

# Leanne D. Chen

Associate Professor of Computational Chemistry, University of Guelph

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## BACKGROUND

### Academic Appointments

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| Jul 2025 – Ongoing  | <b>University of Guelph, Guelph, Ontario</b><br><i>Associate Professor, Department of Chemistry</i>  |
| Mar 2020 – Jun 2025 | <b>University of Guelph, Guelph, Ontario</b><br><i>Assistant Professor, Department of Chemistry</i>  |
| Jul 2017 – Jul 2019 | <b>California Institute of Technology, Pasadena, California</b><br><i>Postdoctoral Scholar, Division of Chemistry and Chemical Engineering</i> |

### Education

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| Sep 2012 – Jun 2017 | <b>Stanford University, Stanford, California</b><br><i>PhD in Physical Chemistry</i>      |
| Sep 2008 – Apr 2012 | <b>Queen's University, Kingston, Ontario</b><br><i>BScH with Distinction in Chemistry</i> |

## SCHOLARSHIP




### Publications

Total number of citations: 3499; number of citations for top first-author paper: 705; *h*-index: 19

\* denotes corresponding author, \_\_ denotes HQP supervised by L. D. Chen, † denotes equal contribution

- 43 | Sabouhanian, N.; [Laframboise, B. J. R.](#); Quintal, J.; Su, Z.; **Chen, L. D.\***; Lipkowski, J.\*; Chen, A.\* Efficient Conversion of CO<sub>2</sub> to Formic Acid at Nanostructured CuBi Catalyst: Electrochemical, Spectroscopic and DFT Studies. *Electrochim. Acta* **2026**, *550*, 148126. [🔗](#)
- 42 | [Johnston, S. J.](#); [Paget, B. D.](#); [Biesenthal, J. A.](#); [Quintal, D. J.](#); **Chen, L. D.\*** Concentration Effects of Co and Cu Dopants in  $\beta$ -Ni(OH)<sub>2</sub> on Ammonia Oxidation Activity and Selectivity. *J. Phys. Chem. C* **2026**, *130*, 257–268. Published in “Jacek Lipkowski Festschrift” Special Issue. [🔗](#)
- 41 | [Laframboise, B. J. R.](#)<sup>†</sup>; [Coveny, J.](#)<sup>†</sup>; [Zhou, J.](#); **Chen, L. D.\*** Computational Design of Pt-M (M = Au, Ir, Pd, Rh, and Ru) Binary Alloys for Enhanced Ammonia Oxidation Electrocatalysis. *ChemElectroChem* **2025**, *12*, e202500288. Invited Article. [🔗](#)
- 40 | van der Zalm, J.; Tang, B.; [Tatarchuk, S. W.](#); Al-Jeda, M.; Su, Z.; **Chen, L. D.**; Lipkowski, J.; Chen, A.\* Photoelectrochemical Degradation of 4-Nitrothiophenol and In Situ Surface-Enhanced Raman Spectroscopy Monitoring Based on Au Nanoparticles Grown on Templated TiO<sub>2</sub>. *J. Phys. Chem. C* **2025**, *129*, 15702–15712. Published in “Jacek Lipkowski Festschrift” Special Issue. [🔗](#)
- 39 | [Paget, B. D.](#); [Johnston, S. J.](#); [Lim, H.](#); **Chen, L. D.\*** A Density Functional Theory Investigation of Ammonia Oxidation Pathways on Nickel Oxide. *Nanoscale Adv.* **2025**, Advance Article. Part of “Nanomaterials for Catalysis and Sensing Applications” Themed Collection. [🔗](#)

- 38 | Choueiri, R. M.<sup>†</sup>; Tatarchuk, S. W.<sup>†</sup>; Parker, O. G.; Cooper, W. M.; **Chen, L. D.**\* Scaling Relations for Ammonia Oxidation. *Catal. Today* **2025**, *448*, 115179. Published in “27<sup>th</sup> Canadian Symposium on Catalysis: Catalyzing the Sustainable Production Paradigm” Special Issue. [🔗](#)
- 37 | Laframboise, B. J. R.; Johnston, S. J.; **Chen, L. D.**\* How Ir-Rh Alloys Improve Electrochemical Ammonia Oxidation Activity Studied by Density Functional Theory. *ChemCatChem* **2025**, *17*, e202401177. Published in “Catalysis Talents” Special Collection. [🔗](#)
- 36 | Johnston, S. J.; Choueiri, R. M.; Liu, X.; Laframboise, B. J. R.; Tatarchuk, S. W.; **Chen, L. D.**\* A Density Functional Theory Investigation of Ammonia Oxidation on the M-doped  $\beta$ -Ni(OH)<sub>2</sub> (M = Cr, Co, Cu, Fe) Surfaces. *J. Phys. Chem. C* **2024**, *128*, 5568–5578. Part of Virtual Special Issue “Jens K. Nørskov Festschrift”. [🔗](#)
- 35 | Pounder, A.; Neufeld, E.; **Chen, L. D.**\*; Tam, W.\* Nickel-Catalyzed Arylation/Lactonization Cascade Reactions for the Synthesis of Bicyclo[3.2.1]lactones. *Organometallics* **2024**, *43*, 2443–2449. Part of “Applied Organometallic Chemistry” Special Issue. [🔗](#)
- 34 | Tatarchuk, S. W.; Choueiri, R. M.; MacKay, A. J.; Johnston, S. J.; Cooper, W. M.; Snyder, K. S.; Medvedev, J. J.; Klinkova, A.\*; **Chen, L. D.**\* Understanding the Mechanism of Urea Oxidation from First-Principles Calculations. *ChemPhysChem* **2024**, *25*, e202300889. Part of Special Collection Dedicated to Jens Nørskov. [🔗](#)
- 33 | Pounder, A.; Neufeld, E.; **Chen, L. D.**\*; Tam, W.\* Rhodium-Catalyzed Ring-Opening Reactions of Heterobicyclic Alkenes with Heteroarene Nucleophiles: An Experimental and Computational Investigation. *Can. J. Chem.* **2024**, *102*, 696–705. Published in Special Issue: Celebrating 150 Years of Chemistry at the University of Guelph. [🔗](#)
- 32 | Snyder, K. S.; **Chen, L. D.**\*; Thomas, D. F.\* Vibrational Spectrum Perturbations of Alkanethiol Self Assembled Monolayers with Noble Gases and Chlorinated Species. *Can. J. Chem.* **2024**, *102*, 682–695. Published in Special Issue: Celebrating 150 Years of Chemistry at the University of Guelph. [🔗](#)
- 31 | Regan, K. T.; Pounder, A.; Lin, C.; **Chen, L. D.**\*; Manderville, R. A.\* Isomer-Specific Solvatochromic and Molecular Rotor Properties of ESIPT-Active Push–Pull Fluorescent Chalcone Dyes. *J. Phys. Chem. A* **2023**, *127*, 8365–8373. [🔗](#)
- 30 | Pounder, A.; Farkas, M.; **Chen, L. D.**\*; Tam, W.\* Iridium/Zinc Co-Catalyzed Ring-Opening Reactions of Oxabicyclic Alkenes with Indole Nucleophiles: A Combined Experimental and Theoretical Study. *Organometallics* **2023**, *42*, 780–792. [🔗](#)
- 29 | Hossain, M. N.; Choueiri, R. M.; Abner, S.; **Chen, L. D.**\*; Chen, A.\* Electrochemical Reduction of Carbon Dioxide at TiO<sub>2</sub>/Au Nanocomposites. *ACS Appl. Mater. Interfaces* **2022**, *14*, 51889–51899. [🔗](#)
- 28 | Choueiri, R. M.; **Chen, L. D.**\* Favorable Electrocatalytic Ammonia Oxidation Reaction Thermodynamics on the  $\beta$ -NiOOH(0001) Surface Computed by Density Functional Theory. *J. Phys. Chem. C* **2022**, *126*, 17952–17965. [🔗](#)
- 27 | Li, F.; Zhou, C.; Feygin, E.; Roy, P.-N.; **Chen, L. D.**\*; Klinkova, A.\* Reaction-Intermediate-Induced Atomic Mobility in Heterogeneous Metal Catalysts for Electrochemical Reduction of CO<sub>2</sub>. *Phys. Chem. Chem. Phys.* **2022**, *24*, 19432–19442. [🔗](#)
- 26 | Ho, A.<sup>†</sup>; Pounder, A.<sup>†</sup>; Valluru, K.; **Chen, L. D.**\*; Tam, W.\* Iridium-Catalyzed Hydroacylation Reactions of C<sub>T</sub>-Substituted Oxabenzonorbornadienes with Salicylaldehyde: An Experimental and Computational Study. *Beilstein J. Org. Chem.* **2022**, *18*, 251–261. [🔗](#)
- 25 | **(Commentary)** Choueiri, R. M.; **Chen, L. D.**\* Dynamic control of programmable catalysts offers new dimension for rate enhancement. *Chem Catal.* **2022**, *2*, 12–15. [🔗](#)
- 24 | Choueiri, R. M.; Tatarchuk, S. W.; Klinkova, A.; **Chen, L. D.**\* Mechanism of Ammonia Oxidation to Dinitrogen, Nitrite, and Nitrate on  $\beta$ -Ni(OH)<sub>2</sub> from First-Principles Simulations. *Electrochem. Sci. Adv.* **2022**, 2100142. [🔗](#)
- 23 | **(Commentary)** **Chen, L. D.**\* Cations play an essential role in CO<sub>2</sub> reduction. *Nat. Catal.* **2021**, *4*, 641–642. [🔗](#)
- 22 | Pounder, A.; Tam, W.; **Chen, L. D.**\* The Mechanism and Origin of Enantioselectivity in the Rhodium-Catalyzed Asymmetric Ring-Opening Reactions of Oxabicyclic Alkenes with Organoboronic Acids: A DFT Investigation. *Organometallics* **2021**, *40*, 1588–1597. [🔗](#)

