Curriculum Vitae

Xiongyi Huang, Ph.D.
Assistant Professor of Chemistry
Johns Hopkins University
Department of Chemistry, 155 Remsen Hall
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1 Education and Professional Experience

Professional Experience

- Assistant Professor, Department of Chemistry, Johns Hopkins University (09/2019 – current)
- Member, Johns Hopkins Chemistry-Biology Interface (CBI) program (09/2020 – current)

Education and Training

- Postdoctoral Fellow, California Institute of Technology (05/2016 – 09/2019)
  Advisor: Prof. Frances Arnold
- Ph.D. in Chemistry, Princeton University (09/2010 – 04/2016)
  Advisor: Prof. John T. Groves
- B.S. in Chemistry, University of Science and Technology of China (USTC) (09/2006 – 07/2010)
  Advisor: Prof. Yao Fu and Prof. Jing Shi

Research Interests

- Biocatalysis
- Protein Engineering
- Transition Metal Catalysis
- Bioinorganic Chemistry
- Organic Synthesis
- High Throughput Screening Technology Development
- Machine-Learning Assisted Protein Engineering and Enzyme Design

2 Awards and Honors

- 2026 Frontiers of Science Fellow, National Academy of Sciences
- 2026 Edward I. Stiefel Memorial Award
- 2026 *ChemComm* Emerging Investigator Lectureship
- 2025 Sloan Research Fellowship
- 2024 Camille Dreyfus Teacher-Scholar Award
- 2023 Johns Hopkins Catalyst Award
- 2022 Johns Hopkins Discovery Award
- 2022 NIH Maximizing Investigators' Research Award (MIRA)
- 2021 Packard Fellowship in Science and Engineering
- 2018 – 2022 NIH Pathway to Independence Award (K99/R00)
- 2017 – 2018 NIH Ruth L. Kirschstein Postdoctoral Fellowship (F32)
- 2016 Chinese Government Award for Outstanding Students Abroad
- 2013 – 2015 HHMI International Student Research Fellowship

3 Publications and Patents

Summary of Publication and Patent Record

- **H-index = 27, Citations > 5000**
- 17 journal publications from independent career (including 2 *Science*, 2 *Nat. Catal.*, 2 *Nat. Synth.*, 1 *Nat. Biotehch.*, 3 *J. Am. Chem. Soc.*, and 2 *Angew. Chem. Int. Ed.*).
- 24 journal publications prior to joining JHU
- 9 patents, patent applications, invention disclosures

At Johns Hopkins (†co-first author, *corresponding author, #undergraduate/high school author)

Published/Accepted

(17) Cheng, L.; Zheng, X.; Jiang, S.; Hu, Y.; Liu, Y.; Yang, K.; Rui, J.; Ding, H.; Zhang, M.; Yuan, T.; Ye, H.; Li, C.-L.; Yang, K. K.; **Huang, X.***; Xiao, H.* "Sequence Display: Generating Large-Scale Sequence–Activity Datasets to Advance Universal Protein Evolution", ***Nat. Biotech.* 2026**, *published*. (DOI: 10.1038/s41587-026-03087-3).

(16) Wang, X.†; Tian, X.†; Xu, G.; Paris, J.; Song, Y.; Chen, X.; Su, Y.; Zhang, J. G.; Hong, X.; Garcia-Borràs, M.; Bragg, A. E.*; Guo, Y.*; Yang, Y-F.*; **Huang, X.*** "Engineering Non-haem Enzymes for Nickel-Catalyzed C(sp^2)–S Coupling via Ligand-to-Metal Charge Transfer Photocatalysis", ***Nat. Synth.* 2026**, *published*. (DOI: 10.1038/s44160-026-01003-w) **[Featured in News&Views in *Nature Synthesis*; Selected as the cover-featured article for the June 2026 issue of *Nature Synthesis*]**

(15) Yuan, T.†; Zhang, M.†; Chen, L.; Zheng, X.; Jiang, S.; **Huang, X.***; Xiao, H.* "Biocatalytic Synthesis of *N*-protected-Amino Acids through 1,3-Nitrogen Migration by Non-heme Iron Enzymes", ***J. Am. Chem. Soc.* 2025**, *147*, 44041–44047.

