

Leanne D. Chen

Assistant Professor, Department of Chemistry

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🎓 Scholar

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BACKGROUND

Academic Appointments

- Mar 2020 – Ongoing | **University of Guelph, Guelph, Ontario**
Assistant Professor, Department of Chemistry
- Jul 2017 – Jul 2019 | **California Institute of Technology, Pasadena, California**
Postdoctoral Scholar, Division of Chemistry and Chemical Engineering

Education

- Sep 2012 – Jun 2017 | **Stanford University, Stanford, California**
PhD in Physical Chemistry
- Sep 2008 – Apr 2012 | **Queen's University, Kingston, Ontario**
BScH with Distinction in Chemistry

SCHOLARSHIP

Refereed Publications

Total number of citations: 1139, number of citations for top first-author paper: 242, h-index: 13

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

Since Tenure-Track Appointment

- 24 | **Chen, L. D.*** Cations play an essential role in CO₂ reduction. *Nat. Catal.* **2021**, *4*, 641–642. 🔗
- 23 | Choueiri, R. M.; Tatarchuk, S. W.; Klinkova, A.; **Chen, L. D.*** Mechanism of Ammonia Oxidation to Dinitrogen, Nitrite, and Nitrate on β -Ni(OH)₂ from First-Principles Simulations. *ChemRxiv* **2021**, Preprint. 🔗
- 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 C1-Substituted Oxabenzonorborenes 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 Tenure-Track Appointment

- 18 | **Chen, L. D.**[†]; Lawniczak, J. J.[†]; 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 CO₂ adsorption limits the rate of electrochemical CO₂ 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 CO₂ during Adsorption at the Metal | Solution Interface. *J. Phys. Chem. C* **2019**, *123*, 29278–29283. [🔗](#)
- 14 | **Chen, L. D.**[†]; Bajdich, M.[†]; 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.[†]; **Chen, L. D.**[†]; Siahrostami, S.[†]; 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 IrO₂(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 CO₂ 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 [La₂(OCH₃)₂]⁴⁺- and [(1,5,9-triazacyclododecane):Zn:(OCH₃)]⁺-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[^]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-Phenylazoly 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. [🔗](#)

Funding

All dollar amounts are in CAD unless otherwise specified. Totals to-date: \$389,684 (as PI), \$75,546 (as Collaborator)

Awarded Grants

- Apr 2021 – Mar 2022 | **Compute Canada Resources for Research Groups Competition**
- Role: Principal Investigator
 - Amount Awarded: \$27,544
- Mar 2021 – Mar 2023 | **New Frontiers for Research Fund – Exploration**
- Role: Nominated Principal Investigator
 - Amount Awarded: \$200,000 (direct), \$50,000 (indirect)
- Aug 2020 – Mar 2021 | **Agricultural Clean Technology Program**
- Role: Collaborator
 - Amount Awarded: \$75,546
- Apr 2020 – Mar 2025 | **NSERC Discovery Grant and Discovery Launch Supplement**
- Role: Principal Investigator
 - Amount Awarded: \$162,140

Submitted Grants

- Jun 2021 | **Climate Action and Awareness Fund**
- Role: Collaborator
 - Status: Not Awarded

Conference Organization

- Nov 2021 | **AIChE Annual Meeting, Boston, Massachusetts**
- Role: Session Chair
 - Session: Fundamentals of Catalysis and Surface Science (Virtual)
 - Responsibilities: inform speakers of AIChE presentation policies, maintain regular communication with abstract authors and area chairs, introduce speakers at the conference
- Oct 2021 | **71st CCEC, Montréal, Québec**
- Role: Session Organizer
 - Session: Computational Catalysis, Chemical Kinetics, and Machine Learning
 - Responsibilities: develop invited speakers list, advertise session to community, review submitted abstracts, maintain regular communication with accepted authors, introduce speakers at the conference
- July 2021 | **VSTC³, Virtual**
- Role: Organizing Committee Member
 - Responsibilities: develop invited speakers list, review abstracts, coordinate with schedules of invited speakers to create the conference program

