
Address: School of Molecular Sciences
Arizona State University
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Education: Arizona State University, Tempe, AZ (2012 – present)
Ph. D. candidate in Chemistry & Biochemistry
Advisors: Gary F. Moore & Thomas A. Moore

Messiah College, Grantham, PA (2004 – 2008)
B.S. in Biochemistry
Advisor: Roseann K. Sachs

Internships: Pacific Northwest National Laboratory – Batelle Marine Sciences
Laboratory, Sequim, WA (Summer 2007)
Advisor: Irv Schultz

Honors and Awards:

- (10) NSF IGERT:SUN Competition Innovation Fund Recipient, 2016 – 2018.
- (9) ARCS Scholar, Phoenix Chapter of the ARCS Foundation, 2017 – 2018.
- (8) P.E.O. Scholar, International Chapter of the P.E.O. Sisterhood, 2017 – 2018.
- (7) Marie Curie Award for Best Use of Chemistry, FUSION 2017: Biodesign Scientific Retreat, Cave Creek, AZ, April 2017.
- (6) Graduate Excellence Award, ASU College of Liberal Arts & Sciences, 2016 – 2017.
- (5) Distinguished Poster Award, Arizona Student Energy Conference, Flagstaff, AZ, September 2016.
- (4) First Generation Graduate Excellence Award, ASU College of Liberal Arts and Sciences, May 2016.
- (3) Individual Travel Grant, ASU Graduate and Professional Student Association, February 2016.
- (2) Graduate Education Travel Award, ASU School of Molecular Sciences, February 2016.

- (1) NSF IGERT:SUN Fellow, 2012 – 2017.

Journal Publications:

- (7) Beiler, A. M.; Moore, Gary F. Caught in the Act, *Nat. Chem.* 2017, doi:10.1038/nchem.2896
- (6) Beiler, A. M.; Khusnutdinova, D.; Wadsworth, B. L.; Moore, G. F. Cobalt Porphyrin-polypyridyl Surface Coatings for Improved Photoelectrosynthetic Fuel Production, *Inorg. Chem.* **2017**, *56*, 12178-12185
- (5) Khusnutdinova, D.; Flores, M.; Beiler, A. M.; Moore, G. F. Synthesis and Characterization of a Cobalt(II) Tetrakis(3-fluorophenyl)porphyrin with a Built-in 4-Vinylphenyl Surface Attachment Moiety. *Photosynthetica*, *submitted*.
- (4) 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.
- (3) 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.
- (2) Beiler, A.M.; Khusnutdinova, D.; Jacob, S.I.; Moore, G. F. Solar Hydrogen Production using Molecular Catalysts Immobilized on Gallium Phosphide (111)A and (111)B Polymer-Modified Photocathodes. *ACS Appl. Mater. Interfaces* **2016**, *8*, 10038–10047.
- (1) Beiler, A.M.; Khusnutdinova, D.; Jacob, S.I.; Moore, G. F. Chemistry at the Interface: Polymer-Functionalized Semiconductors for Solar Hydrogen Production. *Ind. & Eng. Chem. Research*, **2016**, *55*, 5306-5314. *Special Issue “Invited Papers from ACS Boston”*.

Conference Publications:

- (2) Moore, G. F.; Beiler, A. M.; Khusnutdinova, D.; Wadsworth, B. L. Molecular Surface Coatings for Semiconductor Photoelectrochemistry and Photocatalysis. *Abstract of Papers, 253rd ACS Meeting & Exposition* **2017**, pp CATL-215.
- (1) Moore, G. F.; Khusnutdinova, D.; Beiler, A.; Jacob, S.; Skibo, E.; Echeverri, A. Running on Sun: Bioinspired Approaches to Achieving Solar Fuels. *Abstract of Papers, 250th ACS Meeting & Exposition* **2015**, pp ENV-332.

Conference Sessions Organized:

- (1) “Harnessing the Power of Solar, ” Materials Research Society Meeting, Phoenix, AZ, March 2016 (Session Organizer and Chair).

Conference Sessions Chaired:

- (1) “Electron Transfer in Molecules and Beyond,” Electron Donor-Acceptor Interactions Gordon Research Seminar, Newport, RI, August 2016.

