

XIAO SU

ASSISTANT PROFESSOR IN CHEMICAL AND BIOMOLECULAR ENGINEERING
UNIVERSITY OF ILLINOIS, URBANA-CHAMPAIGN

PROFESSIONAL APPOINTMENTS

- Assistant Professor** *January 2019 – Current*
University of Illinois, Urbana-Champaign
 Department of Chemical and Biomolecular Engineering
 Department of Chemistry, Affiliate
 Department of Civil and Environmental Engineering, Affiliate
 Beckman Institute for Advanced Science and Technology, Affiliate
- Postdoctoral Research Associate** *2017–2018*
Massachusetts Institute of Technology, Department of Chemical Engineering

EDUCATION

- PhD in Chemical Engineering** *2011–2017*
Massachusetts Institute of Technology
 Advisors: Prof. T. Alan Hatton, Department of Chemical Engineering
 Prof. Timothy F. Jamison, Department of Chemistry
 Thesis: *Organometallic Redox-Interfaces for Selective Electrochemical Separations*
- Bachelor of Applied Science, Chemical Engineering** *2006–2011*
University of Waterloo
 Honors, Co-operative Program. Graduated with Distinction and Dean's Honors List

SELECTED ACADEMIC AWARDS AND HONOURS

- AICHE Separations Division FRI/John G. Kunesh Award *2023*
 ACS Unilever Award for Outstanding Young Investigator in Colloid & Surface Chemistry *2023*
 German-American Frontiers of Engineering Symposium, NAE & Humboldt Foundation *2023*
 School of Chemical Sciences (SCS) Faculty Teaching Award *2023*
 Center of Advanced Study (CAS) Fellow *2022*
 ISE Elsevier Green Electrochemistry Prize *2021*
 ACS Colloid & Surface Chemistry Victor K. LaMer Award *2020*
 RCSA Scialog Fellow *2020–2023*
 National Science Foundation CAREER Award *2019*
 List of Teachers Ranked as Excellent *Fall 2019, Fall 2022*
 Illinois Water Resources Center (IWRC) Fellow *2019*
 Whakapukahatanga Taiao Research Fellow, U. of Auckland Environmental Engineering *2018*
 Massachusetts Clean Energy Center Catalyst Award *2016–2017*
 ACS Langmuir Student Oral Presentation Award *2016*
 MIT Veraqua Prize Winner *2016*
 MIT Water Innovation Prize Winner *2016*
 NSERC PGS D Graduate Fellowship *2012–2014*
 MIT ChemE Robert T. Haslam Fellowship *2011–2012*
 Julie-Payette NSERC Research Scholarship *2011*
 Sandford Fleming Foundation Award for Academic Excellence *2011*
 Albert Sherwood Barber Award *2011*
 NSERC Andre Hamer Postgraduate Prize *2011*
 Faculty of Engineering Dean's Honor List *Every Academic Term*
 Keith-Carr Memorial Award *2009, 2010*
 NSERC Undergraduate Research Award (USRA) *2008*

JOURNAL PUBLICATIONS**Publications after joining Illinois**

*Denotes corresponding author.

