# Adam Holewinski

**Dept. of Chemical & Biological Eng.**
**University of Colorado Boulder**
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## Education

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|---|---|
| 2013 | Ph.D., Chemical Engineering, University of Michigan, Ann Arbor |
| 2007 | B.S.E. Chemical Engineering, University of Michigan, Ann Arbor |

## Appointments

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|---|---|
| 2024— | Associate Chair for Grad Education, Chemical and Biol. Eng. U. Colorado – Boulder |
| 2023— | Associate Professor, Chemical and Biological Engineering, U. Colorado – Boulder |
| 2023-24 | Visiting Associate Professor, Department of Physics, Technical University of Denmark |
| 2015-23 | Assistant Professor, Chemical and Biological Engineering, U. Colorado - Boulder |
| 2014-15 | Postdoctoral Fellowship, Georgia Institute of Technology (advisor Chris Jones) |
| 2007-13 | Graduate Researcher, University of Michigan (advisor Suljo Linic) |
| 2007 | Internship, BP Refinery - Controls Group (Toledo, OH) |
| 2006 | Internship, Pfizer R&D - Process Safety Lab (Ann Arbor, MI) |

## Awards

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|---|---|
| 2023 | Fulbright U.S. Scholar (Host Institution: Technical University of Denmark) |
| 2023 | Journal of Catalysis Early Career Board |
| 2022 | CU Boulder Provost's Faculty Achievement Award |
| 2022 | CU College of Engineering Dean's Performance Award -- Outstanding Junior Faculty |
| 2020 | RCSA Scialog Fellow: Negative Emissions Science |
| 2020 | Class of Influential Researchers: *Industrial & Engineering Chemistry Research* |
| 2019 | NSF CAREER Award, CBET Catalysis Program |
| 2016 | Outstanding Graduate Teaching Faculty Award, ChBE Dept., CU Boulder |
| 2013 | Michigan Catalysis Society Outstanding Student Presentation Award |
| 2013 | North American Catalysis Society Kokes Travel Award |
| 2012 | University of Michigan Chemical Engineering Graduate Symposium Poster Award |
| 2010 | AIChE Catalysis and Reaction Engineering Division Poster Award |
| 2007 | National Science Foundation Graduate Research Fellowship - Honorable Mention |
| 2006 | Clifton S. Goddin Prize for Outstanding Chemical Engineering Student (U. Michigan) |
| 2004-07 | University of Michigan Engineering Scholarship of Honor |

## Peer-Reviewed Publications

*Refereed articles:* * =APH Corresponding ; Underline = APH Advisee, °(G), #(UG), %(PD), ‡Equal Contrib.

*Independent Career:* *A=article, R=review, P=perspective*

1. Ramos, N.C.°, Neyer, H.#, Medlin, J. W., Holewinski, A. "Anodic Hydrogen Generation from Benzaldehyde on Au, Ag, and Cu: Rotating Ring-Disk Electrode Studies" *Journal of the Electrochemical Society*, (2024) 171, 126507 (IF=3.2) (A)
2. Yang, Y., Yuwono, J., Whittaker, T. N. °, Manyé Ibáñez, M. °, Wang, B., Kim, C., Borisevich, A., Chua, S., Prada, J., Wang, X., Autran, P-O Unocic, R. R., Dai, L., Holewinski, A., and Bedford, N. M. "Double Hydroxide Nanocatalysts for Urea Electrooxidation Engineered toward Environmentally Benign Products" *Advanced Materials*. (2024) 36, 2403187. (IF=24.5) (A)
3. Whittaker, T. N. °, Fishler, Y. ° Clary, J. M., Brimley, P. Holewinski, A., Musgrave, C.B., Farberow, C. A., Smith, W. A., Vigil-Fowler, D. "Insights into Electrochemical CO2 Reduction on Metallic and Oxidized Tin Using Grand-Canonical DFT and In Situ ATR-SEIRA Spectroscopy" *ACS Catalysis*, (2024) 14, 8353-8365. (IF=13.7) (A)

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4. Fishler, Y.,° Leick, N., Teeter, G., Holewinski, A.* and Smith, W.A.* "Layered Sn–Au Thin Films for Increased Electrochemical ATR-SEIRAS Enhancement" *ACS Applied Materials & Interfaces*. (2024) 16, 15, 19780−19791 (IF=10.4) (A)
5. Ramos, N.C.° and Holewinski, A.* "Recent advances in anodic hydrogen production: Electrochemical oxidative dehydrogenation of aldehydes to carboxylates" *Current Opinion in Electrochemistry*. (2024), 45, 101484. (IF=7.9) (R)
6. Tian, C. Dorakhan, R., Wicks, J., Chen, Z., Choi, K-S., Singh, N., Schaidle, J., Holewinski, A., Vojvodic, A. Vlachos, D., Broadbelt, L. Sargent, E.H. "Electro-privileged transformations of bio-derived molecules: Progress and roadmap" *Nature Catalysis*. (2024), 7, 350-360. (IF=40.7) (P)
7. Hasse, J.,° Manyé Ibáñez, M.° and Holewinski, A.* "Impact of electrolyte composition on bulk electrolysis of furfural over platinum electrodes" *ChemCatChem* (2023), 15, 1-9 (IF =5.5) (A)
8. Ramos, N.C.,° Manyé Ibáñez, M.,° Mittal, R.,% Janik, M.J., and Holewinski, A.* "Combining Renewable Electricity and Renewable Carbon: Understanding Reaction Mechanisms of Biomass-Derived Furanic Compounds for Design of Catalytic Nanomaterials" *Accounts of Chemical Research* (2023) 56, 2631−2641. (IF=24.5) (R)
9. Lucas, F. W. S.,% Schwartz, D. K., Medlin, J.W. and Holewinski, A.* "Understanding Reactivity of Self-Assembled Monolayer-Coated Electrodes: SAM-Induced Surface Reconstruction" *Electrochmica Acta* (2023), 459, 142586. (IF=7.3) (A)
10. Holewinski, A.* "Hydride transfer gets a recharge" *Nature Catalysis* (2023), 6, 296-297. (IF=40.7) (P)
11. Al Khulaifi, F.M. ° Alsunni, Y.A. , Musgrave, C.B., Holewinski, A.*, and Medlin, J.W.* "Impact of pretreatment and thiol modifiers on the selective oxidation of glutaraldehyde using $Pd/Al_2O_3$. *Applied Catalysis A: General* (2023), 119229. (IF=5.7) (A)
12. Ramos, N. C.,° Medlin, J.W.* and Holewinski, A.* "Electrochemical stability of thiolate self-assembled monolayers on Au, Pt, and Cu." *ACS Applied Materials and Interfaces* (2023), 15, 14470-14480. (IF=10.4) (A)
13. Delluva, A. A.,° Kulberg-Savercool, J.# Holewinski, A.* "Thermal Enhancement of Product Conductivity Permits Deep Discharge in Solid State Li-$O_2$ Batteries" *ACS Applied Energy Materials* (2022) 5, 14739-14747. (IF=7.0) (A)
14. Baz, A.,° Lyons, M.,# and Holewinski, A*. "Dynamic Electrocatalysis: Examining Resonant Catalytic Rate Enhancement Under Oscillating Electrochemical Potential" *Chem Catalysis* (2022) 2, 3497-3516. (IF=10.8) (A)
15. Hasse, J.,° Agrawal, N., Janik, M.J., & Holewinski, A.* "ATR-SEIRAS Investigation of the Electro-oxidation Mechanism of Biomass-Derived $C_5$ Furanics on Platinum Electrodes" *Journal of Physical Chemistry C,* (2022). *126*. (IF=4.2) (A)
16. Baz, A.,° Dix, S.T., Holewinski, A., Linic, S. "Microkinetic Modeling in Electrocatalysis: Applications, Limitations, and Recommendations for Reliable Mechanistic Insights." *Journal of Catalysis,* (2021) 404, 864-872. (IF=8.0) (P)
17. Lucas, F. W. S.,% Fishler, Y.,° Holewinski, A.* "Tuning the Selectivity of Electrochemical Levulinic Acid Reduction to 4-Hydroxyvaleric Acid: A Monomer for Biocompatible and Biodegradable Plastics." *Green Chemistry,* (2021) *23*, 9154-9164 (IF=11.0) (A)
18. Spivey, T.,° and Holewinski, A.,* "Selective interactions between free-atom-like *d*-states in single-atom-alloy catalysts and near-frontier molecular orbitals." *Journal of The American Chemical Society,* (2021). *143,* 11897-11902. (IF=16.4) (A)
19. Delluva, A. A.,° Kulberg-Savercool, J.# Holewinski, A.* "Decomposition of trace $Li_2CO_3$ at high charging potentials leads to cathode interface degradation with the solid electrolyte LLZO." *Advanced Functional Materials* (2021) 2103716. (IF=19.9) (A)
20. Baz, A.,° and Holewinski, A.,* Predicting macro-kinetic observables with generalized degrees of rate control in electrocatalysis *Journal of Catalysis* (2021) *397*, 233-244. (IF=8.0) (A)
21. Lucas, F. W. S.,% Grim, G., Hasse. J,° Downes, C. Roman, A.,° Tacey, S., Farberow, C., Schaidle, J.* & Holewinski, A.* "Electrochemical routes for the valorization of biomass-derived feedstocks: From chemistry to application." *ACS Energy Letters* (2021). *6,* 1205-1270. (IF=24.0) (R)

