Thomas J. Schwartz, Ph.D., P.E.
Associate Professor
Department of Chemical and Biomedical Engineering
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Education:

2010-2015 – University of Wisconsin – Madison, Madison, WI
- Ph.D. Chemical Engineering
  - Minor: Materials Science
  - Advisor: Prof. James A. Dumesic
  - Thesis Title: Coupling Chemical and Biological Catalysis to Produce Biorenewable Chemicals

2006-2010 – University of Maine, Orono, ME
- B.S. Chemical Engineering
- B.S. Biological Engineering
- Honors College
  - Thesis Advisor: Prof. M. Clayton Wheeler
  - Thesis Title: Energy Densification of Cellulosic Biomass
- Summa cum Laude with Highest Honors

Appointments:

09/2021-present	– Associate Professor of Chemical Engineering, University of Maine
09/2023-present	– Associate Director, Forest Bioproducts Research Institute, UMaine
09/2017-present	– Cooperating Faculty, Department of Chemistry, UMaine
05/2019-present	– Associate, Frontier Institute for Research in Sensor Technology, University of Maine
09/2016-08/203	– Associate, Forest Bioproducts Research Institute, UMaine
09/2015-08/2021	– Assistant Professor of Chemical Engineering, University of Maine
09/2016-05/2019	– Associate, Laboratory for Surface Science & Technology, UMaine
09/2011-08/2015	– National Science Foundation Graduate Research Fellow, University of Wisconsin - Madison
09/2010-09/2011	– Research Assistant, University of Wisconsin - Madison
05/2010-09/2010	– Research Associate, Forest Bioproducts Research Institute, University of Maine
10/2006-05/2010	– Student Research Assistant, Forest Bioproducts Research Institute, University of Maine

Society Memberships and Professional Affiliations:

Licensed Professional Engineer (ME License Number 18148), Tau Beta Pi, Francis Crowe Society, American Institute of Chemical Engineers, American Chemical Society, North American Catalysis Society, New England Catalysis Society, Technical Association of the Pulp and Paper Industry, American Society for Engineering Education.

Awards and Honors:

2022 – Invited Article "Selective Ring Opening of Decalin Over Ir Catalysts" featured on cover of *ACS Sustainable Chemistry & Engineering*

2021 – Invited Article "Catalytic Carbon-Carbon Bond Coupling for Producing Jet Fuel Blendstocks from Biomass" featured on the back cover of *Reaction Chemistry & Engineering*
2021 – CAREER Award, National Science Foundation
2020 – Joseph M. Genco Award, University of Maine Pulp and Paper Foundation
2020 – EPSCoR Research Infrastructure Investment Fellow, National Science Foundation
2019 – University of Maine System Faculty Fellow
2019 – Young Investigator Travel Award, North American Symposium on Catalysis & Reaction Engineering
2018 – Early Career Research Award, University of Maine College of Engineering
2018 – Young Investigator Travel Award, Gordon Research Conference on Catalysis
2017 – Featured in *Chemical Communications* "Emerging Investigators" special issue
2016 – Article "Coupling Chemical and Biological Catalysis: A Flexible Paradigm for Producing Biobased Chemicals" featured on the cover of *Current Opinion in Biotechnology*
2016 – American Chemical Society Petroleum Research Fund Doctoral New Investigator Award
2014 – Article "Engineering Catalyst Microenvironments for Metal-Catalyzed Hydrogenation of Biologically-Derived Platform Chemicals" featured on the frontispiece of *Angewandte Chemie International Edition*
2014 – Grand Prize, NSF Engineering Research Center for Biorenewable Chemicals Student Presentation Contest
2014 – Student Travel Award, Gordon Research Conference on Catalysis
2013 – Roland A. Ragatz Laboratory Teaching Assistant Award, UW CBE Department
2013 – NSF PIRE Program travel scholarship to attend 2013 PIRE Summer School in Turku, Finland and 10th Congress on Catalysis Applied to Fine Chemicals
2011 – 2nd Place, NSF Engineering Research Center for Biorenewable Chemicals Student Presentation Contest
2010 – National Science Foundation Graduate Research Fellowship
2010 – Hovey Award, UMaine CBE Department
2009 – Elected to Tau Beta Pi National Engineering Honor Society
2008 – Sophomore Owls (Top 1% of University of Maine Sophomore Class)

Teaching and Mentoring:

Courses Taught:
CHE 200 Fundamentals of Process Engineering (Maine)
CHE 368 Kinetics and Reactor Design (Maine)
CHE 498/598 Principles of Heterogeneous Catalysis (Maine)
CHE 363 Chemical and Biological Engineering Laboratory II (Maine)
CBE 324 Transport Phenomena Laboratory (Wisconsin)
CBE 735 Graduate Kinetics and Catalysis (Wisconsin)
CBE 450 Process Design (Wisconsin)

