## JILLIAN L. GOLDFARB

## JillianLGoldfarb@gmail.com http://sites.bu.edu/eme2/

#### **EDUCATION**

Ph.D.	Brown University, Providence, RI, Chemical Engineering	2008
Sc.M.	Brown University, Providence, RI, Engineering	2005
B.S.	Northeastern University, Boston, MA, Chemical Engineering	2004

#### **ACADEMIC APPOINTMENTS**

**The Pennsylvania State University,** John and Willie Leone Family Department of Energy & Mineral Engineering

Assistant Professor (January 2018 – )

Faculty Associate: Earth and Mineral Sciences Energy Institute (August 2017 – )
Co-funded Faculty: Institutes of Energy and the Environment (January 2018 – )

Courses: Heat Transfer

**Boston University,** Department of Mechanical Engineering, Division of Materials Science and Engineering

Assistant Professor (January – December 2017)

Research Assistant Professor (August 2013 – December 2016)

Faculty Affiliate: Institute for Sustainable Energy (2016 – 2017)

Initiative on Cities (2015 - 2017)

Faculty Fellow: Pardee Center for the Study of the Longer-Range Future (2016 – 2019)

Courses: Heat Transfer; Introduction to Environmental Engineering; Materials

Science; Graduate Teaching Practicum; Introduction to Engineering;

Bioenergy (at Univ. of Trento)

University of New Hampshire, Department of Chemical Engineering

Assistant Professor (August 2010 – July 2013)

Courses: Air Pollution: Its Origin and Control; Separation Processes; Fossil Fuels

and Renewable Energies; Introduction to Chemical Engineering II (Energy

Balances); Graduate Thermodynamics

#### **AWARDS**

2017 Fulbright Scholar Award for Research and Teaching at University of Trento, Italy

2017 American Chemical Society Green Chemistry Institute GreenX: Rising Star Award

2016 NSF Travel Award to present work at the AIChE International Congress on Sustainability Science and Engineering, Suzhou, China

2015, 2016 Nominated by the American Chemical Society (ACS) for NSF Waterman Award

2015 Finalist, TECO Green Technology International Competition, Taiwan

2015 BU Center for Excellence and Innovation in Teaching Course Innovation Award

2014 ACS Innovative Project Grant

- 2014 ACS Project SEED Grant to Mentor High School Students
- 2014 ACS Younger Chemists Committee Leadership Development Award
- 2014 1st Prize Materials Research Society University Chapter's "Sustainability@My School"
- 2007 ACS Division of Environmental Chemistry Certificate of Merit
- 2007 NSF Travel Award to present work at the 10<sup>th</sup> International Congress on Combustion By-Products and their Health Effects, Ischia, Italy
- 2005-2008 Graduate student fellowship supported by NIEHS Superfund Research Program
- 2004-2005 Brown University Engineering Dean's Fellow
- 1999-2004 Northeastern University College of Engineering Dean's Scholar
- 2003 Northeastern University Jeffrey R. Pierce Service Award
- 2003 Calvin Cronan Award for Excellence in Chemical Engineering Communication
- 2000 Northeastern University Women in Engineering Achievement Award

## PEER-REVIEWED JOURNAL PUBLICATIONS

- \* Undergraduate Researcher; \*\* High School Researcher
- 37. Volpe, M., **J.L. Goldfarb**, L. Fiori. "Hydrothermal Carbonization of *Opuntia ficus-indica* Cladodes: Role of Process Parameters on Hydrochar Properties." *Bioresource Technology*. 2018. 247, 310-318.
- Aslan, D.I., P. Parthasarath, J.L. Goldfarb, S. Ceylan. "Pyrolysis Reaction Models of Waste Tires: Application of Master-Plots method for Energy Conversion via Devolatilization." Waste Management. 2017. 68, 405-411.
- 35. Berger, M. and **J.L. Goldfarb.** "Understanding our Energy Footprint: Undergraduate Chemistry Laboratory Investigation of Environmental Impacts of Solid Fossil Fuel Wastes." *Journal of Chemical Education*. 2017. 94, 1124-1128.
- 34. Xue, J., G. Dou, E. Ziade, **J.L. Goldfarb**. "Integrating Sustainable Biofuel and Silver Nanomaterial Production for *in situ* Upgrading of Cellulosic Biomass Pyrolysis." *Energy Conversion & Management*. 2017. 142, 143-252.
- 33. **J.L. Goldfarb,** G. Dou, M. Salari, M.W. Grinstaff. "Biomass-Based Fuels and Activated Carbon Electrode Materials: An Integrated Approach to Green Energy Systems." *ACS Sustainable Chemistry & Engineering*. 2017. 5, 3046-3054.
- 32. Uzun, H., Z. Yildiz, **J.L.Goldfarb**, S. Ceylan. "Improved Prediction of Higher Heating Value of Biomass Using an Artificial Neural Network Model Based on Proximate Analysis." *Bioresource Technology*. 2017. 234, 122-130.
- 31. Christenson, D.P., **J.L. Goldfarb** and D.L. Kriner "Information Processing and Public Support for 'Fracking." *Energy Policy*. 2017. 105, 407-417.
- 30. Vyas, A\*. T. Chellappa, and **J.L. Goldfarb**. "Development of Porosity and Reactive Surface Area of Feed Corn Stover and Pennsylvania Coal Blends During Co-Pyrolysis". *Journal of Analytical and Applied Pyrolysis*. 2017. 124, 79-88.
- 29. Dou, G. and **J.L. Goldfarb.** "In situ upgrading of pyrolysis biofuels by bentonite clay with simultaneous production of heterogeneous adsorbents for water treatment." *Fuel.* 2017. 195, 273-283.
- 28. **Goldfarb, J.L.**, L. Buessing, E. Gunn, M. Lever\*, A. Billias\*, E. Casoliba, A. Schievano, F. Adani. "Novel Integrated Biorefinery for Olive Mill Waste Management: Utilization of Secondary Waste for Water Treatment." *ACS Sustainable Chemistry & Engineering*. 2017.