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22. Harris, A., Roy, S., Ganguly, S., Parameswar, A., Lucas, F. W. S,% Holewinski, A., Goodwin, A., & Cha, J. "Investigating the use of conducting oligomers and redox molecules in CdS-MoFeP biohybrids." *Nanoscale Advances* (2021). *3,* 1392-1396. (IF=5.6) (A)
23. Roman, A.,° Spivey, T.,° Medlin, J. W. & Holewinski, A.* "Accelerating electro-oxidation turnover rates via potential-modulated stimulation of electrocatlaytic activity" *Industrial and Engineering Chemistry Research* (2020). *59,* 19999-200010. (IF=4.3) (A)
24. Lei, Z.‡, Lucas, F.W.S.‡,%, Moya, E., Huang, S., Rong, Y., Wesche, A., Li, P., Bodkin, L., Jin, Y., Holewinski, A.*, & Zhang, W.*, "Highly stable dioxin-linked metallophthalocyanine covalent organic frameworks" *Chinese Chemical Letters* (2021). *32,* 3799-3802. (IF=8.5) *(A)*
25. Roman, A.,° Hasse, J.° Agrawal, N., Janik, M.J., Medlin, J. W. & Holewinski, A.* "Electro-oxidation of furfural on gold is limited by fuorate self assembly." *Journal of Catalysis* (2020). *391,* 327-335. (IF=8.0) (A)
26. Delluva, A.,° Dudoff, J.,° Teeter, G., & Holewinski, A.* "Cathode interface compatibility of amorphous $LiMn_2O_4$ (LMO) and $Li_7La_3Zr_2O_{12}$ (LLZO) characterized with thin film electrochemical cells" *ACS Applied Materials and Interfaces* (2020) *12,* 24992-24999. (IF=10.4) (A)
27. Barton, Z.,% Garret, G.,° Kurtyka, N.,# Spivey, T.,° Schaidle, & Holewinski, A.* "Electrochemical reduction selectivity of crotonaldehyde on copper" *J. Applied Electrochemistry* (2020) *51*, 5-17. (IF=2.8) (A)
28. Baz, A.,° & Holewinski, A.* "Understanding the interplay of bifunctional and electronic effects: Microkinetic modeling of the CO electrooxidation reaction" *Journal of Catalysis* (2020). *384* 1-13. (IF=8.0) (A)
29. Mark, L., Agrawal, N., Roman, A.,° Holewinski, A., Janik, M. J., & Medlin, J. W. "Insight into the oxidation mechanism of furanic compounds on Pt(111)" *ACS Catalysis* (2019). *9* 11360-11370. (IF=13.7) (A)
30. Roman, A.,° Hasse, J.° Medlin, J. W. & Holewinski, A.* "Elucidating Acidic Electro-Oxidation Pathways of Furfural on Platinum" *ACS Catalysis* (2019). *9*, 10305-10316. (IF=13.7) (A)
31. Gong, L., Agrawal, N., Roman, A.,° Holewinski, A. & Janik, M. J. "Density functional theory study of furfural electrochemical oxidation on the Pt (111) surface" *Journal of Catalysis* (2019). *373*, 322-335. (IF=8.0) (A)
32. Wang, L., Holewinski*, A., & Wang, C*. "Prospects of platinum-based nanostructures for the electrocatalytic reduction of oxygen" *ACS Catalysis* (2018). *8*, 9388-9398. (IF=13.7) (P)
33. Roman, A.,° Dudoff, J.,° Baz, A.,° Holewinski, A.* "Identifying "optimal" electrocatalysts: impact of operating potential and charge transfer model" *ACS Catalysis* (2017). *7*, 8641-8652. (IF=13.7) (P)

