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**Education:** **Arizona State University**, Tempe, AZ (2015 – Present)  
Ph.D. Candidate in Chemistry / National Science Foundation Fellow  
Advisor: Gary F. Moore

**Coe College**, Cedar Rapids, IA (2011 – 2015)  
Dual B.A. Chemistry and Biochemistry, *Cum Laude*  
Advisor: Scott J. Stoudt

**Fellowships, Honors, and Awards:**

- (15) Achievement Awards for College Scientists (ARCS) Scholar (2019 – 2020)
- (14) George U. Yuen Memorial Award (2019)
- (13) Outstanding Graduate Researcher Award, Arizona State University (2018)
- (12) Graduate College Fellowship, Arizona State University (2018)
- (11) Individual Travel Grant, Arizona State University Graduate College (2018)
- (10) LeRoy Eyring Memorial Fellowship in Chemistry (2017 – 2018)
- (9) Individual Travel Grant, Arizona State University Graduate and Professional Student Association (2017)
- (8) NSF IGERT-SUN Competitive Innovation Fund Recipient (2016 – 2018)
- (7) National Science Foundation Intergrative Graduate Education and Research Traineeship (IGERT) Solar-Utilization Network (SUN) Fellowship (2015 – Present)
- (6) Coe College Analytical Chemistry Award (2014)
- (5) Coe College Organic Chemistry Award (2013)
- (4) Coe College Presidential Scholarship (2011 – 2015)
- (3) Coe College Academic Distinction Scholarship (2011 – 2015)
- (2) Polish National Alliance Scholarship (2012 – 2015)
- (1) Elk Grove Village Fallen Soldier Scholarship (2011)

## Journal Publications:

- (10) Wadsworth, B. L.; Khusnutdinova, D.; Urbine, J. M.; Reyes, A. S.; Moore, G. F. **Expanding the Redox Range of Surface-immobilized Metallocomplexes using Molecular Interfaces.** *Appl. Mater. Interfaces* Under Review.
- (9) Wadsworth, B. L.; Beiler, A. M.; Khusnutdinova, D.; Reyes Cruz, E. A.; Moore, G. F. **Interplay between Light Flux, Quantum Efficiency, and Turnover Frequency in Molecular-Modified Photoelectrosynthetic Assemblies.** *J. Am. Chem. Soc.* Accepted. DOI: 10.1021/jacs.9b07295. Supplemental Cover Art Article. (Impact Factor: 14.695)
- (8) Odella, E.‡; Wadsworth, B. L.‡; Mora, S. J.‡; Goings, J. J.‡; Huynh, M. T.; Gust, D.; Moore, T. A.; Moore, G. F.; Hammes-Schiffer, S.; Moore, A. L. **Proton-coupled Electron Transfer Drives Multi Proton Translocations in Bioinspired Systems.** *J. Am. Chem. Soc.* **2019**, *141*, 14057–14061. Supplemental Cover Art Article. (Impact Factor: 14.695) (‡ denotes equal author contributions).
- (7) Odella, E.‡; Mora, S. J.‡; Wadsworth, B. L.‡; Huynh, M. T.‡; Goings, J. J.; Liddell, P. A.; Groy, T. L.; Gervaldo, M.; Sereno, L. E.; Gust, D.; Moore, T. A.; Moore, G. F.; Hammes-Schiffer, S.; Moore, A. L. **Controlling Proton-Coupled Electron Transfer in Bio-Inspired Artificial Photosynthetic Relays.** *J. Am. Chem. Soc.* **2018**, *140*, 15450–15460. (Impact Factor: 14.695). (‡ denotes equal author contributions).
- (6) Khusnutdinova, D.‡; Wadsworth, B. L.‡; Flores, M.; Beiler, A. M.; Reyes Cruz, E. A.; Zenkov, Y.; Moore, G. F. **Electrocatalytic Properties of Binuclear Cu (II) Fused Porphyrins for Hydrogen Evolution.** *ACS Catal.* **2018**, *8*, 9888–9898. Supplemental Cover Art Article. (Impact Factor: 12.221). (‡ denotes equal author contributions).
- (5) Wadsworth, B. L.; Khusnutdinova, D.; Moore, G. F. **Polymeric Coatings for Applications in Electrocatalytic and Photoelectrosynthetic Fuel Production.** *J. Mater. Chem. A.* **2018**, *6*, 21654–21665. (Impact Factor: 10.733).
- (4) Khusnutdinova, D.; Beiler, A. M.; Wadsworth, B. L.; Nanyangwe, S. K.; Moore, G. F. **Vibrational Structure Analysis of Cobalt Fluoro-Porphyrin Surface Coatings on Gallium Phosphide.** *J. Porphyr. Phthalocyanines* **2018**, *22*, 461–466. Cover Art Article. (Impact Factor: 1.292).
- (3) Beiler, A. M.; Khusnutdinova, D.; Wadsworth, B. L.; Moore, G. F. **Cobalt Porphyrin-polypyridyl Surface Coatings for Photoelectrosynthetic Hydrogen Production.** *Inorg. Chem.* **2017**, *56*, 12178–12185. (Impact Factor: 4.850).
- (2) Khusnutdinova, D.; Beiler, A. M.; Wadsworth, B. L.; Jacob, S. I.; Moore, G. F. **Metalloporphyrin-modified Semiconductors for Solar Fuel Production.** *Chem. Sci.* **2017**, *8*, 253–259. (Impact Factor: 9.556).
- (1) Wadsworth, B. L.; Beiler, A. M.; Khusnutdinova, D.; Jacob, S. I.; Moore, G. F. **Electrocatalytic and Optical Properties of Cobaloxime Catalysts Immobilized at a Surface-Grafted Polymer Interface.** *ACS Catal.* **2016**, *6*, 8048–8057. (Impact Factor: 12.221).