- 5,876-884.
- 27. N. Söyler\*, **J.L. Goldfarb**, S. Ceylan, M.T. Saçan. "Renewable Fuels from Pyrolysis of *Dunaliella tertiolecta*: An Alternative Approach to Lipid Extraction and Transesterification of Microalgae." *Energy*. 2017. 120, 907-914.
- 26. **Goldfarb, J.L.** and D.L. Kriner. "Building Public Support for Science Spending: Misinformation, Motivated Reasoning, and the Power of Correction." *Science Communication*. 2017. 39, 77-100.
- 25. Işıtan, S., S. Ceylan, Y. Topcu, C. Hintz, J. Tefft\*, T. Chellappa, J. Guo and **J.L. Goldfarb**. "Product Quality Optimization in an Integrated Biorefinery: Conversion of Pistachio Nutshell Biomass to Biofuels and Activated Biochars via Pyrolysis." *Energy Conversion & Management*. 2016. 127, 576-588.
- 24. Upneja, A.\*\*, G. Dou, C. Gopu\*, C.A. Johnson, A. Newman, A. Suleimenov and **J.L. Goldfarb.** "Sustainable synthesis of biotemplated nanostructured ZnO for photocatalytic water treatment via hydrothermal carbonization of banana stalk." *RSC Advances* 2016. 6, 92813.
- 23. **Goldfarb, J.L.**, M. Buessing and D.L. Kriner. "Public Support for Renewable Energy Policy: Geographic Proximity to Coal and Support for Extending the Production Tax Credit." *Energy Policy*. 2016. 99, 299-307.
- 22. Vyas, A.\*, J. Xue and **J.L. Goldfarb.** "Improving the Environmental and Economic Viability of U.S. Oil Shale via Waste-to-Byproduct Conversion of Semicoke to Sorbents." *Energy & Fuels.* 2016. 30, 188-195.
- 21. Patnaik, A. and **J.L. Goldfarb**. "Continuous Activation Energy Representation of the Arrhenius Equation for the Pyrolysis of Cellulosic Materials: Feed Corn Stover and Cocoa Shell Biomass." with A. Patnaik. *Cellulose Chemistry and Technology*. 2016. 50, 311-320.
- 20. Xue, J., S. Ceylan and **J.L. Goldfarb** "Synergism Among Biomass Building Blocks? Evolved Gas and Kinetics Analysis of Starch and Cellulose Co-Pyrolysis." *Thermochimica Acta*. 2015. 618, 36-47.
- 19. Schievano, A., F. Adani, L. Buessing, A. Botto, E.N. Casoliba, M. Rossoni, and **J.L. Goldfarb.** "An Integrated Biorefinery Concept for Olive Mill Waste Management: Supercritical CO<sub>2</sub> Extraction and Energy Recovery." *Green Chemistry*. 2015. 17; 2874-2887.
- 18. **Goldfarb, J.L.** and S. Ceylan. "Second-Generation Sustainability: Application of the Distributed Activation Energy Model to the Pyrolysis of Locally Sourced Biomass-Coal Blends for use in Co-firing Scenarios." *Fuel.* 2015. 160; 297-308.
- 17. Ceylan, S. and **J.L. Goldfarb**. "Green Tide to Green Fuels: TG-FTIR Analysis and Kinetic Study of *Ulva prolifera* Pyrolysis." *Energy Conversion & Management*. 2015: 101; 263-270.
- 16. Celaya, A.M., A.T. Lade\* and **J.L. Goldfarb**. "Co-Combustion of Brewer's Spent Grains and Illinois No. 6 Coal: Impact of blend ratio on global rates of pyrolysis and oxidation versus compound evolution." *Fuel Processing Technology*. 2015: 129; 39-51.
- 15. Yangali, P. \*, A.M. Celaya, and **J.L. Goldfarb** "Co-Pyrolysis Reaction Rates and Activation Energies of West Virginia Coal and Cherry Pit Blends." *Journal of Analytical & Applied Pyrolysis*. 2014. 108: 203-211.
- 14. Celaya, A.M. and **J.L. Goldfarb**. "Models and Mechanisms to Explore the Global Oxidation Kinetics of Blends of Feed Corn Stover and Illinois No. 6 Coal." *Journal of Thermodynamics and Catalysis*. 2014. 5; 136.
- 13. Goldfarb, J.L. and C. Liu. "Impact of Blend Ratio on the Co-firing of Torrefied Wood and

- Coal via Analysis of Oxidation Kinetics." *Bioresource Technology*. 2013. 149: 208-215.
- 12. **Goldfarb, J.L.**, A. D'Amico\*, C. Culin\*, E.M. Suuberg and I. Külaots. "Oxidation Kinetics of Oil Shale Semicokes: Reactivity as a Function of Pyrolysis Temperature and Shale Origin." *Energy & Fuels*. 2013. 27:666-672.
- 11. **Goldfarb, J.L.** "Review of Sublimation Thermodynamics of Polycyclic Aromatic Compounds and Heterocycles." *Journal of Heterocyclic Chemistry*. 2013. 50: 1243-1263.
- 10. Buessing, L. and **J.L. Goldfarb** "Energy Along Interstate 95: Pyrolysis Kinetics of Floridian Cabbage Palm." *Journal of Analytical & Applied Pyrolysis*. 2012. 96:78-85.
- 9. Datangel, B.\* and **J.L. Goldfarb** "Heavy Metals in Colorado and Chinese Oil Shale Semicoke: Disposal Issues, Impediments to Byproduct Conversion." *Energy & Fuels*. 2011. 25:3522-3529.
- 8. **Goldfarb, J.L.** and I. Külaots "Melting Points and Enthalpies of Fusion of Anthracene and its Heteroatomic Counterparts." *Journal of Thermal Analysis and Calorimetry*. 2010. 102:1063-1070.
- 7. Külaots, I., **J.L. Goldfarb** and E.M. Suuberg. "Characterization of Chinese, American and Estonian Oil Shale Semicokes and their Sorptive Potential." *Fuel.* 2010. 89: 3300-3306.
- 6. **Goldfarb, J.L.** and E.M. Suuberg. "Deviations from Ideal Sublimation Vapor Pressure Behavior in Mixtures of Polycyclic Aromatic Compounds with Interacting Heteroatoms." *Journal of Chemical Thermodynamics*. 2010. 42: 1009-1015.
- 5. **Goldfarb, J.L**. and E.M. Suuberg. "Vapor Pressures and Sublimation Enthalpies of Seven Heteroatomic Aromatic Compounds Measured via the Knudsen Effusion Technique." *Journal of Chemical Thermodynamics*. 2010. 42: 781-786.
- 4. **Goldfarb, J.L**. and E.M. Suuberg. "Raoult's Law and its Application to Sublimation Vapor Pressures of Mixtures of Polycyclic Aromatic Hydrocarbons." *Environmental Engineering Science*. 2008. 25: 1429 –1438.
- 3. **Goldfarb, J.L**. and E.M. Suuberg. "Vapor Pressures and Thermodynamics of Oxygen-Containing Polycyclic Aromatic Hydrocarbons Measured via Knudsen Effusion." *Environmental Toxicology and Chemistry*. 2008. 27: 1244 1249.
- 2. **Goldfarb, J.L**. and E.M. Suuberg. "The Effects of Halogen Heteroatoms on the Vapor Pressures and Thermodynamics of Polycyclic Aromatic Compounds Measured via the Knudsen Effusion Technique." *Journal of Chemical Thermodynamics*. 2008. 40: 460 466.
- 1. **Goldfarb, J.L.** and E.M. Suuberg. "Vapor Pressures and Enthalpies of Sublimation of Ten Polycyclic Aromatic Hydrocarbons Determined via the Knudsen Effusion Method." *Journal of Chemical and Engineering Data*. 2008. 53: 670 676.