*Prior to Independent Career:*

34. Holewinski, A., Sakwa-Novak, M., Carillo, J.M., Potter, M., Ellebracht, N., Rother, G., Sumpter, B., Jones, C. W. "Aminopolymer mobility and support interactions in silica-PEI composites for $CO_2$ capture applications: A quasielastic neutron scattering study" *Journal of Physical Chemistry B,* (2017). *121*, 6721-6731. (IF=3.0)
35. Carillo, J.M. , Sakwa-Novak, M., Holewinski, A., Potter, M., Rother, G., Jones, C.W., and Sumpter, B. "Unraveling the dynamics aminopolymer/silica composites" *Langmuir*, (2016). *32*, 2617-2625. (IF=3.9) (A)
36. Holewinski, A., Sakwa-Novak, M., and Jones, C. W. "Linking $CO_2$ sorption performance to polymer morphology in aminopolymer/silica composites through neutron scattering" *Journal of The American Chemical Society, (*2015). *137,* 11749-11759. (IF=16.4) (A)
37. Sakwa-Novak, M., Holewinski, A., Hoyt, C., Yoo, C., Chai, S., Dai, S., Jones, C.W. "Probing the role of Zr addition vs. textural properties in enhancement of $CO_2$ adsorption performance in silica/PEI composite sorbents" *Langmuir*, (2015). *31*, 9356-9365. (IF=3.9) (A)
38. Holewinski, A., Idrobo, J-C., and Linic, S. "High performance Ag-Co alloy catalysts for electrochemical oxygen reduction." *Nature Chemistry*, (2014). *6*, 828-834. (IF=23.2) (A)
39. Holewinski, A., Xin, H., Nikolla, E., and Linic, S. "Identifying optimal active sites for heterogeneous catalysis by metal alloys based on molecular descriptors and electronic structure

engineering" *Current Opinion in Chemical Engineering,* (2013). *2*, 312-319. (IF=5.2) (P)

40. Holewinski, A., and Linic, S. "Elementary mechanisms in electrocatalysis: Revisiting the ORR Tafel slope." *Journal of the Electrochemical Society*, (2012). *159,* H864-H870. (IF=4.3) (A)
41. Xin, H., Holewinski, A., and Linic, S. "Predictive structure-reactivity models for rapid screening of Pt-based multimetallic electrocatalysts for the oxygen reduction reaction" *ACS Catalysis,* (2012). *2*, 12-16. (Cover Article) (IF=13.1) (A)
42. Xin, H., Holewinski, A., Schweitzer, N., Nikolla, E., and Linic, S. "Electronic structure engineering in heterogeneous catalysis: Identifying novel alloy catalysts based on rapid screening for materials with desired electronic properties" *Topics in Catalysis,* (2012). *55,* 376. (IF=2.9) (P)
43. Nikolla, E., Holewinski, A., Schwank, J., and Linic, S. "Controlling carbon surface chemistry by alloying: carbon tolerant reforming catalyst." *Journal of The American Chemical Society, (*2006). *35,* 11354-11355. (IF=16.4) (A)

## Book Chapters, Technical Reports, and Other Publications

1. Baldwin, R., Grim, G., Dinh, H., Chou, K., Schaidle, J. A., Lekse, J., Holewinski, A., and Baker, S. *Summary Report of the Carbon-Negative Hydrogen Workshop* (2024). Technical Report NREL/TP-2A00-88938

## Patents

1. F. W. S. Lucas and A. Holewinski. *Electrochemical synthesis of 2- methyltetrahydrofuran and 1,4-pentanediol from levulinic acid derived esters and gamma-valerolactone*.
   Provisional Patent Application No. 63/697,427 (Filed with US PTO September 20, 2024).
2. F. W. S. Lucas and A. Holewinski. *Electrochemical Synthesis of hydroxyvaleric acid from levulinic acid*.
   Provisional Patent Application No. 63/252,202 (Filed with US PTO October 5, 2021).
   Full U.S. Patent Application No: 18/501,126 (Filed with US PTO November 3, 2023).
3. J. A. Roper, S. Balijepalli, P. Doll, A. S. C. W. Jones, C. R. Murdock, J. M. Robbins, A. Nomura, B. R. Bommarius, A. Holewinski, and G. Gadda. *Coating for aldehyde remediation and method of making*. Patent Application No. US16/625,881 (Filed with US PTO June 29, 2018; Publication date: May 28, 2020)

## Funding

*Current External* *(>$6M in direct funds as PI since Fall 2015)*

DOE EFRC (DE-SC0012577), (PI: R. Lively, APH Share: $100,000)
*Center for Understanding and Control of Acid Gas- Induced Evolution of Materials for Energy (UNCAGE- ME)*
04/01/2024 – 03/31/2025

DOE SBIR (DE-SC0023982), (PI: RockyTech Ltd. Total $1.149M, APH share: $60,000)
*Modification of Nafion Thermoplastic Precursor to Enable Reprocessing of Fuel Cell and Electrolyzer Manufacturing Scraps*
09/01/2024 - 08/31/2026

NSF (CBET-2301381) Electrochemical Systems Program, $599,434 ( PI: APH; co-PI C. Musgrave)
*Understanding electrochemical hydrogenation reactions over post-transition metal electrodes: the role of incidental mediators and metastable phases*
08/01/2023 - 07/31/2026

DOE BES Catalysis Science Program (DE-SC0023322), $579,983 (PI: APH; co-I M. Janik)
*Electro-oxidative valorization of biomass: design strategies for selective and stable catalysis*
08/01/2022 - 07/31/2025

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DOE BES Clean Energy Technology and Low-Carbon Manufacturing Program (DE-SC0023424), $749,999 (PI: APH)
*Electrochemically-Assisted Dehydrogenation Reactions for Dual-Electrode Hydrogen Evolution*
01/01/2023 - 12/31/2025

ACS Petroleum Research Fund, $110,000 (PI: APH)
*Controlling hydrogenation selectivity for petrochemicals with well-defined active sites*
07/01/2022 - 08/31/2024

NSF (CHE-2055689) Chemical Catalysis Program, $452,787 + €168,334 ( PI: APH; co-PI's W. Zhang and R. Francke)
*NSF-DFG Echem: Cooperativity Between Immobilized Redox Mediators for Selective Anodic Biomass Valorization*
08/01/2021 - 09/31/2024

NSF (CBET-2004090) Catalysis Program, $742,974 (PI: J. W. Medlin; co-PI's: APH and D. Schwartz)
*Catalytic Selectivity Control in Electrochemical Systems using Self-Assembled Monolayers*
08/15/2020 - 07/31/2023

NSF (CBET-1944834) Catalysis Program, $650,714 (PI: APH)
*CAREER: Understanding Bifunctionality in Organic Electro-oxidation Catalysis*
01/01/2020 - 4/30/2025

*Completed External*

Research Corp. for Scientific Advancment Scialog Program (Award #29162), $55,000 (PI: APH, co-PI A. Wuttig; $55,000 per PI)
*A radical approach to negative methane emissions*
02/01/2023 - 01/31/2024

Sloan Foundation / Research Corp. for Scientific Advancment Scialog Program (Award #28503), $55,000 (PI: APH, co-PI's K. Hornbostel and Y. Liu; $55,000 per PI)
*Electric-swing solid state sorbents for direct air capture of $CO_2$*
02/01/2022 - 01/31/2024

