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EDUCATION

Doctor of Philosophy in Chemistry, Princeton University 2014 – 2019
Advisor: Robert R. Knowles

Bachelor of Science, Peking University 2010 – 2014
Advisor: Zhangjie Shi

RESEARCH AND TEACHING EXPERIENCE

Assistant Professor, Department of Chemistry, University of Utah July 2022 – present

Postdoctoral Research Fellow, Harvard University August 2019 – June 2022
Advisor: Daniel G. Nocera

Teaching Experience

CHEM 7200: Organic Synthesis I Fall, 2022; Fall, 2023

CHEM 7350/CHEM 5350: Research Ethics Spring, 2023

Chem 5710: Advanced Organic Chemistry Laboratory Fall, 2023

PUBLICATIONS

1. Disulfide radical anion as a super-reductant in biology and photoredox chemistry. Zhu, Q.; Costentin, C.; Stubbe, J.; Nocera, D. G. *Chem. Sci.* **2023**, *14*, 6876–6881.
2. Ion-pair effects in photoredox chemistry. Zhu, Q.; Nocera, D. G. *Chem* **2022**, *8*, 1796–1799.
3. Catalytic C(β)–O Bond Cleavage of Lignin Enabled by a Spin-Center Shift. Zhu, Q.; Nocera, D. G. *ACS Catalysis* **2021**, *11*, 14181–14187.
4. Taming the Chlorine Radical: Enforcing Steric Control over Chlorine Radical-Mediated C–H Activation. Gonzalez, M. I.; Gygj, D.; Qin, Y.; Zhu, Q.; Johnson, E. J.; Chen, Y.-S.; Nocera, D. G. *J. Am. Chem. Soc.* **2022**, *144*, 1464–1472.
5. Mechanistic Investigation and Optimization of Photoredox Anti-Markovnikov Hydroamination. Qin, Y.; Zhu, Q.; Sun, R.; Ganley, J. M.; Knowles, R. R.; Nocera, D. G. *J. Am. Chem. Soc.* **2021**, *143*, 10232–10242.
6. Photocatalytic Hydromethylation and Hydroalkylation of Olefins Enabled by Titanium Dioxide Mediated Decarboxylation. Zhu, Q.; Nocera, D. G. *J. Am. Chem. Soc.* **2020**, *142*, 17913–17918.
7. C–H Alkylation via Multisite Proton-Coupled Electron Transfer of an Aliphatic C–H Bond. Morton, C. M.; Zhu, Q.; Ripberger, H.; Troian-Gautier, L.; Toa, Z. D.; Knowles, R. R.; Alexanian, E. J. *J. Am. Chem. Soc.* **2019**, *141*, 13253–13260.
8. PCET-Enabled Olefin Hydroamidation Reactions with N-Alkyl Amides. Nguyen, S. T.; Zhu, Q.; Knowles, R. R. *ACS Catal.* **2019**, *9*, 4502–4507.
9. Intermolecular Anti-Markovnikov Hydroamination of Unactivated Alkenes with Sulfonamides Enabled by Proton-Coupled Electron Transfer. Zhu, Q.; Graff, D. E.; Knowles, R. R. *J. Am. Chem. Soc.* **2018**, *140*, 741–747.
10. Catalytic Alkylation of Remote C–H Bonds Enabled by Proton-Coupled Electron Transfer. Choi, G.; Zhu, Q.; Miller, D. C.; Gu, C. J.; Knowles, R. R. *Nature*, **2016**, *539*, 268–271.
11. Catalytic Carbocation Generation Enabled by the Mesolytic Cleavage of Alkoxyamine Radical Cations. Zhu,