Current Graduate Students, Honors Thesis Students, and Post-Docs: **5**
Chayton Boucher, Ph.D. (Chemistry, Co-Advised)
Faeze Akbari Beni, Ph.D. (Chemical Engineering)
Temidayo Ogunjinmi, Ph.D. (Chemical Engineering)
Temitope Akanbi, Ph.D. (Chemical Engineering)
Marlon Morrer, M.S. (Chemistry, Co-Advised)

Previous Graduate Students and Post-Docs Mentored: ***13***

Andrew Boucher, M.S. (Chemistry, Co-Advised, Now: Maine DHHS PFAS Lab)
Mehdi Niknam Sharhak, Ph.D. (Chem. Eng., Post-Doc, Now: Georgia Tech)
Justin Waters, M.S. (Chem. Eng., Now: Merck)
Mackenzie Todd, Ph.D. (Chem. Eng., Now: Weaver & Tidwell)
Matthew Kline, Ph.D. (Chem. Eng., Post-Doc, Now: UOP-Honeywell)
Lauren Babb, M.S. (Chemistry, Co-Advised, Now: Barnard College)
Elnaz Jamalzade, Ph.D. (Chemistry, Co-Advised, Now: Gliead Sciences, Inc.)
Hussein Abdulrazzaq, M.S., Ph.D. (Chem. Eng., Now: Carrier Corporation)
Jalal Tavana, Ph.D. (Chem. Eng., Now: Annellotech)
Christopher Albert, M.S. (Chem. Eng., Now: Sappi N.A.)
Daniela Stuck, M.S. (Chem. Eng., Now: Seagate Technologies)
Akbar Mahdavi Shakib, Ph.D. (Chemistry, Co-Advised, Now: PennState)
Meredith Allen, M.S. (Chem. Eng.; Now: Bluebird Scientific)

Previous Honors Thesis Students Mentored: ***3***

Maddy Logan (Chemical Engineering)
Rachel Karno (Chemical Engineering)
Daniel McKeon (Chemical Engineering)

Undergraduate & High School Research Projects Mentored: **40**

Maine Top Scholars: Grace Farrington, Lucas Lenfest, Hannah Hargrove

Publications: (Total Citations = 1527, h-Index = 19, i10-Index = 23)

33. Kragt, Nikki; Tavana, Jalal; Al-Gharrawi, Mohammed; Wheeler, M. Clayton; Hibbitts, David; Schwartz, Thomas J. Kinetics and reaction mechanism of Pd-catalyzed chlorobenzene hydrogenolysis. *Journal of Catalysis*, **2024**, DOI: 10.1016/j.jcat.2024.115435.
32. Rahmani Chokanlu, Amir; Mahdavi-Shakib, Akbar; Yu, Liping; Schwartz, Thomas J.; Austin, Rachel N.; Frederick, Brian G. Direct Evidence for Sulfur-Induced Deep Electron and Hole Traps in Titania and Implications for Photochemistry. *Journal of Physical Chemistry: C*, **2023**, *127*, 6754-6767. DOI: 10.1021/acs.jpcc.3c00526.
31. Kline, Matthew J.; Karunarathne, Sampath A.; Schwartz, Thomas J.; Wheeler, M. Clayton. Production of High-Cetane Fuel Blendstocks by Ir-Catalyzed Ring Opening of Decalin. *ACS Sustainable Chemistry & Engineering*, **2022**, *10*, 13576-13584. DOI: 10.1021/acssuschemeng.2c00951.
    Invited Paper for a Special Issue in honor of James A. Dumesic
    Featured on the journal cover
30. Killerby, Marjorie A.; Almedia, Saulo T. R.; Hollandsworth, Rachel; Guimaraes, Bianca C.; Leon-Tinoco, Angela; Perkins, Lewis B.; Henry, Darren; Schwartz, Thomas J.; Romero, Juan J. Effect of chemical and biological preservatives and ensiling stage on the dry matter loss, nutritional value, microbial counts, and ruminal in vitro gas production kinetics of wet brewer's grain silage. *Journal of Animal Science*, **2022**, skac095. DOI: 10.1093/jas/skac095.
29. Tavana, Jalal; Faysal, Atik; Gramlich, William M.; Schwartz, Thomas J. Fully-renewable biobased thermoplastics derived from HMF and lignin. *Polymer Chemistry* **2022**, *13*, 1215-1227. DOI: 10.1039/D1PY01441B.
28. Kline, Matthew J.; Karunarathne, Sampath A.; Schwartz, Thomas J.; Wheeler, M. Clayton. Hydrogenation of 2-methylnaphthalene Over Bi-Functional Ni Catalysts. *Applied Catalysis A: General*, **2022**, *630*, 118462. DOI: 10.1016/j.apcata.2021.118462.