NSF (MRI-1919845) Major Research Instrumentation Program, $880,680 (PI: APH; co-PI's T. Cuk,. S. George, J. W. Medlin, M. McGehee)
*MRI: Acquisition of a High-Sensitivity Low-Energy Ion Scattering (HS-LEIS) Spectrometer with Multiple Reactive Environment Transfer for Interrogating Surfaces and Interfaces*
08/01/2019 - 07/31/2022

NSF (CBET-1835967) Energy and Sustainability Program, $342,695 (PI: APH)
*MIEC Cascade Electrodes for High Density Energy Storage in $Li_2O_2$*
08/01/2018 - 1/31/2022

NSF (CHE-1665176) Chemical Catalysis Program, $649,998 (PI: APH; co-PI's J. W. Medlin and M. Janik; CU share: $429,998 )
*Manipulation of reaction selectivity in the electrochemical environment for biomass-to-chemicals conversions*
09/01/2017 - 08/31/2020

NREL LDRD (UGA-0-41026-103), (PI: J. Schaidle; APH share: $198,904)
*Electrochemical Transformations to Enable Fuel and Chemical Production from the Carboxylate Platform*
10/01/2017 - 09/31/2020

NSF (CBET-1806059) Catalysis Program, $104,929 (PI: APH)
*EAGER: Identifying Active Sites in Electrocatalysis by a Steady-State Isotope-Transient Technique*
07/01/2018 - 06/30/2019

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*Internal*

RASEI Seed Grant ($35,000) 2024, (APH – PI, co-PI Kat Knauer),
*Revolutionizing waste carbons via selective electrochemical conversion*

CU Boulder Research & Innovation Seed Grant Program ($50,000) 2022, (APH – PI, co-PI Oana Luca).
*Rewiring Electrolysis for Sustainable Plastics*

Water-Energy Nexus IRT Seed Grant ($16,000) 2018, (APH - PI, co-PI Se-Hee Lee),
*Mixed-Conductor Cascade Electrodes for High Density Energy Storage in $Li_2O_2$*

RASEI Seed Grant ($15,000) 2016, (APH - PI, co-PI Joshua Schaidle),
*Electrochemical upgrading of biomass-derived carboxylic acids*

## Invited presentations

*Departmental, Industrial, or Organizational Seminars*

1. Michigan Catalysis Society – Keynote, Feb. 27 2025
2. Leibniz Institute for Catalysis Rostock – Dec. 8, 2023
3. University of Copenhagen – Chemistry Department, Nov. 21, 2023
4. Technical University of Denmark – Physics Department, Nov. 14, 2023
5. University of Wisconsin Madison – Chemistry Dept., Seminar, Sept. 22, 2022.
6. University of Delaware – Catalysis Center for Energy Innovation, Seminar, Sept 14, 2022
7. University of New Mexico – Chemical and Biological Engineering. Dept. Seminar, April 20, 2022.
8. Virginia Tech – Dept. of Chemical Engineering Dept. Seminar, March 14, 2022.
9. Oregon State University – Chemical Biological and Environmental Eng. Dept. Seminar, Feb. 7, 2022.
10. University of Oregon – Chemistry Dept. Seminar, Feb. 4, 2022.
11. Catalysis Club of Chicago – Annual Symposium Keynote. May 13, 2021
12. Technical University of Denmark – "CatTheory" Webinar Series, Feb. 18, 2021
13. University of Houston – Chemical and Biomolecular Engineering Dept., Seminar, Dec. 4, 2020
14. University of Michigan – Chemical Engineering Dept., Seminar, Nov. 12, 2020
15. Electrochemical Society Detroit Chapter – "Trailblazers in Electrochemistry Seminar Series" Oct. 29, 2020
16. UC Santa Barbara – Catalysis Seminar Series. Sept. 10, 2020
17. Colorado State University – Chemical and Biological Engineering Dept., Seminar, Feb. 27, 2020.
18. Lehigh University – Materials Science and Engineering Dept., Seminar, Dec. 18, 2019.
19. UC Riverside – Materials Science and Engineering Program, Seminar, Jan 27, 2016.

*Pre-2015*

20. University of Illinois Urbana-Champaign – Dept. of Chemical and Biomolecular Engineering, Seminar, Feb. 2014
21. University of Colorado Boulder – Dept. of Chemical and Biological Engineering, Seminar, Feb. 2014
22. University of Virginia, Dept. of Chemical Engineering, Seminar, Jan. 2014

*Invited Conference Talks*

1. Society of German Chemists (GDCh) - Electrochemistry. "Electrochemical Oxidative Dehydrogenation of Aldehydes and Prospects for 'Anodic Hydrogen' " Braunschweig, Germany, September 18, 2024.
2. Annual Meeting of the American Chemical Society. "Kinetic analysis of the co electro-oxidation reaction on Bimetallics: Understanding the interplay of bifunctional and electronic effects" Denver, August 19, 2024.
3. Annual Meeting of the American Chemical Society. "Electrochemical Reduction of Levulinic Acid to PHA Monomers" Denver, August 18, 2024.

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4. Annual Meeting of the American Chemical Society. "Electrochemically-assisted dehydrogenation and prospects for anodic hydrogen" Indianapolis, March 27, 2023.
5. Annual Meeting of the American Chemical Society. "A Kinetic Analysis of the CO Electro-Oxidation Reaction on Bimetallics: Understanding the Interplay of Bifunctional and Electronic Effects" Indianapolis, March 27, 2023.
6. Annual Meeting of the American Chemical Society. "Electro-oxidation pathways for biomass derived furans." Chicago, August 24, 2022.
7. Annual Meeting of the American Chemical Society. "Steering selectivity with free-atom-like d-states in single-atom-alloy catalysts." Chicago, August 22, 2022.
8. ACS Colloid and Surface Science Symposium. "A Kinetic Analysis of the CO Electro-Oxidation Reaction on Bimetallics: Understanding the Interplay of Bifunctional and Electronic Effects" Golden, Colorado, July 13, 2022.
9. Rocky Mountain Catalysis Society Annual Symposium. "Steering selectivity with free-atom-like d-states in single-atom-alloy catalysts." Golden, Colorado, April 22, 2022.
10. Annual Meeting of the American Chemical Society. "Electro-oxidation pathways for biomass derived furans." San Diego, March 24, 2022
11. Annual Meeting of the American Chemical Society. "A Kinetic Analysis of the CO Electro-Oxidation Reaction on Bimetallics: Understanding the Interplay of Bifunctional and Electronic Effects" San Diego, March 22, 2022
12. American Institute of Chemical Engineers National Meeting. "Electro-oxidation pathways for biomass derived furans." Boston, November 8, 2021
13. Annual Meeting of the American Chemical Society. "Steering selectivity with free-atom-like d-states in single-atom-alloy catalysts." Atlanta, August 23, 2021.
14. Annual Meeting of the American Chemical Society. "Electro-oxidation pathways for biomass derived furans." Atlanta, August 23, 2021.
15. ChemistsLive Conference (ACS Cross-Division Event). "Electrochemical Oxidation Pathways of Biomass-Derived Furanics" September 25, 2020
16. ‡ Annual Meeting of the American Chemical Society. "Impact of Charge Transfer Model on the Identification of "Optimal" Electrocatalysts" San Francisco, August 2020.
17. ‡ Annual Meeting of the American Chemical Society. "A Kinetic Analysis of the CO Electro-Oxidation Reaction on Bimetallics: Understanding the interplay of Bifunctional and Electronic Effects." San Francisco, August 2020.
18. ‡ Annual Meeting of the American Chemical Society. "Electro-Oxidation Pathways for Biomass-Derived Furans" Philadelphia, March 2020.
19. ‡ Annual Meeting of the American Chemical Society. "A Kinetic Analysis of the CO Electro-Oxidation Reaction on Bimetallics: Understanding the Interplay of Bifunctional and Electronic Effects" Philadelphia, March 2020.
20. American Institute of Chemical Engineers Annual Meeting. "Insights on the Electrochemical Conversion of Biomass Derivatives" Orlando, Florida. November 11, 2019.
21. Annual Meeting of the American Chemical Society. "Insights on the Electrochemical Conversion of Biomass Derivatives" Orlando, Florida. April 3, 2019.
22. Annual Meeting of the American Chemical Society. "Insights on the Electrochemical Conversion of Biomass Derivatives" Boston, Massachusetts. August 21, 2018.
23. American Institute of Chemical Engineers Annual Meeting. "Impacts of Aminopolymer-Support Interaction on $CO_2$ Sorption Performance Probed by Neutron Scattering Techniques" Minneapolis, Minnesota. October 30, 2017.
24. Annual Meeting of the American Chemical Society. "Mechanistic Analysis of Electrochemical Oxygen Reduction and Development of Economical Silver-alloy Catalysts for Low Temperature Fuel Cells." San Francisco, California. August 11, 2014.