- Q.; Gentry, E. C.; Knowles, R. R. *Angew. Chem. Int. Ed.* **2016**, *55*, 9969–9973.
12. Direct Lactonization of 2-Arylacetic Acids through Pd(II)-Catalyzed C–H Activation/C–O Formation. Yang, M.-Y.; Jiang, X.-Y.; Shi, W.-J.; Zhu, Q.; Shi, Z.-J. *Org. Lett.* **2013**, *15*, 690–693.
 13. Controllable Mono-/Di-alkenylation of Benzyl Thioethers via Rh-catalyzed Aryl C–H Activation. Zhang, X.-S.; Zhu, Q.; Zhang, Y.-F.; Shi, Z.-J. *Chem. Eur. J.* **2013**, *51*, 11898–11903.
 14. Aromatic C–H Addition to Ketones: The Effect of Directing Groups. Zhang, X.-S.; Zhu, Q.; Luo, F.-X.; Chen, G.-H.; Wang, X.; Shi, Z.-J. *Eur. J. Org. Chem.* **2013**, 6530–6534.
 15. Rhodium/Copper-Catalyzed Annulation of Benzimidates with Internal Alkynes: Indenone Synthesis through Sequential C–H and C–N Cleavage. Li, B.-J.; Wang, H.-Y.; Zhu, Q.; Shi, Z.-J. *Angew. Chem. Int. Ed.* **2012**, *51*, 3948–3952.
 16. Olefinic C–H Bond Addition to Aryl Aldehyde and Its N-Sulfonylimine via Rh Catalysis. Li, Y.; Zhang, X.-S.; Zhu, Q.; Shi, Z.-J. *Org. Lett.* **2012**, *14*, 4498–4501.

HONORS & AWARDS

2018-2019 Eli Lilly-Edward C. Taylor Fellowship in Chemistry, Princeton University	December 2018
The Arthur A. Patchett '51 Graduate Fellowship in Chemistry, Princeton University	June 2018
Chemistry Department Service Award for 2017/2018, Princeton University	June 2018
Pickering Teaching Award for Excellence in Teaching, Princeton University	June 2016
Stephan P. A. Fodor '85 Graduate Fellowship in Chemistry, Princeton University	June 2015
Honor Graduation, Peking University	July 2014
National Fellowship of China for undergraduate students, Peking University	October 2013
Guanghua Fellowship of Chemistry Department, Peking University	October 2012
Li Huiru Fellowship of Chemistry Department, Peking University	October 2011
Freshman Fellowship, Peking University	October 2010
Gold Medal Winner of the 42 nd International Chemistry Olympiad in Tokyo, Japan	August 2010

PRESENTATIONS

Poster Presentation: Photocatalytic Mesolytic Bond Cleavage of Cyclic Alkoxyamines for Carbocation Generation. Q. Zhu. Gordon Research Conference: Heterocyclic Compounds, June 2022.

Invited Seminar: Strategic Bond Construction and Cleavage Enabled by Photocatalytic Radical Transformations. Q. Zhu. Chemistry Department, University of California, Los Angeles, February 2022.

Poster Presentation: Catalytic Amidyl Radical and Carbocation Generation Enabled by Photoredox. Q. Zhu, R. R. Knowles. Gordon Research Conference: Electron Donor-Acceptor Interactions, August 2018.

Poster Presentation: Anti-Markovnikov Hydroamidation Enabled by Oxidative PCET. Q. Zhu, D. E. Graff, R. R. Knowles. Princeton University Chemistry Departmental Retreat, September 2017.

Oral Presentation: Catalytic Carbocation Generation Enabled by Mesolytic Cleavage of Alkoxyamine Radical Cation. Q. Zhu, E. C. Gentry, R. R. Knowles. Third-year Research Seminar of Chemistry Department, Princeton University, April 2017.

PROFESSIONAL ACTIVITIES & SERVICE

Student Advisees: Emma Hale (Chemistry Ph.D. program, 2022–current), Josephine Shirah (Chemistry Ph.D. program, 2022–current).

Reviewer services for journals: *Chem.–Cell Press*, *Journal of Organic Chemistry*, *Nano Letters*, *Nature Communications*, *Organic Letters*, *Tetrahedron*, *Tetrahedron Letters*; for proposals at the National Science Foundation (NSF).

Service on Department of Chemistry, University of Utah Committees: Graduate Admission Committee (2022–current), Graduate Recruiting Committee (2022–current), Departmental Seminar Committee (2022–current).