Nov 2020	AIChE Annual Meeting, Virtual <ul style="list-style-type: none"> • Role: Session Co-Chair • Session: Electrocatalysis I, Organic Electrocatalysis • Responsibilities: introduce speakers at the conference
Jun 2019	NAM26, Chicago, Illinois <ul style="list-style-type: none"> • Role: Abstract Selection Committee Member • Responsibilities: conduct reviews for abstracts submitted to the North American Catalysis Meeting based on quality, novelty, and significance of the work

Conference, Workshop, and Departmental Presentations

Invited Presentations

Aug 2021	104th CCCE, Celebrating the Life of Suning Wang, Virtual “First-Principles Modelling of Heterogeneous Electrochemical Reactions”
Jun 2021	ETC-ECS UGSC Speaker Series, Virtual “Ab Initio Computational Modelling of Electrochemical Reactions”
May 2021	ECS Canada Section Spring Meeting, Virtual “First-Principles Simulations of Ni-based Materials for Electrochemical Ammonia Oxidation”
Apr 2021	York University Department of Chemistry Winter Seminar Series, Virtual “Ab Initio Computational Modelling of Electrochemical Reactions”
Feb 2021	Chemical Institute of Canada PTC Seminar Series, Virtual “Ni-based Materials for Electrochemical Ammonia Oxidation”
Oct 2020	(GWC)² Fall Seminar Series, Virtual “Ab Initio Computational Modelling of Electrochemical Reactions”
Oct 2020	University of Toronto Physical Chemistry Seminar Series, Virtual “Ab Initio Computational Modelling of Electrochemical Reactions”
May 2020	University of Guelph MLRG Seminar, Virtual “Atomic-Scale Computational Insight into Electrochemical Reactions: from Mechanistic Understanding to Materials Engineering”
Mar 2020	University of Waterloo Theory Meeting, Waterloo, Ontario “Atomic-Scale Computational Insight into Electrochemical Reactions: from Mechanistic Understanding to Materials Engineering”
Oct 2019	University of Seoul Computational Catalysis & Materials Design Lab, Seoul, South Korea “Understanding the Apparent Fractional Charge of Protons in the Aqueous Electrochemical Double Layer”
Oct 2019	KAIST Complex Molecular-Systems Multiscale Design Lab, Daejeon, South Korea “Atomic-Scale Computational Insight into Electrochemical Reactions: from Mechanistic Understanding to Materials Engineering”
Aug 2019	Lawrence Livermore National Laboratory, Livermore, California “Exploring the Potential of Metal-Doped Graphene as Improved Electrocatalysts for CO ₂ Reduction Using Embedded Mean-Field Theory”
Aug 2019	Toyota Research Institute, Los Altos, California “Understanding the Apparent Fractional Charge of Protons in the Aqueous Electrochemical Double Layer”

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

Contributed Presentations

Feb 2019	JCAP All-Hands Meeting, Oxnard, California “Exploring the Potential of Metal-Doped Graphene as Improved Electrocatalysts for CO ₂ Reduction Using Embedded Mean-Field Theory” (Poster Presentation) Leanne D. Chen, Jens K. Nørskov, Thomas F. Miller III
Jun 2018	Gordon Research Conference on Catalysis, New London, New Hampshire “Exploring the Potential of Metal-Doped Graphene as Improved Electrocatalysts for CO ₂ Reduction Using Embedded Mean-Field Theory” (Poster Presentation) Leanne D. Chen, Feizhi Ding, Jens K. Nørskov, Thomas F. Miller III
Jun 2018	Gordon Research Seminar on Catalysis, New London, New Hampshire “Exploring the Potential of Metal-Doped Graphene as Improved Electrocatalysts for CO ₂ Reduction Using Embedded Mean-Field Theory” (Oral Presentation) Leanne D. Chen, Feizhi Ding, Jens K. Nørskov, Thomas F. Miller III
May 2018	SoCal TheoChem Meeting, Pasadena, California “Exploring Metal-Doped Graphene for CO ₂ Electroreduction with Quantum Embedding Methods” (Poster Presentation) Leanne D. Chen, Thomas F. Miller III