(14) Shen, X.; Chen, X.; Xiao, Y.; Brown, J. B.; Zhang, J. G.; Ji, X.; Rui, J.; Garcia-Borràs, M.; Rao, Y.*; Yang, Y-F.*; **Huang, X.*** "Biocatalytic Enantioconvergent C(sp^3)–N Coupling with Copper-Substituted Nonheme Enzymes", ***Science* 2025**, *389*, 741-746.

(13) Huls, A. J.†; Soler, J.†; Su, Y.; Garcia-Borràs, M.*; **Huang, X.*** "Biocatalytic Olefin Difunctionalization for Synthesis of Chiral 2-Azidoamines Using Nonheme Iron Enzymes", ***Angew. Chem. Int. Ed.* 2025**, *e202423403*.

(12) Zhang, J. G.; **Huang, X.*** "Directed Evolution of Copper-Substituted Nonheme Enzymes for Enantioselective Alkene Oxytrifluoromethylation", ***J. Am. Chem. Soc.* 2025**, *147*, 29624–29630.

(11) Mu, X.†; Ji, X.†; Chen, X.†; Wu, H.; Rui, J.; Hong, X.; Worth M. M.; Reitz, A. D.; Goldberg, L. T. M.#; Garcia-Borràs, M.; Michel, S. L. J.; Yang, Y-F.*; **Huang, X.*** "Unlocking Lewis Acid Catalysis in Nonhaem Enzymes for an Abiotic Ene Reaction", ***Nat. Catal.* 2025**, *8*, 635–644. **[Featured in *Nature Catalysis*]**

(10) Rui, J.; Mu, X.; **Huang, X.*** "A Metallophotoredox Strategy for Biocatalytic Radical C–N_3 and C–SCN Bond Formation", ***Methods Enzymol.* 2025**, *in press* (doi: 10.1016/bs.mie.2025.08.017). (invited contribution to the "Enzyme Reprogramming" issue).

(9) Zhang, J. G.; **Huang, X.*** "Reprogramming Nonheme Iron Enzymes for Abiotic Alkene Trifluoromethylazidation", ***Methods Enzymol.* 2025**, published (doi: 10.1016/bs.mie.2025.06.041). (invited contribution to the "Artificial Metalloproteins" issue).

(8) Zhang, J. G.†; Huls, A. J.†; Palacios, P. M.; Guo, Y.*; **Huang, X.*** "Biocatalytic Generation of Trifluoromethyl Radicals by Nonhaem Iron Enzymes for Enantioselective Alkene Difunctionalization", ***J. Am. Chem. Soc.* 2024**, *146*, 34878–34886. **[Featured in *SynFacts*]**

(7) Rui, J.†; Mu, X.†; Soler, J.; Garcia-Borràs, M.*; **Huang, X.*** "Merging Photoredox with Metalloenzymatic Catalysis for Enantioselective Decarboxylative C(sp^3)–N_3 and C(sp^3)–SCN Bond Formation", ***Nat. Catal.* 2024**, *7*, 1394–1403. **[Featured in *SynFacts*, Selected as the cover-featured article for the December 2024 issue of *Nature Catalysis*]**

(6) Zhao, Q.†; Chen, Z.†; Soler, J.†; Chen, X.; Rui, J.; Ji, T.#; Yu, Q.#; Yang, Y-F.*; Garcia-Borràs, M.*; **Huang, X.*** "Engineering Nonhaem Iron Enzymes for Enantioselective C(sp^3)—F Bond Formation via Radical Fluorine Transfer", ***Nat. Synth.* 2024**, *3*, 958–966. **[Featured in *Nature Catalysis* and *Nature Synthesis*; Selected as the cover-featured article for the August 2025 issue of *Nature Synthesis*]**

(5) Zhao, Q.; Chen, Z.; Rui, J.; **Huang, X.*** "Radical Fluorine Transfer Catalyzed by an Engineered Nonhaem Iron Enzyme", ***Methods Enzymol. 2024***, *696*, 231–247. (invited contribution to the "Fluorine Metabolism, Transport and Enzymatic Chemistry" issue).

(4) Zhao, Q.*; Rui, J.; **Huang, X.*** "Radical-Relay C(sp^3)–H Azidation Catalyzed by an Engineered Nonheme Iron Enzyme", ***Methods Enzymol. 2024***, *703*, 195–213. (invited contribution to the "Mononuclear Non-heme Iron Dependent Enzymes" issue).