- 21 | [Tatarchuk, S. W.](#); [Choueiri, R. M.](#); Medvedeva, X. V.; **Chen, L. D.\***; Klinkova, A.\* Inductive Effects in Cobalt-Doped Nickel Hydroxide Electronic Structure Facilitating Urea Electrooxidation. *Chemosphere*, **2021**, 279, 130550. 
- 20 | [Pounder, A.](#); [Bishop, F.](#); **Chen, L. D.\***; Tam, W.\* A DFT Study on the Mechanism and Origin of Regioselectivity in the Rhodium/Diene-Catalyzed Ring-Opening Reactions of Cr-Substituted Oxabenzonorbornadienes with Arylboronic Acids. *Eur. J. Org. Chem.* **2021**, 12, 1901–1908. 
- 19 | [Pounder, A.](#); **Chen, L. D.\***; Tam, W.\* Ruthenium-Catalyzed [2 + 2] versus Homo Diels-Alder [2 + 2 + 2] Cycloadditions of Norbornadiene and Disubstituted Alkynes: A DFT Study. *ACS Omega* **2021**, 6, 900–911. 

## Before Independent Career

- 18 | **Chen, L. D.<sup>†</sup>**; Lawniczak, J. J.<sup>†</sup>; Ding, F.; Bygrave, P. J.; Riahi, S.; Manby, F. R.; Mukhopadhyay, S.; Miller, T. F.\* Embedded Mean-Field Theory for Solution-Phase Transition-Metal Polyolefin Catalysis. *J. Chem. Theory Comput.* **2020**, 16, 4226–4237. 
- 17 | Gauthier, J. A.; **Chen, L. D.**; Bajdich, M.; Chan, K.\* Implications of the Fractional Charge of Hydroxide at the Electrochemical Interface. *Phys. Chem. Chem. Phys.* **2020**, 22, 6964–6969. 
- 16 | Ringe, S.\*; Morales-Guio, C. G.; **Chen, L. D.**; Fields, M.; Jaramillo, T. F.; Hahn, C.; Chan, K.\* Double layer charging driven CO<sub>2</sub> adsorption limits the rate of electrochemical CO<sub>2</sub> reduction on Au. *Nat. Commun.* **2020**, 11, 33. 
- 15 | Gauthier, J. A.; Fields, M.; Bajdich, M.; **Chen, L. D.**; Sandberg, R. B.; Chan, K.; Nørskov, J. K.\* Electron Transfer to CO<sub>2</sub> during Adsorption at the Metal | Solution Interface. *J. Phys. Chem. C* **2019**, 123, 29278–29283. 
- 14 | **Chen, L. D.<sup>†</sup>**; Bajdich, M.<sup>†</sup>; Martirez, J. M. P.; Krauter, C. M.; Gauthier, J. A.; Carter, E. A.; Luntz, A. C.; Chan, K.; Nørskov, J. K.\* Understanding the Apparent Fractional Charge of Protons in the Aqueous Electrochemical Double Layer. *Nat. Commun.* **2018**, 9, 3202. 
- 13 | Kirk, C.<sup>†</sup>; **Chen, L. D.<sup>†</sup>**; Siahrostami, S.<sup>†</sup>; Karamad, M.; Bajdich, M.; Voss, J.; Nørskov, J. K.; Chan, K.\* Theoretical Investigations of the Electrochemical Reduction of CO on Single Metal Atoms Embedded in Graphene. *ACS Cent. Sci.* **2017**, 3, 1286–1293. 
- 12 | Resasco, J.; **Chen, L. D.**; Clark, E. L.; Tsai, C.; Hahn, C.; Jaramillo, T. F.; Chan, K.; Bell, A. T.\* Promoter Effects of Alkali Metal Cations on the Electrocatalytic Reduction of Carbon Dioxide. *J. Am. Chem. Soc.* **2017**, 139, 11277–11287. 
- 11 | Gauthier, J. A.; Dickens, C. F.; **Chen, L. D.**; Doyle, A. D.; Nørskov, J. K.\* Solvation Effects for Oxygen Evolution Reaction Catalysis on IrO<sub>2</sub>(110). *J. Phys. Chem. C* **2017**, 121, 11455–11463. 
- 10 | Fields, M.; Tsai, C.; **Chen, L. D.**; Abild-Pedersen, F.; Nørskov, J. K.; Chan, K.\* Scaling Relations for Adsorption Energies on Doped Molybdenum Phosphide Surfaces. *ACS Catal.* **2017**, 7, 2528–2534. 
- 9 | **Chen, L. D.**; Urushihara, M.; Chan, K.; Nørskov, J. K.\* Electric Field Effects in Electrochemical CO<sub>2</sub> Reduction. *ACS Catal.* **2016**, 6, 7133–7139. 
- 8 | Tsai, C.; Lee, K.; Yoo, J. S.; Liu, X.; Aljama, H.; **Chen, L. D.**; Dickens, C. F.; Geisler, T. S.; Guido, C. J.; Joseph, T. M.; Kirk, C. S.; Latimer, A. A.; Loong, B.; McCarty, R. J.; Montoya, J. H.; Power, L.; Singh, A. R.; Willis, J. J.; Winterkorn, M. M.; Yuan, M.; Zhao, Z.-J.; Wilcox, J.; Nørskov, J. K.\* Direct Water Decomposition on Transition Metal Surfaces. *Catal. Lett.* **2016**, 146, 718–724. 
- 7 | **Chen, L. D.**; Nørskov, J. K.; Luntz, A. C.\* Theoretical Limits to the Anode Potential in Aqueous Mg–Air Batteries. *J. Phys. Chem. C* **2015**, 119, 19660–19667. 
- 6 | **Chen, L. D.**; Nørskov, J. K.; Luntz, A. C.\* Al–Air Batteries: Fundamental Thermodynamic Limitations from First-Principles Theory. *J. Phys. Chem. Lett.* **2014**, 6, 175–179. 

