Updated 09/27/2023

Jianbing "Jimmy" Jiang, Ph.D.

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APPOINTMENTS

Associate Professor — Aug. 2022–present
University of Cincinnati
Department of Chemistry

Assistant Professor — Aug. 2018–Aug. 2022
University of Cincinnati
Department of Chemistry

Associate Research Scientist — May 2017–Aug. 2018
Yale University
Department of Chemistry; Energy Sciences Institute
Advisor: Gary W. Brudvig and Robert H. Crabtree

Postdoctoral Associate — May 2015–May 2017
Yale University
Department of Chemistry; Energy Sciences Institute
Advisor: Gary W. Brudvig and Robert H. Crabtree

EDUCATION

Ph.D. Chemistry — May 2015
North Carolina State University
Thesis Title: *Light-harvesting architectures with natural protein scaffolds and synthetic chromophores*
Advisor: Jonathan S. Lindsey

M.S. Chemistry — March 2010
East China University of Science and Technology (ECUST)
Thesis Title: *Properties of chemosensors polymerized by reversible addition-fragmentation chain transfer (RAFT) method*
Advisor: He Tian

B.S. Chemistry — May 2007
Jiangnan University
Thesis Title: *Synthesis of fluorine-containing ligands for metal-organic frameworks (MOFs)*
Advisor: Changge Zheng

HONORS AND AWARDS

- Emerging Investigator, Chemical Communications — 2023

- Confluence W Prize from Confluence 2022
- Research Corporation for Science Advancement Scialog Fellow 2021
- NSF CAREER award 2021
- Research Corporation for Science Advancement Scialog Fellow 2020
- University of Cincinnati Pilot award 2020
- Faculty Development Fund from University of Cincinnati 2019
- Emerging Investigator, *Journal of Materials Chemistry A* 2019
- Research Launch Award from University of Cincinnati Office of Research 2019
- Faculty Development Fund from University of Cincinnati 2018
- Percy L. Julian Award for Excellence in Research from NC State University 2015
- Photosynthesis Antenna Research Center (a DOE EFRC) Exchange Fellowship, twice 2012–2013
- Outstanding Graduate Student from Shanghai Education Committee 2010
- First Prize for Comprehensive Science and Technology Activity from ECUST 2009
- Fellowships for Excellence from Jiangnan University, ten times 2003–2007

Major Grants

Fund	Period	Amount
NSF CAREER Chemical Catalysis 2041436 (sole PI)	04/01/2021 – 03/31/2026	$685,000
NSF Environmental Engineering 2051260 (sole PI)	08/01/2021 – 07/31/2024	$402,387
NSF Electrochemical Systems 2112798 (sole PI)	09/01/2021 – 08/31/2024	$416,184
University of Cincinnati Pilot Research Fund	07/01/2020 – 12/31/2021	$20,000

PUBLICATIONS (#Equal contributions; *Corresponding authors)

(64) Sarkar, P.; Dash, S.; Krause, J.; Panetier, J.;* **Jiang, J.*** "Room Temperature Electroreductive Carboxylation of Unactivated Alkyl Chlorides with CO_2 Using a Ni(II) NNN-Pincer Complex. Towards Polyvinyl chloride (PVC) Upgrading," *ChemRxiv* **2023**. DOI: 10.26434/chemrxiv-2023-bczdm

(63) Sinha, S.; **Jiang, J.*** "Main Group Elements in Electrochemical Proton and Carbon Dioxide Reduction," *Chem. Commun.* **2023**, just accepted. Invited contribution in a special Emerging Investigator issue.

(62) Wang, X.; Lashgari, A.; Siwakoti, R.; Gautam, R. K.; McGrath, J.; Sarkar, P.; Naber, G.; Chai, J.; **Jiang, J.*** "Tetrathiafulvalene (TTF) Derivatives as Catholytes for Dual-type Redox Flow Batteries: Molecular Engineering Enables High Energy Density and Cyclability," *J. Mater. Chem. A* **2023**, *11*, 19056–19065.