#### WORKS IN PROGRESS AND UNDER REVIEW

- 12. "Coal Fly Ash as an *in situ* catalyst for hydrothermal biofuel upgrading." L. Gao, A. Perlin. *In Preparation*.
- 11. "Reducing Fuel Segregation of Coal-Biomass Blends During Co-Combustion: Hydrothermal Carbonization as a Biomass Pretreatment" with L. Gao, M. Volpe, L. Fiori. *In Preparation*.
- 10. "In situ Upgrading of Pyrolysis Biofuels by Inorganic Incorporation: Mechanocatalytic and Chemical Catalytic Effects" with L. Gao. In Preparation.

9. "Sustainable Water Treatment through Hydrothermal Carbonization, Secondary Biofuel Extraction, and Activation of *Opuntia ficus indica* for the Removal of Naturally Occurring Heavy Metals in Sicily" with M. Volpe, L. Fiori, L. Gao. *Under Review*.

- 8. "Torrefaction of Blended Biomass Streams: Predicting Resulting Fuel Behavior as a Function of Pure Components' Torrefied Properties" with J. Xue. *Under Review*.
- 7. "Conversion of Municipal Solid Waste to Energy and Activated Carbons for Water Treatment." with C. Gopu\*, M. Volpe, L. Fiori. *Under Review*.
- 6. "In-Situ Biofuel Upgrading and Silver Nanoparticle Synthesis using Brewer's Spent Grain and Silver Nitrate" with C. Ashman and L. Gao. *In Preparation*.
- 5. "Role of Process Parameters on the Hydrothermal Carbonization of the Organic Fraction of Municipal Solid Wastes" with M. Lucian, M. Volpe, G. Piro, L. Gao and L. Fiori. *Under Review*.
- 4. "Enhancing Biomass + Coal Co-firing Scenarios via Torrefaction and Carbonization of Biomass" with J. Xue, S. Ceylan, and T. Chellappa. *Under Review*.
- 3. "Waste to by-product conversion of U.S. oil shale semicoke to a flue gas sorbent material via demineralization" with A. Suleimenov, K. Dupre and E.M. Ryan. *In Preparation*.
- 2. "Modeling Combined Hydrolysis and Adsorption of Oxytetracycline Removal from Water with Biomass-Based Activated Carbons" with M. Berger and J. Ford\*. *Under Review*.
- 1. "Impact of Fuller's Earth on *in situ* Upgrading of Pyrolysis vs. Hydrothermal Biofuels and Biochars" with G. Dou. M. Volpe and L. Fiori. *In Preparation*.

#### INVITED TALKS

- 31. National Youth Leadership Forum, Explore STEM, Villanova, PA, June 28, 2018
- 30. Simmons College, Chemistry & Physics Seminar Series, Boston, MA, Nov. 13, 2017
- 29. Pardee Center for the Study of the Longer-Range Future, Boston, MA, Oct. 25, 2017
- 28. GreenX Plenary, (a TEDx style event), 21<sup>st</sup> Annual Green Chemistry & Engineering Conference, Reston, VA, June 13, 2017
- 27. Università degli Studi di Trento, Facoltà di Ingegneria, Trento, Italy. May 31, 2017
- 26. Penn State, Energy Engineering Department, State College, PA. Mar. 13, 2017
- 25. Virginia Tech, Department of Chemical Engineering, Blacksburg, VA. Feb 9, 2017
- 24. UMass Lowell, Department of Environmental Engineering. Lowell, MA. Feb 3, 2017
- 23. Miami University, Department of Mechanical Engineering, Oxford, OH. Jan, 30, 2017
- 22. Tsinghua University, Department of Thermal Engineering, Beijing, China, Oct. 28, 2016
- 21. China Agricultural University, College of Engineering, Beijing, China, Oct. 28, 2016
- 20. Boston University, Department of Chemistry, Boston, MA. Oct. 12, 2016
- 19. University of Arizona, School of Sustainable Engineering and the Built Environment, Tempe, AZ, Dec. 1, 2015
- 18. Museum of Science, Boston, MA. Nov. 21, 2015
- 17. Università degli Studi "G. d'Annunzio," Chieti-Pescara. Pescara, Italy. Nov. 12, 2015
- 16. Università degli Studi di Milano, Department of Agriculture & Environmental Science, Milan, Italy, Nov. 10, 2015
- 15. Superfund Research Program Graduate Fellows Workshop, Brown University, Providence, RI, Oct. 2, 2015
- 14. Boston University "Rhett Talks" (TEDx –style event), Sept. 7, 2015
- 13. Keynote Speaker, American Institute of Chemical Engineers Northeast Regional Conference, Boston, MA. Mar. 8, 2015

12. Panelist, "Global Efforts in Converting Waste to Energy," Boston University International Education Week, Boston, MA. Nov. 18, 2014

- 11. UMass Lowell, Department of Chemical Engineering. Lowell, MA. Oct. 16, 2014
- 10. UMass Amherst, Department of Civil & Environmental Engineering. Amherst, MA. Sept. 26, 2014
- 9. American Chemical Society Florida Section, Environmental Division. Tampa, FL. May 9, 2014
- 8. Panelist, "Sparking Innovation," Saint Gobain University Days, Boston, MA. Dec. 13, 2013
- 7. Simmons College, Department of Chemistry, Boston, MA. Nov. 11, 2013
- 6. Boston University Department of Mechanical Engineering, Boston, MA. Apr. 18, 2013
- 5. University of Missouri, Department of Chemical Engineering, Columbia, MO. Jan. 31, 2013
- 4. University of Maine, Department of Chemical and Biological Engineering, Orono, ME. Nov. 30, 2012
- 3. Aerodyne Research, Inc., Billerica, MA. Oct. 18, 2012
- 2. Florida Gulf Coast University, Department of Environmental & Civil Engineering, Fort Myers, FL. Feb. 3, 2012
- 1. University of New Hampshire, Department of Chemical Engineering. Durham, NH. Mar. 2010

#### REFERRED CONFERENCE PRESENTATIONS

(Italics indicate presenting author; \* Undergraduate Researcher)