(3) Schaus, L.†; Das, A.†; Knight, A. M.; Jimenez-Osés, G.; Houk, K. N.; Garcia-Borràs, M.*; Arnold, F. H.*; **Huang, X.*** "Protoglobin-Catalyzed Formation of *cis*-Trifluoromethyl-Substituted Cyclopropanes by Carbene Transfer", ***Angew. Chem. Int. Ed.* 2023**, e202208936.

(2) Huang, X.; Yang, Y. The Many Facets of Green Organometallic Chemistry: A Foreword, ***J. Organomet. Chem.* 2022**, *976*, 122398.

(1) Rui, J.†; Zhao, Q.†; Huls, A. J.†; Soler, J.; Paris, J. C.; Chen, Z.; Reshetnikov, V.; Yang, Y-F.; Guo, Y.*; Garcia-Borràs, M.*; **Huang, X.*** "Directed Evolution of Nonheme Iron Enzymes to Access

Abiological Radical-Relay C(sp^3)−H Azidation", ***Science* 2022**, *376*, 869–874. **[Featured by Hyster et al. in *Chem Catalysis* and Biegasiewicz et al. in *Chem Catalysis*]**

Publications Prior to Johns Hopkins

At Caltech (Postdoctoral work)

(8) Pluchinsky, A. J.†; Wackelin, D. J.†; **Huang, X.**; Arnold, F. H.; Mrksich, M.* "High Throughput Screening with SAMDI Mass Spectrometry for Directed Evolution", *J. Am. Chem. Soc.* **2020**, *142*, 19804-19808. (†equal contribution)

(7) Zhang, J.†; **Huang, X.**†; Zhang, R. K.; Arnold, F. H.* "Enantiodivergent α-Amino C−H Fluoroalkylation Catalyzed by Engineered Cytochrome P450s", *J. Am. Chem. Soc.* **2019**, *141*, 9798-9802. (†equal contribution)

(6) **Huang, X.**†; Garcia-Borràs, M.†; Miao, K.; Kan, S. B. J.; Zutshi, A.; Houk, K. N.*; Arnold, F. H.* "A Biocatalytic Platform for Synthesis of Chiral α-Trifluoromethyl Organoborons", *ACS Cent. Sci.* **2019**, *5*, 270-276. (†equal contribution) **[Featured in *ACS Central Science* and *Nature Catalysis*]**

(5) Chen, K.; **Huang, X.**; Zhang, S. Q.; Zhou, A. Z.; Kan, S. B. J.; Hong, X.*; Arnold, F. H.* "Engineered Cytochrome c-Catalyzed Lactone-Carbene B–H Insertion", *Synlett.* **2019**, *30*, 378-382.

(4) Zhang, R. K.; Chen, K.; **Huang, X.**; Wohlschlager, L.; Renata, H.; Arnold, F. H.* "Enzymatic Assembly of Carbon–Carbon Bonds via Iron-Catalysed sp^3 C–H Functionalization", *Nature* **2019**, *565*, 67-72. **[Selected as the *Nature* cover article; Featured in *Synfacts*]**

(3) Zhang, R. K.; **Huang, X.**; Arnold, F. H.* "Selective C−H Bond Functionalization with Engineered Heme Proteins: New Tools to Generate Complexity", *Curr. Opin. Chem. Biol.* **2019**, *49*, 67-75.

(2) Chen, K.; **Huang, X.**; Kan, S. B. J.; Zhang, R. K.; Arnold, F. H.* "Enzymatic Construction of Highly Strained Carbocycles", *Science* **2018**, *360*, 71-75. **[Featured in Caltech home page, Phys.org, myScience, and EurekAlert]**

(1) Kan, S. B. J.†; **Huang X.**†; Gumulya, Y.; Chen, K.; Arnold, F. H.* "Genetically Programmed Chiral Organoborane Synthesis", *Nature* **2017**, *552*, 132-136. (†equal contribution) **[Featured in *Caltech News*, *GEN*, *myScience*, *Forbes*, *ScienceNewsline*, *EurekAlert*, *AZoCleantech*, *Phys.org*]**

At Princeton (PhD work)

(12) Liu, W.; **Huang, X.**; Placzek, M. S.; Krska, S. W.; McQuade, P.; Hooker, J. M.*; Groves, J. T.* "Site-Selective ^{18}F Fluorination of Unactivated C−H Bonds Mediated by a Manganese Porphyrin", *Chem. Sci.* **2018**, *9*, 1168-1172.