(61) Gautam, R. K.; Wang, X.; Lashgari, A.; Sinha, S.; McGrath, J.; Siwakoti, R.; **Jiang, J.*** "Development of High-voltage and High-energy Membrane-free Nonaqueous Lithium-based Organic Redox Flow Batteries," *Nat. Commun.* **2023**, *14*, 4753.

(60) Devi, N.; Sarkar, P.; Patel, A.; **Jiang, J.*** "Hydrodechlorination of Alachlor Using a Molecular Electrocatalyst," *ChemCatChem* **2023**, *15*, e202201512.

(59) Wang, X.; Gautam, R. K.; **Jiang, J.*** "Strategies for Improving Solubility of Redox-Active Organic Species in Aqueous Redox Flow Batteries. A Review," *Batter. Supercaps* **2022**, e202200298 (invited Review)

(58) Chaturvedi, A.; McCarver, G. A.; Sinha S.; Hix, E. G.; Vogiatzis, K. D.;* **Jiang, J.*** "A PEGylated Tin-Porphyrin Complex for Electrocatalytic Proton Reduction: Mechanistic Insights into Main-Group Element Catalysis," *Angew. Chem. Int. Ed.* **2022**, in press

(57) Williams, C. K.; McCarver, G. A.; Chaturvedi, A.; Sinha S.; Ang, M; Vogiatzis, K. D.;* **Jiang, J.*** "Electrocatalytic Hydrogen Evolution Using A Molecular Antimony Complex under Aqueous Conditions: An Experimental and Computational Study on Main-Group Element Catalysis," *Chem. Eur. J.* **2022**, in press

(56) Wang, X.; Chai, J.; Zhang, S.; Chen, B.; Chaturvedi, A.; Cui, G.; **Jiang, J.*** "Insights into Indigo K^+ Association in a Half-Slurry Flow Battery," *ACS Energy Lett.* **2022**, *7*, 1178–1186.

(55) Sinha, S.; Williams, C. K.; **Jiang, J.*** "Outer-Coordination Sphere in Multi-H^+/Multi-e^- Molecular Electrocatalysis," *iScience* **2022**, *25*, 103628. (invited Perspective)

(54) Wang, X.;[#] Lashgari, A.;[#] Chai, J.; **Jiang, J.*** "A Membrane-Free, Aqueous/Nonaqueous Hybrid Redox Flow Battery," Energy Storage Mater. **2022**, 45, 1100–1108.

(53) Wang, X.;[#] Chai, J.;[#] Devi, N.; Lashgari, A.; Chaturvedi, A.; **Jiang, J.*** "Two-Electron-Active Tetracyanoethylene for Application in Nonaqueous Redox Flow Batteries," *J. Mater. Chem. A* **2022**, *9*, 13867–13873. Featured in front cover

(52) Williams, C. K.; MaCarver, G. A.; Lashgari, A.; Vogiatzis, K. D.;* **Jiang, J.*** "Electrocatalytic Dechlorination of Dichloromethane in Water Using a Heterogenized Molecular Copper Complex," *Inorg. Chem.* **2021**, *60*, 4915–4923.

(51) Devi, N.; Williams, C. K.; Chaturvedi, A.; **Jiang, J.*** "Homogeneous Electrocatalytic CO_2 Reduction Using a Porphyrin Complex with Flexible Triazole Units in the Second Coordination Sphere," *ACS Appl. Energy Mater.* **2021**, *4*, 3604–3611.

(50) Chai, J.; Lashgari, A.; Eisenhart, A. E.; Wang, X.; Beck, T. L.;* **Jiang, J.*** "Biphasic, Membrane-free Zn/Phenothiazine Battery. Effects of Hydrophobicity of Redox Materials on Cyclability," *ACS Mater. Lett.* **2021**, *3*, 337–343.

