydrohalogenation and Degradation Studies of Butyl Rubber, *Bayer Technical Report*, Bayer Inc., **2000**

Patents

03. *Apparatus and Method for Parallel Flow Trapped Ion Mobility Spectrometry*, W. Scott Hopkins, Janusz Pawliszyn, Provision Patent Filed: February 13th, 2018. **U.S. Patent No. 62/629,763**
02. *Predicting Molecular Properties using Differential Mobility Spectrometry*, J. Larry Campbell, W. Scott Hopkins, Provision Patent Granted: November 22nd, 2017. **License Number: 564,156**

01. *Optical Pickup for a Musical Instrument*, Hans-Peter Loock, W. Scott Hopkins, Nicholas R. Trefiak, Jonathan Saari, Rui Resendes **U.S. Patent No. 61-105624**, Filed: October 15th, 2008. **Canadian Patent Application No. 2682878**

Invited/keynote Addresses

42. Hopkins, W. S., Fundamentals and Applications of Differential Ion Mobility, University of Leipzig, **2020**
41. Hopkins, W. S., Establishing a Canadian Free Electron Laser Program of Research, FHI Berlin, **2020**
40. Hopkins, W. S., Fundamentals and Applications of Differential Ion Mobility, University of Wuppertal, **2020**
39. Hopkins, W. S., The (Relatively) Untapped Mine of Big Data in Science, UBC Okanagan, **2019**
38. Hopkins, W. S., Using Differential Mobility Spectrometry to Monitor Humulone Content in Beer, Tandem Mass Spectrometry Meeting, Lake Louise, **2018**
37. Hopkins, W. S., Gas Phase Drug Discovery, QANSAS, Agra, India, **2018**
36. Hopkins, W. S., Status of Waterloo Free Electron Laser, Canadian Infrared Users Workshop, Canadian Light Source, Saskatoon, **2018**
35. Hopkins, W. S., IRMPD of Amino Acid-containing Clusters, Canadian Infrared Users Workshop, Canadian Light Source, Saskatoon, **2018**
34. Hopkins, W. S., Gas Phase Drug Discovery: Physicochemical Properties Measurements with Differential Mobility Spectrometry, Western University, London (Ontario), **2018**
33. Hopkins, W. S., Towards Building a Canadian Free Electron Laser Facility, TRIUMF Free Electron Laser Workshop, Vancouver, **2018**
32. Hopkins, W. S., Applying Machine Learning to Differential Mobility Data, ASMS, San Diego, USA, **2018**
31. Hopkins, W. S., Spectroscopy and Structure of Exotic Ion-Solvent Clusters, 95th Canadian Society for Chemistry Conference, **2018**
30. Hopkins, W. S., Drug Discovery in the Gas Phase: Treating Dynamic Clustering with Machine Learning, Graduate School of Natural Science and Technology, Okayama University, Japan, **2018**
29. Hopkins, W. S., Gas Phase Drug Discovery, Hong Kong-Waterloo Workshop, Hong Kong, **2018**
28. Hopkins, W. S., Towards Building a Canadian Free Electron Laser Facility, Italian-Canadian Workshop for Future Directions in Light Sources, Saskatoon, **2018**
27. Hopkins, W. S., Gas Phase Drug Discovery, 3rd Indo-Canadian Research Colloquium, Waterloo, **2018**
26. Hopkins, W. S., Gas Phase Drug Discovery: Physicochemical Property Measurements with Differential Mobility Spectrometry, Tandem Mass Spectrometry Meeting, Lake Louise, **2017**
25. Hopkins, W. S., A New Canadian IR-FEL Facility, Symposium on Chemical Physics, **Nov. 2017**
24. Hopkins, W. S., Drug Discovery in the Gas Phase, Memorial University of Newfoundland, **2017**
23. Hopkins, W. S., The Structures and Properties of Ionic Clusters, University of Alberta, **2017**
22. Hopkins, W. S., The Structures and Properties of Ionic Clusters, University of Calgary, **2017**
21. Hopkins, W. S., Drug Discovery in the Gas Phase, Université de Sherbrooke, **2017**
20. Hopkins, W. S., Drug Discovery in the Gas Phase, Université de Montréal, **2017**
19. Hopkins, W. S., IR-FELs in Science and Engineering, Canadian Light Source, **Feb. 2017**
18. Hopkins, W. S., Combining Rapid Isomer Separations and Physicochemical Property Measurements with Differential Mobility Spectrometry, International Mass Spectrometry Conference, **2016**

17. Hopkins, W. S., IRMPD Spectroscopy of Short-lived Reaction Intermediates in Catalytic Cycles, 99th Canadian Society for Chemistry Conference, **2016**
16. Hopkins, W. S., Rapid Isomer Separations and Physicochemical Property Measurements with Differential Mobility Spectrometry, 99th Canadian Society for Chemistry Conference, **2016**
15. Hopkins, W. S., Elucidating the Physicochemical Properties of Isolated Clusters, University of Toronto (Mississauga), **2015**
14. Hopkins, W. S., (Panel Member) Academic Careers, University of York & University of Toronto Centre for Mass Spectrometry, **2015**
13. Hopkins, W. S., Good Vibrations: Ion Chemistry and Action Spectroscopy, University of York & University of Toronto Centre for Mass Spectrometry, **2015**
12. Hopkins, W. S., Determining the Properties of Gas Phase Clusters, University of Bordeaux, **2015**
11. Hopkins, W. S., Elucidating the Physicochemical Properties of Isolated Clusters, (GWC)² Research Seminars, **2014**
10. Hopkins, W. S., Elucidating the Physicochemical Properties of Isolated Clusters, University of New Brunswick Chemistry Student Symposium, **2014 (Keynote)**
09. Hopkins, W. S., The Structures and Reactivities of Transition Metal Nanoclusters, 95th Canadian Society for Chemistry Conference, **2012**
08. Hopkins, W. S., Modern Methods in Gas-phase Cluster Research, AB SCIEX R&D Division, Concord, ON, **2012**
07. Hopkins, W. S., The Structures and Reactivities of Transition Metal Nanoclusters, University of Guelph, **2012**
06. Hopkins, W. S., Applications in Imaging Mass Spectrometry, Oxford University and Rutherford Appleton Laboratory PlmMS Meeting, **2011**
05. Hopkins, W. S., The Structures and Reactivities of Gas-phase Nanoclusters, British Institute of Physics, **2010**
04. Hopkins, W. S., The Structures and Reactivities of Metal-containing Nanoclusters, University of New Brunswick, **2009**
03. Hopkins, W. S., The Structures and Reactivities of Metal-containing Nanoclusters, Dalhousie University, **2009**
02. Hopkins, W. S., The Structures and Reactivities of Metal-containing Nanoclusters, Oxford University, **2009**
01. Hopkins, W. S., High Resolutions Spectroscopy of Metal-Ligand Complexes, University of Bristol, **2006**

Other Publications

Non-peer Reviewed Articles / Interviews / Popular Media

17. 570 News: The Mike Farwell Show **16 December 2018 (Radio Interview)**
16. Waterloo Magazine, The Graham Supercomputer **Oct. 2017 (Interview)**
15. 570 News: Tech Spotlight, *Host: Glenn Pelletier* **09 May 2017 (Radio Interview)**
14. 570 News: Jennifer Campbell Show, *Host: Lisa Drew* **08 May 2017 (Radio Interview)**
13. Pender, T., Graham brings superpower to UW, *Waterloo Record* **06 May 2017 (Supercomputing Announcement)**
12. Roundhouse Radio 98.3 Vancouver, *Host: Kurt Lapointe* **23 Feb. 2017 (Radio Interview)**

11. Strachan, J., Making a Difference to Drug Discovery, *The Medicine Maker* **Apr. 2017 (Research Highlight)**
10. Baran, P., From Microsolvation to Cell Permeation: Novel Separation Science for Drug Discovery, *ACS Cent. Sci.* **08 Mar. 2017 (First Reactions Research Highlight)**
09. A New Technique to Develop Drugs Faster and Cheaper, *SJLSciences* **02 Mar. 2017 (Research Highlight)**
08. Study says drugs could be developed cheaper and faster, *Science Newsline* **23 Feb. 2017 (Research Highlight)**
07. Study says drugs could be developed cheaper and faster, *Phys.org* **22 Feb. 2017 (Research Highlight)**
06. Study says drugs could be developed cheaper and faster, *Medinary.aezine.com* **22 Feb. 2017 (Research Highlight)**
05. Grant, M., Study says drugs could be developed cheaper and faster, *Waterloo News* **22 Feb. 2017 (Research Highlight)**
04. Ritter, S.K., Two-faced polar molecule grabs both cations and anions, *C&EN* **2016**, 94(20), 8 **(Research Highlight)**
03. Hopkins, W. S.* New View - Determining the Properties of Gas-phase Clusters, *Molecular Physics*, 10.1080/00268976.2015.1053545 **2015 (Invited Interview)**
02. Horiuchi, N., Acoustics: Fibre-Optic Pickup, *Nature Photonics* **2012**, 6, 80 **(Research Highlight)**
01. Harding, D. J., Walsh, T. R., Hamilton, S. M., Hopkins, W. S., Mackenzie, S. R., Grune, P., Haertelt, M., Meijer, G., Fielicke, A.,* The Structure of Rh_8^+ in the Gas Phase, arXiv:0909.5546 **2009**

Conference Presentations & Invited Seminars (Hopkins students in bold font)

207. Hopkins, W. S., Fundamentals and Applications of Differential Ion Mobility, University of Leipzig, **2020**
206. Hopkins, W. S., Establishing a Canadian Free Electron Laser Program of Research, FHI Berlin, **2020**
205. Hopkins, W. S., Fundamentals and Applications of Differential Ion Mobility, University of Wuppertal, **2020**
204. Hopkins, W. S., Fundamentals and Applications of Differential Ion Mobility, University of Wuppertal, **2020**
203. **Coughlan N**, Bull JN, **Fu W**, Campbell JL, Hopkins WS, DMS-gated photodissociation action spectroscopy, GRS Molecular and Ionic Clusters, **2020 (Poster)**
202. **Villanueva Heldmaier F**, **Huard R**, **Coughlan N**, Campbell JL, Guna M, Nooijen M, Hopkins WS, Exploring the non-adiabatic dynamics of cationic nucleobase protomers using differential mobility spectrometry and UV photodissociation spectroscopy, 2020 GRS Molecular and Ionic Clusters, **2020 (Oral)**
201. **Villanueva Heldmaier F**, **Huard R**, **Coughlan N**, Campbell JL, Guna M, Nooijen M, Hopkins WS, Exploring non-adiabatic dynamics: accurately predicting the UV-photodissociation action spectra of selected protonated nucleobase tautomers, 2020 CCCE, **2020 (Oral; Cancelled COVID19)**
200. **Mashmoushi N**, Campbell JL, Di Lorenzo R, Hopkins, WS, Employing differential mobility spectrometry to investigate the diverse clustering interactions of cannabinoids with solvent vapour, 2020 GRS Molecular and Ionic Clusters, **2020 (Poster)**
199. **Mashmoushi N**, Campbell JL, Di Lorenzo R, Hopkins, WS, Separating and Quantifying Isomeric Cannabinoids using Differential Mobility Spectrometry, 2020 CCCE, **2020 (Oral; Cancelled COVID19)**

