
Address: School of Molecular Sciences
Arizona State University
Tempe, AZ 85297-1604, U.S.A.

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Education: **Arizona State University (ASU)**, Tempe, AZ (2016–Present)
Ph.D. Candidate
Advisor: Prof. Gary F. Moore

Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM),
Monterrey, MEX (2009–2014)
B.Sc. in Chemistry
Advisor: Prof. Ernesto Mariño Ochoa

Employment: **Solanum Laboratorios, S. de R. L. de C. V.**, Santa Catarina, MEX (2014–2016)
Research and Development Manager
Immediate Supervisor: Ma. De Lourdes Quintero Garnica

Internships: **Arizona State University (ASU)**, Tempe, AZ (summer 2011, summer 2012, and summer 2013)
Undergraduate Research Assistant
Advisor: Prof. Ana L. Moore

Scholarships and Awards:

- (5) George U. Yuen Memorial Award by the Arizona State University School of Molecular Sciences (2022)
- (4) Distinguished Teaching Assistant Award, by the Arizona State University School of Molecular Sciences (2019)
- (3) Award for Outstanding Performance in the Bachelor in Chemistry Exit Examination (EGEL), by the National Center of Evaluation for Higher Education (CENEVAL) (2013)
- (2) Dr. Xorge A. Dominguez Scholarship, by the ITESM Chemistry Department (2009–2014)
- (1) Academic Talent Scholarship, by the ITESM Scholarship Department (2019–2014)

Journal Publications

- (10) Nguyen, N. P.; Hensleigh, L. K.; Nishiori, D.; Reyes Cruz, E. A.; Moore, G. F.* **Degrade-[Repair Cycle of a Fuel-forming Photoelectrode](#)**. *ACS Applied Energy Materials*, **2022**, DOI: 10.1021/acsaem.2c02367.

- (9) Odella, E.[‡]; Secor, M.[‡]; Reyes Cruz, E. A.; Guerra, W. D.; Urrutia, M. N.; Liddell, P. A.; Moore, T. A.; Moore, G. F.; Hammes-Schiffer, S.*; Moore, A. L.* **Managing the Redox Potential of PCET in Grothuss-Type Proton Wires.** *J. Am. Chem. Soc.*, **2022**, *144* (34): 15672–15679.
- (8) Reyes Cruz, E. A.[‡]; Nishiori, D.[‡]; Wadsworth, B. L.[‡]; Nguyen, N. P.; Hensleigh, L. K.; Khusnutdinova, D.; Beiler, A. M.; Moore, G. F.* **Molecular-Modified Photocathodes for Applications in Artificial Photosynthesis and Solar-to-Fuel Technologies.** *Chem. Rev.* **2022**, *122* (21), 16051–16109.
- (7) Arsenault, E. A.[‡]; Guerra, W. D.[‡]; Shee, J.[‡]; Reyes Cruz, E. A.[‡]; Yoneda, Y.; Wadsworth, B. L.; Odella, E.; Urrutia, M. N.; Kodis, G.; Moore, G. F.; Head-Gordon, M.; Moore, A. L.; Moore, T. A.; Fleming, G. R.* **Concerted Electron-Nuclear Motion in Proton-Coupled Electron Transfer-Driven Grothuss-Type Proton Translocation.** *J. Phys. Chem. Lett.*, **2022**, *13* (20): 4479–4485.
- (6) Reyes Cruz, E. A.; Nishiori, D.; Wadsworth, B. L.; Khusnutdinova, D.; Karcher, T.; Landrot, G.; Lasalle-Kaiser, B.*; Moore, G. F.* **Six-Electron Chemistry of a Binuclear Fe(III) Fused Porphyrin.** *ChemElectroChem* **2021**, *8* (19), 3614–3620. (Front Cover article. Invited Article Honoring Jean-Michel Savéant)
- (5) Nishiori, D.; Wadsworth, B. L.; Reyes Cruz, E. A.; Nguyen, N. P.; Hensleigh, L. K.; Karcher, T.; Moore, G. F.* **Photoelectrochemistry of metalloporphyrin-modified GaP semiconductors.** *Photosynthesis Res* **2021**, *151*: 1–10.
- (4) Nguyen, N. P.; Wadsworth, B. L.; Nishiori, D.; Reyes Cruz, E. A.; Moore, G. F.* **Understanding and Controlling the Performance-Limiting Steps of Catalysts-Modified Semiconductors.** *J. Phys. Chem. Lett.* **2021**, *12* (1), 199–203.
- (3) Wadsworth, B. L.; Nishiori, D.; Nguyen, N. P.; Reyes Cruz, E. A.; Moore, G. F.* **Electrochemistry of Polymeric Cobaloxime-Containing Assemblies in Organic and Aqueous Solvents.** *ECS J. Solid State Sci. Technol.* **2020**, *9* (6), 061018. (Invited contribution for a special issue in honor of Karl M. Kadish)
- (2) 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.* **2019**, *141*, 15932–15941. (Cover article)
- (1) 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* (10), 9888–9898. (Cover article)