(49) Chaturvedi, A.; Williams, C. K.; Devi, N.; **Jiang, J.*** "Effects of Appended Poly(ethylene glycol) on Electrochemical CO_2 Reduction by an Iron Porphyrin Complex," *Inorg. Chem.* **2021**, *60*, 3843–3850.

(48) Wang, X.;[#] Chai, J.;[#] Lashgari, A.; **Jiang, J.*** "Azobenzene-based Low-potential Anolyte for Nonaqueous Organic Redox Flow Battery," *ChemElectroChem* **2021**, *8*, 83–89.

(47) Wang, X.; Chai, J.; **Jiang, J.*** "Redox Flow Batteries Based on Insoluble Redox-Active Materials. A Review," *Nano Mater. Sci.* **2021**, *3*, 17–24. (invited review)

(46) Williams, C. K.; Lashgari, A.; Ang, M.; Dhungana, P.; **Jiang, J.*** "Dechlorination of Dichloromethane by a Metal-Free Triazole-Porphyrin Electrocatalyst: Demonstration of Main-Group Element Electrocatalysis," *Chem. Eur. J.* **2021**, *27*, 6240–6240. DOI: 10.1002/chem.202005012 (*ChemRxiv* **2020**, DOI: 10.26434/chemrxiv.12762266.v1)

(45) Chai, J.; Lashgari, A.; **Jiang, J.*** "Electroactive Materials for Next-Generation Redox Flow Batteries: From Inorganic to Organic," in *Clean Energy Materials*; Lang, Q.; Fan, L.-S. Eds.; American Chemical Society, Washington, DC. **2020**, p1–47.

(44) Williams, C. K.; Lashgari, A.; Tomb, J. A.; Chai, J.; **Jiang, J.*** "Atropisomeric Effects of Second Coordination Spheres on Electrocatalytic CO_2 Reduction," *ChemCatChem* **2020**, *12*, 4886–4892.

(43) Hu, G.;[#] **Jiang, J.**;[#,*] Kelly, H. R.; Matula, A. J.; Wu, Y.; Romano, N.; Mercado, B. Q.; Wang, H.;* Batista, V. S.;* Crabtree, R. H.; Brudvig, G. W.* "Surprisingly Big Linker-Dependence of Activity and

Selectivity in CO_2 Reduction by an Iridium(I) Pincer Complex," *Chem. Commun.* **2020**, *56*, 9126–9129.

(42) Chai, J.;[#] Wang, X.;[#] Lashgari, A.; Williams, C. K.; **Jiang, J.*** "A pH-Neutral, Non-Corrosive, Aqueous Redox Flow Battery with a 3600-Cycle Lifetime: Micellization-Enabled Ultrastability and Crossover Suppression," *ChemSusChem* **2020**, *13*, 4069–4077.

(41) Chai, J.;[#] Lashgari, A.;[#] Wang, X.; **Jiang, J.*** "Extending the Redox Potentials of Metal-Free Anolytes: towards High Energy Density Redox Flow Batteries," *J. Electrochem. Soc.* **2020**, *167*, 100556.

(40) Williams, C. K.; Lashgari, A.; Chai, J.; **Jiang, J.*** "Enhanced Molecular CO_2 Electroreduction Enabled with a Flexible Hydrophilic Channel for Relay Proton Shuttling," *ChemSusChem* **2020**, *13*, 3412–3417.

(39) Lashgari, A.;[#] Williams, C. K.;[#] Glover, J. L.; Wu, Y.; Chai, J.; **Jiang, J.*** "Enhanced Electrocatalytic Activity of a Zinc Porphyrin for CO_2 Reduction: Cooperative Effects of Triazole Units in the Second Coordination Sphere," *Chem Eur. J.* **2020**, *26*, 16774–16781

(38) Chai, J.; Lashgari, A.; Wang, X.; Williams, C. K.; **Jiang, J.*** "All-PEGylated Redox-Active Metal-Free Organic Molecules in Non-Aqueous Redox Flow Battery," *J. Mater. Chem. A* **2020**, *8*, 15715–15724. Invited contribution in a special Emerging Investigator issue; featured in back cover

(37) Chai, J.;[#] Lashgari, A.;[#] Cao, Z.; Williams, C. K.; Wang, X.; Dong, J.; **Jiang, J.*** "PEGylation-Enabled Extended Cyclability of a Non-Aqueous Redox Flow Battery," *ACS Appl. Mater. Interfaces* **2020**, *12*, 15262–15270.