- 5 | Neverov, A. A.; **Chen, L. D.**; George, S.; Simon, D.; Maxwell, C. I.; Brown, R. S.\* A mechanistic study of the  $[\text{La}_2(\text{OCH}_3)_2]^{4+}$ - and  $[(1,5,9\text{-triazacyclododecane}):\text{Zn}:(\text{OCH}_3)]^+$ -catalyzed methanolysis of carbonates: possible application for the recycling of bisphenol A polycarbonates. *Can. J. Chem.* **2013**, *91*, 1139–1146. [🔗](#)
- 4 | Wang, N.; Ko, S.-B.; Lu, J.-S.; **Chen, L. D.**; Wang, S.\* Tuning the Photoisomerization of an N<sup>^</sup>C-Chelate Organoboron Compound with a Metal–Acetylide Unit. *Chem. Eur. J.* **2013**, *19*, 5314–5323. [🔗](#)
- 3 | Rao, Y.-L.; Amarne, H.; **Chen, L. D.**; Brown, M. L.; Mosey, N. J.; Wang, S.\* Photo- and Thermal-induced Multistructural Transformation of 2-Phenylazolyl Chelate Boron Compounds. *J. Am. Chem. Soc.* **2013**, *135*, 3407–3410. [🔗](#)
- 2 | Rao, Y.-L.; **Chen, L. D.**; Mosey, N. J.; Wang, S.\* Stepwise Intramolecular Photoisomerization of NHC-Chelate Dimesitylboron Compounds with C–C Bond Formation and C–H Bond Insertion. *J. Am. Chem. Soc.* **2012**, *134*, 11026–11034. [🔗](#)
- 1 | Sun, C.; Hudson, Z. M.; **Chen, L. D.**; Wang, S.\* Double Cyclization/Aryl Migration Across an Alkyne Bond Enabled by Organoboryl and Diarylplatinum Groups. *Angew. Chem. Int. Ed.* **2012**, *51*, 5671–5674. [🔗](#)

## External Funding

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All amounts are in CAD unless otherwise specified.

Totals to-date: \$581,565 (as Principal Investigator), \$150,000 (as Co-Applicant), \$75,546 (as Collaborator)

Jul 2025 – Apr 2026	<p><b>Digital Research Alliance of Canada Resources for Research Groups Competition</b></p> <ul style="list-style-type: none"> <li>• Role: Principal Investigator</li> <li>• Amount Awarded (In-Kind): \$45,513</li> </ul>
Apr 2023 – Mar 2024	<p><b>Digital Research Alliance of Canada Resources for Research Groups Competition</b></p> <ul style="list-style-type: none"> <li>• Role: Principal Investigator</li> <li>• Amount Awarded (In-Kind): \$20,610</li> </ul>
Apr 2022 – Mar 2023	<p><b>NSERC Research Tools and Instruments Program</b></p> <ul style="list-style-type: none"> <li>• Role: Co-Applicant</li> <li>• Amount Awarded: \$150,000</li> </ul>
Apr 2022 – Mar 2023	<p><b>Digital Research Alliance of Canada Resources for Research Groups Competition</b></p> <ul style="list-style-type: none"> <li>• Role: Principal Investigator</li> <li>• Amount Awarded (In-Kind): \$30,258</li> </ul>
Apr 2021 – Mar 2022	<p><b>Compute Canada Resources for Research Groups Competition</b></p> <ul style="list-style-type: none"> <li>• Role: Principal Investigator</li> <li>• Amount Awarded (In-Kind): \$27,544</li> </ul>
Mar 2021 – Mar 2023	<p><b>New Frontiers for Research Fund – Exploration</b></p> <ul style="list-style-type: none"> <li>• Role: Nominated Principal Investigator</li> <li>• Amount Awarded: \$200,000 (Direct), \$50,000 (Indirect)</li> </ul>
Aug 2020 – Mar 2021	<p><b>Agricultural Clean Technology Program</b></p> <ul style="list-style-type: none"> <li>• Role: Collaborator</li> <li>• Amount Awarded: \$75,546</li> </ul>
Apr 2020 – Mar 2027	<p><b>NSERC Discovery Grant and Discovery Launch Supplement</b></p> <ul style="list-style-type: none"> <li>• Role: Principal Investigator</li> <li>• Amount Awarded: \$207,640</li> </ul>

## Conference Organization and Moderation

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Oct 2024 – Mar 2025	<p><b>53<sup>rd</sup> Southern Ontario Undergraduate Student Chemistry Conference, Guelph, Ontario</b></p> <ul style="list-style-type: none"><li>• Role: Conference Co-Organizer (Organizer: Lara Watanabe; Co-Organizers: France-Isabelle Auzanneau, Rui Huang, Jennifer Murphy)</li><li>• Responsibilities: attend planning meetings, fundraise through the Chemical Institute of Canada and industrial organizations</li></ul>
Feb 2023 – Aug 2024	<p><b>75<sup>th</sup> Annual Meeting of the International Society of Electrochemistry, Montréal, Québec</b></p> <ul style="list-style-type: none"><li>• Role: Symposium Co-Organizer (Organizer: Olaf Magnussen; Co-Organizers: Jun Cheng, Daniel Guay)</li><li>• Symposium: Double Layer Reloaded: Theory Meets Experiment</li><li>• Responsibilities: define scope of symposium, develop list of Canadian and international invited speakers, review abstracts</li></ul>
Jun 2024 – Jul 2024	<p><b>30<sup>th</sup> CSTCC, Halifax, Nova Scotia</b></p> <ul style="list-style-type: none"><li>• Role: Session Chair</li><li>• Session: Solid State</li><li>• Responsibilities: introduce speakers at the conference</li></ul>
Apr 2023 – Jun 2024	<p><b>CSC 2024, Winnipeg, Manitoba</b></p> <ul style="list-style-type: none"><li>• Role: Symposium Organizer (Co-Organizer: Samira Siahrostami)</li><li>• Symposium: Theory-Guided Discovery of Energy Materials</li><li>• Responsibilities: define scope of symposium, develop list of Canadian and international invited speakers, review abstracts and create schedule, introduce speakers at the conference</li></ul>
Sep 2022 – Jun 2023	<p><b>CSC 2023, Vancouver, British Columbia</b></p> <ul style="list-style-type: none"><li>• Role: Symposium Organizer (Co-Organizer: Samira Siahrostami)</li><li>• Symposium: Theory-Guided Discovery of Energy Materials</li><li>• Responsibilities: define scope of symposium, develop list of Canadian and international invited speakers, review abstracts and create schedule, introduce speakers at the conference</li></ul>
Jun 2022 – Jul 2022	<p><b>12<sup>th</sup> WATOC, Vancouver, British Columbia</b></p> <ul style="list-style-type: none"><li>• Role: Session Chair</li><li>• Session: Invited Communications 2C</li><li>• Responsibilities: introduce speakers at the conference</li></ul>
Apr 2021 – Jun 2022	<p><b>105<sup>th</sup> CCCE, Calgary, Alberta</b></p> <ul style="list-style-type: none"><li>• Role: Symposium Organizer (Co-Organizer: Oleksandr Voznyy)</li><li>• Symposium: Theory Guided Discovery of Energy Materials</li><li>• Responsibilities: define scope of symposium, create list of Canadian and international invited speakers, communicate with other symposium organizers in Physical, Theoretical, and Computational Chemistry Division to ensure no significant overlap, introduce speakers at the conference</li></ul>
Oct 2021 – Nov 2021	<p><b>AIChE Annual Meeting, Boston, Massachusetts</b></p> <ul style="list-style-type: none"><li>• Role: Session Chair</li><li>• Session: Fundamentals of Catalysis and Surface Science (Virtual)</li><li>• Responsibilities: inform speakers of AIChE presentation policies, maintain regular communication with abstract authors and area chairs, introduce speakers at the conference</li></ul>

Jan 2021 – Oct 2021	<b>71<sup>st</sup> CCEC, Montréal, Québec</b> <ul style="list-style-type: none"> <li>• Role: Session Co-Organizer</li> <li>• Session: Computational Catalysis, Chemical Kinetics, and Machine Learning</li> <li>• Responsibilities: develop invited speakers list, advertise session to community, review submitted abstracts, maintain regular communication with accepted authors, introduce speakers at the conference</li> </ul>
Mar 2021 – Jul 2021	<b>VSTC<sup>3</sup>, Virtual</b> <ul style="list-style-type: none"> <li>• Role: Organizing Committee Member</li> <li>• Responsibilities: develop invited speakers list, review abstracts, coordinate with schedules of invited speakers to create the conference program</li> </ul>
Oct 2020 – Nov 2020	<b>AIChE Annual Meeting, Virtual</b> <ul style="list-style-type: none"> <li>• Role: Session Co-Chair</li> <li>• Session: Electrocatalysis I, Organic Electrocatalysis</li> <li>• Responsibilities: introduce speakers at the conference</li> </ul>

### Invited Conference, Workshop, and University Department Talks (41 Total)

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#### 31 Contributed Presentations Not Listed