198. **Coughlan N, Carr PJJ, Walker SC, Zhou C**, Guna M, Campbell JL, Hopkins WS, A tandem DMS-MS experiment for spectroscopic interrogation of molecular ions, 2019 Lake Louise Tandem Mass Spectrometry Conference (**Oral**)
197. Cheng M, Rivas N, **Lim SJ**, Pichugin K, Petruk AA, Klinkova A, Smith RDL, Hopkins WS, Sciaini G, Trapping a photoelectron behind a repulsive Coulomb barrier in solution, 35th Symposium on Chemical Physics (2019) (**Poster**)
196. **Villanueva Heldmaier F, Coughlan N**, Campbell JL, Hopkins WS, Exploring the UV-PD action spectra of cationic adenine protomers, 35th Symposium on Chemical Physics (2019) (**Poster**)
195. **Fu W, Zhou C, Carr PJJ, Lecours M, Burt M**, Fillion E, Loire E, McMahon T, Hopkins WS, The structures of homodimers of phenylalanine derivatives, 35th Symposium on Chemical Physics (2019) (**Poster**)
194. **Mashmoushi N**, Campbell JL, Hopkins WS, Characterizing PFOS solvent interactions using differential mobility spectrometry, 35th Symposium on Chemical Physics (2019) (**Poster**)
193. **Coughlan N, Carr PJJ, Walker SC, Zhou C**, Guna M, Campbell JL, Hopkins WS, Electronic spectra of mobility-selected ions in the gas phase, 35th Symposium on Chemical Physics (2019) (**Poster**)
192. **Crouse J, Haack A**, Benter T, Hopkins WS, Understanding non-traditional differential mobility behaviour: a case study of the tricarbostannatrane cation, $N(CH_2CH_2CH_2)_3Sn^+$, 35th Symposium on Chemical Physics (2019) (**Poster**)
191. **Li Y, Coughlan N, Zhou C**, Hopkins WS, Photodissociation and electronic spectroscopy of DMS-selected amino acids, 35th Symposium on Chemical Physics (2019) (**Poster**)
190. **Ieritano C, Featherston J**, Campbell JL, Hopkins WS, How hot are your ions in Differential Mobility Spectrometry, 35th Symposium on Chemical Physics (2019) (**Poster**)
189. **Stienstra CM, Coughlan N, Crouse J, Carr PJJ, Hopkins WS**, Preliminary velocity map imaging experiments for the photodissociation of Xenon dimer, 35th Symposium on Chemical Physics (2019) (**Poster**)
188. **Haack A**, Schluter F-J, Benter T, **Crouse J**, Hopkins WS, A first principles model of differential ion mobility: the effect of ion-solvent clustering, 35th Symposium on Chemical Physics (2019) (**Oral**)
187. Hopkins WS, The (Relatively) Untapped Mine of Big Data in Science, UBC Okanagan, (2019) (**Oral**)
186. Hopkins WS., Determining Humulone Content in Beer, Tandem Mass Spectrometry Meeting, Lake Louise, (2018) (**Oral**)
185. Hopkins WS., Gas Phase Drug Discovery, QANSAS, Agra, India, (2018) (**Oral**)
184. **Coughlan N, Lecours M**, Campbell JL, Hopkins WS, Modifier gases in DMS show preferential solvation behaviour, 34th Symposium on Chemical Physics (2018) (**Poster**)
183. **Zhou C**, Loire C, McMahon T, Fillion E, Hopkins WS, Mapping complex potential energy landscapes, 34th Symposium on Chemical Physics (2018) (**Poster**)
182. **Villanueva Heldmaier F, Zhang Q, Stienstra C**, Campbell JL, Hopkins WS, Differential mobility spectrometry studies of hop extract, 34th Symposium on Chemical Physics (2018) (**Poster**)
181. **Mashmoushi N**, Campbell JL, Hopkins WS, Characterizing lipid isomers using differential mobility spectrometry, 34th Symposium on Chemical Physics (2018) (**Poster**)
180. Lecours M, Zanon M, Bao S, Hopkins WS, Nooijen M, Compact Regularized AO Integrals for Molecules and Solids, 34th Symposium on Chemical Physics (2018) (**Poster**)
179. **Lim SJ**, Campbell JL, Hopkins WS., Investigations of B12H12 (X = H, F, Cl, Br, I) using differential mobility spectrometry, 34th Symposium on Chemical Physics (2018) (**Poster**)

178. **Ieritano C, Crouse J**, Campbell JL, Hopkins WS., A parallelized molecular collision cross section package with optimized accuracy and efficiency for trajectory method calculations, 34th Symposium on Chemical Physics (2018) **(Poster)**
177. **Fu W, Carr PJJ, Lecours M**, Burt M, Fillion E, Loire E, McMahon T, Hopkins WS., The structures and properties of the homodimers of protonated phenylalanine derivatives, 34th Symposium on Chemical Physics (2018) **(Poster)**
176. Crouse J, Walker S, Anwar A, Psutka J, Campbell JL, Hopkins WS., Determining molecular properties using machine learning and differential mobility spectrometry, 34th Symposium on Chemical Physics (2018) **(Poster)**
175. **Carr PJJ, Warneke J, Featherstone J**, Jenne C, Loire E, Hopkins WS., The structures of proton-bound triethylammonium $[B_{12}X_{12}]^{2-}$ (X = F, Cl) clusters, 34th Symposium on Chemical Physics (2018) **(Poster)**
174. **Bowman Z, Crouse J, Scenna A, Ieritano C, Featherston J**, Campbell JL, Hopkins WS., Machine learning collision cross sections using differential mobility spectrometry, 34th Symposium on Chemical Physics (2018) **(Poster)**
173. Hopkins WS Towards Building a Canadian Free Electron Laser Facility, Canadian Infrared Users Workshop, Canadian Light Source, Saskatoon, **2018**
172. Hopkins WS IRMPD of Amino Acid-containing Clusters, Canadian Infrared Users Workshop, Canadian Light Source, Saskatoon, **2018**
171. Hopkins WS., Gas Phase Drug Discovery: Physicochemical Properties Measurements with Differential Mobility Spectrometry, Western University, London (Ontario), **2018**
170. Hopkins WS., Towards Building a Canadian Free Electron Laser Facility, TRIUMF Free Electron Laser Workshop, Vancouver, **2018**
169. Hopkins WS., Applying Machine Learning to Differential Mobility Data, ASMS, San Diego, USA, **2018**
168. Hopkins WS., Spectroscopy and Structure of Exotic Ion-Solvent Clusters, 95th Canadian Society for Chemistry Conference, **2018**
167. Hopkins WS., Towards Building a Canadian Free Electron Laser Facility, Italian-Canadian Workshop for Future Directions in Light Sources, Saskatoon, **2018**
166. Hopkins WS., Gas Phase Drug Discovery, 3rd Indo-Canadian Research Colloquium, Waterloo, **2018**
165. Hopkins WS., Gas Phase Drug Discovery: Physicochemical Property Measurements with Differential Mobility Spectrometry, Tandem Mass Spectrometry Meeting, Lake Louise, **2017**
164. Hopkins WS, A New Canadian IR-FEL Facility, Symposium on Chemical Physics, **Nov. 2017**
163. **Zhang Q, Walker S**, Campbell JL, Innocente S, Hopkins WS, Characterizing Humulone Content in Beer, 33rd Symposium on Chemical Physics (2017) **(Poster)**
162. **Zhou C, Yang AMC, Lecours MJ, Walker S**, Marta R, Fillion E, McMahon TB, Campbell JL, Hopkins WS, The Structures and Properties of Serine Clusters, 33rd Symposium on Chemical Physics (2017) **(Poster)**
161. **Ryall S, Psutka J**, Campbell JL, Hopkins WS, Separating Tautomers of Protonated Methylated Nucleobases, 33rd Symposium on Chemical Physics (2017) **(Poster)**
160. **Psutka J**, Dion-Fortier A, Segura PA, Campbell JL, Hopkins WS, Separation and Classification of Transformation Products of Trimethoprim Using Differential Mobility Spectrometry, 33rd Symposium on Chemical Physics (2017) **(Poster)**

159. **Moreira R, Walker S, Mashmoushi N**, Taylor SD, Hopkins WS, Using Differential Mobility Spectrometry to Design Daptomycin Analogs, 33rd Symposium on Chemical Physics (2017) **(Poster)**
158. **Lim SJ**, Hou G-L, Wang X-B, Warneke J, Hopkins WS, Photoelectron Spectroscopy of $B_{12}X_{12}^{2-}$ ($X=H,F,Cl,Br,I$), 33rd Symposium on Chemical Physics (2017) **(Poster)**
157. **Lee A, Walker S, Anwar A, Ajami S, Psutka J**, Liu C, Goetz G, Janiszewski J, Campbell JL, Hopkins WS, The Effect of Intramolecular Hydrogen Bonds on Chemical Structure, 33rd Symposium on Chemical Physics (2017) **(Poster)**
156. **Ieritano C**, Campbell JL, Hopkins WS, Insights into the Properties of an Anticancer Peptide using Differential Mobility Spectrometry, 33rd Symposium on Chemical Physics (2017) **(Poster)**
155. **Howie B, Ieritano C**, Campbell JL, Hopkins WS, Isolation of Isomeric Drug Metabolites by Differential Mobility Spectrometry: A Proof of Concept Study using Caffeine, 33rd Symposium on Chemical Physics (2017) **(Poster)**
154. **Fu W**, Campbell JL, Hopkins WS, The Structures and Properties of the Proton-bound Dimer of Phenylalanine with Serine, 33rd Symposium on Chemical Physics (2017) **(Poster)**
153. **Carr PJJ, Walker S, Lecours MJ, Featherstone J**, Hou G-L, Wang X-B, McMahon TB, Warneke J, Hopkins WS, Gas Phase Studies of $B_{12}X_{12}^{2-}$ ($X=H,F$) with All-*cis* 1,2,3,4,5,6 Hexafluorocyclohexane, 33rd Symposium on Chemical Physics (2017) **(Poster)**
152. **Bowman Z**, Campbell JL, Le Blanc Y, Liu C, Kafle A, He K, Wang A, Hopkins WS, Using differential mobility spectrometry to separate chiral compounds: Amphetamines, 33rd Symposium on Chemical Physics (2017) **(Poster)**
151. **Zhang Q, Walker S**, Campbell JL, Innocente S, Hopkins WS, Characterizing Humulone Content in Beer, 100th Chemical Society of Canada Conference (2017) **(Poster)**
150. **Carr PJJ, Lecours MJ, Devlugt I, Shepherdson E, Chow T**, Hopkins WS, Reactions of Small Molecules on Cationic Rhodium Clusters, 100th Chemical Society of Canada Conference (2017) **(Poster)**
149. **Psutka J, Anwar A, Walker S**, Dieckmann T, Janiszewski J, Campbell JL, Hopkins WS, Separation and Classification of Nucleobase Tautomers using Differential Mobility Spectrometry, 100th Chemical Society of Canada Conference (2017) **(Poster)**
148. **Lecours MJ**, Marta R, Steinmetz V, Liuni P, Wilson DJ, Fillion E, McMahon TB, Hopkins WS, Coupling Ultrafast ESI with Trapped Ion Spectroscopy, 100th Chemical Society of Canada Conference (2017) **(Poster)**
147. **Fu W, Tran VYW, Huang D**, Campbell JL, Hopkins WS, The Structures and Properties of the Proton-bound Dimer of Phenylalanine with Serine, 100th Chemical Society of Canada Conference (2017) **(Poster)**
146. **Zhou C, Yang AMC, Lecours MJ, Walker S**, Marta R, Fillion E, McMahon TB, Campbell JL, Hopkins WS, The Structures and Properties of Serine Clusters, 100th Chemical Society of Canada Conference (2017) **(Poster)**