Prior to UC

(36) Jing, H.; Liu, S.; Jiang, J.; Tran, V.; Rong, J.; Wang, P.; Lindsey, J. S. "Meso bromination and derivatization of synthetic bacteriochlorins," *New J. Chem.* **2022**, *46*, 5556–5572.

(35) Jing, H.; Wang, P.; Chen, B.; Jiang, J.; Vairaprakash, P.; Liu, S.; Rong, J.; Chen, C.-Y.; Nalaoh, P.; Lindsey, J. S. "Synthesis of Bacteriochlorins Bearing Diverse β-Substituents," *New J. Chem.* **2022**, *46*, 5534–5555.

(34) Fujita, H.; Jing, H.; Krayer, M.; Allu, S.; Veeraraghavaiah, G.; Wu, Z.; **Jiang, J.**; Diers, J. R.; Magdaong, N. C. M.; Mandal, A. K,; Ray, A.; Niedwiedzki, D. M.; Kirmaier, C.; Bocian, D. F.; Holten, D.; Lindsey, J. S. "Annulated Bacteriochlorin for Near-Infrared Photophysical Studies," *New J. Chem.* **2019**, *43*, 7209 – 7232.

(33) Materna, K. L.; **Jiang, J.**; Crabtree, R. H.; Brudvig, G. W. "Silatrane Anchors for Metal Oxide Surfaces: Optimization for Potential Photocatalytic and Electrocatalytic Applications," *ACS Appl. Mater. Interfaces* **2019**, *11*, 5602–5609.

(32) **Jiang, J.**; Matula, A.; Swierk, J.; Romano, N.; Wu, Y.; Batista, V.; Crabtree, R. H.; Lindsey, J. S.; Wang, H.; Brudvig, G. W. "Unusual Stability of a Bacteriochlorin Electrocatalyst under Reductive Conditions. A Case Study on CO_2 Conversion to CO," *ACS Catal.* **2018**, *8*, 10131–10136.

(31) **Jiang, J.**;[#] Spies, J. A.;[#] Swierk, J. R.; Matula, A. J.; Regan, K. P.; Romano, N.; Brennan, B. J.; Crabtree, R. H.; Schmuttenmaer, C. A.; Batista, V. S.; Brudvig, G. W. "Direct Interfacial Electron Transfer from High-Potential Porphyrins into Semiconductor Surfaces: A Comparison of Linkers and Anchoring Groups," *J. Phys. Chem. C* **2018**, *122*, 13529–13539.

(30) Weng, Z.; Wu, Y.; Wang, M.; **Jiang, J.**; Yang, K.; Huo, S.; Wang, X.-F.; Ma, Q.; Brudvig, G. W.; Batista, V. S.; Liang, Y.; Feng, Z.; Wang, H. "Active Sites of Cu-Complex Catalytic Materials for Electrochemical Carbon Dioxide Reduction," *Nat. Commun.* **2018**, *9*, 415.

(29) Materna, K. L.; **Jiang, J.**; Regan, K. P.; Schmuttenmaer, C. A.; Brudvig, G. W. "Optimization of Photoanodes for Photocatalytic Water-Oxidation Using a Heterogenized Iridium Catalyst and a High-Potential Porphyrin Photosensitizer," *ChemSusChem* **2017**, *10*, 4526–4534.