- Mar 2018 | **APS March Meeting, Los Angeles, California**
 “Exploring the Potential of Metal-Doped Graphene as Improved Electrocatalysts for CO₂ Reduction Using Embedded Mean-Field Theory” (Oral Presentation)
 Leanne D. Chen, Thomas F. Miller III
- Jan 2018 | **Berkeley Statistical Mechanics Meeting, Berkeley, California**
 “Exploring Metal-Doped Graphene for CO₂ Electroreduction with Quantum Embedding Methods” (Poster Presentation)
 Leanne D. Chen, Thomas F. Miller III
- Nov 2017 | **The Electrode Potential in Electrochemistry, Castle Reisingburg, Ulm, Germany**
 “Exploring Metal-Doped Graphene for CO₂ Electroreduction with Quantum Embedding Methods” (Poster Presentation)
 Leanne D. Chen, Thomas F. Miller III
- Jun 2017 | **North American Catalysis Society Meeting, Denver, Colorado**
 “The Charge of an Ion in the Outer Helmholtz Plane” (Oral Presentation)
 Leanne D. Chen, Michal Bajdich, Caroline M. Krauter, J. Mark P. Martinez, Emily A. Carter, Alan C. Luntz, Karen Chan, Jens K. Nørskov
- May 2017 | **SUNCAT Scientific Advisory Board Meeting, Stanford, California**
 “First-Principles Modelling of CO₂ Reduction Kinetics: Explicit Solvent and Ion Effects” (Poster Presentation)
 Leanne D. Chen, Meredith Fields, Robert B. Sandberg, Thomas K. Ludwig, Karen Chan, Jens K. Nørskov
- Apr 2017 | **JCAP All-Hands Meeting, Pacific Grove, California**
 “First-Principles Modelling of CO₂ Reduction Kinetics: Explicit Solvent and Ion Effects” (Poster Presentation)
 Leanne D. Chen, Meredith Fields, Robert B. Sandberg, Karen Chan, Jens K. Nørskov
- Apr 2017 | **ACS National Meeting, San Francisco, California**
 “The Charge of an Ion in the Outer Helmholtz Plane” (Oral Presentation)
 Leanne D. Chen, Michal Bajdich, Caroline M. Krauter, J. Mark P. Martinez, Emily A. Carter, Alan C. Luntz, Karen Chan, Jens K. Nørskov
- Nov 2016 | **AIChE Annual Meeting, San Francisco, California**
 “Ab Initio Insights into the Electrochemical Double Layer” (Oral Presentation)
 Leanne D. Chen, Michal Bajdich, Alan C. Luntz, Karen Chan, Jens K. Nørskov
- Oct 2016 | **SUNCAT Theory Group Retreat, Lake Tahoe, California**
 “The ‘Negative Difference Effect’: New Insights and Possible Mechanisms” (Oral Presentation)
 Leanne D. Chen
- Jun 2016 | **SUNCAT Industrial Affiliates Meeting, Stanford, California**
 “First-Principles Modeling of the Electrochemical Interface” (Poster Presentation)
 Leanne D. Chen, Michal Bajdich, Alan C. Luntz, Karen Chan, Jens K. Nørskov
- Jun 2016 | **99th CCCE, Halifax, Nova Scotia**
 “Electric Field Effects in Electrochemical CO₂ Reduction” (Oral Presentation)
 Leanne D. Chen, Makoto Urushihara, Karen Chan, Jens K. Nørskov
- Apr 2016 | **SUNCAT DOE Review, Menlo Park, California**
 “Beyond Li-ion Batteries” (Poster Presentation)
 Leanne D. Chen, Saskia Stegmaier, Johannes Voss, Jens K. Nørskov, Alan C. Luntz
- Dec 2015 | **CIFAR Bio-inspired Solar Energy Program Meeting, San Francisco, California**
 “Electrochemistry with DFT: Metal-Air Batteries and Constant-Potential Energies” (Poster Presentation)
 Leanne D. Chen, Alan C. Luntz, Karen Chan, Jens K. Nørskov