145. **Zhou C, Yang AMC, Lecours MJ, Walker S**, Marta R, Fillion E, McMahon TB, Hopkins WS, The Structures and Properties of Serine Clusters, 32nd Waterloo Symposium on Chemical Physics (2016) **(Poster)**
145. **Zhang Q, Walker S**, Innocente S, Campbell JL, Hopkins WS, Characterizing Humulone Content in Beer, 32nd Waterloo Symposium on Chemical Physics (2016) **(Poster)**
144. **Yao J**, Le Roy R, Nooijen M, Hopkins WS, The Electronic Structure of Co•RG⁺ (RG = Ar,Kr): A Theoretical MR-EOM Study, 32nd Waterloo Symposium on Chemical Physics (2016) **(Poster)**
143. **Walker S, Verbuyst B, Mark A**, Campbell JL, Bogdanov B, Hopkins WS, Investigating Tautomers of Anilinium with Differential Mobility Spectrometry, 32nd Waterloo Symposium on Chemical Physics (2016) **(Poster)**
142. **Psutka J, Anwar A, Walker S**, Campbell JL, Hopkins WS, Separation of Tautomers of Protonated Nucleobases, 32nd Waterloo Symposium on Chemical Physics (2016) **(Poster)**
141. **Lecours MJ**, Marta R, Steinmetz V, Liuni P, Wilson DJ, Fillion E, McMahon TB, Hopkins WS, Coupling Ultrafast ESI with Trapped Ion Spectroscopy, 32nd Waterloo Symposium on Chemical Physics (2016) **(Poster)**
140. **Fu W, Lecours MJ, Carr PJJ**, Burt M, Marta RA, Steinmetz V, McMahon TB, Fillion E, Hopkins WS, The Structures and Properties of Protonated Phenylalanine Derivatives, 32nd Waterloo Symposium on Chemical Physics (2016) **(Poster)**
139. **de Vlucht I, Lecours MJ, Anwar A**, Marta RA, Steinmetz V, McMahon TB, Fillion E, Hopkins WS, Infrared-driven Charge Transfer in Cu, Ag, and Cd B₁₂H₁₂²⁻ Clusters, 32nd Waterloo Symposium on Chemical Physics (2016) **(Poster)**
138. **Carr PJJ, Lecours MJ, Zhan C**, Burt M, Marta R, Fillion E, McMahon TB, Hopkins WS, Exploring Mode-selective Ligand Scrambling of Palladium Catalysts, 32nd Waterloo Symposium on Chemical Physics (2016) **(Poster)**
137. **Anwar A, Psutka J, Walker S**, Campbell JL, Hopkins WS, Differential Mobility Spectrometry of Protonated Nucleobases, International Mass Spectrometry Conference **(Poster)**
136. Hopkins WS, Combining Rapid Isomer Separations and Physicochemical Property Measurements with Differential Mobility Spectrometry, International Mass Spectrometry Conference **(Invited Oral)**
135. **Carr PJJ, Lecours MJ, Zhan C**, Burt M, Marta R, Fillion E, McMahon TB, Hopkins WS, Exploring Mode-selective Ligand Scrambling of Palladium Catalysts, International Mass Spectrometry Conference; Trent Conference on Mass Spectrometry Mini-symposium (2016) **(Invited Oral)**
134. **Steffen J, Huang D, Walker S**, Campbell JL, Hopkins WS, Measuring Ion-Solvent Binding Energies with DMS, International Mass Spectrometry Conference (2016) **(Poster)**
133. **Carr PJJ, Lecours MJ, Zhan C**, Burt M, Marta R, Fillion E, McMahon TB, Hopkins WS, Exploring Mode-selective Ligand Scrambling of Palladium Catalysts, International Mass Spectrometry Conference (2016) **(Poster)**
132. **Walker S**, Bogdanov B, Campbell JL, Hopkins WS, Investigating Tautomers of Anilinium with Differential Mobility Spectrometry, International Mass Spectrometry Conference (2016) **(Poster)**

131. McMahon, T. B., Ziegler, B., **Lecours, M. J.**, Fillion, E., Marta, R. A., O'Hagan, D., Keddie, N., Hopkins, W. S., The Remarkable Ionic Coordinating Ability of All-cis 1,2,3,4,5,6-Hexafluorocyclohexane in the Gas Phase, 64th American Society for Mass Spectrometry Meeting (2016) **(Poster)**
130. Liu, C., LeBlanc, Y. J. C., Shields, J., Zhang, H., Janiszewski, J. S., **Ieritano, C., Melo, L., Shepherdson, E., Verbuyst, M., Hasan, M., Naser, D.**, Hopkins, W. S., Campbell, J. L., Hoffman, T., Combining Rapid Isomer Separations and Physicochemical Property Predictions for Drug Molecules with Differential Mobility Spectrometry, 64th American Society for Mass Spectrometry Meeting (2016) **(Oral)**
129. Hopkins, W. S., **Lecours, M. J., Carr, P. J. J.**, Fillion, E., Marta, R. A., McMahon, T. B., Liuni, P., Wilson, D. K., IRMPD Spectroscopy of Short-lived Reaction Intermediates in Catalytic Cycles, 99th Canadian Chemistry Conference (2016) **(Oral)**
128. **Carr, P. J. J., Lecours, M. J., Zhan, C.**, Fillion, E., Marta, R. A., Burt, M. B., McMahon, T. B., Hopkins, W. S., IRMPD-induced Mode Selectivity of Palladium Catalysts, 99th Canadian Chemistry Conference (2016) **(Oral)**
127. **Lecours, M. J.**, Fillion, E., Marta, R. A., McMahon, T. B., Steinmetz V., O'Hagan, D., Hopkins, W. S., The Remarkable Complexation of All-cis 1,2,3,4,5,6-hexafluorocyclohexane with Icosahedral B₁₂F₁₂²⁻ in the Gas Phase, 99th Canadian Chemistry Conference (2016) **(Poster)**
126. **Anwar, A., Lecours, M. J.**, Gabelica, V., Hopkins, W. S., Exploring G-quadruplex-ligand Interactions, 99th Canadian Chemistry Conference (2016) **(Poster)**
125. **Zhou, C., Lecours, M. J., Yang, A.**, Fillion, E., Marta, R. A., McMahon, T. B., Campbell, J. L., Hopkins, W. S., The Structures and Properties of Serine Clusters, 99th Canadian Chemistry Conference (2016) **(Poster)**
124. **Steffen, J. P.**, Campbell, J. L., Hopkins, W. S., Developing a Model for Differential Mobility Spectrometry (DMS) Trajectories, 99th Canadian Chemistry Conference (2016) **(Poster)**
123. **Yao, J.**, Nooijen, M., Hopkins, W. S., The Electronic Structure of Cobalt-containing Complexes, 99th Canadian Chemistry Conference (2016) **(Poster)**
122. **Fu, W., Mohideen, S., Carr, P. J. J., Lecours, M., Melo, L.**, Fillion, E., Burt, M., McMahon, T. B., Steinmetz, V., Hopkins, W. S., The Structures and Properties of Ionic Clusters of Phenylalanine Derivatives, 99th Canadian Chemistry Conference (2016) **(Poster)**
121. **Walker, S. W. C., Verbuyst, B., Mark, A.**, Campbell, J. L., Bodganov, B., Hopkins, W. S., Investigating Tautomers of Anilinium with Differential Mobility Spectrometry, 99th Canadian Chemistry Conference (2016) **(Oral)**
120. Hopkins, W. S., **Ieritano, C., Melo, L., Shepherson, E., Verbuyst, M., Hasan, M., Naser, D.**, Campbell, J. L., Liu, C., LeBlanc, Y., Shields, J., Zhang, H., Janiszewski, J., Rapid Isomer Separations and Physicochemical Property Measurements with Differential Mobility Spectrometry, 99th Canadian Chemistry Conference (2016) **(Oral)**
119. **Huang, D., Lecours, M. J., Simidzija, P., Walker, S.**, Fillion, E., Marta, R. A., McMahon, T. B., Hopkins, W. S., The Structures and Properties of Lewis acid/base Complexes Containing Tricarbostannatrane, 44th SOUSCC (2016) **(Oral)**

118. **Ajami, S., Walker, S., Anwar, A.**, Campbell, J.L., Janiszewski, J., Hopkins, W. S., Microsolvation of Protonated Acrylamides, 44th SOUSCC (2016) **(Oral)**
117. **Tran, V., Huang, D., Walker, S.**, Hopkins, W. S., Separating the Isomers of Protonated Phenylalanine/Serine Dimer, 44th SOUSCC (2016) **(Oral)**
116. **Shepherdson, E., Chow, W. T. C.**, Hopkins, W. S., Interactions of Carbonyl Sulphide with Cationic Rhodium Nanoclusters of Increasing Size, 31st Waterloo Symposium on Chemical Physics (2015) **(Poster)**
115. **Carr, P. J. J., Lecours, M. J.**, Fillion, E., McMahon, T. B., Hopkins, W. S., IR-induced Chemistry of Palladium Catalysts, 31st Waterloo Symposium on Chemical Physics (2015) **(Poster)**
114. Bicker, S., **Lecours, M. J.**, Marta, R. A., Fillion, E., Hopkins, W. S., McMahon, T. B., Growing Gas-phase Salt Clusters: Lithium Formate Ion and Sodium Formate Ion Species, 31st Waterloo Symposium on Chemical Physics (2015) **(Poster)**
113. **Fu, W., Mohideen, S., Naser, D., Carr, P. J. J., Lecours, M. J., Ieritano, C.**, Burt, M., Fillion, E., Steinmetz, V., McMahon, T. B., Hopkins, W. S., Exploring the Properties and Structures of Ionic Amino Acid Clusters, 31st Waterloo Symposium on Chemical Physics (2015) **(Poster)**
112. **Zhou, C., Yang, A., Lecours, M. J.**, Marta, R. A., Fillion, E., McMahon, T. B., Hopkins, W. S., Structures and Properties of Serine Clusters, 31st Waterloo Symposium on Chemical Physics (2015) **(Poster)**
111. **Mark, A.**, Liu, C., Campbell, J. L., Hopkins, W. S., Microsolvation of Gas Phase Protonated Aniline Tautomers, 31st Waterloo Symposium on Chemical Physics (2015) **(Poster)**
110. **Yao, J.**, Nooijen, M., Hopkins, W. S., Theoretical Photodissociation of Co⁺•RG species, 31st Waterloo Symposium on Chemical Physics (2015) **(Poster)**
109. **Anwar, A., Zaman, S.**, Hopkins, W. S., Liu, C., Le Blanc, J. C. Y., Dey, S., Purkayastha, S., Campbell, J. L., DMS Solvent Clustering of Testosterone Derivatives, 31st Waterloo Symposium on Chemical Physics (2015) **(Poster)**
108. **Steffen, J.**, Campbell, J. L., Hopkins, W. S., Developing a Model for Differential Mobility Spectrometry (DMS) Trajectories, 31st Waterloo Symposium on Chemical Physics (2015) **(Poster)**
107. Liu, C., Le Blanc, Y. J. C., Shields, F., Janiszewski, J., **Ieritano, C., Ye, G., Hawes, G., Hasan, M.**, Hopkins, W. S., Campbell, J. L., Understanding the Roles of Electronic and Steric Effects in Separating Isomers Using Differential Mobility Spectrometry, 31st Waterloo Symposium on Chemical Physics (2015) **(Oral)**
106. Hopkins, W. S., Elucidating the Physicochemical Properties of Isolated Clusters, University of Toronto (Mississauga) (2015) **(Invited; Oral)**
105. Hopkins, W. S., (Panel Member) Academic Careers in Mass Spectrometry, University of York & University of Toronto Centre for Mass Spectrometry (2015) **(Invited; Oral)**
104. Hopkins, W. S., Good Vibrations: Ion Chemistry and Mass Spectrometry, University of York & University of Toronto Centre for Mass Spectrometry (2015) **(Invited; Oral)**