- 26. *Goldfarb*, *J.L.* G. Dou, J. Xue and C. Ashman. "Re-engineering the Integrated Biorefinery: A Materials Approach to *in situ* Biofuel Upgrading." 21<sup>st</sup> Annual Green Chemistry & Engineering Conference. June 2017. *Keynote Address*.
- 25. *Goldfarb*, *J.L.* and G. Dou. "Impact of Bentonite clay on *in situ* upgrading of hydrothermal carbonization and pyrolysis biofuels and biochars for renewable fuel and sustainable material production." 1st International Symposium on Hydrothermal Carbonization, Queen Mary University of London. London, England. Apr. 2017.
- 24. *Gopu, C.*\* and J.L. Goldfarb. "Integrated Municipal Solid Waste Management: Renewable Energy and Activated Carbons for Leachate Treatment." ACS Division of Environmental Chemistry. Apr. 2017.
- 23. *Goldfarb*, *J.L.* G. Dou, J. Xue. "Re-Engineering the Integrated Biorefinery: A Materials Approach to *in situ* Biofuel Upgrading." AIChE International Congress on Sustainability Science and Engineering. Suzhou, China. Oct. 2016
- 22. *Dou*, *G*., and J.L. Goldfarb. "Exploiting the catalytic activity of clay minerals on *in situ* upgrading of pyrolysis biofuels with simultaneous production of heterogeneous adsorbents for water treatment" ACS Division of Environmental Chemistry, Aug. 2016.
- 21. *Suleimenov*, A., and J.L. Goldfarb. "Demineralization Pathways for Oil Shale Semicoke Byproduct Conversion to a Sorbent Material." ACS Energy and Fuels. Aug. 2016.
- 20. *Goldfarb*, *J.L.*, S. Emenyonu\* and J. Xue. "Integrated Processes for Waste Management, Energy Recovery, and the Production of Materials for Environmental Applications." ACS Division of Environmental Chemistry. Mar. 2016.
- 19. Goldfarb, J.L., E.M. Ryan, *A.Vyas\**, *L. Barroso-Luque\**. "Alternatives to Waste for Alternative Fossil Fuels: Improving Oil Shale's Viability via Conversion of Semicoke to

- Flue Gas Adsorbents and Zeolite Precursors." 2015 TECO Green Tech Competition, Taiwan. Aug. 2015.
- 18. *Xue*, *J*., E. Ziade and J.L. Goldfarb. "Integrated Biofuel and Nanomaterial Production via Pyrolysis of Silver Nitrate Impregnated Biomass." ACS Energy and Fuels. Aug. 2015.
- 17. *Vyas*, *A*. \* and J.L. Goldfarb. "Waste-to-byproduct Conversion of Oil Shale Semicoke and Ash to Sorbent and Zeolite Precursors." ACS Energy and Fuels. Aug, 2015.
- 16. Goldfarb, J.L. and *D.L. Kriner*. "Enticing the American Public to Pay for Renewable Energy: The Mediating Roles of the Scientist and Environmental vs. Political Policy Goals." ACS Division of Environmental Chemistry, Aug. 2014.
- 15. Ford, J. \*, M. Berger, J.L. Goldfarb "Fabrication of Activated Biochars from Avocado Pits and Their Adsorption Capacity for Oxytetracycline from Wastewater." ACS Division of Environmental Chemistry, Aug. 2014.
- 14. *Hintz*, *C*. and J.L. Goldfarb "Fabrication of Bio-based Activated Carbons for Removal of Aqueous Pharmaceuticals." ACS Division of Environmental Chemistry, Mar. 2014.
- 13. *Goldfarb*, *J.L.* and L. Buessing. "Multiple Byproduct Pathways for Olive Mill Waste Mitigation: Pyrolysis and Combustion of Supercritical CO<sub>2</sub> Extracted Biomass." ACS Division of Environmental Chemistry, Apr. 2013.
- 12. *Celaya*, *A.M.* and J. L. Goldfarb. "Pyrolysis Kinetics of Domestic and Non-domestic Coal, Locally Sourced Biomass Waste, and Their Blends." ACS Energy & Fuels. April 2013.
- 11. *Buessing*, *L*. and J.L. Goldfarb. "Energy Along I-95: Pyrolysis Kinetics of Floridian Cabbage Palm." ACS Division of Petroleum Chemistry, Mar. 2012.
- 10. *Celaya*, *A.M.*, A.T. Lade\* and J.L. Goldfarb. "Barley, Hops and Coal: Pyrolysis Kinetics of Locally Sourced Coal-Biomass Blends." ACS Fuel Division, Mar. 2012.
- 9. *Goldfarb*, *J.L.*, B. Datangel\* and I. Külaots. "Oil Shale Semicoke as a Carbon Source: Sorbent Capacity, Reactivity and Entrained Compounds as Functions of Pyrolysis Temperature and Shale Origin." ACS Division of Environmental Chemistry. Aug. 2010.
- 8. *Goldfarb*, *J.L.*, I. Külaots and E.M. Suuberg. "Characterization, Kinetics and Potential Utilization of Oil Shale Semicoke." ACS Fuel Division. Aug. 2009.
- 7. Külaots, I., J. Goldfarb and *E.M. Suuberg*. "Properties of Carbon from Oil Shale Semicokes." Oil Shale Symposium. June 2009.
- 6. *Külaots*, *I.*, J. Goldfarb and E.M. Suuberg. "Properties and Potential Applications of Carbon Byproduct from Oil Shale Semicokes." Carbon. June 2009.
- 5. *Goldfarb*, *J.L.* and E.M. Suuberg. "Application of Raoult's Law to Model Contaminant Mixtures of Polycyclic Aromatic Hydrocarbons." ACS Fuel Division. Mar. 2009.
- 4. *Goldfarb*, *J.L.* and E.M. Suuberg. "Investigation of the Thermodynamic Ideality of Mixtures of Polycyclic Aromatic Hydrocarbons." ACS Fuel Division. Apr. 2008.
- 3. *Goldfarb*, *J.L.* and E.M. Suuberg. "Vapor Pressures and Thermodynamics of Model Mixtures of Polycyclic Aromatic Compounds Compared to Raoult's Law Predictions." ACS Division of Environmental Chemistry. Aug. 2007.
- 2. *Goldfarb*, *J.L.* and E.M. Suuberg. "The Thermodynamic Effects of Adding Heteroatoms to Anthracene as Measured by the Knudsen Effusion Technique." ACS Fuel Division. Aug. 2007.
- 1. *Goldfarb*, *J.L.* and E.M. Suuberg. "Vapor Pressures and Enthalpies of Sublimation of Several Polycyclic Aromatic Compounds as Determined via the Knudsen Effusion Method." ACS Fuel Division. Mar. 2007.