27. Schwartz, Thomas J.; Bond, Jesse Q. Leveraging De Donder Relations for a Thermodynamically Rigorous Kinetic Analysis of Liquid-Phase Reactions. *Journal of Catalysis*, **2021**, *404*, 687-705. DOI: 10.1016/j.jcat.2021.09.026.
    Invited Mini-Review for a Special Issue in honor of Michel Boudart
26. Gunukala, Sampath; Schwartz, Thomas J.; Pendse, Hemant P.; DeSisto, William J.; Wheeler, M. Clayton. Pure Sugars for Chemical Catalytic Upgrading: Assessing the Commercial Feasibility of Biomass Pretreatment Technologies. *Sustainable Energy & Fuels*, **2021**, *5*, 5513-5522. DOI: 10.1039/D1SE01097B.
25. Lund, Carl; Tatarchuk, Bruce; Cardona-Martinez, Nelson; Hill, Josephine; Sanchez-Castillo, Marco; Huber, George W.; Roman-Leshkov, Yuriy; Simonetti, Dante; Pagan-Torres, Yomaira; Schwartz, Thomas J.; Motagamwala, Ali Hussein. A Career in Catalysis: James A. Dumesic. *ACS Catalysis*, **2021**, *11*, 2310-2339. DOI: 10.1021/acscatal.0c05325.
24. Jamalzade, Elnaz; Kashkooli, Koorosh; van Walsum, G. Peter; Schwartz, Thomas J. Catalytic Carbon-Carbon Bond Coupling for Producing Jet Fuel Blendstocks from Biomass. *Reaction Chemistry & Engineering*, **2021**, *6*, 845-857. DOI: 10.1039/D0RE00401D.
    Invited Paper for the "Green Chemistry & Reaction Engineering" Issue
    Featured on the journal back cover
23. Mozuch, Michael D.; Hirth, Kolby C.; Schwartz, Thomas J.; Kersten, Philip J. Repurposing inflatable packaging pillows as bioreactors; convenient synthesis of glucosone by whole-cell catalysis under oxygen. *Applied Biochemistry & Biotechnology*, **2021**, *193*, 743-760. DOI: 10.1007/s12010-020-03448-x.
22. Allen, Meredith C.; Hoffman, Alexander J.; Liu, Tsung-Wei; Webber, Matthew S.; Hibbitts, David; Schwartz, Thomas J. Highly Selective Cross-Etherification of 5-Hydroxymethylfurfural with Ethanol. *ACS Catalysis* **2020**, *10*, 6771-6785. DOI: 10.1021/acscatal.0c01328.
21. Abdulrazzaq, Hussein T.; Chokanlu, Amir Rahmani; Frederick, Brian G.; Schwartz, Thomas J. Reaction kinetics analysis of ethanol conversion over MgO-SiO_2. *ACS Catalysis* **2020**, *10*, 6318-6331. DOI: 10.1021/acscatal.0c00811.
20. Schwartz, Thomas J. N_2-promoted hydrodeoxygenation. *Nature Catalysis* **2019**, *2*, 1060-1061. DOI: 10.1038/s41929-019-0399-z.
19. Mahdavi-Shakib, Akbar; Arce-Ramos, Juan M.; Austin, Rachel N.; Schwartz, Thomas J.; Grabow, Lars C.; Frederick, Brian G. Frequencies and Thermal Stability of Isolated Surface Hydroxyls on Pyrogenic TiO_2 Nanoparticles. *Journal of Physical Chemistry: C* **2019**, *123*, 24533-24548. DOI: 10.1021/acs.jpcc.9b05699.
18. Mahdavi-Shakib, Akbar; Husremovic, Samra; Ki, Sohee; Glynn, Jessica; Babb, Lauren; Sempel, Janine; Stavrinoudis, Ioannis; Arce-Ramos, Juan-Manuel; Nelson, Ryan; Grabow, Lars C.; Schwartz, Thomas J.; Frederick, Brian G.; Austin, Rachel Narehood. Titania surface chemistry and its influence on supported metal catalysts. *Polyhedron* **2019**, *170*, 41-50. DOI: 10.1016/j.poly.2019.05.012.
17. Schwartz, Thomas J.; Bond, Jesse Q. A Thermodynamic and Kinetic Analysis of Solvent-enhanced Selectivity in Monophasic and Biphasic Reactor Systems. *Chemical Communications* **2017**, *53*, 8148-8151. DOI: 10.1039/C7CC03164E.
    Invited paper for the 2017 Emerging Investigators issue
16. Perras, Frédéric A.; Padmos, Daniel; Johnson, Robert L.; Wang, Lin-Lin; Schwartz, Thomas J.; Kobayashi, Takeshi; Horton, J. Hugh; Dumesic, James A.; Shanks, Brent H.; Johnson, Duane D.; Pruski, Marek. Characterizing Substrate-Surface Interactions on Alumina-Supported Metal Catalysts by DNP-Enhanced Double-Resonance NMR Spectroscopy. *Journal of the American Chemical Society* **2017**, *139*, 2702-2709. DOI: 10.1021/jacs.6b11408.