(28) Weng, Z.; Zhang, X.; Wu, Y.; Huo, S.; **Jiang, J.**; Liu, W.; He, G.; Liang, Y.; Wang, H. "Self-Cleaning Catalyst Electrodes for Stabilized CO_2 Reduction to Hydrocarbons," *Angew. Chem. Int. Ed.* **2017**, *56*, 13135–13139.

(27) Wu, Y.;[#] **Jiang, J.**;[#] Weng, Z.;[#] Wang, M.; Broere, D. L. J.; Zhong, Y.; Brudvig, G. W.; Feng, Z.; Wang, H. "Electroreduction of CO_2 Catalyzed by a Heterogenized Zn-Porphyrin Complex with a Redox-Innocent Metal Center," *ACS Cent. Sci.* **2017**, *3*, 847–852.

The paper below is designated as a "Hot Paper".

(26) **Jiang, J.**;[#] Materna, K. L.;[#] Hedström, S.;[#] Yang, K. R.; Batista, V.; Crabtree, R. H.; Brudvig, G. W. "Molecular Antimony Complexes for Electrocatalysis: Activity of a Main Group Element in Proton Reduction," *Angew. Chem. Int. Ed.* **2017**, *56*, 9111–9115.

(25) Mi, Y.; Liu, W.; Wang, Q.; **Jiang, J.**; Brudvig, G. W.; Zhou, H.; Wang, H. "Pomegranate-Structured Sulfur Cathode Material with Triple Confinement of Lithium Polysulfides for High-Performance Lithium-Sulfur Batteries," *J. Mater. Chem. A* **2017**, *5*, 11788–11793.

(24) Liu, W.;[#] **Jiang, J.**;[#] Yang, K. R.;[#] Mi, Y.;[#] Kumaravadivel, P.; Zhong, Y.; Fan, Q.; Weng, Z.; Wu, Z.; Cha, J. J.; Zhou, H.; Batista, V. S.; Brudvig, G. W.; Wang, H. "An Ultrathin Dendrimer-Graphene Oxide Composite Film for Stable Cycling Lithium-Sulfur Batteries," *Proc. Natl. Acad. Sci. U.S.A.* **2017**, *114*, 3578–3583.

(23) Mancini, J. A.; Kodali, G.; **Jiang, J.**; Reddy, K. R.; Lindsey, J. S.; Bryant, D. A.; Dutton, P. L.; Moser, C. C. "Multi-step Excitation Energy Transfer Engineered in Genetic Fusions of Natural and Synthetic Light-Harvesting Proteins," *J. R. Soc. Interface* **2017**, *14*, 20160896.

(22) **Jiang, J.**; Swierk, J. R.; Materna, K. L.; Hedström, S.; Lee, S.; Crabtree, R. H.; Schmuttenmaer, C. A.; Batista, V. S.; Brudvig, G. W. "High Potential Porphyrins for Photoelectrochemical Applications Supported on SnO_2- and TiO_2- Surfaces," *J. Phys. Chem. C* **2016**, *120*, 28971–28982.

(21) Mi, Y.; Liu, W.; Yang, K. R.; **Jiang, J.**; Fan, Q.; Weng, Z.; Zhong, Y.; Wu, Z.; Brudvig, G. W.; Batista, V. S.; Zhou, H.; Wang, H. "Ferrocene-Promoted Long-Cycle Lithium-Sulfur Batteries," *Angew. Chem. Int. Ed.* **2016**, *55*, 14818–14822.

(20) **Jiang, J.**; Crabtree, R. H.; Brudvig, G. W. "One-Step Trimethylstannylation of Benzyl and Alkyl Halides," *J. Org. Chem.* **2016**, *81*, 9483–9488.

(19) Swierk, J. R.; Regan, K. P.; **Jiang, J.**; Brudvig, G. W.; Schmuttenmaer, C. A. "Rutile TiO_2 as an Anode Material for Water-Splitting Dye-Sensitized Photoelectrochemical Cells," *ACS Energy Lett.* **2016**, *1*, 603–606.