#### POSTER PRESENTATIONS AND NON-REFERRED CONFERENCE PRESENTATIONS

(Italics indicate presenting author; \*Undergraduate Researcher)

- 26. Karod, M.\*, M. Berger, C. Johnson, J.L. Goldfarb. ACS ENVR & Sci-Mix. Aug. 2017
- 25. Gao, L., J.L. Goldfarb. New England Energy Research Forum. June 2017
- 24. Suleimenov, A. J.L. Goldfarb. Cabot Corp. Student Materials Research Forum, June 2016
- 23. *Vyas*. *A.*, \*, J.L. Goldfarb. Gulf Coast Research Symposium. Oct. 2015. 1<sup>st</sup> Place, Energy Category, Materials Science Division.
- 22. *Quinn*, P., A. Vyas\*, J.L. Goldfarb. Colorado School of Mines Oil Shale Symposium. Oct. 2015
- 21. *Vyas*, *A.\**, J.L. Goldfarb. American Chemical Society Division of Chemical Education (ACS CHED). Aug. 2015
- 20. Xiang, L.\*,, E. Gunn, J.L. Goldfarb. ACS CHED. Aug. 2015
- 19. *Su*, *S.*, *Y. Jiang*, A. Patnaik, J.L. Goldfarb, U. Pal, S. Basu. Materials Research Society University Chapter's "Sustainability @ My School" Contest (1<sup>st</sup> prize) Nov. 2014
- 18. *Goldfarb*, *J.L.* 14<sup>th</sup> EuCheMS International Conference on Chemistry and the Environment. June 2013, Barcelona, Spain
- 17. Miller, K.L.\*, A.M. Celaya, J.L. Goldfarb. ACS CHED. Apr. 2013
- 16. Yangali, P.\*, A.M. Celaya, J.L. Goldfarb. ACS CHED. Apr. 2013
- 15. Cicilio, P.\* A.M Celaya, J.L. Goldfarb. ACS CHED. Aug. 2012
- 14. D'Amico, A.\*, J.L. Goldfarb, I. Kulaots, E.M. Suuberg. ACS CHED. Aug. 2012
- 13. Pappas, L.E.\*, A.M Celaya, J.L. Goldfarb. ACS CHED. Aug. 2012
- 12. Celaya, A.M., A.T. Lade\*, J.L. Goldfarb. ACS Sci-Mix, Mar. 2012
- 11. Lade, A.T.\*, L. Buessing, M. Berger, J.L. Goldfarb. ACS CHED. Mar. 2012
- 10. *Datangel*, *B*.\*, J.L. Goldfarb, I. Kulaots. 9th Annual Undergraduate Symposium on Sustainability and the Environment. Bridgewater State University. Nov. 2010
- 9. Datangel, B.\*, J.L. Goldfarb, I. Kulaots. ACS CHED. Aug. 2010
- 8. Thomas, K.\*, Goldfarb, J.L. and E.M. Suuberg. ACS CHED. August 2009
- 7. Goldfarb, J.L. and *E.M. Suuberg*. Superfund Research Program Annual Meeting, Dec. 2008
- 6. *Goldfarb*, *J.L.* and E.M. Suuberg. Superfund Research Program Annual Meeting, Dec. 2007
- 5. *Goldfarb*, *J.L.* and E.M. Suuberg. 10<sup>th</sup> International Congress on Combustion By-Products and Their Health Effects, June 2007, Ischia, Italy
- 4. Goldfarb, J.L. and E.M. Suuberg. ACS Sci-Mix. Mar. 2007
- 3. Goldfarb, J.L. and E.M. Suuberg. Superfund Research Program Annual Meeting, Dec. 2006
- 2. Goldfarb, J.L. and E.M. Suuberg. Brownfields Annual Conference, Nov. 2006
- 1. *Goldfarb*, *J.L.* and E.M. Suuberg. Superfund Research Program Annual Meeting, Jan. 2006

#### **FUNDING**

Co-Principal Investigator

9/2017 - 8/2020

(PI: Emily Ryan, BU Mechanical Engineering; Co-PI Pirooz Vakili, BU ME)

National Science Foundation CMMI

"Systemic Design of Porous Heterogeneous Hierarchical Materials and Structures to Optimize Reactive Transport Processes"

Total Award: \$586,000; Sub-award to Penn State: \$225,000

Principal Investigator

8/2017 - 7/2018

**Eppley Foundation** 

"Sustainable Engineering at the Food-Energy-Water Nexus: Simultaneous Production of Upgraded Biofuels and Water Treatment Materials"

*Total Award:* \$26,473

Principal Investigator

9/2016 - 8/2019

(co-PIs: Wendy Heiger-Bernays, BU School of Public Health; David Glick, Political Science) Pardee Center for the Study of the Longer-Range Future, Boston University

"Integrating Science, Health and Policy to Engineer Global Sustainable Water Access"

*Total Award:* \$30,000

Principal Investigator: 1/2016: Agilent Technologies Academic Award 01/2016

*Total Award:* \$22,428

Principal Investigator

8/2015 - 7/2017

(co-PI: Allison Dennis, BU Biomedical Engineering)

National Science Foundation CBET

"EAGER: Development of a Mechanistic Framework Correlating Quantum Dot Surface

Chemistry and Subsurface Environmental Fate and Transport"

*Total Award:* \$100,000

Principal Investigator

7/2015 - 12/2017

Initiative on Cities, Boston University

"Integrated Process for Landfill and Leachate Management: Experimentally Informed Design of Waste-to-Energy Conversions for Municipal Solid Waste Mitigation"

*Total Award:* \$9,502

Principal Investigator

6/2014-2/2015

Proctor & Gamble Zero Waste to Landfill Corporate Sustainability Grant

"Byproduct Conversions of P&G Waste Streams."

*Total Award:* \$43,711

Co-Principal Investigator

6/2014 - 5/2015

(PI: Allison Dennis, BU Biomedical Engineering)

Boston University Engineering Dean's Catalyst Award

"Impact of Surface Chemistry on Environmental Fate of Semiconductor Quantum Dots."

*Total Award:* \$20,000

Principal Investigator

9/2011-8/2014

National Science Foundation CBET

"BRIGE: Second Generation Sustainability: Pyrolysis and Combustion of Locally-Sourced

Biomass-Coal Blends." *Total Award: \$174,440* 

#### PROFESSIONAL SERVICE ACTIVITIES

### Division of Environmental Chemistry, American Chemical Society (ACS)

Fall National Meeting Program Chair (August 2016 – Present)

Responsible for Annual Fall National Meeting Division Programming (>500 papers, 30 symposia per meeting); Co-chair of Division Programming Committee

*Alternate Councilor* (September 2017 – Present)

Elected by Division Members to Executive Committee

*Member-at-Large* (September 2014 – 2017)

Elected by Division Members to Executive Committee (2014, 2015, 2016, 2017)

Chair, Publicity and Publications Committee (September 2012 – 2017)

Edit and Publish EnvirofACS, quarterly newsletter of Division; Engage ENVR members in professional networking.

## President, New England Institute of Chemists, Division of American Institute of Chemists

(May 2014 – December 2016)

President-Elect (September 2012 – April 2014)

Executive Board Member (September 2011 – 2017)

Co-chair, Secondary School Awards Committee (September 2011 – 2016)

# Committee Member, Chemical Speciation of Nanomaterials in the Environment, International Union of Pure and Applied Chemistry (August 2016 – Present)

Project No. 2014-026-3-600

Committee charged with developing guidelines for unification of experimental methods, establishing standards and reference materials, and making recommendations on procedures for nanoparticle research to result in a technical IUPAC report.