15. Schwartz, Thomas J.; Lyman, Spencer; Motagamwala, Ali H.; Mellmer, Max A.; Dumesic, James A. Selective Hydrogenation of Unsaturated Carbon−Carbon Bonds in Aromatic-Containing Platform Molecules. *ACS Catalysis* **2016**, 6, 2047-2054. DOI: 10.1021/acscatal.6b00072.
14. Schwartz, Thomas J.; Shanks, Brent H.; Dumesic, James A. Coupling chemical and biological catalysis: A flexible paradigm for producing biorenewable chemicals. *Current Opinion in Biotechnology* **2016**, 38, 54-62. DOI: 10.1016/j.copbio.2015.12.017.
    Featured on the journal cover. Invited paper for the 2016 "Energy Biotechnology" issue
13. Johnson, Robert L.; Perras, Frédéric A.; Kobayashi, Takeshi; Schwartz, Thomas J.; Dumesic, James A.; Shanks, Brent; Pruski, Marek. Identifying Low-Coverage Species on Noble Metal Nanoparticles by DNP-NMR. *Chemical Communications* **2016**, 52, 1859-1862. DOI: 10.1039/C5CC06788J.
12. Schwartz, Thomas J.; Wesley, Thejas S.; Dumesic, James A. Modifying the Surface Properties of Heterogeneous Catalysts using Polymer-Derived Microenvironments. *Topics in Catalysis* **2016**, 59, 19-28. DOI: 10.1007/s11244-015-0501-y.
    Invited paper for the "Catalytic Conversion of Biomass to Fuels and Chemicals" issue
11. Johnson, Robert L.; Schwartz, Thomas J.; Dumesic, James A.; Schmidt-Rohr, Klaus. Solid State NMR Investigation of Methionine Poisoned Pd/γ-Al_2O_3 Catalysts. *Solid State Nuclear Magnetic Resonance* **2015**, 72, 64-72. DOI: 10.1016/j.ssnmr.2015.09.007.
10. Pham, Hien N.; Anderson, Amanda E.; Johnson, Robert L.; O'Neill, Brandon J.; Schwartz, Thomas J.; Schmidt-Rohr, Klaus; Dumesic, James A.; Datye, Abhaya, K. Carbon Overcoating of Supported Metal Catalysts for Improved Hydrothermal Stability. *ACS Catalysis* **2015**, 5, 4546-4555. DOI: 10.1021/acscatal.5b00329.
9. Cao, Fei; Schwartz, Thomas J.; Dumesic, James A.; Huber, George W. Dehydration of Cellulose to Levoglucosenone using Polar Aprotic Solvents. *Energy & Environmental Science* **2015**, 8, 1808-1815. DOI: 10.1039/C5EE00353A.
8. Xiong, Haifeng; Schwartz, Thomas J.; Anderson, Nalin I.; Dumesic, James A.; Datye, Abhaya, K. Graphitic-Carbon Layers on Oxides: Hydrothermally Stable Heterogeneous Catalysts in Biomass Conversion Reactions. *Angewandte Chemie International Edition* **2015**, 54, 7939-7943. DOI: 10.1002/anie.201502206.
7. Schwartz, Thomas J.; Brentzel, Zachary J.; Dumesic, James A. Inhibition of Metal Hydrogenation Catalysts by Biogenic Impurities. *Catalysis Letters* **2015**, 145, 15-22. DOI: 10.1007/s10562-014-1441-z.
    Invited paper for the Silver Anniversary Issue of Catalysis Letters.
6. Schwartz, Thomas J.; Johnson, Robert L.; Cardenas, Javier; Okerlund, Adam; Da Silva, Nancy A.; Schmidt-Rohr, Klaus; Dumesic, James A. Engineering Catalyst Microenvironments for Metal-Catalyzed Hydrogenation of Biologically-Derived Platform Chemicals. *Angewandte Chemie International Edition* **2014**, 53, 12718-12722. DOI: 10.1002/anie.201407615.
    Highlighted as a Hot Paper; Featured on the frontispiece of the Angewandte Chemie International Edition Communications Section.
5. Schwartz, Thomas J.; O'Neill, Brandon J.; Shanks, Brent H.; Dumesic, James A. Bridging the chemical and biological catalysis gap: Challenges and outlooks for producing sustainable chemicals. *ACS Catalysis* **2014**, 4, 2060-2069. DOI: 10.1021/cs500364y.
4. Schwartz, Thomas J.; Goodman, Samuel M.; Osmundsen, Christian M.; Taarning, Esben; Mozuch, Michael D.; Gaskell, Jill; Cullen, Daniel; Kersten, Philip J.; Dumesic, James A. Integration of Chemical and Biological Catalysis: Production of Furylglycolic Acid from Glucose via Cortalcerone. *ACS Catalysis* **2013**, 3, 2689-2693. DOI: 10.1021/cs400593p.
    Highlighted in: ACS Catalysis, Virtual Special Issue on Cascade Catalysis