*‡ denotes cancellation due to COVID-19*

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*Invited Workshop Talks*

1. ACS Catalysis Division Summer School Series: "The Confluence of Kinetics and Thermodynamics in Electrocatalysis: Kinetic Fingerprints and Catalyst Design" Webinar, 2023
2. Leibniz Institute for Catalysis. "Heterogeneous Electrocatalysis: Fundamentals, Applications, and Tools for Mechanistic Studies and Catalyst Design" Rostock, Germany. Dec 11, 2023
3. Hiden Analytical Conference on DEMS: "Theoretical and practical considerations for rigorous on-line mass spectrometry for electrochemical kinetics" (Presented by student T. Whittaker). Penn State University. October 15, 2024

## Contributed presentations *(Oral presentations unless poster noted)*

1. Todd Whittaker, Yuval Fishler, Wilson Smith, Adam Holewinski, Charles Musgrave, and Derek Vigil-Fowler. "Insights into Electrochemical $CO_2$ Reduction on Metallic and Oxidized Tin using Grand-Canonical DFT and in-situ ATR-SEIRA spectroscopy" Annual Meeting of the American Chemical Society. Denver, Colorado. August 21, 2024
2. Emma Hollis, Marc Manyé Ibáñez, and Adam Holewinski (*Poster*): "Exploring effects of metal-oxide supports on platinum catalysts for electrochemical partial oxidation of furfural" Annual Meeting of the American Chemical Society. Denver, Colorado. August 20, 2024
3. Nathanael Ramos, Hudson Neyer, and Adam Holewinski. "Anodic hydrogen production during benzaldehyde electrooxidation on Au, Ag, and Cu: Rotating ring-disk voltammetry analysis" Annual Meeting of the American Chemical Society. Denver, Colorado. August 19, 2024
4. Yuval Fishler, Adam Holewinski, and Wilson Smith, "Electrosynthesis methods of catalysts for operando ATR-SEIRAS applications in electrocatalysis" Annual Meeting of the American Chemical Society. Denver, Colorado. August 19, 2024
5. Marc Manyé Ibáñez, Joe Hasse, Emma Hollis, J. Will Medlin, and Adam Holewinski. "Impact of electrolyte engineering and modulation of the local catalyst/support environment on bulk electrolysis of furfural over platinum catalysts" Annual Meeting of the American Chemical Society. Denver, Colorado. August 18, 2024
6. Adam Holewinski (*Poster*): "Electrocatalytic Conversion Mechanisms for Renewable Fuels and Chemicals." Gordon Research Conference on Catalysis. New London NH, June 2024.
7. Nathanael Ramos, Hudson Neyer, and Adam Holewinski. "Rotating Disk Electrode Studies of Benzaldehyde Oxidation on Group Ib Metals"Annual Meeting of the Electrochemical Society. San Francisco, California. May 27, 2024
8. Joseph Hasse, Marc Manyé Ibáñez, Alex Román, and Adam Holewinski. "Electro-oxidation pathways for biomass-derived furans" Annual Meeting of the Electrochemical Society. Gothenburg, Sweden. October 10, 2023.
9. Todd Whittaker, Adam Baz, Taylor Spivey, Lindsey Hamblin, and Adam Holewinski. "A Kinetic Analysis of CO Electro-Oxidation on Bimetallics: Understanding the Interplay of Bifunctional and Electronic Effects" North American Catalysis Society National Meeting. Providence, Rhode Island. June 22, 2023.
10. Yuval Fishler, Adam Holewinski, Wilson A. Smith. "Comparison of Sn electrocatalyst thin films for ATR-FTIR applications in $CO_2$ reduction" North American Catalysis Society National Meeting. Providence, Rhode Island. June 20, 2023.
11. Nathanael C. Ramos, J. Will Medlin, and Adam Holewinski. "Comparison of Sn electrocatalyst thin films for ATR-FTIR applications in $CO_2$ reduction" North American Catalysis Society National Meeting. Providence, Rhode Island. June 19, 2023.
12. Adam Baz, Taylor Spivey, Todd Whittaker, and Adam Holewinski. "A Kinetic Analysis of the CO Electro-Oxidation Reaction on Bimetallics: Understanding the Interplay of Bifunctional and Electronic Effects" American Institute of Chemical Engineers National Meeting. Phoenix, Arizona. November 15, 2022
13. Taylor Spivey and Adam Holewinski. "Steering selectivity with free-atom-like d-states in single-atom-alloy catalysts." American Institute of Chemical Engineers National Meeting. Phoenix,