**Conference Publications:**

- (7) Moore, G. F.; Beiler, A. M.; Khusnutdinova, D.; Wadsworth, B. L. **Tetrapyrrolic Surface Coatings for Applications in Photoelectrosynthetic Fuel Production.** *Meeting Abstracts, 233<sup>rd</sup> Electrochemical Society Meeting (ECS) 2018, 12, 972–972.*
- (6) Mora S. J.; Odella, E.; Wadsworth, B. L.; Huynh, M. T.; Moore, G. F.; Hammes-Schiffer, S.; Gust, D.; Moore, T. A.; Moore, A. L. **Multiple proton transfers coupled to a single electron transfer in benzimidazole-phenol derivatives.** *Abstract of Papers, 255<sup>th</sup> American Chemical Society (ACS) Meeting and Exposition 2018, INOR-1163.*
- (5) Moore, G. F. Beiler, A. M.; Khusnutdinova, D.; Wadsworth, B. L. **Bioinspired Polymeric Surface Coatings for Applications in Photoelectrosynthetic Fuel Production.** *Abstract of Papers, Materials and Research Society Spring Meeting and Exhibit.* 2018, Paper # EN18.09.04.
- (4) Wadsworth, B. L.; Khusnutdinova, D.; Beiler, A. M; Moore, G. F. **Polymeric Interfaces for Renewable Fuel Production.** *Abstract of Papers, Materials and Research Society Spring Meeting and Exhibit.* 2018, Paper # EN18.15.06.
- (3) Khusnutdinova, D.; Beiler, A. M; Wadsworth, B. L.; Moore, G. F. **Integrated Photocatalytic Materials for Fuel Production.** *Abstract of Papers, Materials and Research Society Spring Meeting and Exhibit.* 2018, Paper # EN18.04.16.
- (2) Beiler, A. M.; Khusnutdinova, D.; Wadsworth, B. L.; Moore, G. F. **Chemistry at the Interface: Hybrid Materials for Solar Fuel Production.** *Abstract of Papers, Materials and Research Society Spring Meeting and Exhibit.* **2018**, Paper # NM03.12.04.
- (1) Moore, G. F.; Beiler, A. M.; Khusnutdinova, D.; Wadsworth, B. L. **Molecular Surface Coatings for Semiconductor Photoelectrochemistry and Photocatalysis.** *Abstract of Papers, 253<sup>rd</sup> American Chemical Society (ACS) Meeting and Exposition 2017, CATL-215.*

**Media Coverage:**

- (3) Interview on Arizona Horizons: Arizona PBS Channel 8. *Producing Clean Fuel with Solar Power and Chemical Reactions.* <https://azpbs.org/horizon/2019/09/producing-clean-fuel-with-solar-power-and-chemical-reactions/>
- (2) ASU Now: *Extracting Clean Fuel from Sunlight.* <https://asunow.asu.edu/20190830-extracting-clean-fuel-sunlight>
- (1) Biodesign Institute News: *ASU Research Graces Cover of ACS Journal.* <https://biodesign.asu.edu/news/asu-research-graces-cover-acs-journal>

**Selected Oral Presentations:**

- (4) Wadsworth, B. L.; Moore, G. F. **Bioinspired Molecular-modified Materials for Solar Fuel Generation.** *Photosynthesis Gordon Research Conference, Newry, ME, July 2019.*

- (3) Wadsworth, B. L.; Beiler, A. M.; Khusnutdinova, D.; Moore, G. F. **Polymeric Interfaces for Renewable Fuel Production.** *Materials Research Society Spring Meeting and Exhibit*, Phoenix, AZ, April **2018**.
- (2) Wadsworth, B. L.; Mora, S. J.; Odella, E. **Multiple proton transfers coupled to a single electron transfer in models of Tyr<sub>z</sub>-His couple of PSII.** *Center for Bioenergy & Photosynthesis, Arizona State University*, Tempe, AZ, November **2017**.
- (1) Wadsworth, B. L. **Controlling the Redox Properties of Surface Immobilized Catalysts Using Polymer Coordination Environments and Synthetic Manipulation.** *Arizona Student Energy Conference (AzSEC): Sixth Annual Student Conference on Renewable Energy Science, Technology, and Policy*. Tempe, AZ, October **2017**.