3. Chia, Mei; Schwartz, Thomas J.; Shanks, Brent H.; Dumesic, James A. Triacetic Acid Lactone as Potential Biorenewable Platform Chemical. *Green Chemistry* **2012**, 14, 1850-1853. DOI: 10.1039/C2GC35343A.
   *Highlighted in: Teaming up for Biobased Chemicals, Chemical & Engineering News, **2012**, 90 (32), 37-38.*
2. Schwartz, Thomas J.; van Heiningen, Adriaan R.P.; Wheeler, M. Clayton. Energy Densification of Levulinic Acid by Thermal Deoxygenation. *Green Chemistry* **2010**, 12, 1353-1356. DOI: 10.1039/C005067A.
1. Schwartz, Thomas J.; Lawoko, Martin. Removal of Acid-Soluble Lignin from Biomass Extracts using Amberlite XAD-4 Resin. *Bioresources* **2010**, 5(4), 2337-2347.

Book Chapters:

2. Abdulrazzaq, Hussein; Schwartz, Thomas J. Catalytic Conversion of Ethanol to Commodity and Specialty Chemicals. In *Ethanol: Science and Engineering*, Eds: Basile, Angelo; Iulianelli, Adolfo; Veziroglu, Nejat T. Elsevier, **2019**. DOI: 10.1016/B978-0-12-811458-2.00001-8.
1. Schwartz, Thomas J.; Hakim, Sikander. Furanic Resins and Polymers. In *Furfural: An Entry Point of Lignocellulose in Biorefineries to Produce Renewable Chemicals, Polymers, and Biofuels*, Eds: Lopez Grandos, Manuel; Alonso, David Martin. World Scientific Publishing Co, **2018**. DOI: 10.1142/9781786344878_0016.

Conference Proceedings:

4. Kessler, Travis; Schwartz, Thomas; Wong, Hsi-Wu; Mack, J. Hunter. Evaluating Diesel/Biofuel Blends Using Artificial Neural Networks/Nonlinear Equations. ASME internal Combustion Engine Fall Conference, November **2020**. DOI: 10.1115/ICEF2021-67785
3. Kessler, Travis; Schwartz, Thomas; Wong, Hsi-Wu; Mack, J. Hunter. Predicting the Cetane Number, Yield Sooting Index, Kinematic Viscosity, and Cloud Point for Catalytically Upgraded Pyrolysis Oils using Artificial Neural Networks. ASME Internal Combustion Engine Fall Conference, November **2020**. DOI: 10.1115/ICEF2020-2978.
2. Albert, Christopher M.; Tunc, Sefik; Craig, Gary; Waite, Darrell; Schwartz, Thomas J. Xylan Adsorption on Cellulose Fibers: A Fundamental Adsorption Study. TAPPI PEERS, November **2020**.
1. Kessler, Travis; Schwartz, Thomas; Wong, Hsi-Wu; Mack, J. Hunter. Screening Compounds for Fast Pyrolysis and Catalytic Biofuel Upgrading Using Artificial Neural Networks. ASME Internal Combustion Engine Fall Conference, November **2019**. DOI: 10.1115/ICEF2019-7170.

Invited Presentations:

33. Non-Fossil Carbon Transformations, Workshop for Initiative for Sustainable Energy, Brown University, October **2023**.
32. Center for Energy Innovation Seminar/Webinar Series, UMass Lowell, April **2023**.
31. Lignin Production & Applications: Expanding Transnational Collaboration Webinar, Finland-Maine-Michigan Bioeconomy Collaboration, March **2023**.
30. Department Seminar Series, Stevens Institute of Technology, March **2023**.
29. ACS Symposium: Catalysis for oxygenate conversion: fundamentals, applications, and perspectives, ACS Fall Meeting, Chicago, IL, August **2022**.