- Sep 2015 | **4th Annual ReLIable Metal–Air Workshop, Birkerød, Denmark**
 “An Atomistic Description of Anode Reactions in Aqueous Mg–Air Batteries” (Oral Presentation)
 Leanne D. Chen, Jens K. Nørskov, Alan C. Luntz
- May 2015 | **SUNCAT Industrial Affiliates Meeting, Stanford, California**
 “How Surface Electrochemistry Dictates Anodic Potential in Aqueous Al–Air and Mg–Air Batteries”
 (Poster Presentation)
 Leanne D. Chen, Jens K. Nørskov, Alan C. Luntz
- Mar 2015 | **APS March Meeting, San Antonio, Texas**
 “Al–Air Batteries: Fundamental Thermodynamic Limitations from First Principles Theory” (Oral Presentation)
 Leanne D. Chen, Jens K. Nørskov, Alan C. Luntz
- Feb 2015 | **SUNCAT Scientific Advisory Board Meeting, Stanford, California**
 “Aqueous Metal–Air Batteries:
 Intrinsic Surface-Dependent Nature of Anodic Dissolution” (Poster Presentation)
 Leanne D. Chen, Jens K. Nørskov, Alan C. Luntz
- Sep 2014 | **3rd Annual ReLIable Metal–Air Workshop, Copenhagen, Denmark**
 “Aqueous Mg–O₂ and Al–O₂ Batteries:
 DFT Studies of the Fundamental Electrochemical Mechanisms” (Oral Presentation)
 Leanne D. Chen, Alan C. Luntz, Jens K. Nørskov
- Aug 2014 | **CAMD Summer School, Lyngby, Denmark**
 “Aqueous Mg–O₂ and Al–O₂ Batteries:
 DFT Studies of Productive and Parasitic Electrochemistry” (Poster Presentation)
 Leanne D. Chen, Alan C. Luntz, Jens K. Nørskov
- Jun 2014 | **SUNCAT Industrial Affiliates Meeting, Stanford, California**
 “Towards the Development of Economic and High Specific Energy Metal–Air Batteries:
 A Preliminary Study” (Poster Presentation)
 Leanne D. Chen, Alan C. Luntz, Jens K. Nørskov
- Nov 2013 | **AICHe Annual Meeting, San Francisco, California**
 “Toward High Specific Energy Metal–Air Batteries in Vehicle Propulsion Applications” (Oral Presentation)
 Leanne D. Chen, Alan C. Luntz, Jens K. Nørskov
- Sep 2013 | **2nd Annual ReLIable Metal–Air Workshop, Copenhagen, Denmark**
 “Ab Initio Investigations of Mg–Air and Al–Air Batteries” (Oral Presentation)
 Leanne D. Chen, Alan C. Luntz, Jens K. Nørskov
- Aug 2013 | **SUNCAT DOE Review, Stanford, California**
 “Li–Air and Mg–Air Batteries” (Poster Presentation)
 Venkat Viswanathan, Leanne D. Chen, Jens S. Hummelshøj, Alan C. Luntz, Jens K. Nørskov
- Jun 2013 | **SUNCAT Industrial Affiliates Meeting, Stanford, California**
 “Towards the Development of Economic and High Specific Energy Metal–Air Batteries:
 A Preliminary Study” (Poster Presentation)
 Leanne D. Chen, Alan C. Luntz, Jens K. Nørskov
- Jul 2012 | **DAAD RISE Professional Conference, Heidelberg, Germany**
 “Ab Initio Studies on the Mechanism of Lithium Diffusion in Li–S Batteries” (Oral Presentation)
 Leanne D. Chen, Thomas Eckl
- Mar 2012 | **Southern Ontario Undergraduate Chemistry Conference, Guelph, Ontario**
 “Theoretical Investigations of Organoboron Photochromic Systems” (Oral Presentation)
 • Award: Best Oral Presentation in Physical Chemistry
 Leanne D. Chen, Nicholas J. Mosey, Suning Wang

Sep 2011 | **Queen's Chemistry Graduate Symposium, Kingston, Ontario**
"Shedding Light on Photochromism: A Mechanistic Study with DFT and TDDFT Methods" (Oral Presentation)
Leanne D. Chen, Suning Wang, Nicholas J. Mosey



Collaborations

Apr 2021 – Ongoing | Mechanistic investigations of CO₂ reduction on hybrid materials with Aicheng Chen
Apr 2020 – Ongoing | Rational design of electrocatalysts for ammonia and urea oxidation with Anna Klinkova
Mar 2020 – Ongoing | Understanding enantioselectivity/regioselectivity in ring-opening reactions with William Tam