Aug 2025	<b>Third Annual ECS Guelph Young Researcher Symposium, Guelph, Ontario (Keynote)</b> “Understanding Ammonia Oxidation on Transition Metals”
Feb 2025	<b>Wilfrid Laurier University Chemistry &amp; Biochemistry Departmental Seminar, Waterloo, Ontario</b> “Understanding Ammonia Oxidation on Transition Metals”
Sep 2024	<b>McMaster University Chemistry &amp; Chemical Biology Departmental Seminar, Hamilton, Ontario</b> “Understanding Ammonia Oxidation on Transition Metals”
Jun 2024	<b>Diverse Applications of Electrochemistry Symposium at CSC, Winnipeg, Manitoba</b> “Understanding the Mechanism of Urea Oxidation from First-Principles Calculations”
Nov 2023	<b>University of Ottawa Chemistry Departmental Seminar, Ottawa, Ontario</b> “Understanding the Electrochemical Ammonia and Urea Oxidation Reactions”
Nov 2023	<b>Carleton University Chemistry Departmental Seminar, Ottawa, Ontario</b> “Understanding the Electrochemical Ammonia and Urea Oxidation Reactions”
Nov 2023	<b>Queen’s University Chemistry Departmental Seminar, Kingston, Ontario</b> “Understanding the Electrochemical Ammonia and Urea Oxidation Reactions”
Nov 2023	<b>37<sup>th</sup> Waterloo Symposium on Chemical Physics, Waterloo, Ontario</b> “Understanding the Electrochemical Ammonia and Urea Oxidation Reactions”
Oct 2023	<b>University of Toronto Physical Chemistry Seminar Series, Toronto, Ontario</b> “Understanding the Electrochemical Ammonia and Urea Oxidation Reactions”
Jun 2023	<b>Design and Evaluation of Electrochemical Interfaces Symposium at CSC, Vancouver, British Columbia</b> “Scaling Relations for the Electrocatalytic Ammonia Oxidation Reaction”
May 2023	<b>Centre for Research in Molecular Modelling Symposium, Montréal, Québec</b> “Scaling Relations for the Electrocatalytic Ammonia Oxidation Reaction”
Apr 2023	<b>Texas Tech University Department of Chemical Engineering Seminar Series, Virtual</b> “Scaling Relations for the Electrocatalytic Ammonia Oxidation Reaction”

Apr 2023	<b>University of Windsor Department of Chemistry Seminar Series, Virtual</b> “Scaling Relations for the Electrocatalytic Ammonia Oxidation Reaction”
Apr 2023	<b>Chemical Institute of Canada PTC Seminar Series, Virtual</b> “Scaling Relations for the Electrocatalytic Ammonia Oxidation Reaction”
Sep 2022	<b>Catalysis and Modelling Symposium, Copenhagen, Denmark</b> “First-Principles Simulations of Ni-based Materials for Electrochemical Ammonia Oxidation”
Jul 2022	<b>12<sup>th</sup> WATOC, Vancouver, British Columbia</b> “First-Principles Simulations of Ni-based Materials for Electrochemical Ammonia Oxidation”
Jun 2022	<b>29<sup>th</sup> CSTCC, Kelowna, British Columbia</b> “First-Principles Modelling of Electrochemical Reactions”
Jun 2022	<b>Designing Electrocatalyst Materials for Clean Energy Symposium at CCCE, Calgary, Alberta</b> “First-Principles Simulations of Ni-based Materials for Electrochemical Ammonia Oxidation”
Apr 2022	<b>Canada’s Rising Stars in Electrochemical Systems Symposium, Virtual</b> “First-Principles Simulations of Ni-based Materials for Electrochemical Ammonia and Urea Oxidation”
Aug 2021	<b>Celebrating the Life of Suning Wang Symposium at CCCE, Virtual</b> “First-Principles Modelling of Heterogeneous Electrochemical Reactions”
Jun 2021	<b>ETC-ECS UGSC Speaker Series, Virtual</b> “Ab Initio Computational Modelling of Electrochemical Reactions”
May 2021	<b>ECS Canada Section Spring Meeting, Virtual</b> “First-Principles Simulations of Ni-based Materials for Electrochemical Ammonia Oxidation”
Apr 2021	<b>York University Department of Chemistry Winter Seminar Series, Virtual</b> “Ab Initio Computational Modelling of Electrochemical Reactions”
Feb 2021	<b>Chemical Institute of Canada PTC Seminar Series, Virtual</b> “Ni-based Materials for Electrochemical Ammonia Oxidation”
Oct 2020	<b>(GWC)<sup>2</sup> Fall Seminar Series, Virtual</b> “Ab Initio Computational Modelling of Electrochemical Reactions”
Oct 2020	<b>University of Toronto Physical Chemistry Seminar Series, Virtual</b> “Ab Initio Computational Modelling of Electrochemical Reactions”
May 2020	<b>University of Guelph MLRG Seminar, Virtual</b> “Atomic-Scale Computational Insight into Electrochemical Reactions: from Mechanistic Understanding to Materials Engineering”
Mar 2020	<b>University of Waterloo Chemistry Departmental Seminar, Waterloo, Ontario</b> “Atomic-Scale Computational Insight into Electrochemical Reactions: from Mechanistic Understanding to Materials Engineering”
Oct 2019	<b>University of Seoul Computational Catalysis &amp; Materials Design Lab, Seoul, South Korea</b> “Understanding the Apparent Fractional Charge of Protons in the Aqueous Electrochemical Double Layer”
Oct 2019	<b>KAIST Complex Molecular-Systems Multiscale Design Lab, Daejeon, South Korea</b> “Atomic-Scale Computational Insight into Electrochemical Reactions: from Mechanistic Understanding to Materials Engineering”
Aug 2019	<b>Lawrence Livermore National Laboratory, Livermore, California</b> “Exploring the Potential of Metal-Doped Graphene as Improved Electrocatalysts for CO <sub>2</sub> Reduction Using Embedded Mean-Field Theory”

Aug 2019	<b>Toyota Research Institute, Los Altos, California</b> “Understanding the Apparent Fractional Charge of Protons in the Aqueous Electrochemical Double Layer”
Apr 2019	<b>257<sup>th</sup> ACS National Meeting, Orlando, Florida</b> “Understanding the Apparent Fractional Charge of Protons in the Aqueous Electrochemical Double Layer”
Mar 2019	<b>University of Guelph Chemistry Departmental Seminar, Guelph, Ontario</b> “Atomic-Scale Computational Insight into Electrochemical Reactions: from Mechanistic Understanding to Materials Engineering”
Feb 2019	<b>University of Colorado Boulder Chemical Engineering Departmental Seminar, Boulder, Colorado</b> “Atomic-Scale Computational Insight into Electrochemical Reactions: from Mechanistic Understanding to Materials Engineering”
Jan 2019	<b>University of Delaware Chemical Engineering Departmental Seminar, Newark, Delaware</b> “Atomic-Scale Computational Insight into Electrochemical Reactions: from Mechanistic Understanding to Materials Engineering”
Jan 2019	<b>York University Chemistry Departmental Seminar, Toronto, Ontario</b> “Atomic-Scale Computational Insight into Electrochemical Reactions: from Mechanistic Understanding to Materials Engineering”
Dec 2018	<b>JCAP Theory Meeting, Menlo Park, California</b> “Quantum Embedding Methods for CO <sub>2</sub> Reduction Catalysis”
Aug 2017	<b>Dynamics at Surfaces Gordon Research Conference, Newport, Rhode Island</b> “First-Principles Modelling of the Electrochemical Interface: Applications to CO <sub>2</sub> Reduction and Beyond”
Feb 2017	<b>MIT Chemical Engineering Departmental Seminar, Cambridge, Massachusetts</b> “Electrochemical Energy Transformation Processes: An Atomistic Perspective”
Jun 2016	<b>University of Toronto Electrical Engineering Departmental Seminar, Toronto, Ontario</b> “Electrochemical Energy Transformation Processes: An Atomistic Perspective”



## Postdoctoral Scholar Supervision

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May 2025 – Ongoing	Jingwen Zhou
May 2021 – Apr 2023	Rachelle Choueiri
Jun 2020 – Apr 2021	Rachelle Choueiri (co-supervised with Anna Klinkova)

## Refereeing Activity

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Verified but incomplete records of my journal refereeing activity can be found at ORCID  and Web of Science 