28. ACS Symposium: Fundamentals and Applications of Multifunctional Catalysis, ACS Fall Meeting, Chicago, IL, August **2022**.
27. Bioenergy & Biomass Conversion Session, AVS 67th International Symposium and Exhibition, Virtual, October **2021**.
26. ACS Symposium: Improving energy resilience through lower carbon transportation fuels, ACS Fall Meeting, Atlanta, GA, August **2021**.
25. ACS Symposium: Catalytic conversion of renewable and waste carbon sources: Approaches to improve carbon utilization, ACS Virtual Spring Meeting, April **2021**.
24. #ChemistsLive Symposium on Heterogeneous Catalysis for Bioproducts and Biofuels, ACS #ChemistsLive, September **2020**.
23. Olaf Hougen Symposium in Honor of Jim Dumesic, UW Madison, November **2019**.
22. Pulping Group Seminar, Westrock Corporation, October **2019**.
21. ACS Symposium: Amorphous Catalysis, ACS Fall Meeting, San Diego, CA August 25-29 **2019**.
20. Fundamental Research Group Seminar, Omya Corporation, May **2019**.
19. ERIC Catalysis Colloquium, Technische Universitat Munchen, May **2019**.
18. Guest Seminar Series, Green Mountain College, February **2019**.
17. Catalysis Group Seminar, University of Michigan, January **2019**.
16. Department Seminar Series, University of Toledo Department of Chemical Engineering, Toledo, OH, January **2019**.
15. Catalysis Group Seminar, Ohio State University, September **2018**.
14. Mid-Atlantic Biomass Expo, Philadelphia, PA, September 12-14, **2018**.
13. TAPPI Seminar Series, Georgia Institute of Technology, September **2018**.
12. ACS Symposium: Hybrid Biological and Chemocatalytic Processes for Biomass Upgrading, ACS Fall Meeting, Boston, MA, August 19-23, **2018**.
11. Paper Days Session on "Growth Through Research & Development", UMaine Pulp and Paper Foundation, April **2018**.
10. Department Seminar Series, University of New Hampshire Department of Chemical Engineering, December **2017**.
9. ACS Symposium: Environmental Applications of Liquid Phase Catalysis for Green Chemical Processes of Renewable Materials, ACS Fall Meeting, Washington, D.C., August 20-24, **2017**.
8. IYCBC 2017: International Young Scientist Symposium on Catalytic Biomass Conversion, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China, July 14-20, **2017**.
7. Catalysis Society of Metropolitan New York Annual Symposium, Mar. 22, **2017**.
6. Alpha Chi Sigma session in honor of Jim Dumesic, AIChE Annual Meeting, San Francisco, CA, Nov. 13-18, **2016**.
5. Department Seminar Series, UMaine Department of Chemistry, Oct. 4, **2016**.
4. Graduate Student Seminar Series, UW Madison Department of Chemical and Biological Engineering, March **2015**.
3. Department Seminar Series, University of Maine Department of Chemical and Biological Engineering, February **2015**.
2. Department Seminar Series, Clarkson University Department of Chemical and Biomolecular Engineering, February **2015**.
1. Department Seminar Series, Auburn University Department of Chemical Engineering, January **2015.**

Conference Presentations (underline denotes presenting author):