Postdoctoral Fellow Supervision

May 2021 – Ongoing | Rachelle Choueiri
Jun 2020 – Apr 2021 | Rachelle Choueiri (co-supervised with Anna Klinkova)

Refereeing Activity

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

May 2015 – Ongoing | Referee activity for journals, format: *Journal Name* (number of reviews conducted), total: 38

- *ACS Catalysis* (1)
- *ACS Materials Letters* (2)
- *ACS Omega* (1)
- *Applied Surface Science* (2)
- *Canadian Journal of Chemistry* (2)
- *Chem Catalysis* (1)
- *Chemical Science* (4)
- *Electrochimica Acta* (4)
- *Energy & Environmental Science* (12)
- *Journal of Materials Chemistry A* (1)
- *Molecular Systems Design and Engineering* (1)
- *Nature Catalysis* (3)
- *Nature Communications* (2)
- *Physical Chemistry Chemical Physics* (2)

May 2021 – May 2021 | Reviewer, IOP Publishing textbook proposal
Feb 2019 – Mar 2019 | Grant Review Panel, PSC CUNY Cycle 50

Editorial Roles

Mar 2021 – Ongoing | Topic Editor, *Catalysts*, MDPI
Dec 2020 – Ongoing | Review Editor, *Modelling, Theory and Computational Catalysis*, Frontiers in Catalysis
May 2020 – Ongoing | Editorial Advisory Board Member, *Electrochemical Science Advances*, Wiley

News Articles

- Jun 2021 | **College of Engineering and Physical Sciences Highlight**
“Q&A with Dr. Leanne Chen” [!\[\]\(1207edb9a08751d3d55970560645ed23_img.jpg\)](#)
- May 2021 | **University of Guelph News**
“Prof Awarded Funding to Develop Technology to Curb Agricultural Emissions” [!\[\]\(d7a34a706cfa4ef37c62a369101e1b36_img.jpg\)](#)
- Apr 2020 | **College of Engineering and Physical Sciences Highlight**
“Earth Day 2020” [!\[\]\(7325769475e8f4bf67f57a0cbebc8ab9_img.jpg\)](#)

Scholarships and Awards

- 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)
- Apr 2012 | NSERC Alexander Graham Bell Canada Graduate Scholarship (CGS-M)
- Apr 2012 | Walter MacFarlane Smith Prize in Chemistry for Best Thesis
- Mar 2012 | DAAD Professional Research Internships in Science and Engineering

TEACHING

Courses

- Sep 2021 – Ongoing | CHEM*7500 (Graduate)
- Role: Instructor
 - Responsibilities: create course materials, deliver lectures, hold weekly office hours, assign problem sets, grade problem sets, evaluate midterm and final projects
- Sep 2020 – Ongoing | CHEM*2820 (Undergraduate)
- Role: Instructor
 - 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 and uploading grades to CourseLink

Student Advising and Supervising

Default role is Primary Supervisor unless otherwise specified

Graduate Student Supervision

- Sep 2021 – Ongoing | Stephen Tatarchuk, PhD
- Sep 2020 – Ongoing | Kayla Snyder, PhD (co-supervised with Daniel Thomas)
- May 2020 – Ongoing | Austin Pounder, PhD (co-supervised with William Tam)

May 2020 – Dec 2020		Lina Ghulam, MSc (co-supervised with William Tam) <ul style="list-style-type: none"> • currently enrolled in PharmD Degree at University of Waterloo
May 2020 – Dec 2020		Siobhan Liu, MSc <ul style="list-style-type: none"> • currently enrolled in Ontario College Graduate Degree at Seneca College

Undergraduate Research Project

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 2021 – Aug 2021		Krish Kiran Valluru, Volunteer (co-supervised with William Tam)
Jan 2021 – Apr 2021		Mirna Ghattas, Volunteer
May 2020 – Aug 2020		Siobhan Liu, Research Assistant I