60. K. Cho, R. Chen, J. Elbert, **X. Su***. “Redox-Functionalized Semiconductor Interfaces for Photoelectrochemical Separations,” *Small*, **2023**, Accepted, In Press.
59. Y. H. Deng, J. Jeon, **X. Su**, H. J. Kong*, et al. “In situ Immobilization of MnO₂ Nanosheets on a Porous Support for Rapid and Continuous Cleaning of Bisphenol A-Contaminated Water,” *Chemical Engineering Journal*, **2023**. Accepted, In Press.
58. N. Kim, J. Elbert, C. Kim, **X. Su***, “Redox-copolymers for Nanofiltration-enabled Electrodialysis,” *ACS Energy Letters*, 2023, 8, 2097–2105. ([link](#))
57. P. Baldaguez Medina, V. Ardilla Contreras, F. Hartmann, D. Schmitt, A. Klimek, J. Elbert, M. Gallei, X. Su, “Investigating the electrochemically-driven capture and release of PFAS by redox-metallopolymers sorbents,” *ACS Applied Materials & Interfaces*. **2023**, 15, 18, 22112-22122. ([link](#))
56. A. Román Santiago, S. Yin, J. Elbert, J. Lee, D. Shukla, **X. Su***. “Imparting selective fluorophilic interactions in redox copolymers for the electrochemically mediated capture of short-chain perfluoroalkyl substances,” *Journal of the American Chemical Society*, **2023**, 145, 17, 9508-9519. ([link](#))
55. J. Jeon, J. Elbert, J. Chae, **X. Su***. “Chiral Metallopolymers for Redox-Mediated Enantioselective Interactions,” *Advanced Functional Materials*, **2023**, 202301545. ([link](#))
54. K. Kim, A. Zagalskaya, J. L. Ng, J. Hong, T. A. Pham, V. Alexandrov, **X. Su*** “Coupling nitrate capture with ammonia production through bifunctional redox-electrodes,” *Nature Communications*, **2023**, 14, 823. ([link](#))
53. N. Kim, J. Lee, **X. Su***. “Precision Tuning of Highly Selective Polyelectrolyte Membranes for Redox-mediated Electrochemical Separation of Organic Acids,” *Advanced Functional Materials*, **2023**, 33(12), 2211645. ([link](#))
52. S. Cotty, N. Kim, **X. Su***. “Electrochemically-mediated recovery and purification of gold for sustainable mining and electronic waste recycling,” *ACS Sustainable Chemistry & Engineering*, **2023**, 11 (9), 3975-3986. ([link](#))
51. H. Kim, S. Kim, N. Kim, **X. Su**, C. Kim. “Multi-electrode scale-up strategy and parametric investigation of redox-flow desalination systems,” *Desalination*, **2023**, 549, 116350. ([link](#))
50. W. Shi, J. Ma, R. Dai, **X. Su**, Z. Wang*, “Metal-Organic Framework with Redox-Active Bridge Enables Electrochemically Highly-Selective Removal of Arsenic from Water,” *Environmental Science & Technology*, **2023**, 57, 15, 6342–6352. ([link](#))
49. S. Cotty, J. Jeon, J. Elbert, V. Jeyaraj, A. Mironenko, **X. Su***. “Electrochemical Recycling of Homogeneous Catalysts,” *Science Advances*, **2022**, 8(42), eade3094. ([link](#))
48. N. Kim, J. Jeon, J. Elbert, C. Kim*, **X. Su***. “Redox-mediated Electrochemical Desalination for Waste Valorization in Dairy Production,” *Chemical Engineering Journal*, **2022**, 428, 131082. ([link](#))
47. H. Hübner, R. Candeago, D. Schmitt, A. Schieber, B. Xiong, M. Gallei*, **X. Su***. “Synthesis and covalent immobilization of redox-active metallopolymers for organic phase electrochemistry,” *Polymer*, **2022**, 23 (244), 124656. *Special Issue: 30 Year Anniversary of Polyferrocenylsilanes: An Inspiration for New Advances in Main Group and Transition-Metal Containing Polymers.* ([link](#))
46. N. B. Üner, P. Baldaguez Medina, J. L. Dinari, **X. Su***, R. Mohan Sankaran, Rate, “Efficiency, and Mechanisms of Electrochemical Perfluorooctanoic Acid Degradation with Boron-Doped Diamond and Plasma Electrodes,” *Langmuir*, **2022**, 38 (29), 8975-8986. ([link](#))