103. **Lecours, M. J., Carr, P. J. J.,** Marta, R. A., Fillion, E., McMahon, T. B., Luini, P., Wilson, D., Hopkins, W. S., Using TRESI to Isolate Intermediates in Catalytic Cycles, Trent Conference in Mass Spectrometry (2015) **(Oral)**
102. **Fu, W., Carr, P. J. J., Lecours, M. J.,** Burt, M., Marta, R. A., Fillion, E., McMahon, T. B., Hopkins, W. S., The Structures and Properties of Phenylalanine Clusters, Trent Conference in Mass Spectrometry (2015) **(Oral)**
101. **Carr, P. J. J., Lecours, M. J.,** Burt, M., Marta, R. A., Fillion, E., McMahon, T. B., Hopkins, W. S., IR-induced Chemistry of Palladium Catalysts, Trent Conference in Mass Spectrometry (2015) **(Oral)**
100. **Ieritano, C.,** Campbell, J. L., Hopkins, W. S., Separation of sn-positional Isomers of Phosphatidyl Choline via DMS: A Theoretical Study, Trent Conference in Mass Spectrometry (2015) **(Poster)**
99. **Zanon, M., Lecours, M. J.,** Marta, R. A., Fillion, E., McMahon, T. B., Hopkins, W. S., The Structures and Properties of Dopamine Dimers, Trent Conference in Mass Spectrometry (2015) **(Poster)**
98. **Naser D., Zanon, M.,** Campbell, J. L., Hopkins, W. S., Examining Intramolecular Hydrogen bonding with DMS, Trent Conference in Mass Spectrometry (2015) **(Poster)**
97. **Simidzija, P., Lecours, M. J.,** Marta, R. A., Fillion, E., McMahon, T. B., Hopkins, W. S., Tricabastannatrane Interactions with Lewis Bases, Trent Conference in Mass Spectrometry (2015) **(Poster)**
96. **Steffen, J.,** Campbell, J. L., Hopkins, W. S., Modelling DMS Trajectories, Trent Conference in Mass Spectrometry (2015) **(Poster)**
95. **Zhou, C., Lecours, M. J.,** Marta, R. A., Fillion, E., McMahon, T. B., Hopkins, W. S., The Structures and Properties of Serine Clusters, Trent Conference in Mass Spectrometry (2015) **(Poster)**
94. **Yao, J., Nooijen, M.,** Hopkins, W. S., Theoretical Studies of Co⁺•RG Photodissociation, Trent Conference in Mass Spectrometry (2015) **(Poster)**
93. Hopkins, W. S., Determining the Properties of Gas Phase Clusters, University of Bordeaux (2015) **(Invited; oral)**
92. Campbell, J. L., Liu, C., Le Blanc, J. C. Y., Goetz, G. H., Shields, J., Janiszewski, J. S., **Anwar, A.,** Hopkins, W. S., Using differential mobility spectrometry for detection of intramolecular hydrogen bonding, American Society for Mass Spectrometry Annual Meeting (2015) **(poster)**
91. Lock, C. J., Campbell, J. L., Liu, C., Le Blanc, J. C. Y., Shields, J., Janiszewski, J. S., **Ieritano, C., Ye, G. F., Hawes, G. F., Hasan, M.,** Hopkins, W. S., Understanding the roles of electronic and steric effects in separating isomers using differential mobility spectrometry, American Society for Mass Spectrometry Annual Meeting (2015) **(poster)**
90. **Sinclair, G.,** Murphy, G. K., Hopkins, W. S., Catalyst Effects on an Iodoarene Difluorination Reaction, 43rd SOUSCC (2015) **(Oral)**
89. **Hasan, M.,** Campbell, J. L., Hopkins, W. S., Gas Phase Determination of Bioavailability through Ion-Solvent Interactions, 43rd SOUSCC (2015) **(Oral)**
88. **Steffen, J.,** Campbell, J. L., Hopkins, W. S., Developing an Ion Trajectory Model for DMS, AB SCIEX Hopkins Group Symposium (2014) **(Invited; oral)**

87. **Ye, G.**, Campbell, J. L., Hopkins, W. S., A New Method for Assaying Drug Bioavailability, AB SCIEX Hopkins Group Symposium (2014) **(Invited; oral)**
86. **Yang, A.**, Campbell, J. L., Hopkins, W. S., Methanol Clusters in Differential Mobility Spectrometry, AB SCIEX Hopkins Group Symposium (2014) **(Invited; oral)**
85. **Carr, P. J. J.**, Huang, D., Burt, M., Fillion, E., McMahon, T. B., Hopkins, W. S., IRMPD of Boron Fluoride Clusters, AB SCIEX Hopkins Group Symposium (2014) **(Invited; oral)**
84. **Anwar, A.**, Campbell, J. L., Hopkins, W. S., DMS Studies of Model Testosterone Derivatives, AB SCIEX Hopkins Group Symposium (2014) **(Invited; oral)**
83. **Yao, J.**, Nooijen, M., Hopkins, W. S., Chemical Bonding in the Cobalt Dimer Cation, 30th Waterloo Symposium on Chemical Physics (2014) **(poster)**
82. **Fu, W., Carr, P. J.**, Burt, M., Fillion, E., McMahon, T., Hopkins, W. S., Exploring the Structures and Properties of Ionic Amino Acid Clusters, 30th Waterloo Symposium on Chemical Physics (2014) **(poster)**
81. **Myatt, P., Carr, P. J., Huang, D.**, Burt, M., Fillion, E., McMahon, T., Hopkins, W. S., IRMPD of Boron Fluoride Clusters, 30th Waterloo Symposium on Chemical Physics (2014) **(poster)**
80. **Steffen, J.**, Campbell, J. L., Hopkins, W. S., Developing a Model for DMS Trajectories, 30th Waterloo Symposium on Chemical Physics (2014) **(poster)**
79. **Sinclair, G.**, Murphy, G. K., Hopkins, W. S., Catalyst Effects on an Iodoarene Difluorination Reaction, 30th Waterloo Symposium on Chemical Physics (2014) **(poster)**
78. **Lee, T., Zhou, C.**, Hopkins, W. S., Enantiomeric Separation of Quaternary Ammonium Salt Crystals, 30th Waterloo Symposium on Chemical Physics (2014) **(poster)**
77. **Carr, P. J., Zhan, C.**, Burt, M., Fillion, E., Steinmetz, V., McMahon, T., Hopkins, W. S., Mode-selective Ligand Scrambling in Palladium Catalysts, 30th Waterloo Symposium on Chemical Physics (2014) **(poster)**
76. Hopkins, W. S., Elucidating the Physicochemical Properties of Isolated Clusters, (GWC)² Thursday Afternoon Research Seminars (2014) **(Invited; oral)**
75. Hopkins, W. S., Elucidating the Physicochemical Properties of Isolated Clusters, UNB Chemistry Student Symposium, University of New Brunswick (2014) **(Invited, Keynote)**
74. **Steffen, J.**, Hopkins, W. S., Developing a Model for DMS Ion Trajectories, 31st Annual Trent Conference on Mass Spectrometry (2014) **(oral)**
73. **Yang, A.**, Hopkins, W. S., Solvent-induced Tautomerization in Differential Mobility Spectrometry, 31st Annual Trent Conference on Mass Spectrometry (2014) **(oral)**
72. **Ye, G. F.**, Hopkins, W. S., Differential Mobility as a New Assay Method for Drug Bioavailability, 31st Annual Trent Conference on Mass Spectrometry (2014) **(oral)**
71. **Carr, P. J.**, Hopkins, W. S., IRMPD of Boron Fluoride Clusters, 31st Annual Trent Conference on Mass Spectrometry (2014) **(oral)**

70. **Anwar, A.**, Hopkins, W. S., DMS Solvent Clustering of Testosterone Derivatives, 31st Annual Trent Conference on Mass Spectrometry (2014) (**oral**)
69. Hopkins, W. S., IR-induced Chemistry of Palladium-containing Clusters”, 31st Annual Trent Conference on Mass Spectrometry (2014) (**poster**)
68. Campbell, J. L., Leblanc, J. C. Y., Liu, C., Janiszewski, J., **Ye, G. F.**, Hopkins, W. S., Differential Mobility Spectrometry as a Measure of Ion Solvation: The Roles of Solvent and Ionic Structures for Separating Quinoline-based Drugs, 62nd ASMS Conference on Mass Spectrometry, Baltimore (2014) (**poster**)
67. **Lecours, M. J., Chow, W. C. T.**, Hopkins, W. S., Structures and Properties of Rhodium Sulphide Clusters, 42nd SOUSCC, University of Windsor (2014) (**poster; 1st prize**)
66. **Hawes, G. F., Fu, W.**, Hopkins, W. S., Photochemistry of Vanadium Complexes, 42nd SOUSCC, University of Windsor (2014) (**oral; 2nd prize**)
65. **Ieritano, C., Hasan, M.**, Burt, M., Marta, R. A., McMahon, T. B., Hopkins, W. S., The Structures of Gas-phase Metal-cysteine Complexes, 42nd SOUSCC, University of Windsor (2014)
64. **Sinclair, G.**, Murphy, G. K., Hopkins, W. S., DFT Studies of Fluorine Abstraction, 42nd SOUSCC, University of Windsor (2014)
63. **Carr, P. J., Drouillard, B.**, Hopkins, W. S., Sulphur-poisoning of Rhodium Cluster Surface Reactions, 42nd SOUSCC, University of Windsor (2014)
62. **Anwar, A.**, Hopkins, W. S., Structures and Properties of Lanthanide Clusters, 42nd SOUSCC, University of Windsor (2014)
61. **Ko, T.**, Burt, M., Marta, R. A., **Hasan, M.**, Hopkins, W. S., McMahon, T. B., Gas-phase structures of chloride-bound phenylalanine derivatives determined by IRMPD spectroscopy and computational chemistry, 30th Annual Trent Conference on Mass Spectrometry, the University of Trent (2013)
60. **Anwar, A.**, Hopkins, W. S., DFT Studies of lanthanide nanocluster structures and properties, 30th Annual Trent Conference on Mass Spectrometry, the University of Trent (2013)
59. **Carr, P. J.**, Hopkins, W. S., Sulphur poisoning of N₂O decomposition on rhodium nanoclusters, 30th Annual Trent Conference on Mass Spectrometry, the University of Trent (2013)
58. **Hasan, M.**, Burt, M., Marta, R. A., Fillion, E., McMahon, T. B., Hopkins, W. S., Probing C-H---O Hydrogen bonding with IRMPD, 30th Annual Trent Conference on Mass Spectrometry, the University of Trent (2013)
57. **Hasan, M., Baldwin, J.**, Hopkins, W. S., Microsolvation of Uranyl, UO₂⁺, Southern Ontario Undergraduate Student Chemistry Conference, the University of Guelph (2013) (**oral; 2nd prize**)
56. **Chow, W. C. T., Lecours, M. J.**, Hopkins, W. S., Carbonyl Sulfide Decomposition on Cationic Rhodium Clusters, Southern Ontario Undergraduate Student Chemistry Conference, the University of Guelph (2013)
55. **Hasan, M.**, Burt, M., Marta, R. A., Fillion, E., McMahon, T. B., Hopkins, W. S., Persistent C-H---O Hydrogen bonding in Benzyl Meldrum’s Acid Derivatives, Symposium on Chemical Physics, the University of Waterloo (2013)

54. **Ko, T.**, Burt, M., Quasimuddin, N., Marta, R. A., **Hasan, M.**, Hopkins, W. S., McMahon, T. B., Gas-Phase Structures of Chloride-Bound Phenylalanine Derivatives Determined by IRMPD Spectroscopy and Computational Chemistry, Symposium on Chemical Physics, the University of Waterloo (2013)
53. **Johnston, Z.**, Burt, M., Hopkins, W. S., McMahon, T. B., Exploring the Serial Addition of Water to p-hydroxybenzoic acid using Computational Techniques, Symposium on Chemical Physics, the University of Waterloo (2013)
52. **Anwar, A.**, Hopkins, W. S., Density Functional Theory Studies of Monoisotopic Lanthanide Clusters, Symposium on Chemical Physics, the University of Waterloo (2013)
51. **Ye, G. F.**, Hopkins, W. S., Structures and Properties of Lanthanum Clusters, Symposium on Chemical Physics, the University of Waterloo (2013)
50. **Lecours, M. J., Chow, W. C. T.**, Hopkins, W. S., The Effects of Sulphur Adsorption of Rhodium Clusters, Symposium on Chemical Physics, the University of Waterloo (2013)
49. **Carr, P. J., Lecours, M. J., Drouillard, B.**, Hopkins, W. S., Exploring Sulphur-Poisoning of Rhodium Cluster Surface Reactions, Symposium on Chemical Physics, the University of Waterloo (2013)
48. **Zhu, M., Lape, J.**, Campbell, J. L, Hopkins, W. S., Asymmetric Microsolvation of Alkylated Ammonium, Symposium on Chemical Physics, the University of Waterloo (2013)
47. Campbell, J. L, Le Blanc, Y., Schneider, B., Duchoslav, E., **Zhu, M., Lape, J.**, Hopkins, W. S., Using Differential Ion Mobility to Explore (and Exploit?) the Solvation of Ions, Symposium on Chemical Physics, the University of Waterloo (2013)
46. Burt, M., Wilson, K., Marta, R. A., **Hasan, M.**, Hopkins, W. S., McMahon, T. B., Identifying anion- Π interactions in halide-bound phenylalanine derivatives using IRMPD spectroscopy, Symposium on Chemical Physics, the University of Waterloo (2013)
45. Hopkins, W. S., Modern Methods in Gas-phase Cluster Research, AB SCIEX R&D Division, Concord, ON (2012) (**Invited; oral**)
44. **Lecours, M. J.**, Hopkins, W. S., Design of a New Instrument for Gas-phase Nanocluster Research, Southern Ontario Undergraduate Student Chemistry Conference, the University of Guelph (2012)
43. **Chow, W. T. C., Lecours, M. J.**, Hopkins, W. S., Computational Investigations of Carbonyl Sulfide Adsorption of Cationic Rhodium Clusters, Southern Ontario Undergraduate Student Chemistry Conference, the University of Guelph (2012) (**oral; 1st prize**)
42. **Hasan, M., Baldwin, J.**, Hopkins, W. S., Uranyl Microsolvation to Form Aqueous Nanosolutions, Symposium on Chemical Physics, the University of Waterloo (2012)
41. **Chow, W. T. C.**, Hopkins, W. S., Computer Modelling of Carbonyl Sulfide Adsorption of Cationic Rhodium Clusters, Symposium on Chemical Physics, the University of Waterloo (2012)
40. Hopkins, W. S., The Structures and Reactivities of Transition Metal Nanoclusters, 95th Canadian Society for Chemistry Conference, Calgary Convention Centre (2012) (**Invited; oral**)
39. Hopkins, W. S., The Structures and Reactivities of Transition Metal Nanoclusters, Department of Chemistry, University of Guelph (2012) (**Invited; oral**)