[‡] = Contributed equally.

* = Correspondent author.

Conferences Attended

- (1) 2019 Materials Research Society (MRS) Spring Meeting. Phoenix, AZ. April 22-26, 2019.

Conference Presentations

- (2) Reyes Cruz, E. A.; Nishiori, D.; Wadsworth, B. L.; Khusnutdinova, D.; Karcher, T.; Landrot, G.; Lasalle-Kaiser, B.*; Moore, G. F.* **Six-Electron Chemistry of a Binuclear Fe(III) Fused Porphyrin. Inclusive Future Faculty Symposium 2022**, Virtual Meeting, March 2022 (Poster Presentation)
- (1) Reyes Cruz, E. A.; Nishiori, D.; Wadsworth, B. L.; Khusnutdinova, D.; Karcher, T.; Landrot, G.; Lasalle-Kaiser, B.*; Moore, G. F.* **Six-Electron Chemistry of a Binuclear Fe(III) Fused Porphyrin. Artificial Photosynthesis 2021**, Virtual Meeting, December 2021 (Poster Presentation)

Outreach Activities

- (4) Grand Award Judge at the Intel International Science and Engineering Fair, Phoenix, AZ (2019)
- (3) Arizona State University's Night of the Open Door Event volunteer, Tempe, AZ (2018–2019)
- (2) President of the Bachelor of Science in Chemistry Student Association (SALCQ), Monterrey, MEX (2012–2013)
- (1) General Coordinator of the Bachelor of Science in Chemistry Student Association (SALCQ), Monterrey, MEX (2011–2012)

Teaching Experience***As Graduate Teaching Assistant***

- (21) **CHM 233 General Organic Chemistry I** (Fall 2021)
- (20) **CHM 238 General Organic Chemistry Lab II** (Fall 2021)
- (19) **CHM 238 General Organic Chemistry Lab II** (Spring 2022)
- (18) **CHM 234 General Organic Chemistry II** (Spring 2022)
- (17) **CHM 238 General Organic Chemistry Lab II** (Fall 2021)
- (16) **CHM 238 General Organic Chemistry Lab II** (Spring 2021)
- (15) **CHM 234 General Organic Chemistry II** (Spring 2021)
- (14) **CHM 238 General Organic Chemistry Lab II** (Fall 2020)
- (13) **CHM 238 General Organic Chemistry Lab II** (Summer 2020)
- (12) **CHM 237 General Organic Chemistry Lab I** (Summer 2020)

- (11) **CHM 234 General Organic Chemistry II** (Spring 2020)
- (10) **CHM 238 General Organic Chemistry Lab II** (Spring 2020)
- (9) **CHM 433/531 Advanced Organic Chemistry** (Fall 2019)
- (8) **CHM 238 General Organic Chemistry Lab II** (Spring 2019)
- (7) **CHM 238 General Organic Chemistry Lab II** (Fall 2018)
- (6) **CHM 237+238 General Organic Chemistry Condensed Lab I+II** (Summer 2018)
- (5) **CHM 238 General Organic Chemistry Lab II** (Spring 2018)
- (4) **CHM 238 General Organic Chemistry Lab II** (Fall 2017)
- (3) **CHM 238 General Organic Chemistry Lab II** (Summer 2017)
- (2) **CHM 238 General Organic Chemistry Lab II** (Spring 2017)
- (1) **CHM 238 General Organic Chemistry Lab II** (Fall 2016)