## Member, Program Review Committee, Clean Water Life (September 2016 – Present)

Evaluate a collaborative project between Clean Water Life, Engineers without Borders, universities and industry members, to deliver clean water infrastructure to a school and develop a community climate change strategy in Cumayasa, Dominican Republic.

# Co-Chair, Centennial Celebration Committee, Division of Environmental Chemistry, American Chemical Society (April 2013 – September 2014)

Coordinated thematic programming for Division's Centennial Celebration across two ACS National Conferences; Coordinate new "Emerging Leaders" Award; Planned "Leaders and Legends" Reception

## **Organizing Committee Member and On-Site Coordinator** (Jan – July 2017)

1<sup>st</sup> International Workshop on Near-Limit Flames, July 29-30, 2017

Hosted workshop at Boston University, organized by Yiguang Ju, Princeton University, before the 26th International Colloquium on the Dynamics of Explosions and Reactive Systems.

#### **Guest Editor**

Energies Special Issue on Thermofluid Biomass Conversions (with L. Fiori) 2018

Special Issue on Nano-Enabled Technologies for Environmental Applications (with K. Hristovski, B. Meyer, O. Khasanov, E. Yurtov) 2017

## **National Conference Session Organization**

Chair: Division of Environmental Chemistry Poster Session, ACS Fall Meeting 2017, 2018

Co-Chair (with W.Y. Chen, R.A. Doong, M.H. Fan, C.P. Huang, J. Leszczynski): Surface Chemistry of Biochar and Its Applications in Environmental and Related Systems, ACS Fall Meeting 2017

Co-Chair (with K. Hristovski and K. Doudrick): Nano-enabled Environmental Technologies. Division of Environmental Chemistry, ACS Fall Meeting 2015

Co-Chair (with D. D. Dionysiou and E. Carraway, A.Gu, J. Hill, S. Simonich, R. Brennan, I. Escobar, H. Hsu-Kim, C. Lee, S. Richardson): Women in Environmental Science and Engineering. Division of Environmental Chemistry, ACS Fall Meeting 2014

Co-Chair (with M. Nimios and F. Zhao): Biomass and Biotechnologies for Energy. Energy and Fuels Division, ACS Fall Meeting 2013

Co-Chair (with J. Rice): Addressing the Complex Site: Chemistry, Toxicology, and Fate of Mixed Pollutants Across Environmental Media, Division of Environmental Chemistry, ACS Fall Meeting 2012

Chair: Roadblocks to Alternative Clean Fossil Fuels, Transport and Energy Division, American Institute of Chemical Engineers Spring National Meeting 2012

## **Reviewer for Peer-Refereed Journals**

Bioresource Technology Industrial & Engineering Chemistry Research Journal of Applied & Analytical Pyrolysis Chemical Papers Energy & Environmental Science Journal of Chemical Thermodynamics Energy & Fuels Journal of Hazardous Materials

**Energy Policy** Journal of Petroleum Technology & Alternative Fuels

Energy Conversion & Management Journal of Physical Chemistry

Environmental Toxicology & Journal of the Taiwan Institute of Chemical Engineers Chemistry

Journal of Thermal Analysis and Calorimetry

Fluid Phase Equilibria **RSC** Advances

Science of the Total Environment Fuel

Fuel Processing Technology Thermochimica Acta

## **Reviewer for Funding Agencies**

Department of Energy; National Science Foundation; American Chemical Society Petroleum Research Fund; Tau Beta Pi Scholarship Review Board

#### PROFESSIONAL DEVELOPMENT ACTIVITIES

- 2016 Metrolab Water and Green Infrastructure Workshop, Washington DC
- 2016 Granta Materials Intelligence Software Design Workshop, Boston, MA
- 2014 American Chemical Society Leadership Development Course, Dallas, TX
- 2013 National Science Foundation BRIGE Grantees Workshop, Arlington, VA
- 2013 Industry-Academic Partnerships Workshop, Saint Gobain University Days, Boston, MA
- 2013 University of New Hampshire Workshop on Implicit Bias, Durham, NH
- 2012 AIChE Young Professionals Separation Technologies Workshop, Houston, TX
- 2011 AIChE Faculty Workshop, Minneapolis, MN
- 2010 AIChE Student Chapter Faculty Advisor's Workshop, Salt Lake City, UT

#### COURTESY AND PRIOR APPOINTMENTS

**The Pennsylvania State University,** John and Willie Leone Family Department of Energy & Mineral Engineering

*Visiting Researcher* (August – December 2017)

**Università di Trento,** Department of Civil, Environmental and Mechanical Engineering Trento, Italy

Visiting Assistant Professor (January – June 2017)

**Worcester Polytechnic Institute,** Chemical Engineering Department, Worcester, MA *Visiting Assistant Professor* (August 2013 – 2015)

**Brown University**, Division of Engineering, Providence, RI *Visiting Scholar* (August 2008 – 2010)

**Northeastern University,** Department of Chemical Engineering, Boston, MA *Lecturer* (Fall 2009 – Spring 2010)

Courses: Chemical Engineering Calculations; Thermodynamics II

Simmons College, Department of Chemistry, Boston, MA

Research Assistant Professor (September 2009 – August 2010)

**Lecturer** (Fall 2008; Fall 2009 – Spring 2010)

Courses (Labs): General Chemistry; Physical Chemistry; Quantitative Analysis

#### TECHNICAL AND ACADEMIC SOCIETIES

## **American Chemical Society**

National Member, 2007 – present

Member, Fuel Division, 2007 – present

Member, Division of Environmental Chemistry, 2007 – present

New England Regional Section Member, 2008 – present

## **American Institute of Chemical Engineers**

National Member, 2001 – 2016

Boston Local Section Member, 2004 – present

## **Omega Chi Epsilon**

Chemical engineering honors society (inducted Fall 2003)

Chapter President, 2003, 2004

## Tau Beta Pi, MA-E Chapter

Engineering honors society (inducted Spring 2003)

#### **UNIVERSITY SERVICE**

## The Pennsylvania State University (2018 –)

Energy and Mineral Engineering Graduate Education Committee

## **Boston University (2013 – 2017)**

Organizer/Facilitator, Mechanical Engineering Teaching Assistants' Boot Camp (2015 – 2017)

Member, Mechanical Engineering Undergraduate Laboratory Committee (2015 – 2017)

Member, Mechanical Engineering Graduate Admissions Committee (2015 – 2017)

Judge, Boston University Graduate Research Symposium (2016)

Mentor, Photonics NSF REU/RET (Undergraduate and High School Teacher) (Summer 2015)

Mentor, Mechanical Engineering (ME) Senior Design Project in Renewable Energy (2014-2015)