Invited Talks:

- (4) “Streamlined Synthesis and Assembly of a Hybrid Cobalt Porphyrin-Polypyridine-Modified Cathode for Photoelectrochemical Fuel Production,” Photochemistry Gordon Research Seminar, Lewiston, ME, July 2017.
- (3) “Artificial Photosynthesis for Clean Energy,” Sandra Day O’Connor High School STEM Conference, Phoenix, AZ, May 2017.
- (2) “Running on Sun All Night Long”, Arizona Student Energy Conference, Flagstaff, AZ, September 2016.
- (1) “Artificial Biosynthesis: Conversion of Solar Energy to Chemical Energy Through Surface-Immobilized Catalysts,” Arizona Student Energy Conference, Tucson, AZ, April 2015.

Outreach Activities:

- (8) Symposium Assistant, Materials Research Society Meeting, Phoenix, AZ, April 2017.
- (7) Invited Grand Award Judge, Intel International Science and Engineering Fair, 2016.
- (6) Next Gen Voices Essay, “Ingenuity”, *Science*, May 2016.
- (5) Grant Reviewer, Graduate and Professional Student Association, September 2015 – present.
- (4) Science Mentor, “Innovate to Mitigate” Challenge, Technical Research Institute Center, 2014 – 2015.
- (3) Next Gen Voices Essay, “NextGen's Course Catalog”, *Science*, January 2015.
- (2) Team Leader, “GREEN RICE: An Integrated Biomass Reactor,” NSF IGERT Video and Poster Competition, May 2013.
- (1) Community Environmental Development Worker, Peace Corps Dominican Republic, March 2010 – May 2012.

Poster Presentations:

- (7) Beiler, A. M.; Khusnutdinova, D.; Moore, G. F. Streamlined Synthesis and Assembly of a Hybrid Cobalt Porphyrin-Polypyridine-Modified Cathode for

- Photoelectrochemical Fuel Production. *International Solar Fuels Conference 2*, San Diego, CA, July 2017.
- (6) Beiler, A. M.; Khusnutdinova, D.; Wadsworth, B. L.; Moore, G. F. Structure-Function Relationships of Molecular Modified Photocathodes. *FUSION 2017: Biodesign Scientific Retreat*, Cave Creek, AZ, April 2017.
 - (5) Beiler, A. M.; Khusnutdinova, D.; Jacob, S. I.; Moore, G. F. Structure-Function Relationships of Molecular Modified Photocathodes. *Arizona Student Energy Conference*, Flagstaff, AZ, September 2016.
 - (4) Beiler, A. M.; Khusnutdinova, D.; Jacob, S. I.; Moore, G. F. Structure-Function Relationships of Molecular Modified Photocathodes. *Electron Donor-Acceptor Interactions Gordon Research Conference*, Newport, RI, August 2016.
 - (3) Beiler, A. M.; Khusnutdinova, D.; Jacob, S. I.; Moore, G. F. Solar Hydrogen Production using Molecular Catalysts Immobilized On Gallium Phosphide [111]A and [111]B Polymer-modified Photocathodes. *Materials Research Society Meeting*, Phoenix, AZ, March 2016.
 - (2) Beiler, A. M.; Khusnutdinova, D.; Jacob, S. I.; Moore, G. F. Solar Hydrogen Production using Molecular Catalysts Immobilized On Gallium Phosphide [111]A and [111]B Polymer-modified Photocathodes. *Solar Fuels Gordon Research Conference*, Lucca, Italy, February 2016.
 - (1) Beiler, A.M.; Vaughn, M. D.; Enderle, K.; Moore, T. A.; Moore, G. F. Covalent Attachment and Orientation of Plant-type Ferredoxin and Direct Electrochemical Analysis of the [2Fe-2S] Redox Center. *24th Western Photosynthesis Conference*, Pacific Grove, CA, January 2015.

Teaching Experience:

Arizona State University

- (4) **BCH 463** Biophysical Chemistry, Teaching Assistant (2015 - 2016)
- (3) **CHM 460** Biological Chemistry, Teaching Assistant (2016)
- (2) **CHM 433** Advanced Organic Chemistry, Teaching Assistant (Fall 2015)
- (1) **CHM 237** General Organic Chemistry, Laboratory Instructor (2014)

Professional Organizations:

- (2) Materials Research Society
- (1) American Women in Science Association