45. F. Galetto*, C. Silva, R. Beche, R. Balaguez, M. S. Franco, F. F. Asiss, F. Frizon, **X. Su**, “Decarboxylative ring-opening of 2-oxazolidinones: a facile and modular synthesis of beta-chalcogen amines,” **2022**, *RSC Advances*, 12, 34496-34502. ([link](#))
44. M. A. Alkhadra, **X. Su**, M. E. Suss, H. Tian, E. N. Guyes, A. N. Shocron, K. M. Conforti, J. P. De Souza, N. Kim, M. Tedesco, K. Khoiruddin, I. G. Wenten, J. G. Santiago, T. A. Hatton, M. Z. Bazant*, “Electrochemical Methods for Water Purification, Ion Separations, and Energy Conversion,” *Chemical Reviews*, **2022**. 122, 16, 13547–13635. ([link](#))
43. H. An, J. W. Smith, B. Q. Ji, S. Cotty, S. Zhou, L. Yao, F. C. Kalutantirige, W. Chen, Z. Qu, **X. Su**, J. Feng, Q. Chen*. “Mechanism and performance relevance of nanomorphogenesis in polyamide films revealed by quantitative 3D imaging and machine learning,” *Science Advances*, **2022**, 8, 8. ([link](#))
42. A. Roman Santiago, P. Baldaquez Medina, **X. Su***. “Electrochemical Remediation of Perfluoroalkyl Substances from Water,” **2022**, *Electrochimica Acta*, 403(20), 139635. *Special Invited Issue for 29th ISE Topical Meeting: Energy and water: electrochemistry in securing the sustainable society development*. ([link](#))
41. J. Hong, K. Cho, V. Presser, **X. Su***, “Recent advances in wastewater treatment using semiconductor photocatalysts,” *Current Opinion in Green and Sustainable Chemistry*, **2022**, 36. ([link](#))
40. N. Kim, J. Jeon, R. Chen, **X. Su***. “Electrochemical Separations in Bio and Food Manufacturing for Organic Acids and Protein Recovery”, **2022**, 178, 267-288. *Chemical Engineering Research & Design. Emerging Stars Special Issue*. ([link](#))
39. K. Kim, D. Raymond, R. Candeago, **X. Su***. “Selective Cobalt and Nickel Electrodeposition for Lithium-Ion Battery Recycling through Integrated Electrolyte and Interface Control,” *Nature Communications*, **2021**, 12, 6554. ([link](#)). *2021 Editor’s Highlight by Nature Communications in “Energy”*.
38. R. Chen, J. Feng, J. Jeon, T. Sheehan, C. Ruettiger, M. Gallei, D. Shukla, **X. Su***. “Structure and Potential Dependent Selectivity in Redox-Metallopolymers: Electrochemically-mediated Multicomponent Metal Separations,” *Advanced Functional Materials*, **2021**, 31(15),2009307. ([link](#))
37. H. Vapnik, J. Elbert, **X. Su***. “Redox-Copolymers for the Recovery of Rare-Earth Elements by Electrochemically-Regenerated Ion Exchange,” *Journal of Materials Chemistry A*, **2021**, 9, 20068-20077. *Themed Issue: Journal of Materials Chemistry A Emerging Investigators*. ([link](#))
36. P. Baldaquez Medina, S. Cotty, K. Kim, J. Elbert, **X. Su***. “Electrochemically-mediated Remediation of GenX Using Redox-Copolymers,” *Environmental Science: Water Research & Technology*, **2021**, 7, 2231-2240. *Emerging investigator series*. ([link](#))
35. K. Kim, R. Candeago, . Raymond, G. Kim, A. H. Park, **X. Su***. “Electrochemical Approaches for Selective Recovery of Critical Elements in Hydrometallurgical Processes of Complex Feedstocks,” *iScience*, **2021**, 24(5), 102374. Special issue on *Material Criticality*. ([link](#))
34. Y. Kim, K. Kim, H. H. Eom, **X. Su***, J. W. Lee*. “Electrochemically-assisted removal of cadmium ions by redox active Cu-based framework,” *Chemical Engineering Journal*, **2021**, 421,(1),129765. ([link](#))
33. N. Kim, E. Lee, **X. Su***, C. Kim*. “Parametric investigation of the desalination performance in multichannel membrane capacitive deionization (MC-MCDI),” *Desalination*, **2021**, 503, 114950. ([link](#))
32. Y. Kim, H. Kim, K. Kim, H. Eom, **X. Su**, J. Lee*. “Electrosorption of Cadmium Ions in Aqueous Solutions Using a Copper-gallate Metal-organic Framework.” *Chemosphere*, **2022**, 286, 131853. ([link](#))