Undergraduate Academic Advisor, Class of 2018

Graduate Student Academic Advisor (LEAP, M.S., M.Eng., Ph.D. students)

Summer Orientation Freshman Advisor (2014, 2015, 2016)

Faculty-in-Residence, Student Village (2014 – present)

Facilitator, Residence Life Workshop "Finding Summer Research Positions" (2014, 2015)

Organizer, Greater Boston Food Bank Food Drive @ BU Residence Life (2015, 2016)

Faculty Advisor, Myles Standish Hall Engineering Residents (2013 – 2017)

Faculty Advisor, Tau Beta Pi (2013 – present)

Fulbright Panelist, BU International Education Week (2017)

Mentor, Society of Women Engineers Career Networking Night (2014 – 2016)

Guest Lecturer:

ME533: Energy Conversion, "Environmental Impacts of Coal Technologies" 2013

WISE@Warren: Women in STEM, "Delivering Great Presentations" 2013 – 2016

MS782: Advanced Materials Characterization, "Thermal Analysis Techniques" 2014 – 2016

Summer Pathways: STEM For High School Students, "Careers in Engineering" 2014

ME533: Energy Conversion, "Unconventional Fossil Fuels" 2015

ME555: MEMS: Fabrication and Materials, "Materials for Energy & Environment" 2015

ME519: Advanced Heat Transfer, "Transport and Phase Changes" 2015

ME519: Advanced Heat Transfer, "Transient Heat Conduction" 2016

Greater Boston Area Research Opportunities for Young Women, "Presenting Yourself" 2017

## **University of New Hampshire (2010 – 2013)**

Founder, Engaging Your Future Seminar Series (2011 –2013)

Environmental Engineering Program Committee (2010–2013)

College to Career Planning Committee, UNH Women's Commission (2012–2013)

Judge, Graduate Research Exposition (2011, 2012)

Faculty Advisor, American Institute of Chemical Engineers Student Chapter (2010–2013)

Faculty Advisor and Founder, AIChE ChemECar Team (2010–2013)

#### ADVISING

#### **Post-Doctoral Researchers**

- 4. Maurizio Volpe, Ph.D. in Environmental Engineering and Ph.D. in Chemical Engineering (October November 2017)

  Visiting Post-doctoral Researcher studying Upgrading of Biomass to Solid Products
- 3. Carol Johnson, Ph.D., Geosciences, Virginia Tech (June 2016 2017)

  Post-doctoral Scholar on NSF-funded project on Quantum Dot Fate & Transport
- 2. Guolan Dou, Ph.D. in Organic Chemistry (October 2015 September 2016) China Scholarship Council Post-Doctoral Fellow studying Solid Fuel Pyrolysis
- 1. Thiago Chellappa, Ph.D. in Mechanical Engineering (May August 2015) CAPES Brazilian Post-Doctoral Fellow studying Biomass to Energy Conversions

#### **Graduate Students**

## (The Pennsylvania State University; 2018 – present)

13. Lihui Gao, Ph.D. in Chemical Engineering from China University of Mining and Technology [jointly supervised by Penn State] (Expected 2020)

Thesis: New Approaches to the Integrated Biorefinery: Clay Minerals as in situ Catalysts for Upgrading Biofuels and Producing Materials for Water Treatment

#### (*Boston University*; 2013 – 2017)

- 12. Allen Perlin, M.S. in Mechanical Engineering from Boston University *Project:* Heterogeneous Hierarchical Photocatalysts for Recycled Water Treatment
- 11. Giulia Ischia, M.S. in Energy Engineering from Universita degli Studi di Trento [jointly supervised by Boston University] (Expected 2018)

  \*Thesis: Integrated Thermochemical Conversion Pathways for Municipal Solid Waste to Energy and Bioproducts

 Silvia Del Bianco, M.S. in Environmental Engineering from Universita degli Studi di Trento [jointly supervised by Boston University] (Expected 2018)
 Thesis: Upgrading Municipal Solid Waste Hydrochars to Sorbent Materials with Secondary Energy Extraction Pathways

- 9. Giulia Severini, M.S. in Environmental Engineering from Universita degli Studi di Trento [jointly supervised by Boston University] (Expected 2018)

  \*Thesis: Extracting Phosphorous from Cow Manure Hydrochars and Producing Nutrient-Rich Soil Amendments and Water Treatment Materials
- 8. Handunge Tharanga Jayarathne, M.Eng. in Mechanical Engineering (Expected 2018) *Project: In situ Upgrading of Pyrolysis Biofuels with Copper Impregnation*
- 7. Lorenzo Rossi, M.S. in Agricultural Sciences from Universita degli Studi di Milano [jointly supervised by Boston University] (Expected 2018)

  \*Thesis: Thermal Conversions of Municipal Solid Waste to Renewable Energy and Activated Carbons for Water Treatment and Microbial Fuel Cell Electrodes
- 6. Cole Ashman, M.Eng. in Mechanical Engineering (September 2017) **Project**: In situ upgrading of biofuels from Brewer's Spent Grain
- 5. Junjie Xue, Ph.D. in Agricultural Engineering from China Agricultural University [jointly supervised by Boston University] (June 2016)

  Thesis: Reaction Synergies during Co-Pyrolysis of Blended Biomass Streams
- 4. Anna Newman, M.S. in Materials Science & Engineering (May 2016)

  \*Project: Octanol-water partitioning of polycyclic aromatic hydrocarbon mixtures\*

## (University of New Hampshire; 2010-2014)

- 3. Chloe Hintz, M.S. in Chemical Engineering (May 2014)

  Thesis: Accessing Active Sites of Biochars for Preferential Sorption of Pharmaceutical Compounds from Simulated Wastewater
- 2. Ana Celaya, M.S. in Chemical Engineering (May 2013)

  Thesis: Thermal Behavior of Coal, Locally Sourced Biomass, and their Blends via Pyrolysis and Oxidation

Award: 2013 UNH Graduate School Travel Award

Li Buessing, M.S. in Chemical Engineering (May 2012)
 Thesis: Olive Mill Waste Mitigation: Exploring Waste-to-Byproduct Conversions of CO<sub>2</sub>
 Supercritical Fluid Extracted Olive Mill Waste
 Award: 2012 ACS Fuel Division Graduate Student Travel Award

## **Undergraduate Students**

\*Denotes students who are pursing or have received graduate degrees

## Boston University (2013 – present)

26. Madeline Karon, B.S. in Chemistry, Simmons College (Expected May 2019)
Research Assistant: Sustainable production of biofuels and sorbents for heavy metal removal from drinking water

Presented poster at 2017 Fall ACS National Meeting

25. Noah Bernays, B.S. in Mechanical Engineering (Expected May 2018)
Research Assistant: Biomass-based Sorbent Foams for Water Treatment
Received Spring 2017 UROP Award