May 2015 – Ongoing	<p>Referee activity for journals, format: <i>Journal Name</i> (number of reviews conducted), total: 145</p> <ul style="list-style-type: none"> <li>• <i>ACS Applied Energy Materials</i> (1)</li> <li>• <i>ACS Catalysis</i> (3)</li> <li>• <i>ACS Materials Letters</i> (2)</li> <li>• <i>ACS Omega</i> (1)</li> <li>• <i>Angewandte Chemie</i> (1)</li> <li>• <i>Applied Catalysis B: Environment and Energy</i> (1)</li> <li>• <i>Applied Surface Science</i> (2)</li> <li>• <i>Canadian Journal of Chemistry</i> (8)</li> <li>• <i>Catalysis Science &amp; Technology</i> (1)</li> </ul>
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- *Cell Reports Physical Science* (1)
- *Chem Catalysis* (4)
- *Chemical Engineering Journal* (3)
- *Chemical Science* (4)
- *Chemistry – A European Journal* (1)
- *ChemPhysChem* (2)
- *ChemSusChem* (1)
- *Communications Chemistry* (1)
- *Electrochimica Acta* (11)
- *Energy & Environmental Science* (34)
- *Energy & Fuels* (2)
- *Inorganic Chemistry* (1)
- *International Journal of Hydrogen Energy* (1)
- *Ionics* (1)
- *iScience* (2)
- *Journal of the American Chemical Society* (4)
- *Journal of Materials Chemistry A* (1)
- *Journal of Power Sources* (1)
- *Langmuir* (1)
- *Molecular Systems Design and Engineering* (1)
- *Nano Letters* (1)
- *Nanotechnology* (1)
- *Nature Catalysis* (9)
- *Nature Chemistry* (1)
- *Nature Communications* (11)
- *Nature Energy* (3)
- *Nature Sustainability* (1)
- *Nature Synthesis* (1)
- *Physical Chemistry Chemical Physics* (15)
- *Scientific Reports* (1)
- *Small* (1)
- *The Journal of Chemical Physics* (2)
- *The Journal of Physical Chemistry* (2)

Apr 2024 – Ongoing	Reviewer, Mitacs Elevate/Accelerate Programs (3)
Jan 2023 – Ongoing	External Reviewer, NSERC Discovery Grants Program (5)
Nov 2025 – Dec 2025	Reviewer, National Agency for Research and Development, Government of Chile
Jul 2025 – Sep 2025	External Reviewer, Tenure & Promotion Application, Dalhousie University
Nov 2024 – Dec 2024	Reviewer, 29 <sup>th</sup> North American Catalysis Society Meeting
Sep 2024 – Oct 2024	Reviewer, GTIIT Seed Grants
Jul 2023 – Jul 2023	Reviewer, Fulbright STEM Impact Award
May 2023 – Jul 2023	Reviewer, DOE Office of Science
Sep 2022 – Dec 2022	Reviewer, Fulbright Senior Award
Nov 2021 – Dec 2021	External Reviewer, New Frontiers in Research Fund – Exploration
Apr 2021 – May 2021	Reviewer, IOP Publishing textbook proposal
Feb 2019 – Mar 2019	Reviewer, PSC CUNY Cycle 50

## News Articles

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- Dec 2025 | **College of Computational, Mathematical, and Physical Sciences News**  
“Computational Modelling of Nickel Oxide is Helping Power Sustainable Energy” 
- Oct 2025 | **University of Guelph News**  
“2025 Research Excellence Awards Honour Impactful Scholarship” 
- Oct 2025 | **Department of Chemistry News**  
“L. Chen Group Publishes Article with Cover Art by MSc Student Brendan Paget” 
- Jun 2022 | **College of Engineering and Physical Sciences News**  
“2022 CEPS Awards” 
- Apr 2022 | **College of Engineering and Physical Sciences News**  
“Chemistry Innovations to Reduce Byproduct Waste” 
- Jun 2021 | **College of Engineering and Physical Sciences Highlight**  
“Q&A with Dr. Leanne Chen” 
- May 2021 | **University of Guelph News**  
“Prof Awarded Funding to Develop Technology to Curb Agricultural Emissions” 
- Apr 2020 | **College of Engineering and Physical Sciences Highlight**  
“Earth Day 2020” 
- Jan 2016 | **AIChE ChEnected**  
“Graduate Research Spotlight: Meet Leanne Chen” 

## Scholarships and Awards

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- Aug 2025 | University of Guelph Research Excellence Award
- Mar 2024 | Outstanding Reviewer for *Energy & Environmental Science*
- Jun 2022 | CEPS Assistant Professor Research Excellence Award
- Jun 2018 | Gordon Research Seminar in Catalysis Presentation Award
- Jun 2017 | North American Catalysis Society Kokes Award
- Apr 2013 | NSERC Alexander Graham Bell Canada Graduate Scholarship (CGS D3, declined for PGS D3)
- Apr 2012 | NSERC Alexander Graham Bell Canada Graduate Scholarship (CGS M, declined for PGS M)
- Apr 2012 | Walter MacFarlane Smith Prize in Chemistry for Best Thesis
- Mar 2012 | DAAD Professional Research Internships in Science and Engineering
- Mar 2012 | Best Oral Presentation in Physical Chemistry, 40<sup>th</sup> SOUSCC
- Feb 2011 | NSERC Undergraduate Student Research Award
- Dec 2010 | Dr. Erwin Bunzel Scholarship in Organic Chemistry
- Dec 2010 | The Robert Y. Moir Scholarship
- Sep 2008 | Queen’s University Excellence Scholarship

## Editorial Roles

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May 2025 – Ongoing	Editorial Board Member, <i>Academia Catalysis</i>
Apr 2025 – Ongoing	Guest Editor for “Focus on Computational Methods in Energy Research at the Nanoscale” Collection, <i>Nanotechnology</i> , IOP Publishing
Apr 2025 – Ongoing	Guest Editor for “Focus on the Electrochemical Technology Centre at the University of Guelph” Collection, <i>Nanotechnology</i> , IOP Publishing
Jan 2025 – Ongoing	Editorial Board Member, <i>Nanotechnology</i> , IOP Publishing
Dec 2020 – Ongoing	Review Editor, <i>Modelling, Theory and Computational Catalysis</i> , <i>Frontiers in Catalysis</i>
May 2020 – Ongoing	Editorial Advisory Board Member, <i>Electrochemical Science Advances</i> , Wiley
Jun 2024 – Dec 2025	Guest Editor for “Double Layer Reloaded: Theory Meets Experiment” Special Issue, <i>Electrochimica Acta</i> , Elsevier
May 2023 – May 2024	Guest Editor for “Engineering Dynamic Catalysts: Methods, Theory, and Application” Special Issue, <i>iScience</i> , Cell Press

## TEACHING

### Courses

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Jan 2026 – Ongoing	CHEM*6030, Foundations of Theoretical and Computational Chemistry (Graduate) <ul style="list-style-type: none"><li>• Role: Instructor</li><li>• Responsibilities: create course materials, deliver lectures, assign problem sets, grade problem sets, evaluate midterm and final projects</li></ul>
Sep 2022 – Ongoing	CHEM*3860, Quantum Chemistry (Undergraduate) <ul style="list-style-type: none"><li>• Role: Instructor</li><li>• Responsibilities: create course materials, deliver lectures, hold weekly office hours, coordinate with TA to deliver tutorials, author midterm and final exams, grade midterm and final exams</li></ul>
Sep 2021 – Ongoing	CHEM*7500, Topics in Computational Chemistry (Graduate) <ul style="list-style-type: none"><li>• Role: Instructor</li><li>• Responsibilities: create course materials, deliver lectures, hold weekly office hours, assign problem sets, grade problem sets, evaluate midterm and final projects</li></ul>
Sep 2020 – Ongoing	CHEM*2820, Thermodynamics and Kinetics (Undergraduate) <ul style="list-style-type: none"><li>• Role: Instructor</li><li>• Responsibilities: create course materials, deliver lectures, hold weekly office hours, assign problem sets, create rubrics for problem sets, author midterm and final exams, grade midterm and final exams, coordinate with TA to deliver tutorials, communicate with TA about grading problem sets</li></ul>

### Student Advising and Supervising

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Default role is Primary Supervisor unless otherwise specified

## Graduate Student Supervision

Sep 2025 – Ongoing		Julia Coveny, MSc
Jan 2025 – Ongoing		Henry Lim, MSc
Jan 2024 – Ongoing		Brendan Paget, MSc
Sep 2021 – Ongoing		Stephen Tatarchuk, PhD
May 2023 – Aug 2025		Brendan Laframboise, MSc
Sep 2022 – Aug 2025		Shayne Johnston, MSc
May 2020 – Apr 2024		Austin Pounder, PhD (co-supervised with William Tam)
Sep 2020 – Dec 2023		Kayla Snyder, PhD (co-supervised with Daniel Thomas)