31. B. Gurkan*, **X. Su**, A. Klemm, Y. Kim, S. Mallikarjun Sharada, A. Rodriguez-Katakura, K. J. Kron. "Perspective and challenges in electrochemical approaches for reactive CO₂," *iScience*, **2021**, 24, 12, 103422. ([link](#))
30. L. Bromberg, N. Ozbek, K. J. Tan, **X. Su**, L. Padhye, T. A. Hatton*. "Iron phosphomolybdate complexes in electrocatalytic reduction of aqueous disinfection byproducts," *Chemical Engineering Journal*, **2021**, 408, 127354. ([link](#))
29. L. Bromberg, **X. Su**, V. Martis, T. A. Hatton*. "Reactive Fibrous Materials for Decontamination of Chemical and Biological Threats," *Key Engineering Materials*, **2021**, 893, 3–10. ([link](#))
28. A. Kumar, Y. Kim, **X. Su**, H. Fukuda, G. Naidu, F. Du, F., S. Vigneswaran, E. Drioli, T. A. Hatton, J. Lienhard*. "Advances and challenges in metal ion separation in water", *Trends in Chemistry*, **2021**, 3 (10), 819-831. ([link](#))
27. K. Kim, P. Baldaguez Medina, J. Elbert, E. Kaiywa, R. Cusick, Y. Men, **X. Su***. "Molecular Tuning of Redox Copolymers for Selective Electrochemical Remediation," *Advanced Functional Materials*, **2020**, 30(52), 2004635. ([link](#))
26. K. Kim, S. Cotty, J. Elbert, R. Chen, C. H. Hou, **X. Su***. "Asymmetric Redox-Polymer Interfaces for Electrochemical Reactive Separations: Synergistic Capture and Conversion of Arsenic," *Advanced Materials*, **2020**, 32(6), 1906877. ([link](#))
25. R. Candeago, K. Kim, H. Vapnik, S. Cotty, M. Aubin, S. Berensmeier, A. Kushima, **X. Su***. "Semi-conducting Polymer Interfaces for Electrochemically Assisted Mercury Remediation," *ACS Applied Materials & Interfaces*, **2020**, 12(44), 49713–49722. ([link](#))
24. N. Kim, **X. Su***, C. Kim*. "Electrochemical lithium recovery system through the simultaneous lithium enrichment via sustainable redox reaction," *Chemical Engineering Journal*, **2020**, 127715. ([link](#))
23. R. Chen, T. Sheehan, M. Brucks, J. L. Ng, **X. Su***. "Capacitive Deionization and Electrosorption for Heavy Metal Removal," *Environmental Science: Water Research Technology*, **2019**, Themed Collection: Capacitive Deionisation, **2020**, 6, 258-282. ([link](#))
22. J.S. Kang, S. Kim, D. Y. Chung, Y. J. Son, K. Jo, **X. Su** et al. "Rapid Inversion of Surface Charges in Heteroatom-Doped Porous Carbon: A Route to Robust Electrochemical Desalination," *Advanced Functional Materials*, **2020**, 30(9), 1909387. ([link](#))
21. K. J. Tan, **X. Su**, T. A. Hatton*. "An asymmetric iron-based redox-active system for electrochemical separation of ions in aqueous media," *Advanced Functional Materials*, **2020**, 30(15), 1910363. ([link](#))
20. P. Srimuk, **X. Su**, D. Aurbach, V. Presser*. "Charge transfer materials for electrochemical water desalination, ion separation, and recovery of elements," *Nature Reviews Materials*, **2020**, 5, 517-538. ([link](#))
19. **X. Su***. "Electrochemical Interfaces for Chemical and Biomolecular Separations," *Current Opinion in Colloid and Interface Science*, **2020**, 46, 77-93. Special Issue on *Colloidal and Interfacial Challenges related to Separations, Analysis, and Recycling*. ([link](#))