Arizona. November 15, 2022

14. Adam Holewinski (*Poster*): "Electrocatalytic Conversion Mechanisms for Renewable Fuels and Chemicals." Gordon Research Conference on Catalysis. New London NH, June 2022.
15. Adam Baz and Adam Holewinski. "A Microkinetic Understanding of CO and Methanol Electro-Oxidation on Bimetallic Catalysts" North American Catalysis Society National Meeting. New York, New York. May 26, 2022.
16. Taylor Spivey and Adam Holewinski. "Interactions Between Free Atom Like States of Single Atom Alloys and Frontier Molecular Orbitals of Unsaturated Aldehydes" North American Catalysis Society National Meeting. New York, New York. May 25, 2022.
17. Joseph Hasse and Adam Holewinski. "Surface mechanisms for furfural electrooxidation to value-added chemicals probed by ATR-SEIRAS" North American Catalysis Society National Meeting. New York, New York. May 23, 2022.
18. Taylor Spivey and Adam Holewinski. "Driving Selectivity with Free-Atom-Like States on Single Atom Alloy Catalysts" Annual Meeting of the American Chemical Society. San Diego, California. March 20, 2022
19. Taylor Spivey and Adam Holewinski. "Driving Selectivity with Free-Atom-Like States on Single Atom Alloy Catalysts" American Institute of Chemical Engineers National Meeting. Boston, Massachusetts. November 16, 2021
20. Joseph Hasse and Adam Holewinski. (*Poster*) "Elucidation of Surface Moieties during Furfural Oxidation on Platinum Catalysts Using in-Situ Spectroscopy" American Institute of Chemical Engineers National Meeting. Boston, Massachusetts. November 16, 2021
21. Adam Baz and Adam Holewinski. "Understanding CO and Methanol Electro-Oxidation Activity on $Ag_xPd_{1-X}/C$ Alloys Under Alkaline Conditions" American Institute of Chemical Engineers National Meeting. Boston, Massachusetts. November 8, 2021
22. Alex Roman, Joe Hasse, Naveen Agrawal, Mike Janik, and Adam Holewinski. "Electro-oxidation pathways for biomass-derived furans." Annual Meeting of the Electrochemical Society. Orlando, Florida. October 12, 2021.
23. Francisco W.S. Lucas and Adam Holewinski. "Electrochemical Valorization of Biomass-Derived Feedstocks: Levulinic Acid to 4-Hydroxyvaleric Acid" Annual Meeting of the Electrochemical Society. Orlando, Florida. October 11, 2021.
24. Alexander Delluva and Adam Holewinski. "Evolution of cathodic interfaces with the solid state electrolyte $Li_7La_3Zr_2O_{12}$." American Institute of Chemical Engineers National Meeting. Orlando, Florida. November 2019
25. Adam Baz and Adam Holewinski. "A kinetic analysis of the CO electro-oxidation reaction on Pt bimetallics: Understanding the interplay of bifunctional and electronic effects." American Institute of Chemical Engineers National Meeting. Orlando, Florida. November 2019
26. Alex Roman, Joe Hasse, J.W. Medlin and Adam Holewinski. "Electro-oxidation of furans to value-added chemicals." Annual Meeting of the Electrochemical Society. Atlanta, Georgia. October 16, 2019.
27. Adam Baz and Adam Holewinski. "A kinetic analysis of the CO electro-oxidation reaction on Pt bimetallics: Understanding the interplay of bifunctional and electronic effects." Annual Meeting of the Electrochemical Society. Atlanta, Georgia. October 15, 2019.
28. Alex Roman, Joe Hasse, J.W. Medlin and Adam Holewinski. "Insights on the Electrochemical Conversion of Biomass Derivatives." Annual Meeting of the American Chemical Society. San Diego, California. August 28, 2019.
29. Alex Roman, J.W Medlin, and Adam Holewinski. "Insights on the Electrochemical Conversion of Biomass Derivatives." North American Catalysis Society National Meeting. Chicago, Illinois. June 26, 2019.
30. Adam Baz and Adam Holewinski. "Independent tuning of active sites in bifunctional methanol electro-oxidation catalysis." North American Catalysis Society National Meeting. Chicago, Illinois. June 26, 2019.

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31. Alex Roman, J.W Medlin, and Adam Holewinski. (*Poster*) "Electro-oxidation of furans to value-added chemicals." North American Catalysis Society National Meeting. Chicago, Illinois. June 25, 2019.
32. Alex Roman, J.W Medlin and Adam Holewinski. "Electro-oxidation of furans to value-added chemicals." Society of Hispanic Professional Engineers National Convention. Pasadena, California October 18, 2018.
33. Alex Roman, J.W Medlin and Adam Holewinski. "Electro-oxidation of furans to value-added chemicals." American Institute of Chemical Engineers National Meeting. Pittsburgh, Pennsylvania. October 30, 2018.
34. Adam Holewinski (*Poster*): "Electrocatalytic Conversion Mechanisms for Renewable Fuels and Chemicals." Gordon Research Conference on Catalysis. New London NH, June 2018.
35. Alex Roman, J.W Medlin, and Adam Holewinski. (*Poster*) "Electrocatalytic Upgrading of Biomass-Derived Oxygenates" North American Catalysis Society National Meeting. Denver, Colorado. June 7, 2017.
36. Adam Holewinski, Alex Roman, and Cody Barnhill. "Probing the nature of active sites for methanol oxidation with transient isotope kinetics." Annual Meeting of the American Chemical Society. San Francisco, California. April 3, 2017.
37. Adam Holewinski, (*Poster*): "Electrocatalytic Conversion Mechanisms for Renewable Fuels and Chemicals." Gordon Research Conference on Catalysis. New London NH, June 2016.
38. Adam Holewinski, Miles Sakwa-Novak, and Christopher W. Jones, "Neutron Scattering Characterization of $CO_2$ Sorbent Materials: The Morphology of Polyethyleneimine in Mesorporous Silica and Its Performance Impacts.", American Institute of Chemical Engineers National Meeting, Salt Lake City Utah, November 2015
39. Adam Holewinski and Suljo Linic, "Pt-Free Electrocatalysts for Efficient Oxygen Reduction In Alkaline Fuel Cells: Experimental and Computational Insights.", American Institute of Chemical Engineers National Meeting, Salt Lake City Utah, November 2015
40. Adam Holewinski, Miles Sakwa-Novak, and Christopher W. Jones, "Neutron scattering characterization of amino-polymer/silica composite $CO_2$ adsorbents: Morphology, mobility, and consequences for performance.", North American Catalysis Society National Meeting. Pittsburgh, Pennsylvania. June 15, 2015.
41. Adam Holewinski, Miles Sakwa-Novak, and Christopher W. Jones, "Neutron scattering characterization of amino-polymer/silica composite $CO_2$ adsorbents: Morphology, mobility, and consequences for performance.", Annual Meeting of the American Chemical Society. Denver, Colorado. March 24, 2015.
42. Adam Holewinski and Suljo Linic, "Mechanistic analysis of electrochemical oxygen reduction and development of economical silver alloy catalysts for low temperature fuel cells.", Annual Meeting of the American Chemical Society. Denver, Colorado. March 22, 2015.
43. Adam Holewinski and Suljo Linic, " Development of Ag-alloy Oxygen Reduction Electrocatalysts for Low Temperature Fuel Cells.", American Institute of Chemical Engineers National Meeting. San Francisco, California. November 7, 2013.
44. Adam Holewinski and Suljo Linic, " Understanding ORR Kinetics Through Microkinetic Modeling: Revisiting the Tafel Slope.", American Institute of Chemical Engineers National Meeting. San Francisco, California. November 7, 2013.
45. Adam Holewinski and Suljo Linic, " Kinetic analysis of electrochemical oxygen reduction and development of Ag-alloy catalysts for low temperature fuel cells.", North American Catalysis Society National Meeting. Louisville, Kentucky. June 4, 2013.
46. Adam Holewinski, and Suljo Linic, " Development of Low-cost Ag-alloy Oxygen Reduction Electrocatalysts for Low Temperature Fuel Cells", Michigan Catalysis Society Spring Symposium. Dearborn, Michigan. May 7, 2013.
47. Adam Holewinski and Suljo Linic, " Pt-free electrocatalysts for efficient oxygen reduction in alkaline fuel cells:Experimental and computational insights.", American Institute of Chemical Engineers National Meeting. Pittsburgh, Pennsylvania. October 31, 2012.