(11) **Huang, X.**; Groves, J. T.* "Oxygen Activation and Radical Transformations in Heme Proteins", *Chem. Rev.* **2018**, *118*, 2491-2553.

(10) Huang, X.†; Zhuang, T.†; Kates, P. A.; Gao, X.; Chen, X.; Groves, J. T.* "Alkyl Isocyanates via Manganese-Catalyzed C–H Activation for the Preparation of Substituted Ureas", *J. Am. Chem. Soc.* **2017**, *139*, 15407–15413. (†equal contribution)

(9) Hsieh, C. H.; **Huang, X.**; Amaya, J. A.; Rutland, C. D.; Keys, C. L.; Groves, J. T.; Austin, R. N.; Makris, T. M. "The Enigmatic P450 Decarboxylase OleT Is Capable of, but Evolved to Frustrate, Oxygen Rebound Chemistry", *Biochemistry* **2017**, *56*, 3347–3357.

(8) Huang, X.; Groves, J. T.* "Beyond Ferryl-Mediated Hydroxylation: 40 Years of the Rebound Mechanism and C−H Activation", *J. Biol. Inorg. Chem.* **2016**, 1–23.

(7) Huang, X.; Groves, J. T.* "Taming Azide Radicals for Catalytic C−H Azidation", *ACS Catal.* **2016**, *6*, 751–759.

(6) Huang, X.; Bergsten, T. M.; Groves, J. T.* "Manganese-Catalyzed Late-Stage Aliphatic C−H Azidation", *J. Am. Chem. Soc.* **2015**, *137*, 5300–5303.

(5) Huang, X.; Liu, W.; Hooker, J. M.; Groves, J. T.* "Targeted Fluorination with the Fluoride Ion by Manganese-Catalyzed Decarboxylation", *Angew. Chem. Int. Ed.* **2015**, *54*, 5241–5245. [Selected as a "Hot Paper" by Angewandte Chemie]

(4) Huang, X.†; Liu, W.†; Ren, H.; Neelamegam, R.; Hooker, J. M.*; Groves, J. T.* "Late Stage Benzylic C−H Fluorination with [^{18}F]Fluoride for PET Imaging" *J. Am. Chem. Soc.* **2014**, *136*, 6842–6845. (†equal contribution) **[Highlighted in C&EN News, *Angew. Chem. Int. Ed.* and *Chem. Sci.*]**

(3) Liu, W.; **Huang, X.**; Groves, J. T.* "Oxidative Aliphatic C−H Fluorination with Manganese Catalysts and Fluoride Ion", *Nat. Protoc.* **2013**, *8*, 2348–2354.

(2) Liu, W.; **Huang, X.**; Cheng, M.; Nielsen, R. J.; Goddard, W. A. III; Groves, J. T.* "Oxidative Aliphatic C−H Fluorination with Fluoride Ion Catalyzed by a Manganese Porphyrin", *Science* **2012**, *337*, 1322–1325. **[Highlighted in *Nature*, C&EN News, Chemistry World and Princeton University home page]**

(1) Cooper, H. L. R.; Mishra, G.; **Huang, X.**; Pender-Cudlip, M.; Austin, R. N.; Shanklin, J.; Groves, J. T.* "Parallel and Competitive Pathways for Substrate Desaturation, Hydroxylation and Radical Rearrangement by the Non-heme Diiron Hydroxylase AlkB", *J. Am. Chem. Soc.* **2012**, *134*, 20365–20375.

At USTC (Undergraduate work)

(4) Shi, J.*; **Huang, X.**; Wang, H. J.; Fu, Y. "Hydride Dissociation Energies of Six-Membered Heterocyclic Organic Hydrides Predicted by ONIOM-G4 Method", *J. Chem. Inf. Model.* **2012**, *52*, 63–75.

(3) Shi, J.*; **Huang, X.**; Wang, J. P.; Li, R. "A Theoretical Study on C−COOH Homolytic Bond Dissociation Enthalpies", *J. Phys. Chem. A* **2010**, *114*, 6263–6272.