Publications prior to joining Illinois

18. **X. Su**, A. Kushima, C. Halliday, J. Zhou, J. Li, T. A. Hatton. “Electrochemically-Mediated Remediation of Heavy Metal Oxyanions by Redox-Active Metallopolymers: Selective Separation of Chromium and Arsenic,” *Nature Communications*, **2018**, 9, 4701. ([link](#))
17. J. Lee, P. Pattarachai, S. Fleischmann, **X. Su**, T. A. Hatton, V. Presser*. “Redox-electrolytes for non-flow electrochemical energy storage: A critical review and best practice,” *Progress in Materials Science*, **2019**, 101, 46-89. ([link](#))
16. L. Bromberg, **X. Su**, K. Philips, T. A. Hatton. “Magnesium Thiodialkanoates: Dually-Functional Additives to Organic Coatings,” *Industrial & Engineering Chemistry Research*, **2018**, 57(32), 10992–11004. ([link](#))
15. T. Winter, **X. Su**, T. A. Hatton, M. Gallei. “Ferrocene-Containing Inverse Opals by Melt-Shear Organization of Core/Shell Particles,” *Macromolecular Rapid Communications*, **2018**, 39, 1800428. ([link](#))
14. **X. Su**, T. A. Hatton. “Electrosorption at functional interfaces: from molecular-level interactions to electrochemical cell design,” *Physical Chemistry Chemical Physics*, **2017**, 19, 23570 – 23584. [Back-Cover Highlight] ([link](#))
13. **X. Su**, J. Hubner, M. Kauke, L. Dalbosco, C. Gonzalez, J. Thomas, E. Zhu, M. Franzreb, T.F. Jamison, T.A. Hatton. “Redox Interfaces for Electrochemically Controlled Protein-Surface Interactions: Bioseparations and Heterogeneous Enzyme Catalysis,” *Chemistry of Materials*, **2017**, 29 (13), 5702–5712. ([link](#))
12. **X. Su**, K.J. Tan, J. Elbert, C. Ruttiger, M. Gallei, T.F. Jamison, T.A. Hatton. “Asymmetric Faradaic systems for selective electrochemical separations,” *Energy & Environmental Science*, **2017**, 10, 1272–1283. ([link](#))
11. **X. Su**, T.A. Hatton. “Redox-electrodes for Selective Electrochemical Separations,” State-of-Art Perspective. *Advances in Colloid and Interface Science*, **2017**, 244, 6–20. ([link](#))
10. **X. Su**, L. Bromberg, V. Martis, F. Simeon, A. Huq, T.A. Hatton. “Post-synthetic Functionalization of Mg-MOF-74 with Tetraethylenepentamine: Structural Characterization and Enhanced CO₂ Adsorption,” *ACS Applied Materials & Interfaces*, **2017**, 9 (12), 11299–11306. ([link](#))
9. **X. Su**, L. Bromberg, K.J. Tan, T.F. Jamison, L.K. Padhye, T.A. Hatton. “Electrochemically Mediated Reduction of Nitrosamines by Hemin-Functionalized Redox Electrodes,” *Environmental Science & Technology Letters*, **2017**, 4 (4), 161–167. ([link](#))
8. J.R. Du, **X. Su**, X. Feng. “Chitosan/sericin blend membranes for adsorption of bovine serum albumin,” *The Canadian Journal of Chemical Engineering*, **2017**, 95 (5), 954–960. ([link](#))
7. **X. Su**, H. Kulik, T.F. Jamison, T.A. Hatton. “Anion-selective redox electrodes: electrochemically-mediated separation with organometallic interfaces,” *Advanced Functional Materials*. **2016**, 26(20), 3394–3404. [Back-Cover Highlight] ([link](#))
6. L. Bromberg, **X. Su**, V. Martis, Y. Zhang, T.A. Hatton. “Self-Decontaminating Fibrous Materials Reactive toward Chemical Threats,” *ACS Applied Materials & Interfaces*, **2016**, 8 (27), 17555–17654. ([link](#))
5. L. Bromberg, **X. Su**, T.A. Hatton. “Functional networks of organic and coordination polymers for Fructose Conversion,” *Chemistry of Materials*, **2014**, 26 (21), 6257–6264. ([link](#))
4. J. Kozak, J. Wu, **X. Su**, F. Simeon, T.A. Hatton, T.F. Jamison. “Bromine-Catalyzed Conversion of CO₂ and Epoxides to Cyclic Carbonates under Continuous Flow Conditions,” *Journal of American Chemical Society*, **2013**, 135 (49), 18497–18501. ([link](#))

3. L. Bromberg, **X. Su**, T.A. Hatton. “Heteropolyacid-Functionalized Aluminum 2-Aminoterephthalate Metal-Organic Frameworks as Reactive Aldehyde Sorbents and Catalysts,” *ACS Applied Materials Interfaces*, **2013**, 5 (12), 5468–5477. ([link](#))
2. L. Bromberg, **X. Su**, T.A. Hatton. “Aldehyde Self-Condensation Catalysis by Aluminum Aminoterephthalate Metal–Organic Frameworks Modified with Aluminum Isopropoxide,” *Chemistry of Materials*, **2013**, 25 (9), 1636–1642. ([link](#))
1. **X. Su**, C. Vesco, J. Fleming, V. Choh. “Density of Ocular Components of the Bovine eye,” *Optometry and Vision Science*, **2009**, 86(10), 1187–1195. ([link](#))