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48. Adam Holewinski and Suljo Linic, " Revisiting the Tafel Slope: Understanding ORR Kinetics Through Microkinetic Modeling.", American Institute of Chemical Engineers National Meeting. Pittsburgh, Pennsylvania. October 31, 2012.
49. Adam Holewinski, and Suljo Linic, " Understanding and optimizing the kinetic behavior of the oxygen reduction reaction", Annual Meeting of the American Chemical Society. Philadelphia, Pennsylvania. August 19, 2012.
50. Adam Holewinski, Hongliang Xin, and Suljo Linic, " Understanding the kinetic behavior of the oxygen reduction reaction for rapid catalyst screening", Michigan Catalysis Society Spring Symposium. Midland, Michigan. May 14, 2012.
51. Adam Holewinski and Suljo Linic, " Pt-free electrocatalysts for efficient oxygen reduction in alkaline fuel cells: Experimental and computational insights.", American Institute of Chemical Engineers National Meeting. Minneapolis, Minnesota. October 19, 2011.
52. Adam Holewinski and Suljo Linic. "Oxygen reduction on metals in acidic and basic media: Insights toward design of Pt-free electrocatalysts." North American Catalysis Society National Meeting. Detroit, Michigan. June 6, 2011.
53. Adam Holewinski and Suljo Linic, (Poster) "Experimental and Computational Studies of Oxygen Reduction on Platinum and Silver Catalysts in Acidic and Basic Media", American Institute of Chemical Engineers National Meeting. Salt Lake City, Utah. November 10, 2010.
54. Adam Holewinski and Suljo Linic, " Design of novel platinum-free electrocatalysts for oxygen reduction in alkaline fuel cells", American Institute of Chemical Engineers National Meeting. Salt Lake City, Utah. November 8, 2010.
55. Adam Holewinski, Eranda Nikolla, and Suljo Linic, "Degradation of the performance of solid oxide fuel cell (SOFC) electrodes in extreme environments", Annual Meeting of the American Chemical Society. Washington, DC. August 18, 2009.

## Teaching

*Courses Taught*

CHEN 4838/5838: Electrochemical Engineering, (U. Colorado)
- Fall 2018, Spring 2022, Fall 2024, Fall 2024 (full course), Summer 2020 (1 cr. 'Module')

CHEN 4521: Physical Chemistry for Engineers, (U. Colorado)
- Spring 2023, Spring 2019, Spring 2018, Spring 2017

CHEN 5390: Chemical Reaction Engineering, (U. Colorado)
- Fall 2022, Fall 2021, Fall 2020, Fall 2019, Fall 2017, Fall 2016, Fall 2015

CHEN 3660: Energy Fundamentals, (U. Colorado)
- Spring 2021

*Workshops Attended*

2015 FTEP: *Teaching in a nutshell* (U. Colorado)

2017 FTEP: *Flipping the Class for the Skeptic* (U. Colorado)

2017 FTEP: *Effective Facilitation of Clickers and Peer Instruction* (U. Colorado)

*Curriculum and Educational Materials Development*

- Wrote interactive modules illustrating quantum chemical principles (posted to learncheme.com)
- Developed new course CHEN 4838/5838: Electrochemical Engineering
- Wrote course pack for CHEN 5390 (full content of course)

## Mentoring

*PhD Students (* designates graduated; ‡ designates co-advised student)*

1. Alex M. Roman, 2020*,‡ PhD (co-advised by J.W.M.); NSF GRFP Fellow, 2015-18 (Current position: Blue Origin, Seattle)
2. Alexander Delluva, 2021*, PhD; (Current position: Peak Energy, Denver)

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3. Adam Baz, 2022*, PhD; DoEd GAANN Fellowship 2018; (Current position: Boston Metal)
4. Joseph Hasse 2023*, PhD; (Current position: Otoro Energy)
5. Taylor Spivey 2024*, PhD; DoEd GAANN Fellowship 2019, DOE SCGSR Fellow 2020; (Current position: )
6. Faysal Al Khulaifi 2024*,‡, PhD (co-advised by J.W.M.); (Current position: Lecturer, King Fahd University of Petroleum and Minerals)
7. Yuval Fishler‡, PhD Candidate (co-advised by W.A.S.)
8. Todd Whittaker‡, PhD Candidate (co-advised by C.B.M.)
9. Nathanael Ramos‡, PhD Candidate (co-advised by J.W.M.)
10. Yiqi Xu‡, PhD Pre-Candidate (co-advised by J.W.M.)
11. Marc Manyé Ibáñez, PhD Pre-Candidate
12. Emma Hollis, PhD Pre-Candidate
13. Varun Awasthi, PhD Pre-Candidate (co-advised by C.B.M.)
14. Jonathan Paul, PhD Pre-Candidate
15. Hannah Oberg, PhD Pre-Candidate
16. Hariharan Kavitha, PhD Pre-Candidate (co-advised by A.G.)

*MS Students*

1. Jessica Dudoff, 2017-20
2. Cody Barnhill, 2015-16
3. Grey Garrett, 2018-19

*Postdoc*

1. Dr. Zachary Barton (PhD Chemistry U. Illinois Urbana-Champaign), 2017-19 (Current position: Lockheed Martin, Denver)
2. Dr. Francisco Willian de Souza Lucas, (PhD Chemistry Federal U. São Carlos), 2020-22 (Current position: Nuclera Nucleics, Boston)
3. Dr. Yaran Zhao (PhD Nankai University), 2021-22 (Current position: Assistant Professor, Beijing Normal University at Zhuhai)
4. Dr. Rupali Mittal (PhD University of Delhi), 2023-present
5. Dr. Haoran Ding (PhD University of Delaware) 2024-present

*Undergraduate Researchers (visiting students noted, others CU-Boulder, * = Senior Thesis, ‡= paper author)* (19)