(18) **Jiang, J.**;[#] Swierk, J. R.;[#] Hedstrom, S.; Matula, A. J.; Crabtree, R. H.; Batista, V. S.; Schmuttenmaer, C. A.; Brudvig, G. W. "Molecular Design of Light-Harvesting Photosensitizers: Effect of Varied Linker Conjugation on Interfacial Electron Transfer," *Phys. Chem. Chem. Phys.* **2016**, *18*, 18678–18682.

The paper below is highlighted in JACS Spotlights.

(17) Weng, Z.;[#] **Jiang, J.**;[#] Wu, Y.; Wu, Z.; Guo, X.; Materna, K. L.; Liu, W.; Batista, V. S.; Brudvig, G. W.; Wang, H. "Electrochemical CO_2 Reduction to Hydrocarbons on a Heterogeneous Molecular Cu Catalyst in Aqueous Solution," *J. Am. Chem. Soc.* **2016**, *138*, 8076–8079.

(16) Zhang, N.; **Jiang, J.**; Liu, M.; Taniguchi, M.; Mandal, A. K.; Evans-Storms, R. B.; Pitner, J. B.; Bocian, D. F.; Holten, D.; Lindsey, J. S. "Bioconjugatable, PEGylated Hydroporphyrins for Photochemistry

and Photomedicine. Narrow-Band, Near-Infrared-Emitting Bacteriochlorins," *New J. Chem.* **2016**, *40*, 7750–7767.

(15) **Jiang, J.**; Yang, E.; Reddy, K. R.; D. M. Niedzwiedzki; C. Kirmaier; D. F. Bocian; D. Holten; Lindsey, J. S. "Synthetic Bacteriochlorins Bearing Polar Motifs (Carboxylate, Phosphonate, Ammonium and a short PEG). Water-Solubilization, Bioconjugation, and Photophysical Properties," *New J. Chem.* **2015**, *39*, 5694–5714**.**

(14) Zhang, N.; Reddy, K. R.; **Jiang, J.**; Taniguchi, M.; Sommer, R. D. Lindsey, J. S. "Elaboration of an Unexplored Substitution Site in Synthetic Bacteriochlorins," *J. Porphyrins Phthalocyanines* **2015**, *19,* 887–902.

(13) **Jiang, J.**; Taniguchi, M.; Lindsey, J. S. "Near-Infrared Tunable Bacteriochlorins Equipped for Bioorthogonal Labeling," *New J. Chem.* **2015**, *39*, 4534–4550.

(12) **Jiang, J.**; Chen, C.-Y.; Zhang, N.; Vairaprakash, P.; Lindsey, J. S. "Polarity-Tunable and Wavelength-Tunable Bacteriochlorins Bearing a Single Carboxylic Acid or NHS Ester. Use in a Protein Bioconjugation Model System," *New J. Chem.* **2015**, *39*, 403–419**.**

(11) Harris, M. A.; Sahin, T.; **Jiang, J.**; Vairaprakash, P.; Loach, P. A.; Niedzwiedzki, D. M.; Kirmaier, C.; Loach, P. A.; Bocian, D. F.; Holten, D.; Lindsey, J. S. "Enhanced Light-Harvesting Capacity by Micellar Assembly of Free Accessory Chromophores and LH1-like Antennas," *Photochem. Photobiol.* **2014**, *90*, 1264–1276.

(10) **Jiang, J.**; Reddy, K. R.; Pavan, M. P.; Lubian, E.; Bocian, D. F.; Holten, D.; Parkes-Loach, P. S.; Loach, P. A.; Lindsey, J. S. "Amphiphilic, Hydrophilic, or Hydrophobic Synthetic Bacteriochlorins in Biohybrid Light-Harvesting Architectures. Consideration of Molecular Designs," *Photosynth. Res.* **2014**, *122*, 187–202.