54. Niknam, Mahdi; Geci, Christian; Frederick, Brian G.; Schwartz, Thomas J. Highly Active Nanoporous Solid Base MgO Catalyst Derived from MOF-74 Towards Knoevenagel Reaction. AIChE Annual Meeting, Orland, FL, November 5-10, **2023**.
53. Kragt, Nicole; Williams, Demeterius; Nguyen, Vivian; Tavana, Jalal; Al-Gharrawi, Mohammed; Schwartz, Thomas J.; Hibbitts, David. Trends in C-X Hydrogenolysis: Contrasting Functionalized Alkanes and Aromatics. AIChE Annual Meeting, Orlando, FL, November 5-10, **2023**.
52. Ogunjinmi, Temidayo; Kianimoqadam, Alireza; Waldt, Conor; Hibbitts, David; Lapp, Justin; Schwartz, Thomas J. Solar-Thermal Dehydrogenation of Propane to Propylene. AIChE Annual Meeting, Orlando,FL, November 5-10, **2023**.
51. Frederick, Brian G.; Thibodeau, Timothy; Mahdavi-Shakib, Akbar; Boucher, Chayton; Rahmani-Chokanlu, Amir; Schwartz, Thomas J.; Amar, Francois. Effects of Composition and Phase on Catalytic Sites in Reducible Metal Oxides. ACS Spring Meeting, Indianapolis, IN, March 26-30, **2023**.
50. Karunarathne, Sampath A.; Kline, Matthew J.; Schwartz, Thomas J.; Wheeler, M. Clayton; Pendse, Hemant P. Production of Renewable Diesel and Jet Fuel from Thermal Deoxygenation (TDO) Oil. AIChE Annual Meeting, Phoenix, AZ, November 12-17, **2022**.
49. Todd, Mackenzie R.; Schwartz, Thomas J. Competing Dehydration Reactions of Branched Alcohols on Solid Acids. AIChE Annual Meeting, Phoenix, AZ, November 12-17, **2022**.
48. Kline, Matthew J.; Karunarathne, Sampath A.; Schwartz, Thomas J.; Wheeler, M. Clayton. Production of renewable diesel and jet fuel via selective ring opening of decalin. ACS Northeast Regional Meeting, Rochester, NY, October 2-5, **2022**.
47. Austin, Rachel N.; Sempel, J. D.; Mahdavi-Shakib, A.; Hoffman, M.; Oza, A.; Bennett, E.; Owen, J. S.; Chokanlu, A. R.; Schwartz, Thomas J.; Frederick, Brian G. Probing the influence of metal oxide nanoparticle surfaces in catalysis. ACS Northeast Regional Meeting, Rochester, NY, October 2-5, **2022**.
46. Boucher, Chayton K.; Mahdavi-Shakib, Akbar; Schwartz, Thomas J.; Frederick, Brian G. Kinetic model of tungsten oxide catalyzed conversion of glucose to lactic acid and hydroxymethylfurfural. ACS Northeast Regional Meeting, Rochester, NY, October 2-5, **2022**.
45. Todd, Mackenzie R.; Schwartz, Thomas J. Competing Dehydration Reactions of Branched Alcohols on Solid Acids. ACS Northeast Regional Meeting, Rochester, NY, October 2-5, **2022**.
44. Todd, Mackenzie R.; Park, Jaeryul R.; Roling, Luke T.; Schwartz, Thomas J. Solvation effects in liquid-phase esterification reactions catalyzed by hydrogen form ion exchange resins. Gordon Research Conference on Catalysis, poster presentation, June 19-24, **2022**.
43. Todd, Mackenzie R.; Park, Jaeryul R.; Roling, Luke T.; Schwartz, Thomas J. Solvation effects in liquid-phase esterification reactions catalyzed by hydrogen form ion exchange resins. North American Catalysis Society NAM 27, New York, NY, May 22-27, **2022**.
42. Todd, Mackenzie R.; Schwartz, Thomas J. Solvation effects in liquid-phase esterification reactions catalyzed by hydrogen form ion exchange resins. ACS Spring Meeting, San Diego, CA, March 20-24, **2022**.
41. Kline, Matthew J.; Karunarathne, Sampath A.; Schwartz, Thomas J.; Wheeler, M. Clayton. Selective Ring opening of decalin for production of renewable diesel fuel. ACS Spring Meeting, San Diego, CA, March 20-24, **2022**.