38. Hopkins, W. S., Imaging Wavefunctions in Dissociative Photoionization, Symposium on Chemical Physics, the University of Waterloo (2011)
37. Forthomme, D., Linton, C., Read, A., Tokaryk, D., Adam, A. G., Downie, L. E., Granger, A. D., Hopkins, W. S., Unravelling the visible spectrum of strontium monomethoxide, Symposium on Chemical Physics, the University of Waterloo (2011)
36. Hopkins, W. S., Applications in Imaging Mass Spectrometry, PlmMS Meeting, University of Oxford and Rutherford Appleton Laboratory (2011) **(Invited; oral)**
35. Forthomme, D., Linton, C., Tokaryk, D., Adam, A. G., Granger, A. D., Downie, L. E., Hopkins, W. S., Unravelling the visible spectrum of strontium monomethoxide, International Symposium on Molecular Spectroscopy, the Ohio State University (2011)
34. Hopkins, W. S., The Structures and Reactivities of Gas-phase Nanoclusters, British Institute of Physics Annual Meeting, the Open University (2010) **(Invited; oral)**
33. Hopkins, W. S., Woodham, A. P., Plowright, R., Wright, T., Mackenzie, S. R., Velocity-map Imaging of Gold – Rare Gas Complexes, RSC Spectroscopy and Dynamics Group Meeting, the University of Birmingham (2010)
32. Hopkins, W. S., Mackenzie, S. R., Velocity-map Imaging of Metal-containing Complexes, Molecular and Ionic Clusters Meeting, Niigata, Japan (2010)
31. Hopkins, W. S., Hamilton S. M., Mackenzie, S. R., REMPI Spectroscopy of VO, RSC Spectroscopy and Dynamics Group Meeting, the University of Nottingham (2009)
30. Harding, D. J., Grune, P., Hopkins, W. S., Hamilton S. M., Haertelt, M., Neville, S., Meijer, G., Walsh, T. R., Fielicke, A., Mackenzie, S. R., Structural Determination of Rhodium Cluster Oxides, RSC Spectroscopy and Dynamics Group Meeting, the University of Nottingham (2009)
29. Mackenzie, S. R., Mazurenka, M., Hopkins, W. S., Hamilton S. M., Schnippering, M., Neil, S., Evanescent wave cavity based spectroscopy as a probe of dynamical interfacial phenomena, RSC Spectroscopy and Dynamics Group Meeting, the University of Nottingham (2009)
28. Forthomme, D., Downie, L. E., Granger, A. D., Adam, A. G., Linton, C., Tokaryk, D., Hopkins, W. S., Population Depletion Spectroscopy of Strontium Monomethoxide, International Symposium on Molecular Spectroscopy, the Ohio State University (2009)
27. Hopkins, W. S., The Structures and Reactivities of Metal-containing Nanoclusters, Department of Chemistry, University of New Brunswick (2009) **(Invited; oral)**
26. Hopkins, W. S., The Structures and Reactivities of Metal-containing Nanoclusters, Department of Chemistry, Dalhousie University (2009) **(Invited; oral)**
25. Hopkins, W. S., The Structures and Reactivities of Metal-containing Nanoclusters, Department of Physical and Theoretical Chemistry, University of Oxford (2009) **(Invited; oral)**
24. Linton, C., Adam, A. G., Downie, L. E., Granger, A. D., Ross, A. J., Crozet, P., Hopkins, W. S., Population Depletion Spectroscopy of the B-X Transition of Calcium Monomethoxide, International Symposium on Molecular Spectroscopy, the Ohio State University (2008)

23. Hopkins, W. S., Crouse, J., Hudson, Z., Loock, H.-P., Photodissociation Dynamics of Nitrites: UV Photolysis of NO₂, HONO and H₃CONO, RSC Spectroscopy and Dynamics Group Meeting, the University of East Anglia (2007)
22. Hamilton, S. M., McNaughter, P., Hopkins, W. S., Mackenzie, S. R., Spectroscopic Studies of Metal and Metal-containing Clusters, RSC Spectroscopy and Dynamics Group Meeting, the University of East Anglia (2007)
21. Yang, Q., Barnes, J. A., Saari, J., Weinberg, S., Hopkins, W. S., Trefiak, N., Kozin, I., Loock, H.-P., Pedersen, D., Fiber Bragg Grating Acoustic Transducers, Symposium on Chemical Physics, the University of Waterloo (2007)
20. Linton, C., Tokaryk, D. W., Adam, A. G., Granger, A. D., Downie, L. E., Hopkins, W. S., Population Depletion Spectroscopy of the Calcium and Strontium Monomethoxide Radicals, Symposium on Chemical Physics, the University of Waterloo (2007)
19. Hopkins, W. S., Loock, H.-P., Cronin, B., Devine, A. L., Nix, M. G. D., Dixon, R. N., Ashfold, M. N. R., High-resolution Photodissociation Dynamics of Atmospherically Relevant Molecules, 90th Canadian Chemistry Conference, Winnipeg, MB (2007)
18. Hopkins, W. S., High Resolution Spectroscopy of Metal-ligand Complexes, Department of Chemistry, University of Bristol (2006) **(Invited; oral)**
17. Adam, A. G., Hopkins, W. S., High-resolution Spectroscopy of Strontium Monomethoxide, 89th Canadian Chemistry Conference, Halifax, NS (2006)
16. Hopkins, W. S., Loock, H.-P., Ashfold, M. N. R., Cronin, B., Dixon, R. N., Orr-Ewing, A., Photodissociation of Formaldehyde, Symposium on Chemical Physics, the University of Waterloo (2006)
15. Hopkins, W. S., Cronin, B., Loock, H.-P., Ashfold, M. N. R., Dixon, R. N., State-selective Photo-induced Dissociation Dynamics of the Formaldehyde H + HCO Product Channel, RSC Spectroscopy and Dynamics Group Meeting, the University of Oxford (2006) **(Invited; oral)**
14. Linton, C., Ross, A. J., Crozet, P., Hopkins, W. S., Adam, A. G., Structure and Spectra of the CaOCH₃ Radical, Symposium on Chemical Physics, the University of Waterloo (2005)
13. Adam, A. G., Crouse, J. G., Downie, L. E., Hopkins, W. S., Linton, C., Read, A., Tokaryk, D. W., High Resolution Laser Spectroscopy of Strontium Monomethoxide, Symposium on Chemical Physics, the University of Waterloo (2005)
12. Linton, C., Ross, A. J., Crozet, P., Adam, A. G., Hopkins, W. S., Structure and Spectra of the Calcium Monomethoxide Radical, International Symposium on Molecular Spectroscopy, the Ohio State University (2005)
11. Adam, A. G., Hopkins, W. S., High Resolution Laser Spectroscopy of Strontium Monomethoxide, International Symposium on Molecular Spectroscopy, the Ohio State University (2005)
10. Hopkins, W. S., Adam, A. G., Linton, C., Tokaryk, D. W., Read, A., High Resolution Laser Spectroscopy of the B-X Transition of Strontium Monomethoxide, Symposium on Chemical Physics, the University of Waterloo (2004)

09. Crozet, P., Ross, A. J., Linton, C., Adam, A. G., Hopkins, W. S., Le Roy, R. J., High Geometry of the CaOCH₃ Radical from Isotope Effects in the A²E–X²A₁ Transition, Symposium on Chemical Physics, the University of Waterloo (2004)
08. Adam, A. G., Hopkins, W. S., Tokaryk, W. D., Visible Laser Spectroscopy of Hafnium Monofluoride, Symposium on Chemical Physics, the University of Waterloo (2003)
07. Crozet, P., Ross, A. J., Linton, C., Dick, M. J., Adam, A. G., Hopkins, W. S., On the A-X System of the Calcium Monomethoxide Radical, International Symposium on Molecular Spectroscopy, the Ohio State University (2003)
06. Adam, A. G., Hopkins, W. S., High Resolution Laser Spectroscopy of Hafnium Monofluoride, International Symposium on Molecular Spectroscopy, the Ohio State University (2003)
05. Adam, A. G., Hopkins, W. S., Visible Laser Spectroscopy of Hafnium Monofluoride, the Canadian Association of Physicists Congress, the University of Prince Edward Island (2003)
04. Adam, A. G., Hopkins, W. S., Shepard, S. A., High Resolution Laser Spectroscopy of Hafnium Monofluoride, Symposium on Chemical Physics, the University of Waterloo (2002)
03. Adam, A. G., Hopkins, W. S., High Resolution Laser Spectroscopy of Titanium Monobromide and Hafnium Monofluoride, International Symposium on Molecular Spectroscopy, the Ohio State University (2002)
02. Adam, A. G., Hopkins, W. S., High Resolution Laser Spectroscopy of Titanium Monobromide, Symposium on Chemical Physics, the University of Waterloo (2001)
01. Adam, A. G., Hopkins, W. S., High Resolution Laser Spectroscopy of the Titanium Monohalides TiCl and TiBr, International Symposium on Molecular Spectroscopy, the Ohio State University (2001)

Lifetime Summary

	First Author	Co-Author	Total
Books and monographs	2	0	2
Edited Books and monographs	0	0	0
Chapters in Books and monographs	1	0	1
Refereed Journal Articles	16	53	69
Presentations at Conferences	42	165	207
Technical Reports	2	0	2
Invited/keynote addresses	42	0	42
Other Publications	17	0	17
Patents	1	2	3
Citations			1029

h-index = 19, i10-index = 41

List of Invited Addresses

2020	Fritz Haber Institute, Berlin, Germany
2020	University of Leipzig, Leipzig, Germany
2020	University of Wuppertal, Wuppertal, Germany
2019	University of British Columbia, Okanagan

2018	QANSAS, Arga, India
2018	IR Users Meeting; Canadian Light Source
2018	Western University
2018	TRIUMF Free Electron Laser Workshop
2018	American Society for Mass Spectrometry (ASMS) annual conference
2018	95 th Canadian Society for Chemistry Conference
2018	Italian-Canadian Workshop for Future Light Sources (CLS)
2018	3 rd Indo-Canadian Research Colloquium
2017	35 th Waterloo Symposium on Chemical Physics
2017	Memorial University of Newfoundland
2017	Tandem Mass Spectrometry Conference, Lake Louise
2017	University of Alberta
2017	University of Calgary; Institute for Quantum Science and Technology
2017	Université de Montreal
2017	Université de Sherbrooke
2017	Canadian Light Source
2016	International Mass Spectrometry Conference
2016	99 th Canadian Society for Chemistry Conference
2015	University of Toronto (Mississauga); Department of Chemistry
2015	University of York & University of Toronto; (Research Talk)
2015	University of York & University of Toronto; (Panel Discussion)
2015	Université de Bordeaux;
2014	University of Waterloo; (GWC) ² Research Seminar
2014	University of New Brunswick; Chemistry Student Symposium (Keynote)
2014	AB SCIEX R&D Division (Research Group Invited Symposium)
2012	AB SCIEX R&D Division
2012	95 th Canadian Society for Chemistry Conference
2012	University of Guelph; Department of Chemistry
2011	Oxford University & Rutherford Appleton Laboratory; PlmMS Meeting
2010	British Institute of Physics Annual Meeting
2009	University of New Brunswick; Department of Chemistry
2009	Dalhousie University; Department of Chemistry
2009	Oxford University; Physical & Theoretical Chemistry Laboratory
2006	University of Bristol; Department of Chemistry