(9) Harris, M. A.; **Jiang, J.**; Niedzwiedzki, D. M.; Jiao, J.; Taniguchi, M.; Kirmaier, C.; Loach, P. A.; Bocian, D. F.; Lindsey, J. S.; Holten, D.; Parkes-Loach, P. S. "Versatile Design of Biohybrid Light-Harvesting Architectures to Tune Location, Density and Spectral Coverage of Attached Synthetic Chromophores for Enhanced Energy Capture," *Photosynth. Res.* **2014**, *121*, 35–48.

(8) **Jiang, J.**; Vairaprakash, P.; Reddy, K. R.; Sahin, T.; Pavan, M. P.; Lubian, E.; Lindsey, J. S. "Hydrophilic Tetracarboxy Bacteriochlorins for Photonics Applications," *Org. Biol. Chem.* **2014**, *12*, 86–103.

(7) Harris, M. A.; Parkes-Loach, P. S.; Springer, J. W.; **Jiang, J.**; Martin, E. C.; Qian, P.; Jiao, J.; Niedzwiedzki, D. M.; Kirmaier, C.; Olsen, J. D.; Bocian, D. F.; Holten, D.; Hunter, C. N.; Lindsey, J. S.; Loach, P. A. "Integration of Multiple Chromophores with Native Photosynthetic Antennas to Enhance Solar Energy Capture and Delivery," *Chem. Sci.* **2013**, *4*, 3924–3933.

(6) Reddy, K. R.; **Jiang, J.**; Krayer, M.; Harris, M. A.; Springer, J. W.; Yang, E.; Jiao, J.; Niedzwiedzki, D. M.; Pandithavidana, D.; Parkes-Loach, P. S.; Kirmaier, C.; Loach, P. A.; Bocian, D. F.; Holten, D.; Lindsey, J. S. "Palette of Lipophilic Bioconjugatable Bacteriochlorins for Construction of Biohybrid Light-Harvesting Architectures," *Chem. Sci.* **2013**, *4*, 2036–2053.

(5) Leng, B.; **Jiang, J.**; Tian, H. "A Mesoporous Silica Supported Hg^{2+} Chemodosimeter," *AIChE J.* **2010**, *56*, 2957–2964.

(4) **Jiang, J.**; Xiao, X.; Zhao, P.; Tian, H. "Colorimetric Naked-Eye Recognizable Anion Sensors Synthesized via RAFT Polymerization," *J. Polym. Sci., Part A: Polym. Chem.* **2010**, *48*, 1551–1556.

(3) Leng, B.; Zou, L,; **Jiang, J.**; Tian, H. "Colorimetric Detection of Mercuric Ion (Hg^{2+}) in Aqueous Media Using Chemodosimeter-functionalized Gold Nanoparticles," *Sensor. Actuat. B-chem.* **2009**, *140*, 162–169.

(2) Zhao, P.;[#] **Jiang, J.**;[#] Leng, B.; Tian, H. "Polymer Fluoride Sensors Synthesized by RAFT Polymerization," *Macromol. Rapid Commun.* **2009**, *30*, 1715–1718.

(1) **Jiang, J.**; Leng, B.; Xiao, X.; Zhao, P.; Tian, H. ""Off-On-Off" Fluorescent Proton Switch Synthesized by RAFT Polymerization," *Polymer* **2009**, *50*, 5681–5684.

ORAL PRESENTATION

(1) "Toward Increased Spectral Coverage of Biohybrid Light-Harvesting Antennas," in Photosynthetic Antenna Research Center (PARC) All Hands Meeting 2012. St Louis, MO. Aug. 2012.

(2) "New Generation of Light-Harvesting Constructs with Natural Protein Scaffolds and Synthetic Pigments," PARC's Graduate Student and Post-Doc (GSPD) Seminar. Raleigh, NC. Jan. 2013.

(3) "Light-Harvesting Biohybrid Architectures with Natural Protein Scaffolds and Synthetic Chromophores," ACS national meeting, San Francisco, CA. Aug. 2014.