Bella Hughes (U. Pittsburgh, YSSRP Program)., Joseph Sullivan, Hudson Neyer (Arapahoe CC, SPUR Program), Samuel Burke-Bevis, Robert Benke, Jonas Kulberg-Savercool*, Lindsey Hamblin*, Mason Lyons (U. Iowa, YSSRP Program), Nina Hooper*; Kasie Coogan (U. Alabama, YSSRP Program); Matthew Zhang; Hussain Almajed; Samantha Kaczaral (Vanderbilt, YSSRP program); Griffin Drake (Oregon State, YSSRP program); Nicholas Kurtyka‡; George Curtis; Jordan Finzel (WPI, C2B2 REU program); Roy Madrid; Sarah Burns (DLA program)

*PhD Committee Member* (34)

*Internal*

Wenhan Ou (MSE), Jesus Melendez-Gil (CHBE), Jason Pfeilsticker (CHBE), Quinn Brink (Chemistry), Rishabh Tennankore (CHBE); Brian Radka (CHBE); Ezra Baghdaddy (CHBE); Filipe de Sousa Evangelista (CHBE); Nathan Jarvey (CHBE); Lacey Roberts (CHBE); Elizabeth Allan-Cole (CHBE); Xinpei Zhou (CHBE); Zack Blanchette (CHBE); Ben Greydanus (CHBE); Andrew Yeang (CHBE); Nicholas Singstock (CHBE); Mat Rasmussen (CHBE); Alex Jenkins (CHBE); Glenn Hafenstine (CHBE); William McNeary (CHBE); Lesli Mark (CHBE); Natalie Schieber (CHBE); Shiyi Wang (CHBE); Christopher Bartel (CHBE); Ryan Trottier (CHBE); Ashutosh Mishra (CHBE); Mike Lotto (AES); Franklin Maharaj (Chemistry); Mohammed Alkhater (CHBE); Brian Robb (Chemisty); Scott Waters (Chemistry)

*External*:

# Adam Holewinski

PhD Defense Opponent, Sihang Liu, Technical University of Denmark;
Thesis Committee for Oscar Moreno, U. Delaware

## Service

*Professional Organization Leadership Roles*

- North American Catalysis Society Board of Directors – *Rocky Mountain Catalysis Society Representative,* 2022-

*Journal Collection Guest Editorship*

- "Advanced in Electrochemical Conversions for a Greener Chemical Industry". *Green Chemistry*, 2024. Co-Editors: J.P. Tessonier, V. Glezakou, A. Holewinski, and J. Lopez-Ruiz.

*Conference organization*

1. Co-Chair, "Electrocatalysis and Photoelectrocatalysis: Fuel Cells" AIChE National Meeting, Salt Lake City Utah, November 2015
2. Organizer/Chair, in "Electrocatalysis and Photoelectrocatalysis" and "Fuels from Sun" (2 sessions each). AIChE National Meeting, San Francisco CA, November 2016
3. Organizer/Chair for "Electrocatalysis for Energy Conversion" (4 sessions). American Chemical Society, Spring National Meeting, San Francisco CA, April 2017
4. Program Committee and Session Chair ("Catalytic Nanoparticles"). North American Catalysis Society National Meeting, Denver, Colorado, June 2017
5. Organizer/Chair for "Electrocatalysis for Energy Conversion and Storage" (4 sessions). American Chemical Society, Fall National Meeting, Washington DC, August 2017
6. Organizer/Chair, in "Electrocatalysis and Photoelectrocatalysis" and "Fuels from Sun" (3 sessions). AIChE National Meeting, Minneapolis MN, November 2017
7. Organizer/Chair, in "Rational Catalyst Design" (1 session). AIChE National Meeting, Pittsburgh PA, October 2018
8. Session Chair (2 Sessions: "Catalysis with Ligand Effects", "Photoelectrochemistry and Plasmonics"). North American Catalysis Society National Meeting, Chicago IL, June 2019.
9. Organizer/Chair for "Electrocatalysis for Energy Conversion and Storage" (4 sessions). American Chemical Society, Fall National Meeting, San Diego CA, August 2019.
10. ‡Organizer for "ACS Divisional Awards Symposium" American Chemical Society, Fall National Meeting, San Francisco CA, August 2020.
11. Organizer for "ACS Divisional Awards Symposium" American Chemical Society, Fall National Meeting, Atlanta GA, August 2021.
12. Session Chair ("Fuel Cell Catalysts"). North American Catalysis Society National Meeting, New York NY, May 2022
13. Organizer for "ACS Divisional Awards Symposium" American Chemical Society, Spring National Meeting, Indianapolis, March 2023.
14. Program Committee ("Electrocatalysis and Photoelectrocatalysis"). North American Catalysis Society National Meeting, Atlanta, GA June 2025
15. Telluride Science Workship "Biomass Valorization through Electro-conversion Reactions" Telluride, CO. July 2025

*Journal peer-review service*

- Referee for ~40 manuscripts per year. Journals include Nature, Nature Catalysis, Nature Chemistry, Journal of the American Chemical Society, Angewandte Chemie, Science Advances, Journal of Catalysis, ACS Catalysis, ACS Energy Letters, Joule, ACS Applied Materials & Interfaces, Journal of Physical Chemistry C, Applied Catalysis A: General, Applied Catalysis B: Environmental, Industrial & Engineering Chemistry Research, Chemical Communications, Catalysis Science & Technology, Catalysis Today.

*Funding agency peer review*

# Adam Holewinski

- Panel Reviewer: NSF CBET Catalysis Program; NSF CBET Electrochemical Systems Program; NSF CBET Process Systems, Reaction Engineering and Molecular Thermodynamics Program;
- DOE Basic Energy Sciences – Catalysis Science Program and CPIMS Program, ad-hoc reviews
- ACS Petroleum Research Fund – ad-hoc reviews
- Stanford Synchrotron Radiation Lightsource – ad-hoc reviews
- Beckman Foundation – Postdoc Fellowship in Chemical Sciences

*Departmental and University service*

- CHBE: Director of Graduate Studies 2024–
- CEAS: Surface Science Characterization User Facility: Creation, planning, installation, and user liaison, 2020–
- CHBE Seminar Series Organizer, 2021-22
- CHBE Leadership Team, 2020-21
- RASEI Director Search Committee, 2020
- CHBE Undergraduate Committee, 2019-2023
- CHBE Faculty Committee, 2018
- RASEI Space Allocation Committee, 2018-2020
- CHBE Graduate Committee, 2016 – 2018 (Admissions, Curriculum, Recruiting)
- Ad-hoc faculty search reviews in CHBE and RASEI annually
- CU Youth Scholars Summer Research Program – Career Development Workshop speaker, 2018-
- Student researcher group 'Catalysis Supergroup' faculty advisor 2015-2018

*Other*

- Colorado Center for Biofuels and Biorefining REU guest speaker, 2017
- EFRC Early Career Network 'Academic Interview' workshop guest speaker, 2016

*Society memberships*

American Institute of Chemical Engineering; American Chemical Society; North American Catalysis Society; Electrochemical Society