## Undergraduate Research Project

Jan 2025 – Apr 2025		Jesper Biesenthal, CHEM*4900
Sep 2024 – Apr 2025		Julia Coveny, CHEM*4900/4910
Sep 2024 – Dec 2024		Daniel Quintal, CHEM*4900
Sep 2023 – Apr 2024		William Cooper, NANO*4910/4920
Sep 2021 – Apr 2022		Shayne Johnston, CHEM*4900/4910
Jan 2021 – Apr 2021		Alexander Sweett, CHEM*4900
Sep 2020 – Apr 2021		Katrina Ruzicka, CHEM*4900/4910 (co-supervised with William Tam)
Sep 2020 – Apr 2021		Krish Kiran Valluru, CHEM*4900/4910 (co-supervised with William Tam)
Sep 2020 – Dec 2020		Megan Farkas, CHEM*4910 (co-supervised with William Tam)
Sep 2020 – Dec 2020		Mirna Ghattas, CHEM*4910
Sep 2020 – Dec 2020		Cassandra Rooke, CHEM*4910 (co-supervised with William Tam)
Sep 2020 – Dec 2020		Taylor Rounds, CHEM*4910 (co-supervised with William Tam)
Sep 2020 – Dec 2020		Lindsey Starkman, CHEM*4910
Sep 2020 – Dec 2020		Fiona Bishop, CHEM*4900 (co-supervised with William Tam)
Sep 2020 – Dec 2020		Laura Martin, CHEM*4900
May 2020 – Aug 2020		Chelsea D’Cruz, CHEM*4900

## Undergraduate Research Assistant

May 2025 – Aug 2025		Julia Coveny, NSERC Undergraduate Student Research Award
May 2024 – Aug 2024		Alexander MacKay, Undergraduate Research Award
May 2024 – Aug 2024		William Cooper, Research Assistant I
Apr 2024 – Aug 2024		Olivia Parker, Research Assistant I
May 2022 – Aug 2022		Xinrun Liu, Provost International Coop Initiative Research Assistant
May 2022 – Aug 2022		Alexander MacKay, Undergraduate Research Award

## **Awards, Scholarships and Distinctions Received by HQP**

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Sep 2025	Julia Coveny, Graduate Tuition Scholarship ( <b>\$6,000</b> )
Jul 2025	Jingwen Zhou, Jacek Lipkowski Award ( <b>\$500</b> )
May 2025	Shayne Johnston, Braithwaite Conference Travel Grant ( <b>\$300</b> )
May 2025	Brendan Paget, Braithwaite Conference Travel Grant ( <b>\$500</b> )
May 2025	Brendan Laframboise, R. H. F. Manske Prize ( <b>\$750</b> )
May 2025	Brendan Paget, MSc Seminar Prize ( <b>\$200</b> )
Mar 2025	Jesper Biesenthal, Egelstaff Physics Scholarship ( <b>\$500</b> )
Jul 2024	Brendan Laframboise, Ontario Graduate Scholarship ( <b>\$15,000</b> )
May 2024	Brendan Paget, CEPS Dean's Graduate Entrance Scholarship ( <b>\$5,000</b> )
May 2024	Olivia Parker, College of Engineering & Physical Sciences Society of Excellence ( <b>\$200</b> )
May 2024	Brendan Laframboise, Braithwaite Conference Travel Grant ( <b>\$700</b> )
May 2024	Stephen Tatarchuk, Braithwaite Conference Travel Grant ( <b>\$1,200</b> )
Mar 2024	Julia Coveny, Chemical Institute of Canada Silver Medal ( <b>Engraved Medal</b> )
Mar 2024	Alexander MacKay, Nanoscience Scholarship ( <b>\$1,000</b> )
Mar 2024	Olivia Parker, CEPS Leadership Scholarship ( <b>\$1,000</b> )
Dec 2023	Austin Pounder, Alberta Innovates Postdoctoral Fellowship ( <b>\$140,000</b> )
May 2023	Stephen Tatarchuk, NSERC CGS D3 ( <b>\$105,000</b> )
May 2023	Stephen Tatarchuk, R. H. F. Manske Prize ( <b>\$750</b> )
Apr 2023	Stephen Tatarchuk, Queen Elizabeth II Graduate Scholarship in Science and Technology ( <b>\$15,000</b> )
Mar 2023	Brendan Laframboise, Stephen Safe Scholarships in Chemistry ( <b>\$2,500</b> )
Mar 2023	Brendan Paget, Guelph Soap Company Scholarship ( <b>\$1,500</b> )
Mar 2023	Olivia Parker, Thermodynamics and Kinetics Scholarship ( <b>\$1,400</b> )
May 2022	Austin Pounder, Charles S. Humphrey Graduate Fellowship in Chemistry ( <b>\$5,000</b> )
Apr 2022	Stephen Tatarchuk, Queen Elizabeth II Graduate Scholarship in Science and Technology ( <b>\$15,000</b> )
Mar 2022	Alexander MacKay, Nanoscience Scholarship ( <b>\$1,000</b> )
Mar 2022	Austin Pounder, College of Engineering and Physical Sciences Graduate Dean's Scholarship ( <b>\$3,500</b> )
Feb 2022	Kayla Snyder, Good Samaritan Award ( <b>\$1,000</b> )
Sep 2021	Austin Pounder, NSERC PGS D3 ( <b>\$63,000</b> )
Mar 2021	Fiona Bishop, Chemical Institute of Canada Silver Medal ( <b>Engraved Medal</b> )
Mar 2021	Mirna Ghattas, Paul Rowntree Memorial Scholarship ( <b>\$1,000</b> )
Mar 2021	Taylor Rounds, CEPS Dean's Scholarship ( <b>\$2,000</b> )
Mar 2021	Taylor Rounds, Lautens Prize in Organic Chemistry ( <b>\$1,500</b> )

- Mar 2021 | Katrina Ruzicka, Chemical Institute of Canada Silver Medal (**Engraved Medal**)
- Mar 2021 | Kayla Snyder, Chemistry Laboratory Instructor Scholarship (**\$250**)
- Mar 2021 | Krish Kiran Valluru, Guelph Soap Company Scholarship (**\$1,500**)