(4) "Artificial Light-Harvesting Architectures with Natural Protein Scaffolds and Synthetic Chromophores," Yale Energy Sciences Institute, New Haven, CT. Jan. 2015.

(5) "Artificial Light-Harvesting Architectures with Natural Protein Scaffolds and Synthetic Chromophores," Louisiana State University, Baton Rouge, LA. Nov. 2016.

(6) "Well-Defined Organic Materials for Renewable Energy Capture, Conversion and Storage," SUNY the College of Environmental Science and Forestry, Syracuse, NY. Feb. 2017.

(7) "Well-defined Synthetic Polymers and Molecules towards Environmental, Biomedical and Energy Applications," University of Houston, Houston, TX. Dec. 2017.

(8) "Organic and Polymeric Materials for Renewable Energy Capture, Conversion and Storage," University of Central Florida, Orlando, FL. Jan. 2018.

(9) "Molecular Light-harvesting Architectures and Catalysts towards Renewable Energy Production," University of California–Riverside, Riverside, CA. Jan. 2018.

(10) "Well-defined Polymeric Materials for Renewable Energy Capture, Conversion and Storage," University of Cincinnati, Cincinnati, OH. Feb. 2018.

(11) "Well-defined Polymeric Biomaterials for Renewable Energy Capture, Conversion and Storage," Brandeis University, Waltham, MA. Feb. 2018.

(12) "CO_2 Reduction Using Molecular Electrocatalysts with a Redox-Active Ligand," Eastern Illinois University, Charleston, IL. Oct. 2019.

(13) "Micellization-Enabled Ultrastability and Crossover Suppression in pH-Neutral, Aqueous Redox Flow Batteries," Indiana University–Purdue University Indianapolis (Virtual), Sep. 2020.

(14) "Micellization-Enabled Ultrastability and Crossover Suppression in pH-Neutral, Aqueous Redox Flow Batteries," MRS Fall 2020 meeting (Virtual), Nov. 2020.

(15) "Micellization-Enabled Ultrastability and Crossover Suppression in pH-Neutral, Aqueous Redox Flow Batteries," University of Akron (virtual), Mar. 2021.

(16) "Higher Coordination Sphere-Enabled Molecular Electrocatalysis," University of Louisville, Oct. 2021.

(17) "Electrocatalytic Hydrodehalogenation of Organohalides Using Molecular Electrocatalysts," Confluence, Dec. 2021

(18) "Enhanced Molecular Electrocatalysis Enabled by Outer Functional Spheres," SUNY Binghamton, Apr. 2022

(19) "Fundamentals and Applications of Redox Flow Batteries," Nanoscience and STEM for Latin American College Students (Virtual), Aug. 2022

(20) "Membrane-Free Redox Flow Batteries," Materials Research Society Fall Meeting, Boston, MA. Dec. 2022

(21) "Electrocatalysis Using Main-Group-Element-based Molecular Catalysts," University of Michigan, Ann Arbor, MI. Dec. 2022

(22) "Electrocatalysis Using Main-Group-Element-based Molecular Catalysts," University of Tennessee Knoxville, Knoxville, TN. Mar. 2023

(23) "Membrane-Free Redox Flow Batteries," ACS National Meeting, Indianapolis, IN. Mar. 2023

COURSES

- Chem3030: Instrumental Analysis Fall 2023
- Chem8081/Chem4081/EVST4081: Sustainable Energy Fall 2023
- Chem8081/Chem4081/EVST4081: Sustainable Energy Fall 2022
- Chem3030: Instrumental Analysis Fall 2021
- Chem8081/Chem4081/EVST4081: Sustainable Energy Fall 2021
- Chem3030: Instrumental Analysis Fall 2020
- Chem8081/Chem4081/EVST4081: Sustainable Energy Fall 2020
- Chem3030: Instrumental Analysis Fall 2019
- Chem8081/Chem4081: Sustainable Energy Fall 2019
- Chem8069: Special Topics in Physical Chemistry Fall 2018