(2) Huang, X.; Wang, H. J.; Shi, J.* "Theoretical Study on Acidities of (*S*)-Proline Amide Derivatives in DMSO and Its Implications for Organocatalysis", *J. Phys. Chem. A* **2010**, *114*, 1068–1081.

(1) Wang, H-J.; **Huang, X.**; Shen, R.; Fu, Y.*; Rui, L. "Theoretical Study of One-Electron Redox Potentials of Some NADH Model Compounds", *Chin. J. Chem.* **2010**, *28*, 72–80.

Patents, Patent Applications, and Invention Disclosures

(9) Huang, X.; Wang, X.; Shen, X.; Su, Y.; Rui, J. "Nonheme Enzyme Biocatalysts for Carbon−Heteroatom Cross Coupling", Johns Hopkins University Invention Disclosure D18645, December 18, 2024.

(8) Huang, X.; Mu, X.; Ji, X.; Rui, J. "Engineered Nonheme enzymes for Lewis Acid Catalysis", Johns Hopkins University Invention Disclosure D18543, October 8, 2024

(7) Huls, A. J.; Zhang, J. G.; Rui, J.; Zhao, Q.; Huang, X.; Chen, Z. "Biocatalytic Use of Nonheme Iron Proteins for Molecular Functionalization", U.S. Patent US20250263677A1, August 21, 2025.

(6) Chen, K.; Huang, X.; Jennifer, S.B.J. "Biocatalytic Synthesis of Strained Carbocycles", World Patent WO2018175628, September 27, 2018.

(5) Jennifer, S.B.J.; Huang, X.; Chen, K. "Heme Protein Catalysts for Carbon−Boron Bond Formation *In Vitro* and *In Vivo*", World Patent WO2018165325, September 13, 2018.

(4) Groves, J.T.; Huang, X. "Targeted, Metal-Catalyzed Fluorination of Complex Compounds with Fluoride Ion via Decarboxylation", World Patent WO2016130549, August 8, 2016.

(3) Groves, J.T.; Huang, X. "Direct Oxidative Carbon-Hydrogen Fluorination of a Carbon Containing Compound, Comprises Combining a Carbon Containing Compound, a Fluorinating Agent, a Fluorinating Catalyst, and an Oxidant", U.S. Patent US20160158388, June 9, 2016.

(2) Groves, J.T.; Huang, X.; Liu, W. "Methods and Compositions for Direct Radioactive Labeling of Bio-Active Molecules and Building Blocks", World Patent WO2015134467, September 11, 2015.

(1) Groves, J.T.; Liu. W.; Huang, X. "C−Halogen Bond Formation", World Patent WO2015054476, April 16, 2015.

4 Invited Talks

Summary of Invitations

- 18 Invited Talks at Academic Departments
- 8 Invited Talks at National Conferences
- 7 Invited Talks at International Conferences

Invited Talks at Academic Departments

(18) 2026/06 (scheduled), Department of Chemistry, Scripps Research, San Diego CA

(17) 2026/04, Department of Chemistry, Princeton University, Princeton NJ

(16) 2026/03, Department of Chemistry, University of Texas, San Antonio, San Antonio TX

(15) 2026/12, Department of Chemistry, University of Delaware, Wilmington DE

(14) 2025/10, Chemistry Department, The Pennsylvania State University, University Park PA

(13) 2025/09, Department of Chemistry, University of Maryland, College Park MD

(12) 2025/05, Department of Chemistry, Texas A&M University, College Station TX

(11) 2025/05, Chemistry Department, University of Texas Austin, Austin TX

(10) 2025/04, Department of Chemistry, University of Chicago, Chicago IL

(9) 2025/04, Department of Chemistry, Carnegie Mellon University, Pittsburgh PA

(8) 2025/04, Department of Chemistry, University of Cincinnati, Cincinnati OH

(7) 2025/04, Department of Chemistry, Ohio State University, Columbus OH

(6) 2025/04, Department of Chemistry, New York University, New York City NY

(5) 2025/03, Department of Chemistry, Rice University, Houston TX

(4) 2025/02, Department of Chemistry, North Carolina State University, Raleigh NC