Meetings and Workshops Attended by HQP

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 th 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 ³ , Virtual (Extended Oral Presentation)
Jul 2021		Stephen Tatarchuk, VSTC ³ , Virtual (Speed Oral Presentation)
May 2021		Kayla Snyder, (GWC) ² Annual General Meeting, Virtual (Poster Presentation)
May 2021		Stephen Tatarchuk, (GWC) ² Annual General Meeting, Virtual (Poster Presentation)
Nov 2020		Siobhan Liu, 23 rd CBGRC, Virtual (Oral Presentation) <ul style="list-style-type: none"> • Award: Best Oral Presentation in Computational Chemistry
Oct 2020		Stephen Tatarchuk, 70 th CCEC, Virtual (Poster Presentation)

Student Committees

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

Advisory Committee

May 2020 – Ongoing | Emmanuel Boateng, PhD
Apr 2020 – Ongoing | Feng Li, PhD (University of Waterloo)
Sep 2020 – Apr 2021 | Lanting Qian, PhD
May 2021 – Ongoing | Lanting Qian, MSc
Jan 2021 – Ongoing | Reem Elmahdy, MSc
Jan 2021 – Ongoing | Virginia Galpin, MSc
Jan 2021 – Ongoing | Yining Shi, MSc
May 2020 – Ongoing | Elise Chung, MSc
May 2020 – Ongoing | Kyle Salmon, MSc

Examination Committee

Sep 2021 | Leann Tran, MSc Thesis Defence (Biophysics)
May 2021 | Scott Prins, MSc Thesis Defence
Apr 2021 | Stephen Tatarchuk, MSc Thesis Defence (University of Waterloo)
May 2020 | Maryanne Stones, PhD Thesis Defence

Graded Projects

The following list only includes students not supervised by L. D. Chen


Mar 2021 | Mary Kolkman, CHEM*4910 Final Evaluation
Mar 2021 | Julia Mandato, CHEM*4910 Final Evaluation
Mar 2021 | Candice Robillard, CHEM*4900 Final Evaluation
Mar 2021 | Matthew Smith, CHEM*4900 Final Evaluation
Feb 2021 | Michael Lapolla, CHEM*4910 Final Evaluation

SERVICE


Service to Department

Jun 2021 – Ongoing | **(GWC)² Director Search Committee**

- Role: Member
- Responsibilities: attend scheduled meetings, conduct review of candidates' portfolios, rank candidates and make final recommendation

Aug 2020 – Ongoing	Electrochemical Technology Centre <ul style="list-style-type: none"> • Role: Member • 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
May 2020 – Ongoing	Undergraduate Awards Committee <ul style="list-style-type: none"> • Role: Member • Responsibilities: select Departmental undergraduate awards winners, assist and provide input for College and University level undergraduate awards for BPCH and CHEM students, organize and operate the Annual Undergraduate Awards Night • Accomplishments: created slideshow and managed attendance list for the 38th Undergraduate Awards Night on March 22nd, 2021, adapted to a virtual format 
Apr 2021 – Jun 2021	Ad Hoc Physical Chemistry Curriculum Committee <ul style="list-style-type: none"> • Role: Member • 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
Oct 2020 – Feb 2021	Chemistry Chair Search Committee <ul style="list-style-type: none"> • Role: Member • 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 and make final recommendation
Oct 2020 – Nov 2020	Chemistry Research Leadership Chair Nomination Committee <ul style="list-style-type: none"> • Role: Member • Responsibilities: review executive summaries and lifetime curricula vitarum from candidates, attend meetings to rank candidates based on their achievements, selection by vote of final Research Leadership Chair nominees

Service to College

Oct 2020	CEPS Graduate Student Research Day (Virtual) <ul style="list-style-type: none"> • Role: Panelist • Responsibilities: discuss sustainability as it pertains to CO₂ capture, utilization, and storage, elaborate on how computational modelling is beneficial for sustainability research, propose broad strategies to overcome current challenges in sustainability 
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Professional Memberships

May 2021 – Ongoing	Electrochemical Society (Member), Canada Section (Member)
Mar 2021 – Ongoing	Canadian Society for Chemical Engineering (Affiliate Member)
Mar 2020 – Ongoing	University of Guelph Faculty Association (Member)
Aug 2019 – Ongoing	Canadian Association of Theoretical Chemists (Member)
May 2016 – Ongoing	Chemical Institute of Canada (Member)
Nov 2014 – Ongoing	American Chemical Society (Member)