24. Chitanya Gopu\*, B.S. in Mechanical Engineering (May 2017)

Research Assistant: MSW to Energy; Deoxygenation of pyrolysis biofuels

Received Spring 2016 UROP Award

Received Summer 2016 STARS award

Received 2017 UROP Travel Award

Presented paper at 2017 Spring ACS National Meeting

Co-author on RSC Advances article and submitted manuscript

23. Ami Vyas, B.S. in Electrical Engineering (May 2017)

Research Assistant: Functionalizing oil shale semicoke for flue gas scrubbing
First Place, Materials Science, Gulf Coast Research Symposium Fall 2015
Received 2014, 2015 STARS awards; Spring 2015 and Fall 2015 UROP Award
Presented poster and oral paper at 2015 Fall ACS National Meeting
Finalist at 2015 TECO Green Tech Challenge in Taiwan
Co-author of Energy & Fuels, Journal of Analytical & Applied Pyrolysis articles

- 22. Garrison Norton, B.S. in Mechanical Engineering (May 2017) Research Assistant: MSW to Energy Conversions
- 21. Longxian (Elizabeth) Zhang, B.S. in Chemistry (May 2017)
  Independent Study Project: Eutectic and solid solution behavior of PAHs

  \*Presented poster at 2015 Fall ACS National Meeting\*\*
- 20. Stephanie Emenyonu, B.S. in Biomedical Engineering, Dartmouth College (May 2016) REU: *In situ* upgrading of biofuels via co-production of iron oxide nanoparticles *Co-author on Spring 2016 ACS National Meeting Paper*
- 19. Carolyn Nicolo, B.S. in Mechanical Engineering (May 2016) Research Assistant: Co-production of biofuels and nanoparticles
- 18. Jennette Chenevert\*, B.S. in Chemistry, Simmons College (May 2015)

  \*Thesis: Octanol-Water Partitioning of Quantum Dots: Thermodynamics or Kinetics

17. Alex Billias\*, B.S. in Physics (December 2015)
Independent Study Project: Surface Chemistry of Activated Carbons via FTIR

Co-author on ACS Sustainable Chemistry & Engineering article

## International Undergraduate Student Advised, Boston University (2013 – present)

- Mohamed (Simo) Yezrour, B.S. in Physical Measurement Sciences, Université Paul Sabatier (Dec. 2016) May – July 2014
   Internship: Installation and validation of scientific equipment
- Tom Léger, B.S. in Thermal & Energy Sciences, University of Nantes, France (Oct. 2016)
   June August 2015
   Internship: Construction of apparatus for measuring aerosols (co-supervised by J. Bird)

## University of New Hampshire (2010 – 2014)

- 14. Nicholas Osadchy, B.S. in Chemical Engineering (May 2015)
  Research Assistant: Eutectic behavior of polycyclic aromatic hydrocarbon mixtures
- 13. Joel Ford, B.S. in Chemical Engineering (May 2015)
  McNair Scholars Program Fellow: Competitive adsorption of PCBs to biochars

  Presented paper at American Chemical Society Fall 2014 Meeting

  Co-author of manuscript under review
- 12. Elizabeth Cardin, B.S. in Chemical Engineering (May 2014) Independent Study Project: Optimizing oil shale oil extraction
- 11. Anthony D'Amico\*, B.S. in Chemical Engineering (May 2014)
  Independent Study Project: Reaction kinetics of oil shale semicokes

  Co-author of Energy & Fuels article

  Presented poster at American Chemical Society Fall 2012 Meeting

  Received UNH Hamel Center Undergraduate Research Presentation Award
- 10. Pablo Yangali\*, B.S. in Chemical Engineering (May 2015)
  Research Assistant: Co-pyrolysis of cherry pits and coal analyzed by GC-MS

  Presented poster at American Chemical Society Spring 2013 Meeting
  Co-author of article in Journal of Applied & Analytical Pyrolysis
- 9. Kathleen Miller, B.S. in Chemical Engineering (May 2014)
  Research Assistant: Impact of particle size on thermal lag during pyrolysis

  Presented poster at American Chemical Society Spring 2013 Meeting
- 8. Amanda Lade, B.S. in Chemical Engineering (May 2014)
  Research Experience and Apprenticeship Program (REAP); Research Assistant

  Presented poster at American Chemical Society Spring 2012 Meeting
  Received UNH Hamel Center Undergraduate Research Presentation Award
  Co-author of article in Fuel Processing Technology

7. Melissa Lever, B.S. in Chemistry, Simmons College (September 2013) *Thesis*: Chemical and Physical Activation of Olive Mill Waste for Production of Activated Carbons

Co-author of article in ACS Sustainable Chemistry & Engineering

6. Lauren Pappas, B.S. in Chemical Engineering (May 2013)

Research Assistant: Co-pyrolysis of cocoa shell and coals

Presented posters at 2012 AIChE Student Conference, ACS Fall 2012 Meeting Received UNH Hamel Center Undergraduate Research Presentation Award Undergraduate Research Award (URA)

Project: Removal of Amoxicillin from Wastewater with Biochars

5. Phylicia Cicilio\*, B.S. in Chemical Engineering (May 2013)

Independent Project for University Honors, Spring 2013

**Thesis**: Octanol-water Partitioning Coefficients of PCB Mixtures

Research Assistant: Kinetics of locally sourced coal-biomass blending

Received UNH Hamel Center Undergraduate Research Presentation Award

- 4. Daniel Morgan, B.S. in Chemical Engineering (May 2012) Independent Study Project: Biochar production from banana stalk
- 3. Bradley White\*, B.S. in Chemical Engineering (May 2012)
  Independent Study Project: Indoor air quality at the University of New Hampshire

## Simmons College (2008 – 2010)

2. Beatriz Datangel, B.S. in Chemistry Management (May 2010)

*Thesis*: Oil shale Semicoke as a Carbon Source: Sorbent Capacity, Reactivity and Entrained Compounds as Functions of Pyrolysis Temperature and Shale Origin

Co-author on article in Energy & Fuels

Co-author on paper presented at American Chemical Society Fall 2010 Meeting Presented poster at 9<sup>th</sup> Annual Symposium on Sustainability & Environment, 2010 Presented poster at American Chemical Society Fall 2010 Meeting

1. Katelyn Thomas\*, B.S. in Chemistry (May 2009)

Independent Study: Thermal analysis of oil shale pyrolysis

Presented poster at American Chemical Society Fall 2009 Meeting

## **High School Students, Boston University (2014 – 2017)**

\*Denotes students pursing degrees in STEM fields

- 3. Ayush Upneja\*, Research Intern, Summer 2016
  First author on paper published in RSC Advances
- 2. Safwa Ali\*, ACS Project SEED Scholar, Summer 2014
- 1. Julia Dariu\*, ACS Project SEED Scholar, Summer 2014