## **Meetings and Workshops Attended by HQP**

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- Nov 2025 | Julia Coveny, 39<sup>th</sup> Symposium on Chemical Physics, Waterloo, Ontario (Poster Presentation)
- Nov 2025 | Henry Lim, 39<sup>th</sup> Symposium on Chemical Physics, Waterloo, Ontario (Poster Presentation)
- Nov 2025 | Jingwen Zhou, 39<sup>th</sup> Symposium on Chemical Physics, Waterloo, Ontario (Poster Presentation)
- Oct 2025 | Henry Lim, CCMPS Launch Poster Session, Guelph, Ontario (Poster Presentation)
- Aug 2025 | Julia Coveny, CCMPS Undergraduate Poster Session, Guelph, Ontario (Poster Presentation)
- Aug 2025 | Brendan Laframboise, ECS Guelph Young Researcher Symposium, Guelph, Ontario (Flash Talk)
- Aug 2025 | Brendan Paget, ECS Guelph Young Researcher Symposium, Guelph, Ontario (**First Prize Flash Talk**)
- Aug 2025 | Jingwen Zhou, ECS Guelph Young Researcher Symposium, Guelph, Ontario (**Award Lecture**)
- Jun 2025 | Shayne Johnston, CSC 2025, Ottawa, Ontario (Poster Presentation)
- Mar 2025 | Brendan Paget, CSC 2025, Ottawa, Ontario (Poster Presentation)
- Mar 2025 | Jesper Biesenthal, SOUSCC53, Guelph, Ontario (Oral Presentation)
- Mar 2025 | Julia Coveny, SOUSCC53, Guelph, Ontario (Oral Presentation)
- Nov 2024 | Shayne Johnston, 38<sup>th</sup> Symposium on Chemical Physics, Waterloo, Ontario (Poster Presentation)
- Nov 2024 | Brendan Paget, 38<sup>th</sup> Symposium on Chemical Physics, Waterloo, Ontario (Poster Presentation)
- Oct 2024 | Brendan Laframboise, CEPS Student Research and Grad Preview Day, Guelph, Ontario (Poster Presentation)
- Oct 2024 | Brendan Paget, CEPS Student Research and Grad Preview Day, Guelph, Ontario (Poster Presentation)
- Aug 2024 | Alexander MacKay, CEPS Undergraduate Poster Session, Guelph, Ontario (Poster Presentation)
- Aug 2024 | Stephen Tatarchuk, ISESS 2024, Guelph, Ontario (**Top Eight Oral Presentations**)
- Jun 2024 | Brendan Laframboise, CSC 2024, Winnipeg, Manitoba (**Pearson Book Prize**)
- May 2024 | Stephen Tatarchuk, 27<sup>th</sup> Canadian Symposium on Catalysis, Sherbrooke, Québec (Oral Presentation)
- Nov 2023 | Brendan Laframboise, 37<sup>th</sup> Symposium on Chemical Physics, Waterloo, Ontario (Poster Presentation)
- Nov 2023 | Stephen Tatarchuk, 37<sup>th</sup> Symposium on Chemical Physics, Waterloo, Ontario (Poster Presentation)
- Jun 2023 | Shayne Johnston, CSC 2023, Vancouver, British Columbia (Oral Presentation)
- Jun 2023 | Austin Pounder, CSC 2023, Vancouver, British Columbia (Oral Presentation)
- May 2023 | Austin Pounder, (GWC)<sup>2</sup> Annual General Meeting, Guelph, Ontario (**Top Two Poster Presentations**)
- May 2023 | Kayla Snyder, (GWC)<sup>2</sup> Annual General Meeting, Guelph, Ontario (**Top Two Poster Presentations**)
- May 2023 | Stephen Tatarchuk, (GWC)<sup>2</sup> Annual General Meeting, Guelph, Ontario (**PhD Seminar Winner**)
- Mar 2023 | Alexander MacKay, SOUSCC51, Peterborough, Ontario (Oral Presentation)
- Mar 2023 | Stephen Tatarchuk, ETC-ECS Student Chapter Speaker Series, Virtual (**Invited Oral Presentation**)
- Dec 2022 | Rachele Choueiri, ETC-ECS Student Chapter Speaker Series, Virtual (**Invited Oral Presentation**)

Nov 2022 | Rachelle Choueiri, 36<sup>th</sup> Symposium on Chemical Physics, Waterloo, Ontario (Oral Presentation)

Nov 2022 | Shayne Johnston, 36<sup>th</sup> Symposium on Chemical Physics, Waterloo, Ontario (Poster Presentation)

Nov 2022 | Stephen Tatarchuk, 36<sup>th</sup> Symposium on Chemical Physics, Waterloo, Ontario (Poster Presentation)

Aug 2022 | Xinrun Liu, S22 Undergraduate Research Showcase, Virtual (Oral Presentation)

Aug 2022 | Alexander MacKay, S22 Undergraduate Research Showcase, Virtual (Oral Presentation)

Aug 2022 | Xinrun Liu, 2022 CEPS Undergraduate Poster Session, Guelph, Ontario (Poster Presentation)

Jul 2022 | Rachelle Choueiri, WATOC 2020, Vancouver, British Columbia (**Invited Communication**)

Jun 2022 | Rachelle Choueiri, CSTCC 2022, Kelowna, British Columbia (**Invited Oral Presentation**)

Jun 2022 | Rachelle Choueiri, CSC CCCE 2022, Calgary, Alberta (**De Gruyter Book Prize**)

Jun 2022 | Stephen Tatarchuk, CSC CCCE 2022, Calgary, Alberta (Oral Presentation)

Jun 2022 | Austin Pounder, CSC CCCE 2022, Calgary, Alberta (**Best Poster Presentation, Organic Division**)

May 2022 | Stephen Tatarchuk, (GWC)<sup>2</sup> Annual General Meeting, Virtual (**Top Two Poster Presentations**)

Mar 2022 | Shayne Johnston, SOUSCC 50, Virtual (Oral Presentation)

Dec 2021 | Rachelle Choueiri, ETC-ECS Student Chapter Speaker Series, Virtual (**Invited Oral Presentation**)

Oct 2021 | Austin Pounder, 24<sup>th</sup> CBGRC, Virtual (Oral Presentation)

Oct 2021 | Kayla Snyder, 24<sup>th</sup> CBGRC, Virtual (**Top Eight Shotgun Presentations**)

Oct 2021 | Stephen Tatarchuk, 24<sup>th</sup> CBGRC, Virtual (**Best Oral Presentation in Computational Chemistry**)

Oct 2021 | Rachelle Choueiri, 71<sup>st</sup> CCEC, Virtual (Oral Presentation)

Aug 2021 | Rachelle Choueiri, ACS Fall National Meeting & Exposition, Virtual (Oral Presentation)

Aug 2021 | Rachelle Choueiri, SUNCAT Summer Institute, Virtual (Poster Presentation)

Aug 2021 | Stephen Tatarchuk, SUNCAT Summer Institute, Virtual (Poster Presentation)

Aug 2021 | Stephen Tatarchuk, 104<sup>th</sup> CCCE, Virtual (Poster Presentation)

Aug 2021 | Rachelle Choueiri, Materials Project Workshop, Virtual (Participation)

Aug 2021 | Stephen Tatarchuk, Materials Project Workshop, Virtual (Participation)

Jul 2021 | Rachelle Choueiri, VSTC<sup>3</sup>, Virtual (**Extended Oral Presentation**)

Jul 2021 | Stephen Tatarchuk, VSTC<sup>3</sup>, Virtual (Speed Oral Presentation)

May 2021 | Kayla Snyder, (GWC)<sup>2</sup> Annual General Meeting, Virtual (Poster Presentation)

May 2021 | Stephen Tatarchuk, (GWC)<sup>2</sup> Annual General Meeting, Virtual (Poster Presentation)

Oct 2020 | Stephen Tatarchuk, 70<sup>th</sup> CCEC, Virtual (Poster Presentation)

## Student Committee Memberships

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Students' default specialization is Chemistry and default institution is the University of Guelph unless otherwise specified

## Advisory Committee

Jan 2026 – Ongoing | Raoul Vaz, PhD

Oct 2025 – Ongoing | Venkatesh Sanjeevan Guruprasad, PhD (University of Waterloo)

May 2025 – Ongoing | Yining Shi, PhD

Nov 2024 – Ongoing | Dylan McFarlane-Urbszat, MSc/PhD

Nov 2023 – Ongoing | Ruzhen Xu, MSc/PhD

Nov 2023 – Ongoing | Cameron Dean, PhD (University of Waterloo)

May 2023 – Ongoing | Emad Hatami, PhD

Jan 2023 – Ongoing | Yubo Wang, PhD (University of Waterloo)

Aug 2022 – Ongoing | Matthew Hill, PhD

Mar 2022 – Jan 2026 | Mukaila Ibrahim, PhD

May 2020 – Apr 2025 | Emmanuel Boateng, PhD

Mar 2022 – Aug 2023 | Kseniia Medvedeva, PhD (University of Waterloo)

Apr 2020 – Jul 2022 | Feng Li, PhD (University of Waterloo)

Jan 2026 – Ongoing | Hanaa Rujully, MSc

Mar 2025 – Ongoing | Nicholas Oudejans, MSc

Sep 2024 – Ongoing | Toby McConville, MSc (University of Waterloo)

Sep 2024 – Ongoing | Patrick Thomas, MSc (University of Waterloo)

Oct 2023 – Ongoing | James Galvao, MSc

Feb 2023 – Ongoing | Kelvin Olivares, MSc

Jan 2025 – Aug 2025 | Noah King, MSc

Apr 2023 – May 2025 | Gabriele Wehrle, MSc

Jan 2021 – Dec 2024 | Yining Shi, MSc

Mar 2022 – May 2024 | Abida Suboor, MSc

May 2023 – Apr 2024 | Aliaksandra Radchanka, MSc (University of Waterloo)

Aug 2022 – Apr 2024 | Amir Hemmati, MSc (University of Waterloo)

Sep 2022 – Feb 2024 | Chi-Kai Hung, MSc

May 2020 – Aug 2023 | Kyle Salmon, MSc

Jan 2021 – May 2023 | Reem Elmahdy, MSc

May 2020 – Jan 2023 | Elise Chung, MSc

Jan 2021 – May 2022 | Virginia Galpin, MSc

Nov 2020 – Aug 2021 | Lanting Qian, MSc

## Examination Committee

Jan 2026 | Adam Riddell, PhD Thesis Defense (Chair)