Research Funding Record

Investigators	Funding Agency and Title	Amount (per annum)	Project Period
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Hopkins	NSERC Engage	\$25K	2019
Hopkins	NSERC Collaborative Research and Development	\$50K	2017
Hopkins	Ontario Centres of Excellence	\$50K	2017
Hopkins	NSERC Discovery Grant	\$28K	2017 – 2021
Hopkins	Early Researcher Award (Province of Ontario)	\$30K	2017 – 2021
Hopkins	NSERC Engage	\$25K	2017
Hopkins	NSERC Collaborative Research and Development	\$54.6K	2016
Hopkins	Ontario Centres of Excellence	\$54.6K	2016
Hopkins	Pfizer Inc. (Internal Funding Competition)	\$42K	2016
Hopkins / McMahon	Waterloo-Bordeaux Research Grants	\$50K	2015-2017
Hopkins	NSERC Engage Plus	\$22K	2014
Hopkins	NSERC Engage	\$25K	2013
Hopkins	University of Waterloo University Research Chair	\$40K	2013-2017
Hopkins	UW Chemistry	\$20K (est)	2012
Hopkins	Ontario Research Fund	\$110K	2012-2014
Hopkins	CFI - LOF	\$110K	2012-2014
Hopkins	NSERC RTI	\$75K	2012-2014
Hopkins	NSERC Discovery Grant	\$35K	2012 – 2016
Hopkins	University of Waterloo Startup	\$46K	2012-2016

Total funding to date: >\$1.75 million

C. TEACHING ACTIVITIES

Record of Courses Taught

Term	Course	Title	Grad/Undergrad	Load
W2019	CHEM 750	Atomic and Molecular Clusters	G	100%
W2019	CHEM 400	Atomic and Molecular Clusters	UG	100%
F2018	CHEM 750	Advanced Spectroscopy	G	100%
F2018	CHEM 209	Introductory Spectroscopy & Structure	UG	100%
F2017	CHEM 209	Introductory Spectroscopy & Structure	UG	100%
W2017	CHEM 750	Atomic and Molecular Clusters	G	100%
W2017	CHEM 450	Atomic and Molecular Clusters	UG	100%
F2016	CHEM 209	Introductory Spectroscopy & Structure	UG	100%
S2016	CHEM 750	Advanced Spectroscopy	G	100%
W2016	CHEM 450	Atomic and Molecular Clusters	UG	100%
F2015	CHEM 209	Introductory Spectroscopy & Structure	UG	100%
W2014	CHEM 450/750	Atomic and Molecular Clusters	G / UG	100%
F2014	CHEM 209	Introductory Spectroscopy & Structure	UG	100%
W2013	CHEM 450/750	Atomic and Molecular Clusters	G / UG	100%
F2013	CHEM 209	Introductory Spectroscopy & Structure	UG	100%
F2012	CHEM 209	Introductory Spectroscopy & Structure	UG	100%

F2011	CHEM 209	Introductory Spectroscopy & Structure	UG	100%
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Summary of Teaching Evaluations

Course	Term	Overall Common Score (maximum of 5.0)	# of Students	Response Rate
CHEM 750	F2018	N/A	11	N/A
CHEM 209	F2018	4.60	99	29.3%
CHEM 209	F2017	4.50	217	38 %
CHEM 750	W2017	N/A	6	N/A
CHEM 450	W2017	4.70	73	51 %
CHEM 209	F2016	4.65	258	40 %
CHEM 750	S2016	N/A	14	N/A
CHEM 450	W2016	4.94	25	76 %
CHEM 209	F2015	4.30	238	48 %
CHEM 209	F2014	4.48	238	37 %
CHEM 450/750	W2014	4.94	25	64 %
CHEM 209	F2013	4.61	197	59 %
CHEM 450/750	W2013	4.88	12	83 %
CHEM 209	F2012	4.62	181	45 %
CHEM 209	F2011	4.80	153	45 %

Graduate Student Supervision

Completed: 8 M.Sc., 2 Ph.D., 2 PDF

In progress: 3 M.Sc., 4 Ph.D., 1 PDF

PDF

Name	Period*	Title of Research Project
Stephen Walker	Oct 2015 – Oct 2017	DMS as a tool for drug discovery
Jeff Crouse	Jan 2018 – Jan 2020	Machine Learning Molecular Properties using DMS data
Neville Coughlan (Banting Fellow)	Oct 2018 –	Structures and Dynamics of Gas-phase Clusters

* Month Year of first registration and Month Year of completion

Ph.D

Name	Period*	Title of Research Project
Patrick Carr	May 2013 – Aug 2019	Determining the Structures of Metal-containing Clusters
Weiqiang Fu	Sept 2016 -	Studies of Gas-phase Amino Acid Clusters
Michael Lecours (Vanier Scholar)	May 2015 -	Structures and Dynamics of Gas-phase Clusters
Ce Zhou	May 2015 – May 2020	The Structures and Properties of Amino Acid Clusters
Christian Ieritano (Vanier Scholar)	Dec 2018 -	DMS studies of biologically relevant species
Dan Rickert (OGS)	Sept 2018 -	Development of a parallel flow trapped ion mobility spectrometer

* Month Year of first registration and Month Year of completion

M.Sc.

Name	Period*	Title of Research Project
Jingfei Yao	Sept 2014 – Aug 2016	Photodissociation Dynamics of Metal-containing Molecules
Weiqiang Fu	Sept 2014 – Aug 2016	Studies of Gas-phase Amino Acid Clusters
Ahdia Anwar (NSERC PGSM)	Sept 2015 – Sept 2017	Characterization of Biologically-relevant Clusters
Johnny Steffen	May 2015 – January 2018	Development of Electronic Structure Theory for Metal-containing Molecules
Jarrod Psutka (NSERC PGSM)	Sept 2016 – August 2018	DMS studies of nucleic acids
Qiuying Zhang	Sept 2016 – August 2018	DMS studies of Humulone Isomer Interconversion in Beer
Zack Bowman	Sept 2017 – Sept 2019	Determining Collision Cross Sections from DMS Behaviour
Christian Ieritano (NSERC PGSM)	Sept 2017 – Dec 2018	DMS studies of anti-cancer agents
Ryan Moreira (OGS)	Sept 2017 – Dec 2018	DMS studies of antibiotics
Suzy Lim	Sept 2017 – Sept 2019	Structures and properties of gas phase clusters
Fiorella Villanueva Heldmaier	Sept 2018 -	Separation and characterization of isomers of humulone and its derivatives
Nour Mashmoushi	Sept 2018 -	DMS studies of lipids
Yuting Li	Jan 2019 -	Trapped Ion Spectroscopy

* Month Year of first registration and Month Year of completion

B.Sc. Honors Thesis

Name	Year
48. Rebecca Huard	2019/2020
47. Brittaney Abreu	2018/2019
46. Beverly Abreu	2018/2019
45. Raman Dhillon	2018/2019
44. Carrie Vuu	2018/2019
43. Kevin Tsang	2018/2019
42. Nina Culum	2018/2019
41. Paul Jalbert	2018/2019
40. Justine Williams	2018/2019
39. Chris Hopkins	2018/2019
38. Conrad Kuchalski	2018
37. Ryland Scott	2018
36. Louis Nguyen	2018
35. Nour Mashmoushi	2017/2018
34. Yuhong Yu	2017/2018
33. Yuting Li	2017/2018

32. Doug Pimlott	2017/2018
31. Dorota Borzycka	2017/2018 (w/ Richard Smith)
30. Fiorella Villanueva Heldmaier	2017/2018
29. Adam Scenna	2017/2018
28. Denzel Huang	2016/2017 (w/ Graham Murphy)
27. Carolyn Kimball	2016/2017 (w/ Monica Barra)
26. Emma Boyle	2016/2017
25. Andre Paradis	2016/2017
24. Zack Bowman	2016/2017
23. Christian Ieritano	2016/2017
22. Tina Lee	2016
21. Brent Verbuyst	2015/2016
20. Mitch Verbuyst	2015/2016
19. Simon Henson-Lucas	2015/2016
18. Tom Meshner	2015/2016
17. Jarrod Psutka	2015/2016
16. Gene Ye	2015/2016
15. Amy Yang	2015
14. Shadman Zaman	2015
13. Luke Melo	2014/2015
12. Ce Zhou	2014/2015
11. Mike Lecours	2014/2015
10. Ahdia Anwar	2014/2015
9. Geoff Sinclair	2014/2015
8. Moaraj Hasan	2014/2015
7. Zach Johnston	2014/2015
6. Chuantian Zang	2014
5. Weiqiang Fu	2013/2014
4. Jingfei Yao	2013/2014
3. Patrick Carr	2013/2014
2. Braden Drouillard	2012/2013
1. Rebecca Harrop	2012

Other

Name	Period*	Position
56. Vivian Hang	Jan 2020 – Apr 2020	Co-op Student
55. Cailum Stienstra	Sept 2019 – Dec 2019	NSERC USRA
54. Dan Juhasz	May 2019 – Aug 2019	NSERC USRA
53. Cailum Stienstra	Sept 2018 – Dec 2018	Volunteer
52. Dan Juhasz	Sept 2018 – Dec 2018	Volunteer
51. Jason Guo	July 2018	High school volunteer
50. Kevin Tsang	May 2018 – Aug 2018	Volunteer
49. Jack Buchok	Jan 2018 – Apr 2018	NSERC USRA
48. Arthur Lee	Sept 2017 – Dec 2017	Coop student
47. Stephanie Ryall	Sept 2017 – Dec 2017	NSERC USRA
46. Brad Howie	Sept 2017 – Dec 2017	NSERC USRA
45. Steve Walker	Nov 2015 – Oct 2017	Postdoctoral Fellow
44. Suzy Lim	Jan 2017 – Aug 2017	Volunteer
43. Arthur Lee	Jan 2017 – Apr 2017	Coop student
42. Sherif Meshref	Jan 2017 – Apr 2017	Coop student
41. Isaac de Vlugt	Sept 2016 – April 2017	NSERC USRA
40. Mark Zanon	May 2016 – Aug 2016	Summer student

39. Vanessa Tran	Jan 2016 – May 2016	NSERC USRA
38. Denzel Huang	Jan 2016 – Aug 2016	Coop student (w/ G. Murphy)
37. Evan Shepherdson	Sept 2015 – Dec 2015	NSERC USRA
36. Alison Mark	Sept 2015 – Dec 2015	Coop student
35. Sanya Arora	Sept 2015 – Dec 2015	Volunteer
34. Petar Simidzija	May 2015 – Aug 2015	NSERC USRA
33. Dalia Naser	May 2015 – Aug 2015	Volunteer
32. Mark Zanon	May 2015 – Aug 2015	Volunteer
31. Sarah Ajami	May 2015 – Aug 2015	Volunteer
30. Matt Baker	Jan 2015 – May 2015	Coop student
29. Denzel Huang	Jan 2015 – May 2015	Coop student
28. Phil Myatt	Sept 2014 – Dec 2014	Coop student
27. Tina Lee	Sept 2014 – Dec 2014	NSERC USRA
26. Christian Ieritano	Sept 2014 – Dec 2014	Coop student
25. Namit Joshi	May 2014 – Aug 2014	Volunteer
24. Johnny Steffen	May 2014 – Aug 2014	Summer student
23. Ahdia Anwar	May 2014 – Aug 2014	Coop student
22. Gene Ye	May 2014 – Aug 2014	Coop student
21. Denzel Huang	May 2014 – Aug 2014	Coop student
20. Gillian Hawes	Jan 2014 – May 2014	NSERC USRA
19. Geoff Sinclair	Jan 2014 – May 2014	Coop student
18. Christian Ieritano	Jan 2014 – May 2014	Coop student
17. Nicole Wood	Jan 2013 – May 2013	President's Scholar
16. Gene Ye	Sept 2013 – Dec 2013	Coop student
15. Ahdia Anwar	May 2013 – Aug 2013	NSERC USRA
14. John Lape	May 2013 – Aug 2013	Volunteer
13. Travis Ko	May 2013 – Aug 2013	Volunteer (w/ Terry McMahon)
12. Patrick Carr	May 2013 – Aug 2013	Summer student
11. Moaraj Hasan	May 2013 – Aug 2013	Coop student
10. Mabel Zhu	May 2013 – Dec 2013	Coop student
9. Michael Lecours	Sept 2013 – Dec 2013	NSERC USRA
8. Gene Ye	Jan 2013 – May 2013	Coop student
7. Jesse Baldwin	Sept. 2012 – May 2013	Research Associate
6. Spencer Lee	Sept 2012 – Dec 2012	President's Scholar (w/ Terry McMahon)
5. Moaraj Hasan	Sept 2012 – Dec 2012	NSERC USRA
4. Theodore Chow	Sept 2012 – Dec 2012	NSERC USRA
3. Michael Lecours	Jan 2012 – May 2012	Coop student
2. Theodore Chow	Jan 2012 – May 2012	Coop student
1. Clement Kwok	Sept 2011 – Dec 2011	Coop student