(3) 2024/12, Department of Chemistry, University of Utah, Salt Lake City UT

(2) 2024/12, Department of Chemistry, Utah State University, Logan UT

(1) 2023/06, Department of Chemistry, Westlake University, Hangzhou, China

Invited Talks at National Conferences

(8) 2026/07 (scheduled), Gordon Research Conference Stereochemistry, Newport RI

(7) 2026/01, Gordon Research Conference Metals in Biology, Ventura CA

(6) 2025/07, Gordon Research Conference Protein Engineering, Smithfield RI

(5) 2025/01, Gordon Research Conference Metals in Biology, Ventura CA

(4) 2024/08, Society for Industrial Microbiology and Biotechnology annual meeting, Boston MA

(3) 2024/05, Frontiers in Chemistry and Biology Interface Symposium, College Park MD

(2) 2022/10, Protein Engineering Biocatalysis Congress, Philadelphia PA

(1) 2022/07, Gordon Research Conference Biocatalysis, Manchester NH

Invited Talks at International Conferences

(7) 2026/08 (scheduled), Speaker, 12th International Congress on Biocatalysis (Biocat2026), Hamburg, Germany

(6) 2026/07 (scheduled), Keynote speaker, 18th European Biological Inorganic Chemistry Conference (EuroBIC18), Groningen, Netherlands

(5) 2025/10, Plenary speaker, International Conference on Photochemistry and Industry, Wuhan, China

(4) 2025/06, Plenary speaker, Repurposed & Artificial Enzymes Conference, Basel, Switzerland

(3) 2023/06, Plenary speaker, Future of Chemistry Symposium, Zhejiang University, Hangzhou, China

(2) 2023/06, Plenary speaker, the 4th Competence Center for Biocatalysis (CCBIO) Symposium, Wädenswil, Switzerland

(1) 2024/09, 11th International Meeting on Halogen Chemistry (HalChem XI), Baltimore MD, USA

5 Professional Organizations and Service

Professional Organizations

- Member, American Chemical Society, 2013-present
- Member, American Association for the Advancement of Science, 2016-present
- Member, Society for Industrial Microbiology and Biotechnology, 2024-present

Activities

- Panel Reviewer, National Institute of Health, Chemical Synthesis & Biosynthesis (CSB) Study Section, June 2025, June 2026 (scheduled)
- "ad hoc" Reviewer, National Science Foundation, Centers for Chemical Innovation (CCI) Program, 2025
- "ad hoc" Reviewer, National Science Foundation, Division of Chemistry: Disciplinary Research Programs (CHE-DRP), 2025
- "ad hoc" Reviewer, Department of Energy, Basic Energy Sciences (BES) Program, 2026
- Grant Reviewer, European Research Council Grant, 2022-2023
- Grant Reviewer, ACS Petroleum Research Fund, 2024-2025
- Grant Reviewer, Swiss National Science Foundation, 2025
- Grant Reviewer, the Dutch Research Council, 2025
- Session Chair, 2025 Repurposed & Artificial Enzymes Conference, Basel, Switzerland
- Journal Reviewer: Science, Nature, Nature Chemistry, Nature Synthesis, Nature Catalysis, Journal of the American Chemical Society, Nature Communications, ACS Central Science, Angewandte Chemie, ACS Catalysis, Journal of Organic Chemistry, Organic Letter, ChemBioChem

Departmental and University Service

- Johns Hopkins Packard Fellowship Selection Committee, 2021-current
- Johns Hopkins Chemistry-Biology Interface Curriculum Committee, 2020-current
- Johns Hopkins Chemistry Department Graduate Admissions Committee, 2020 – current
- Johns Hopkins Chemistry Department Colloquium Organizer, 2020 – current
- Johns Hopkins Chemistry Department Graduate Student Seminar Organizer, 2020-current
- Johns Hopkins Chemistry Department “Pathway to Your Career” Seminar Series Organizer, 2023-current
- Johns Hopkins Chemistry Department Faculty Search Committee, 2023