**Poster Presentations:**

- (11) Wadsworth, B. L.; Khusnutdinova, D.; Reyes, E. A.; Nguyen, N.; Nishiori, D.; Moore, G. F. **Bioinspired Molecular-modified Materials for Solar Fuel Generation.** *Photosynthesis Gordon Research Conference*, Newry, ME, July **2019**.
- (10) Wadsworth, B. L.; Khusnutdinova, D.; Reyes, E. A.; Nguyen, N.; Nishiori, D.; Moore, G. F. **Bioinspired Molecular-modified Materials for Solar Fuel Generation.** *Photosynthesis Gordon Research Seminar*, Newry, ME, July **2019**.
- (9) Wadsworth, B. L.; Beiler, A. M.; Khusnutdinova, D.; Moore, G. F. **Modeling Current-Potential Responses of Homogeneous-Heterogeneous Photocathodes.** *Materials Research Society Spring Meeting and Exhibit*, Phoenix, AZ, April **2019**.
- (8) Wadsworth, B. L.; Khusnutdinova, D.; Beiler, A. M.; Moore, G. F. **Probing the Physical Properties of Molecular-based Surface Coatings for Applications in Electrocatalysis.** *Gerischer Electrochemistry Today*, Boulder, CO, August **2018**.
- (7) Wadsworth, B. L.; Khusnutdinova, D.; Beiler, A. M.; Moore, G. F. **Controlling the Redox and Optical Properties of Molecular Interfaces using Polymeric Architectures.** *Solar Fuels Gordon Research Conference*, Ventura, CA, January **2018**.
- (6) Wadsworth, B. L.; Khusnutdinova, D.; Beiler, A. M.; Moore, G. F. **Controlling the Redox and Optical Properties of Molecular Interfaces using Polymeric Architectures.** *Solar Fuels Gordon Research Seminar*, Ventura, CA, January **2018**.
- (5) Wadsworth, B. L.; Beiler, A. M.; Khusnutdinova, D.; Moore, G. F. **Chemical Stabilization of Molecular Hydrogen-Production Catalysts by Immobilization on Surface Grafted Polymers.** *2<sup>nd</sup> International Solar Fuels Conference (ISF-2)*, San Diego, CA, July **2017**.
- (4) Wadsworth, B. L.; Moore, G. F. **Electrocatalytic and Optical Properties of Cobaloxime Catalysts Immobilized at a Surface-Grafted Polymer Interface.** *FUSION 2017: Biodesign Scientific Retreat*, Cave Creek, AZ, April **2017**.

- (3) Wadsworth, B. L.; Beiler, A. M.; Khusnutdinova, D.; Jacob, S. I.; Moore, G. F. **Optical and Electronic Properties of Hydrogen-producing Molecular Catalysts Immobilized at a Surface-attached Polymer Interface.** *Arizona Student Energy Conference (AzSEC)*, Flagstaff, AZ, September **2016**.
- (2) Wadsworth, B. L.; Beiler, A. M.; Khusnutdinova, D.; Jacob, S. I.; Moore, G. F. **Interfacing Molecular Catalysts to Transparent Conducting Oxides.** *Materials Research Society Spring Meeting and Exhibit*, Phoenix, AZ, March **2016**.
- (1) Wadsworth, B. L.; Stoudt, S. J. **Triarylmethyl Germanium Trihalide Synthesis and Characterization.** *248<sup>th</sup> American Chemical Society (ACS) Meeting and Exposition*, San Francisco, CA, August **2014**.

**Conference Sessions Organized:**

- (3) Discussion Leader, **Biomimetic Photosynthesis**, *Photosynthesis Gordon Research Seminar*, Newry, ME, July **2019**.
- (2) Symposium Assistant, **Photo(electrocatalytic) Materials and Integrated Assemblies for Solar Fuels Production–Discovery, Characterization and Performance.** *Materials Research Society Spring Meeting and Exhibit*, Phoenix, AZ, April **2017**.
- (1) Symposium Co-Organizer, **Harnessing the Power of Solar.** *Materials Research Society Spring Meeting and Exhibit*, Phoenix, AZ, March **2016**.

**Outreach Activities:**

- (5) Mentor for an ASU Preparatory Academy high school student conducting research in the Gary F. Moore laboratory at Arizona State University through an NSF funded internship program, Tempe, AZ (2018)
- (4) Advanced Materials Initiative (AMI) Volunteer, Materials Research Society, Phoenix, AZ (2018 and 2019)
- (3) Provided scientific guidance to local Arizona artist, Jose Benavides, for a special art exhibit on Biomimicry, Tempe Center for the Arts, Tempe, AZ (2017)
- (2) Arizona State University's Night of the Open-Door Event volunteer, Tempe, AZ (2016 and 2017)
- (1) Grand award judge, Intel International Science and Engineering Fair, Phoenix, AZ (2016 and 2019)