* Month Year of first registration and Month Year of completion

NSERC USRA Scholars: 15 students

D. SERVICE

Committees

University

2020, WaterFEL: Waterloo Free Electron Laser, Project Lead

2020, Institute for Photonics Science, founding member

2019, Nominating Committee for Dean of Science

2019, WaterFEL: Waterloo Free Electron Laser, Project Lead

2019, Institute for Photonics Science, founding member
2019, Waterloo AI Graduate Level Scholarship Committee, member

2018, WaterFEL: Waterloo Free Electron Laser, Project Lead

2017, WaterFEL: Waterloo Free Electron Laser, Project Lead
2017, "Interaction between light and Matter" initiative with University of Bordeaux, UW Representative

2016, "Interaction between light and Matter" initiative with University of Bordeaux, UW Representative

2015, "Interaction between light and Matter" initiative with University of Bordeaux, UW Representative
2015, President's Advisory Committee on Convocation Speakers, member

2014, Designated PhD Chair (Sayed Rajabi; physics), Examination Chair
2014, Designated PhD Chair (William Sulis; physics), Examination Chair
2014, Designated PhD Chair (Junbo Huang; math), Examination Chair
2014, Designated PhD Chair (Firdaus Yusof Alias; optometry), Examination Chair
2014, President's Advisory Committee on Convocation Speakers, member

2013, Designated PhD Chair (Azin Ashkan; computer science), Examination Chair
2013, Designated PhD Chair (Kelley Skinner; health management), Examination Chair
2013, Designated PhD Chair (Bryan Gillis; physics), Examination Chair
2013, President's Advisory Committee on Convocation Speakers, member

2012, Designated PhD Chair (Cassandra Helt; biology), Examination Chair
2012, Designated PhD Chair (Alireza Moayed; physics), Examination Chair
2012, Designated PhD Chair (Gopika Sreenilayam; physics), Examination Chair
2012, Designated PhD Chair (Reza Bagheriasl; chemical engineering), Examination Chair
2012, RFP #12-039 evaluation committee, member
2012, RFP #12-098 evaluation committee, member

Faculty

2020, CEVR Institute Member
2019, Faculty Graduate Level Scholarship Committee, member
2019, Designated MSc/PhD Chair Pool
2018, Waterloo AI Graduate Level Scholarship Committee, member
2018, Faculty Graduate Level Scholarship Committee, member
2018, Designated MSc/PhD Chair Pool
2017, Chemistry Chair Nominating Committee, member
2017, Designated MSc Chair Pool

Department

2020, Sabbatical Year
2020, PhD Advisory Committee (Alshymaa Ali), Student advisor
2020, PhD Advisory Committee (Josh Featherstone), Student advisor
2020, PhD Advisory Committee (Hanieh Farkhondeh), Student advisor
2020, PhD Advisory Committee (Neil Raymond), Student advisor
2020, PhD Advisory Committee (John Chow), Student advisor
2020, MSc Advisory Committee (Hernando Rosales), Student advisor
2020, MSc Advisory Committee (Meixin Cheng), Student advisor
2020, 5 PhD & 3 MSc Committees for my own students
2020, Graduate Curriculum Committee, member

2019, PhD Advisory Committee (Alshymaa Ali), Student advisor
2019, PhD Advisory Committee (Josh Featherstone), Student advisor

2019, PhD Advisory Committee (Hanieh Farkhondeh), Student advisor
2019, PhD Advisory Committee (Natalie Sisombath), Student advisor
2019, PhD Advisory Committee (Tijana Vasiljevic), Student advisor
2019, PhD Advisory Committee (Kevin Bishop), Student advisor
2019, PhD Advisory Committee (Spencer Yim), Student advisor
2019, PhD Advisory Committee (Neil Raymond), Student advisor
2019, PhD Advisory Committee (John Chow), Student advisor
2019, MSc Advisory Committee (Hernando Rosales), Student advisor
2019, MSc Advisory Committee (Meixin Cheng), Student advisor
2019, MSc Advisory Committee (Paola Ortiz Suarez), Student advisor
2019, 7 PhD & 4 MSc Committees for my own students
2019, Departmental Safety Committee, Lab Inspector
2019, CHEM 494 Seminar Session Chair
2019, CHEM 494 Report (x1 + 9 from my lab), Reader
2019, Graduate Curriculum Committee, member

2018, PhD Examination Committee (Jonathon Grandy)
2018, PhD Examination Committee (Matt Schmidt), Student advisor
2018, MSc Examination Committee (Johnny Steffen), Student Supervisor
2018, MSc Examination Committee (Qiuying Zhang), Student Supervisor
2018, MSc Examination Committee (Jarrod Psutka), Student Supervisor
2018, MSc Examination Committee (Daniel Rickert)
2018, PhD Advisory Committee (Hanieh Farkhondeh), Student advisor
2018, PhD Advisory Committee (Natalie Sisombath), Student advisor
2018, PhD Advisory Committee (Tijana Vasiljevic), Student advisor
2018, PhD Advisory Committee (Kevin Bishop), Student advisor
2018, PhD Advisory Committee (Spencer Yim), Student advisor
2018, PhD Advisory Committee (Neil Raymond), Student advisor
2018, PhD Advisory Committee (John Chow), Student advisor
2018, PhD Advisory Committee (Matt Elango), Student advisor
2018, MSc Advisory Committee (Hernando Rosales), Student advisor
2018, MSc Advisory Committee (Meixin Cheng), Student advisor
2018, MSc Advisory Committee (Paola Ortiz Suarez), Student advisor
2018, 4 PhD & 6 MSc Committees for my own students
2018, Departmental Safety Committee, Lab Inspector
2018, CHEM 494 Seminar Session Chair
2018, CHEM 494 Report (x1 + 8 from my lab), Reader
2018, Graduate Curriculum Committee, member

2017, MSc Examination Committee (Ahdia Anwar), Student Supervisor
2017, PhD Examination Committee (Prateek Goel), Student advisor
2017, PhD Examination Committee (German Gomez Rios), Student advisor
2017, MSc Examination Committee (Justen Poole), Student advisor
2017, MSc Examination Committee (Neil Raymond), Student advisor
2017, MSc Examination Committee (Siyuan Wu), Student advisor
2017, PhD Advisory Committee (Hanieh Farkhondeh), Student advisor
2017, PhD Advisory Committee (Prateek Goel), Student advisor
2017, PhD Advisory Committee (Natalie Sisombath), Student advisor
2017, PhD Advisory Committee (Tijana Vasiljevic), Student advisor
2017, PhD Advisory Committee (Matt Schmidt), Student advisor
2017, PhD Advisory Committee (Kevin Bishop), Student advisor
2017, PhD Advisory Committee (Spencer Yim), Student advisor
2017, MSc Advisory Committee (Siyuan Wu), Student advisor
2017, MSc Advisory Committee (Justen Poole), Student advisor
2017, MSc Advisory Committee (Neil Raymond), Student advisor
2017, 4 PhD & 4 MSc Committees for my own students

2017, Departmental Safety Committee, Lab Inspector
2017, Departmental Executive Committee
2017, CHEM 494 Seminars
2017, CHEM 494 Report (x6 + 5 from my lab), Reader
2017, Coop Work Report (x2), Reader

2016, Hiring Committee, Analytical Lab Instructor
2016, PhD Advisory Committee (Haneih Farkhondeh), Student advisor
2016, PhD Advisory Committee (Prateek Goel), Student advisor
2016, PhD Advisory Committee (Natalie Sisombath), Student advisor
2016, PhD Advisory Committee (Tijana Vasiljevic), Student advisor
2016, MSc Advisory Committee (Matt Schmidt), Student advisor
2016, MSc Advisory Committee (Kevin Bishop), Student advisor
2016, MSc Advisory Committee (Lindsay Orr), Student advisor
2016, MSc Advisory Committee (Spencer Yim), Student advisor
2016, MSc Advisory Committee (Justen Poole), Student advisor
2016, MSc Advisory Committee (Neil Raymond), Student advisor
2016, Departmental Safety Committee, Lab Inspector
2016, Departmental Executive Committee, Physical/Theoretical Chemistry Representative
2016, CHEM 494 Seminars, Session Chair (March)
2016, CHEM 494 Report (x5), Reader
2016, Coop Work Report (x6), Reader

2015, PhD Advisory Committee (Haneih Farkhondeh), Student advisor
2015, PhD Advisory Committee (Prateek Goel), Student advisor
2015, PhD Advisory Committee (Lee Huntington), Student advisor
2015, PhD Advisory Committee (Natalie Sisombath), Student advisor
2015, PhD Advisory Committee (Tijana Vasiljevic), Student advisor
2015, MSc Advisory Committee (Matt Schmidt), Student advisor
2015, MSc Advisory Committee (Kevin Bishop), Student advisor
2015, MSc Advisory Committee (Kathleen Wilson), Student advisor
2015, MSc Advisory Committee (Nabil Faruk), Student advisor
2015, MSc Advisory Committee (Lisa Hutfluss), Student advisor
2015, MSc Advisory Committee (Zhebing Liu), Student advisor
2015, MSc Advisory Committee (Lindsay Orr), Student advisor
2015, MSc Advisory Committee (Spencer Yim), Student advisor
2015, MSc Advisory Committee (Justen Poole), Student advisor
2015, MSc Advisory Committee (Stacey Lavery), Student advisor
2015, MSc Advisory Committee (Neil Raymond), Student advisor
2015, MSc Examination (Lisa Huffluss), Examiner
2015, MSc Examination (Zhebing Liu), Examiner
2015, MSc Examination (Lindsay Orr), Examiner
2015, MSc Examination (Stacey Lavery), Examiner
2015, PhD Examination (Lee Huntington), Examiner
2015, PhD Examination (Jake Henkie), Examiner
2015, IQC/ Chemistry Search Committee, Member
2015, Departmental Safety Committee, Lab Inspector
2015, Departmental Executive Committee, Physical/Theoretical Chemistry Representative
2015, CHEM 494 Seminars, Session Chair (March)
2015, CHEM 494 Seminars, Session Chair (July)
2015, CHEM 494 Report (x5), Reader
2015, Coop Work Report (x6), Reader
2015, IBMB Seminar Series, Host to Prof. Derek Wilson
2015, IBMB Chemistry Seminar Series, Host to Prof. Jeff Smith

2014, PhD Advisory Committee (Haneih Farkhondeh), Student advisor

2014, PhD Advisory Committee (Prateek Goel), Student advisor
 2014, MSc Advisory Committee (Matt Schmidt), Student advisor
 2014, MSc Advisory Committee (Kevin Bishop), Student advisor
 2014, MSc Advisory Committee (Kathleen Wilson), Student advisor
 2014, MSc Advisory Committee (Nabil Faruk), Student advisor
 2014, MSc Advisory Committee (Lisa Hutfluss), Student advisor
 2014, MSc Advisory Committee (Zhebing Liu), Student advisor
 2014, MSc Advisory Committee (Lindsay Orr), Student advisor
 2014, MSc Advisory Committee (Spencer Yim), Student advisor
 2014, MSc Examination (Michael Chan), Examination Chair
 2014, MSc Examination (Kathleen Wilson), Examiner
 2014, MSc Examination (Nabil Faruk), Examiner
 2014, IQC/ Chemistry Search Committee, Member
 2014, Departmental Safety Committee, Lab Inspector
 2014, Departmental Executive Committee, Physical/Theoretical Chemistry Representative
 2014, CHEM 494 Seminars, Session Chair (March)
 2014, CHEM 494 Seminars, Session Chair (July)
 2014, CHEM 494 Seminars, Session Chair (November)
 2014, CHEM 494 Report (Yixuan Shi), Reader (March)
 2014, CHEM 494 Report (Ryan Shatford), Reader (March)
 2014, CHEM 494 Report (Kai Wang), Reader (July)
 2014, Chemistry Faculty Mentor (J. Burgess, Y, Shi, H. Singh, A. Gilchrist), Mentor