6 Teaching and Mentorship

Courses Taught

- **2020 Spring,** AS.030.622 Seminar-Literature of Chemistry
- **2020 Fall,** AS.030.621 Literature-Organic Chemistry
- **2021 Spring,** AS.030.622 Seminar-Literature of Chemistry
- **2021 Spring,** AS.030.648 Biocatalysis-Fundamentals, Recent Advances, and Industrial Applications
- **2021 Fall,** AS.030.621 Literature-Organic Chemistry
- **2022 Spring,** AS.030.622 Seminar-Literature of Chemistry
- **2022 Spring,** AS.030.620 Chemical Biology II
- **2023 Intersession,** AS.030.622 Seminar-Literature of Chemistry
- **2023 Spring,** AS.030.648 Biocatalysis-Fundamentals, Recent Advances, and Industrial Applications
- **2023 Spring,** AS.030.626 Advanced Mechanistic Organic Chemistry II
- **2024 Spring,** AS.030.356 Advanced Inorganic Lab
- **2024 Spring,** AS.030.626 Advanced Mechanistic Organic Chemistry II
- **2025 Intersession,** AS.030.622 Seminar-Literature of Chemistry
- **2025 Spring,** AS.030.356 Advanced Inorganic Lab
- **2026 Intersession,** AS.030.622 Seminar-Literature of Chemistry
- **2026 Spring,** AS.030.356 Advanced Inorganic Lab
- **2026 Spring,** AS.030.648 Biocatalysis-Fundamentals, Recent Advances, and Industrial Applications

Note: In addition to these official teaching duties, I also serve as a guest lecturer for Chemical Biology I (AS.030.619.01) and Chemical Biology II (AS.030.620).

Mentorship

Postdoctoral Fellows

Current

- **Yihang Xiao**, 2024-current
- **Beibei Zhao**, 2026-current

Alumni

- **Qun Zhao**, 2020-2023, Current Position: Professor, Jiangnan University, China
- **Mahbbat Ali**, 2020-2021, Current Position: Senior Scientist, BellBrook Labs LLC
- **Viktor Reshetnikov**, 2020-2021, Current Position: Research Scientist, Insilico Medicine AI Ltd
- **Xianhai Tian**, 2023-2024, Current Position: Professor, Xiamen University, China
- **Xinpeng Mu**, 2022-2024, Current Position: Postdoctoral Fellow, Rice University
- **Xuzhong Shen**, 2022-2024, Current Position: Postdoctoral Fellow, Indiana University

PhD Students

Current

- **James Zhang**, Chemistry, 2020-current
- **Xiuze Wang**, Chemistry, 2022-current
- **Yuxuan Su**, Chemistry, 2023-current
- **Andrew Putz**, Chemistry, 2023-current
- **Sarah Sinott**, Chemistry, 2024-current
- **Raiyan Sakib**, Chemistry, 2024-current
- **Zhihan Zhao**, Chemistry, 2025-current
- **Kaleb Ott**, Chemical Biology Interface Program, 2026/03 – current (rotation student)

Alumni

- **Zhenhong Chen**, 2019-2024, Current Position: Postdoc, Merck & Co.
- **Anthony Huls**, 2019-2024, Current Position: Postdoc, University of Alabama
- **Jinyan Rui**, 2020-2025, Current Position: Postdoc, University of Texas, Austin
- **Xinyuan Ji**, 2021-2025, Current Position: Postdoc, University of Basel, Switzerland

Undergraduate and High School Student

Current

- **Marcus Kwok**, Biophysics, 2023-current
- **Rosie Chen**, Biophysics, 2024-current
- **Xiaoxiao (Ann) Shen**, Applied Math and Statistics, 2024-current
- **Andy Yin**, Chemical and Biomolecular Engineering, 2024-current
- **Chuning Liu**, Chemistry, 2024-current)
- **Shuaicheng Lai**, Applied Math and Biology, 2024-current
- **Kevin Mao**, Chemistry, 2024-current

Alumni

- **Xiaoxiao(Ann) Shen**, 2024-2026, Current: Master Program, Biostatics, Johns Hopkins University
- **Nate T. Ji**, 2020-2023, Current: MD program at Icahn School of Medicine at Mount Sinai
- **Eugene Kim**, 2022-2023, Current: Master Program in Chemistry, University of Pennsylvania
- **Emily Yu**, 2022-2024, Current: Undergraduate Student, Yale University
- **Lucie Goldberg**, 2023-2025, Current: Undergraduate Student, Williams College