40. Austin, Rachel N.; Mahdavi-Shakib, Akbar; Schwartz, Thomas J.; Frederick, Brian G.; Grabow, Lars; Owen, Jonathan S.; Bennett, Ellie; Sempel, Janine D.; Oza, Aisha, Hoffman, Maya. Probing the influence of metal oxide nanoparticle surfaces in catalysis. ACS Spring Meeting, San Diego, CA, March 20-24, **2022**.
39. Kline, Matthew J.; Karunarathne, Sampath A.; Schwartz, Thomas J.; Wheeler, M. Clayton. Ring opening of alkylnaphthenes over supported Ir and Pt catalysts. ACS Spring Meeting, San Diego, CA, March 20-24, **2022**.
38. Kline, Matthew J.; Karunarathne, Sampath A.; Schwartz, Thomas; Wheeler, Clayton. Selective Ring Opening of Decalin over Ion-Exchanged Ir Zeolites. AIChE Fall Meeting, Boston, MA November 5-19, **2021**.
37. Schwartz, Thomas J. Renewable, Tunable Polymers from Lignin and 5-Hydroxymethylfurfural. ACS Spring Meeting, Virtual, April 5-16, **2021**.
36. Kessler, Travis; Schwartz, Thomas; Wong, Hsi-Wu; Mack, J. Hunter. Predicting the Cetane Number, Yield Sooting Index, Kinematic Viscosity, and Cloud Point for Catalytically Upgraded Pyrolysis Oils using Artificial Neural Networks. ASME Internal Combustion Engine Fall Conference, Online, November 4-5, **2020**.
35. Albert, Christopher M.; Tunc, Sefic; Craig, Gary; Waite, Darrell; Schwartz, Thomas J. Xylan Adsorption on Cellulose Fibers: A Fundamental Adsorption Study. TAPPI PEERS, Atlanta, GA, October 14, **2020**.
34. Allen, Meredith C.; Hoffman, Alexander J.; Liu, Tsung-Wei; Hibbitts, David; Schwartz, Thomas J. Selective Etherification of HMF. New England Catalysis Society, Worcester, MA, Jan 13, **2020.**
33. Stuck, Daniela; Frederick, Brian G.; Austin, Rachel N.; Grabow, Lars C.; Schwartz, Thomas J. Effects of Liquid Water on Selective C-O Hydrogenolysis Catalyzed by Ru-TiO_2 Interfacial Sites. AIChE Annual Meeting, Orlando, FL, Nov 10-15, **2019**.
32. Jamalzade, Elnaz; van Walsum, G. Peter; Kashkooli, Koorosh; Schwartz, Thomas J. Catalytic Carbon-Carbon Bond Coupling for Producing Biolubricants from Mixed Organic Acids. AIChE Annual Meeting, Orlando, FL, Nov 10-15, **2019**.
31. Kessler, Travis; Schwartz, Thomas; Wong, Hsi-Wu; Mack, J. Hunter. Screening Compounds for Fast Pyrolysis and Catalytic Biofuel Upgrading Using Artificial Neural Networks. ASME Internal Combustion Engine Fall Conference, Chicago, IL, Oct 20-23, **2019**.
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Patents:

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Service to the University, Profession, and Community:

Graduate Coordinator – UMaine Chemical & Biomedical Engineering (2021-Present)
Department Graduate Committee - UMaine Chemical & Biomedical Engineering (2016-Present)
Department Curriculum Committee – UMaine Chemical & Biomedical Engineering (2021-2023)
Graduate Board – UMaine Graduate School (2023-Present))

Graduate Board Executive Committee - UMaine Graduate School (2023-Present)

New England Catalysis Society – Chair (2023-Present), Vice Chair (2021-2023), Secretary (2019-2021)
North American Catalysis Society – Technical Program Co-Chair NAM28 meeting (2023)
ACS CATL Division – Spring Programming Chair (2021-2023)

Trustee – Orono-Veazie Water District (2021-Present)

Journal Referee for:

Angewandte Chemie, *Nature Catalysis*, *Chemical Science*, *ACS Catalysis*, *Journal of Catalysis*, *ChemCatChem*, *Applied Catalysis A: General, Applied Catalysis B: Environmental, Energy Technology*, *Catalysis Today*, *Green Chemistry*, *ACS Sustainable Chemistry & Engineering*, *ACS Applied Materials & Interfaces*, *Journal of Physical Chemistry: C*, *AIChE Journal*, *Chemical Engineering Journal*, *Journal of Molecular Catalysis A: Chemical*, *Fuel Processing Technology, Fuel*, *Industrial & Engineering Chemistry Research*, *New Journal of Chemistry*, *Energy & Fuels*, and *Catalysis Science & Technology*

Proposal Referee for:

US National Science Foundation (numerous programs), US Department of Agriculture (SBIR and AFRI Bioproducts & Bioengineering programs), American Chemical Society Petroleum Research Fund (Doctoral New Investigator and New Directions programs), and the US National Academy of Sciences (US-Egypt Joint Funding program)

Session Chair/Symposium Organizer for:

Organizer for: *AIChE National Meetings (2015-Present)*: "Catalytic Conversion of Biomass Resources" (2015-2020), "Fundamentals of Catalysis" (2017-2020), "Catalysis in Liquid Media" (2020-2021), Catalysis & Reaction Engineering Poster Session (2019-Present); *ACS National Meeting Spring 2016*: "Synthesis of Catalysts by Nontraditional Routes"; *ACS National Meeting Spring 2021:* "Reactions on Surfaces in Liquid Media"; *ACS National Meeting Spring 2022:* "Surface Chemistry and Catalysis at Solid-Liquid Interfaces"; *ACS National Meeting Spring 2023:* "Fundamentals of Bulk Oxide Catalysis"; *ACS National Meeting Spring 2024: "General Catalysis Poster Session"*
Session Chair at: *4th North American Symposium on Catalysis and Reaction Engineering*, *North American Catalysis Society, NAM26 & NAM27*.