2013, PhD Advisory Committee (Prateek Goel), Student advisor
 2013, MSc Advisory Committee (Matt Schmidt), Student advisor
 2013, MSc Advisory Committee (Kevin Bishop), Student advisor
 2013, MSc Advisory Committee (Kathleen Wilson), Student advisor
 2013, MSc Advisory Committee (Nabil Faruk), Student advisor
 2013, MSc Advisory Committee (Lisa Hutfluss), Student advisor
 2013, MSc Examination (Yahya Alzahrany), Examination Chair
 2013, MSc Examination (Tahereh Sabergharesou), Examination Chair
 2013, MSc Examination (John Sous), Examiner
 2013, CHEM 494 Report (Kevin Bishop), Reader (March)
 2013, CHEM 494 Report (Kevin Trebych), Reader (March)
 2013, IQC/ Chemistry Search Committee, Member
 2013, Chemistry DACA Phys Chem / Chem Phys Search, Member
 2013, Chemistry Faculty Mentor (J. Burgess, Y, Shi, H. Singh, A. Gilchrist), Mentor

2012, PhD Advisory Committee (Prateek Goel), Student advisor
 2012, MSc Advisory Committee (Matt Schmidt), Student advisor
 2012, MSc Advisory Committee (Kathleen Wilson), Student advisor
 2012, MSc Advisory Committee (Nabil Faruk), Student advisor
 2012, MSc Advisory Committee (Lisa Hutfluss), Student advisor
 2012, (GWC)² Director nomination committee, member
 2012, PhD Examination (Shokouh Farvid), Examiner
 2012, MSc Examination (Steve Constable), Examiner
 2012, CHEM 494 Report (Kathleen Wilson), Reader (March)
 2012, CHEM 494 Seminars, Session Chair (July)
 2012, IQC/ Chemistry Search Committee, Member
 2012, Chemistry Faculty Mentor (J. Burgess, Y, Shi, H. Singh), Mentor

Other

2020, NSERC Evaluation Group EG1504 (Chemistry), in-coming chair [physical / analytical]
 2020, PhD Advisory Committee (Jacy Conrad; University of Guelph), Student advisor
 2020, PhD Advisory Committee (Andrew Finlay; University of Guelph), Student advisor
 2020, PhD Advisory Committee (Cody Landry; University of Guelph), Student advisor

- 2020, PhD Advisory Committee (Jason Sylvester; University of Guelph), Student advisor
2020, UW Symposium on Chemical Physics, Organizer
2020, UW Symposium on Chemical Physics, Session Chair
- 2019, NSERC Evaluation Group EG1504 (Chemistry), Member
2019, Member-at-large, Canadian Society for Chemistry PTC Division Executive Committee
2019, PhD Advisory Committee (Jacy Conrad; University of Guelph), Student advisor
2019, PhD Advisory Committee (Andrew Finlay; University of Guelph), Student advisor
2019, PhD Advisory Committee (Cody Landry; University of Guelph), Student advisor
2019, PhD Advisory Committee (Jason Sylvester; University of Guelph), Student advisor
2019, UW Symposium on Chemical Physics, Organizer
2019, UW Symposium on Chemical Physics, Session Chair
- 2018, PhD Examination Committee (Chris Alcorn; University of Guelph), Student advisor
2018, PhD Examination Committee (Jane Ferguson; University of Guelph), Student advisor
2018, PhD Advisory Committee (Cody Landry; University of Guelph), Student advisor
2018, PhD Advisory Committee (Jason Sylvester; University of Guelph), Student advisor
2018, Member-at-large, Canadian Society for Chemistry PTC Division Executive Committee
2018, PhD Advisory Committee (Chris Alcorn; University of Guelph), Student advisor
2018, PhD Advisory Committee (Jane Ferguson; University of Guelph), Student advisor
2018, PhD Advisory Committee (Jacy Conrad; University of Guelph), Student advisor
2018, UW Symposium on Chemical Physics, Organizer
2018, UW Symposium on Chemical Physics, Session Chair
- 2017, Member-at-large, Canadian Society for Chemistry PTC Division Executive Committee
2017, PhD Advisory Committee (Chris Alcorn; University of Guelph), Student advisor
2017, PhD Advisory Committee (Jane Ferguson; University of Guelph), Student advisor
2017, PhD Advisory Committee (Jacy Conrad; University of Guelph), Student advisor
2017, UW Symposium on Chemical Physics, Organizer
2017, UW Symposium on Chemical Physics, Session Chair
- 2016, Juror, Selection Committee for CSC E.W.R. Steacie Award
2016, Member-at-large, Canadian Society for Chemistry PTC Division Executive Committee
2016, PhD Advisory Committee (Chris Alcorn; University of Guelph), Student advisor
2016, PhD Advisory Committee (Jane Ferguson; University of Guelph), Student advisor
2016, PhD Advisory Committee (Jacy Conrad; University of Guelph), Student advisor
2016, 99th Canadian Chemistry Conference, Session Chair
2016, UW Symposium on Chemical Physics, Organizer
2016, UW Symposium on Chemical Physics, Session Chair
- 2015, PhD Advisory Committee (Chris Alcorn; University of Guelph), Student advisor
2015, PhD Advisory Committee (Jane Ferguson; University of Guelph), Student advisor
2015, PhD Advisory Committee (Jacy Conrad; University of Guelph), Student advisor
2015, Waterloo-Bordeaux "Interactions of Light and Matter" initiative, UW Representative
2015, Trent Conference on Mass Spectrometry, Session Chair
2015, UW Symposium on Chemical Physics, Organizer
2015, UW Symposium on Chemical Physics, Session Chair
- 2014, PhD Advisory Committee (Chris Alcorn; University of Guelph), Student advisor
2014, Waterloo-Bordeaux "Interactions of Light and Matter" initiative, UW Representative
2014, Trent Conference on Mass Spectrometry, Session Chair
2014, UW Symposium on Chemical Physics, Organizer
2014, UW Symposium on Chemical Physics, Session Chair
- 2013, PhD Advisory Committee (Chris Alcorn; University of Guelph), Student advisor
2013, PhD Advisory Committee (Kwame Agbovi; University of Guelph), Student advisor

2013, UW Symposium on Chemical Physics, Organizer
2013, UW Symposium on Chemical Physics, Session Chair
2013, PhD Examination Committee (Kristy Erikson; University of Guelph), Examiner

2012, "Chemistry Matters" departmental news letter, Contributor
2012, "CHEM 13 News" magazine, contributor
2012, UW Symposium on Chemical Physics, Organizer
2012, UW Symposium on Chemical Physics, Session Chair
2012, PhD Advisory Committee (Chris Alcorn; University of Guelph), Student advisor

Related Community Service

2019, Director of YouTube Channel "CPPC – Chem Phys Phys Chem"

2018, Guest on 570 News Tech Spotlight [Drug Discovery]
2018, Director of YouTube Channel "CPPC – Chem Phys Phys Chem"

2017, Guest on 570 News Tech Spotlight [Graham Supercomputer]
2017, Guest on 570 News Jennifer Campbell Show [Graham Supercomputer]
2017, Guest on Roundhouse Radio (Vancouver) with Kurt Lapointe [Drug Discovery]
2017, Director of YouTube Channel "CPPC – Chem Phys Phys Chem"

2016, Director of YouTube Channel "CPPC – Chem Phys Phys Chem"

2015, Director of YouTube Channel "CPPC – Chem Phys Phys Chem"

2014, Director of YouTube Channel "CPPC – Chem Phys Phys Chem"

2012, SOUSCC Physical & Theoretical Chemistry Division, Prize Judge
2012, Virtual Researcher on Call (VROC) outreach program, participant
2012, CSC Physical & Theoretical Chemistry Division, poster judge

E. PROFESSIONAL ACTIVITIES

Society Memberships and Positions Held

Canadian Society for Chemistry
Canadian Association of Physicists
Canadian Society for Mass Spectrometry
American Chemistry Society
American Society for Mass Spectrometry

Refereeing

Journals

2020, Journal of Physical Chemistry Letters
2020, Journal of Mass Spectrometry
2020, Journal of Physical Chemistry
2020, Journal of Aerosol Science
2020, Journal of the American Society for Mass Spectrometry
2020, Nature Communications

2019, Nature Communications
2019, Scientific Reports (x2)
2019, Angewandte Chemie (x2)

2019, Analytical Chemistry (x3)
2019, Physical Chemistry Chemical Physics
2019, International Journal of Mass Spectrometry
2019, Journal of the American Society for Mass Spectrometry (x2)
2019, Environmental Science and Technology
2019, Frontiers in Chemistry

2018, Journal of the American Chemical Society
2018, Physical Chemistry Chemical Physics
2018, Journal of Molecular Spectroscopy
2018, Analytica Chimica Acta

2017, Journal of the American Chemical Society (x2)
2017, Trends in Analytical Chemistry
2017, Journal of the American Society for Mass Spectrometry (x2)
2017, Physical Chemistry Chemical Physics (x2)
2017, Journal of Chemical Physics
2017, Analytica Chimica Acta (x2)
2017, International Journal of Mass Spectrometry (x3)
2017, New Journal of Chemistry (x3)
2017, Journal of Mass Spectrometry

2016, Journal of Physical Chemistry
2016, Analytical Chemistry
2016, Journal of Mass Spectrometry (x2)

2015, Canadian Journal of Chemistry
2015, Journal of Mass Spectrometry
2015, Physical Chemistry Chemical Physics

2014, Canadian Journal of Chemistry (x3)
2014, Applied Physics A (x2)
2014, Physical Chemistry Chemical Physics
2014, Journal of the American Society for Mass Spectrometry

2013, Journal of Chemical Physics
2013, Physical Chemistry Chemical Physics

2012, Journal of Chemical Physics

Promotion/Tenure Decisions

Nil

Grant Applications

2019, The Netherlands Organisation for Scientific Research (NWO), LIFT program
2019, The Netherlands Organisation for Scientific Research (NWO), VENI program
2019, The University of Vienna, Uni:Docs program

2018, NSERC Discovery Grant (x1)

2017, The Netherlands Organisation for Scientific Research (NWO), LIFT program

2014, NSERC Discovery Grant (x1)

2013, NSERC Discovery Grant (x2)

2012, NSERC Discovery Grant (x1)

Editorial Duties

Nil

Guest Editor

Nil

Reviewer Duties Journals and Granting Agencies

45 journal articles reviewed; 9 grant applications reviewed

Proceedings

Nil

External Thesis Examiner

Ph.D.

2018, Yiming Xiao, Dept. Chemistry, Western University, London, Canada

2018, Jane Ferguson, Department of Chemistry, University of Guelph

2018, Chris Alcorn, Dept. Chemistry, University of Guelph, Guelph, Canada

2017, Yasamin Alahmadi, Dept. Chemistry, Memorial University of Newfoundland, St. John's, Canada

2015, Jake Henkie, Dept. Chemistry, University of Guelph, Guelph, Canada

2013, Kristy Erikson, Dept. Chemistry, University of Guelph, Guelph, Canada.

External Ph.D. Committees

2012-2018, Chris Alcorn, Department of Chemistry, University of Guelph

2014-, Jane Ferguson, Department of Chemistry, University of Guelph

2015-, Jacy Conrad, Department of Chemistry, University of Guelph

M.Sc.

Nil

Consulting and Technology Transfer Activity

2020, Co-founder & Chief Executive Officer, WaterMine Innovations Inc.

2018, Co-founder & Chief Science Officer, WaterMine Innovations Inc.

2016, Science consultant on "Downsizing", Paramount Pictures