Trainee Achievements

- **Jinyan Rui**, 2026, ACS Division of Biochemistry and Chemical Biology Young Investigator Award
- **Jinyan Rui**, 2026, Life Sciences Research Foundation (LSRF) Fellowship
- **Jinyan Rui**, 2025, Dissertation Prize Fellowship, Johns Hopkins University
- **Jinyan Rui**, 2024, Chinese Government Award for Outstanding Students Abroad (Extraordinary Potential Prize Winner)
- **Jinyan Rui**, 2023, Gompf Family Fellowship, Johns Hopkins University
- **Anthony Huls**, 2021, Ernest M. Marks Award of Teaching Excellence, Johns Hopkins University
- **Anthony Huls**, 2022, William Hooper Grafflin Fellowship, Johns Hopkins University
- **James G. Zhang**, 2024, Emmett and Elsie Buhle Fund, Johns Hopkins University
- **Kevin Mao**, 2024, Provost's Undergraduate Research Award, Johns Hopkins University
- **Nate T. Ji**, 2022, the Martin and Mary Kilpatrick Prize in Chemistry, Johns Hopkins University

Education Service

Graduate Board Oral (with the year of exam; not including my own trainees)

- **Sea On Lee (Fried Lab)**, Department of Chemistry, 2020
- **Philip To (Fried Lab)**, Department of Chemistry, 2020
- **David Cho (Goldberg Lab)**, Department of Chemistry, 2020
- **Zhenya Luo (Kempa Lab)**, Department of Chemistry, 2021
- **Qi Xie (Fried Lab)**, Department of Chemistry, 2021
- **Divya Yadav (Fried Lab)**, Department of Chemistry, 2021
- **Shijun Gao (Greenberg Lab)**, Department of Chemistry, 2021
- **Boya Feng (Goldberg Lab)**, Department of Chemistry, 2022
- **Ekroop Cheema (Rokita Lab)**, Department of Chemistry, 2022
- **April Xia (Fried Lab)**, Department of Chemistry, 2022
- **Stella Matutina Ikuzwe (Rokita Lab)**, Department of Chemistry, 2022
- **Marissa Coschigano (Klaussen Lab)**, Department of Chemistry, 2022
- **Sudha Yadav (Goldberg Lab)**, Department of Chemistry, 2022
- **Son Vu (Greenberg Lab)**, Department of Chemistry, 2023
- **Hanrui Yu (Greenberg Lab)**, Department of Chemistry, 2024
- **Xuanhe Jiang (Greenberg Lab)**, Department of Chemistry, 2024
- **Adina Tasbolat (Tovar Lab)**, Department of Chemistry, 2024
- **Seven Liu (Toscano Lab)**, Department of Chemistry, 2025
- **Jonah Ruskin (Lectka Lab)**, Department of Chemistry, 2025
- **Lyupeng Wen (Goldberg Lab)**, Department of Chemistry, 2025
- **Isabella Niedzwiecki (Goldberg Lab)**, Department of Chemistry, 2025

Thesis Committee (with the year of student's completion; not including my own trainees)

Defense completed

- **Sea On Lee (Fried Lab)**, Department of Chemistry, 2022
- **Michael S. Lichstrahl (Townsend Lab)**, Department of Chemistry, 2022
- **Shijun Gao (Greenberg Lab)**, Department of Chemistry, 2024
- **Shaun Spisak (Ostermeier Lab)**, Chemical-Biology Interface Program, 2024
- **Qi Xie (Fried Lab)**, Department of Chemistry, 2025
- **Erh-Yeh (Henry) Tsou (Ostermeier Lab)**, Department of Chemical and Biomolecular Engineering, 2025
- **April Xia (Fried Lab)**, Department of Chemistry, 2025
- **Divya Yadav (Fried Lab)**, Department of Chemistry, 2025
- **Hanrui Yu (Greenberg Lab)**, Department of Chemistry, 2026
- **Lyupeng Wen (Goldberg Lab)**, Department of Chemistry, 2026

Currently in the Program

- **Isabella Niedzwiecki (Goldberg Lab)**, Department of Chemistry, TBD
- **Ekroop Cheema (Rokita Lab)**, Department of Chemistry, TBD
- **Seven Liu (Toscano Lab)**, Department of Chemistry, TBD
- **Jonah Ruskin (Lectka Lab)**, Department of Chemistry, TBD
- **Adina Tasbolat (Tovar Lab)**, Department of Chemistry, TBD
- **Xuanhe Jiang (Greenberg Lab)**, Department of Chemistry, TBD
- **Son Vu (Greenberg Lab)**, Department of Chemistry, TBD
- **James Wu (Fried Lab)**, Department of Chemistry, TBD