Jan 2026 | Negar Sabouhanian, PhD Thesis Defense

Jul 2025 | Babak Tavana, PhD Thesis Defense

May 2025 | Joshua van der Zalm, PhD Thesis Defense

Sep 2024 | Alexander Morrison, PhD Thesis Defense

Dec 2023 | Sharon Abner, PhD Thesis Defense

Aug 2023 | Kseniia Medvedeva, PhD Thesis Defense (University of Waterloo)

Jun 2023 | Sofia Donnecke, PhD Thesis Defense (University of Victoria)

Jun 2023 | Farshad Farshidfar, PhD Thesis Defense

Dec 2022 | Michael Salverda, PhD Thesis Defense

Jul 2022 | Jesse Dondapati, PhD Thesis Defense

Jul 2022 | Feng Li, PhD Thesis Defense (University of Waterloo)

May 2020 | Maryanne Stones, PhD Thesis Defense

Sep 2025 | Ruzhen Xu, MSc Thesis Defense

May 2025 | Gabriele Wehrle, MSc Thesis Defense

Dec 2024 | William Rutherford, MSc Thesis Defense (Biophysics)

Dec 2024 | Yining Shi, MSc Thesis Defense

May 2024 | Breanna Clarke, MSc Thesis Defense

May 2024 | Nathan Shami, MSc Thesis Defense

Apr 2024 | Aliaksandra Radchanka, MSc Thesis Defense (University of Waterloo)

Feb 2024 | Chi-Kai Hung, MSc Thesis Defense

Aug 2023 | Kyle Salmon, MSc Thesis Defense

Jan 2022 | Farnood Pakravan, MSc Thesis Defense

Sep 2021 | Leann Tran, MSc Thesis Defense (Biophysics)

May 2021 | Scott Prins, MSc Thesis Defense



Apr 2021 | Stephen Tatarchuk, MSc Thesis Defense (University of Waterloo)

## SERVICE

### Service to Department

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Sep 2025 – Ongoing	<p><b>Chemistry Tenure and Promotion Committee</b></p> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: evaluate annual progress of tenure-track faculty members, portfolios for members applying for tenure and/or promotion, and research leaves</li> </ul>
Jan 2022 – Ongoing	<p><b>Faculty and Staff Awards Committee</b></p> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: nominate faculty and staff members for awards, craft recommendation letters for award candidates</li> </ul>

Jan 2022 – Ongoing	<p><b>Graduate Scholarships Committee</b></p> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: rank candidates for graduate scholarships including OGS, Dean’s Scholarship, and NSERC PGS</li> </ul>
Aug 2020 – Ongoing	<p><b>Electrochemical Technology Centre</b></p> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: consider new ETC membership applications, serve as judges or sessional chairs of the ETC-ECS Guelph Young Researcher Symposium, participate in the ETC-ECS UGSC Speaker Series</li> </ul>
May 2020 – Ongoing	<p><b>Undergraduate Awards Committee</b></p> <ul style="list-style-type: none"> <li>• Role: Chair (Sep 2023 – Ongoing), Member (May 2020 – Aug 2023)</li> <li>• Responsibilities: select Departmental undergraduate awards recipients, assist and provide input for College and University level undergraduate awards for BPCH and CHEM students, organize and operate the Annual Undergraduate Awards Night</li> <li>• Accomplishments: created awards pamphlet  and certificates for the 41<sup>st</sup> Undergraduate Awards Night on March 21, 2024; created slideshow and managed attendance list for the 38<sup>th</sup> Undergraduate Awards Night on March 22<sup>nd</sup>, 2021, adapted to a virtual format </li> </ul>
Sep 2023 – Aug 2024	<p><b>Departmental Seminar Organizing Committee</b></p> <ul style="list-style-type: none"> <li>• Role: Chair</li> <li>• Responsibilities: invite external speakers and oversee their visits</li> </ul>
Apr 2021 – Oct 2023	<p><b>Physical Chemistry Curriculum Committee</b></p> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: review existing Departmental curriculum for Physical Chemistry, update curriculum to reflect modern chemistry principles, discuss and summarize findings through meetings, present recommendations to Department</li> </ul>
Jun 2021 – Oct 2021	<p><b>(GWC)<sup>2</sup> Director Search Committee</b></p> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: conduct review of candidates’ portfolios, rank candidates, make final recommendation</li> </ul>
Oct 2020 – Feb 2021	<p><b>Chemistry Chair Search Committee</b></p> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: review application materials from candidates, including vision statements, curricula vitarum, highlights of past leadership roles, attend candidate presentations, interview candidates, discuss all aspects of candidates’ portfolios including letters from Departmental personnel, rank candidates, make final recommendation</li> </ul>
Oct 2020 – Nov 2020	<p><b>Chemistry Research Leadership Chair Nomination Committee</b></p> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: review executive summaries and lifetime curricula vitarum from candidates, rank candidates based on their achievements, selection by vote of final Research Leadership Chair nominees</li> </ul>

## Service to College

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Sep 2021 – Ongoing	<p><b>CEPS Undergraduate Awards Committee</b></p> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: rank candidates for CEPS undergraduate awards, discuss and vote for proposed new awards and changes to existing awards</li> </ul>
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Sep 2023	<b>CEPS NSERC Discovery Grants Internal Review</b> <ul style="list-style-type: none"> <li>• Role: Peer Reviewer</li> <li>• Responsibilities: evaluate and score Discovery Grant applications from CEPS faculty before submission to NSERC</li> </ul>
Oct 2022	<b>CEPS Graduate Student Research Day</b> <ul style="list-style-type: none"> <li>• Role: Oral Presentation Judge</li> <li>• Responsibilities: evaluate oral presentations from graduate students in the College of Engineering and Physical Sciences, choose award recipients </li> </ul>
Oct 2020	<b>CEPS Graduate Student Research Day (Virtual)</b> <ul style="list-style-type: none"> <li>• Role: Panelist</li> <li>• Responsibilities: discuss sustainability as it pertains to CO<sub>2</sub> capture, utilization, and storage, elaborate on how computational modelling is beneficial for sustainability research, propose broad strategies to overcome current challenges in sustainability </li> </ul>

## Service to University

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Aug 2022 – Ongoing	<b>Research Honours and Awards Advisory Committee</b> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: solicit names of potential nominees for awards and prizes, review recommendations for nomination to institutional awards</li> </ul>
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## External Service

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Sep 2022 – Jan 2026	<b>NSERC Scholarships and Fellowships Committee</b> <ul style="list-style-type: none"> <li>• Role: Ad Hoc Member (2025–2026), Member (2022–2025)</li> <li>• Responsibilities: read, score, and provide in-depth evaluations for scholarship and fellowship applications, participate in virtual review meetings and discussions</li> </ul>
May 2022 – May 2025	<b>(GWC)<sup>2</sup> Annual General Meeting</b> <ul style="list-style-type: none"> <li>• Role: Poster Judge</li> <li>• Responsibilities: score presentations to be considered for best poster prizes</li> </ul>
Jan 2025 – Mar 2025	<b>CSC Director Nominations Committee</b> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: evaluate applications for the Canadian Society for Chemistry Director positions</li> </ul>
Jul 2024 – Aug 2024	<b>Digital Research Alliance of Canada Merit Review Committee</b> <ul style="list-style-type: none"> <li>• Role: Member</li> <li>• Responsibilities: evaluate applications for the Digital Research Infrastructure Equity, Diversity, Inclusion, and Accessibility Champions program</li> </ul>
Mar 2023	<b>51<sup>st</sup> Southern Ontario Undergraduate Student Chemistry Conference (SOUSCC51)</b> <ul style="list-style-type: none"> <li>• Role: Presentation Judge</li> <li>• Responsibilities: score oral presentations in Physical, Theoretical, and Computational Chemistry; score poster presentations in Polymer and Materials Chemistry</li> </ul>

## Professional Memberships

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Jan 2025 – Ongoing	International Society of Theoretical Chemical Physics (Member)
May 2021 – Ongoing	Electrochemical Society (Member), Canada Section (Member)

Mar 2021 – Ongoing | Canadian Society for Chemical Engineering (Affiliate Member)

Mar 2020 – Ongoing | Canadian Association of Theoretical Chemists (Member)

May 2016 – Ongoing | Chemical Institute of Canada (Member)

Nov 2014 – Ongoing | American Chemical Society (Member)