Book Chapters

2. **X. Su**, T.A. Hatton. *Kirk-Othmer Encyclopedia for Chemical Technology*. “Electro-separations: Electrosorption,” **2016**, 1–11. ([link](#))
1. A. Roman Santiago, J. Jeon, E. Kaiywa, R. Cusick, **X. Su**. “Membrane-based electrochemical technologies: III. Selective ion removal/recovery,” in *Electrochemical Membrane Technology for Water and Wastewater Treatment*, **2022**, 403-444. editors: Guohua Chen, Kwang-Ho Choo, Zhiwei Wang, Chuyang Tang, David Waite, Elsevier. ([link](#))

Society Magazines

3. R. C. Alkire*, **X. Su**, T. Osaka. “Historical Perspectives on Electroplating during the Past 100 Years,” *The Electrochemical Society Interface*, **2022**, In Press.
2. **X. Su***. “Electrochemical Separations for Metal Recycling,” *The Electrochemical Society Interface*, **2020**, 29, 55. Fall 2020 Issue on Electrochemistry for Sustainability. ([link](#))
1. **X. Su***, Z. Chen, J. St-Pierre, N. Vasiljevic. “Electrochemistry for Recycling,” *The Electrochemical Society Interface*, **2021**, 30(3), 41. Fall 2021 Issue on Interface. ([link](#))

PATENTS

12. S. Cotty, **X. Su**, U.S. Provisional patent application. No. 63/444,334. "Electrochemical System And Method For Selective Recovery Of Gold From Electronic Waste And Mining Streams." Submitted: 02/09/2023.
11. J. Jeon, J. Elbert, **X. Su**, U.S. patent application. No. 63413119. "Hierarchical chirality in redox metallopolymers." Submitted: 10/05/2022.
10. S. Cotty, **X. Su**, U.S. patent application. PCT/US2022/025467. "Electrochemical Recycling of Homogeneous Catalysts." Submitted: 08/26/2022.
9. K. Kim, **X. Su**, U.S. Provisional patent application. 2021-012-01(63237364). "Integrated electrolyte and interfacial control for selective electrodeposition." Submitted: 10/07/2021.
8. N. Kim, J. Elbert, C. Kim, **X. Su**, U.S. patent application PCT/US2022/035675, "Redox-Mediated Electrochemical Desalination for Waste Valorization in Dairy Production." Submitted; July 1st, 2021. [UIUC patent]
7. H. Vapnik, J. Elbert, **X. Su**, U.S. Provisional patent application, UIUC2021-068-01. "Electrochemically-regenerated ion-exchange using redox-polymers," Submitted: June 11th, 2021. [UIUC patent]
6. K. Kim, P. B. Medina, J. Elbert, **X. Su**. U.S. Provisional patent application, UIUC2020-198-01. "Copolymers and Electrochemical Systems and Methods for the Remediation of Organic Pollutants." Submitted: June 14th, 2021.
5. **X. Su**, R. Candeago. U.S. Patent Application No. 20322-383. "Working Electrode, System, and Method for the Electrochemical Remediation of a Metal Species." Provisional Application, 2021.
4. **X. Su**, T. A. Hatton. U.S. Patent Application No. 62/413960. "Use of electrochemical devices or systems comprising redox-functionalized electrodes for bioseparation and biocatalysis." International No. PCT/US2017/058888.
3. L. Bromberg, **X. Su**, T. A. Hatton. U.S. Patent Application No. 15/592,160. "Selective reduction of tobacco specific nitrosamines and related methods."
2. **X. Su**, D. Achilleos, T. A. Hatton. U.S. Patent Application, No: 15/336,637. "Electrochemical devices or systems comprising redox-functionalized electrodes and uses thereof."
1. **X. Su**, D. Achilleos, T. A. Hatton. International Patent Application WO2017/075263. "Electrochemical devices or systems comprising redox-functionalized electrodes and uses thereof."

SELECTED INVITED TALKS (OUT OF 58)

Department of Chemical and Biomolecular Engineering, U. Wisconsin Madison, Fall **2023**
Materials for Emerging Electrochemical Separations, MRS Fall **2023**
AIChE Separations Division Kunesh Award Plenary Session, November **2023**
ISE Elsevier Green Electrochemistry Award Lecture, ISE Lyon, September **2023**
Oak Ridge National Laboratory (ORNL) Neutron Scattering Workshop, August **2023**
Separations Chemistry for Critical Materials, Industrial & Engineering Chemistry, ACS Fall **2023**
Department of Chemical Engineering, National Tsing Hua University, June **2023**
ACS Colloids Symposium Unilever Award Lecture, June **2023**
Department of Chemistry, Iowa State University, April **2023**
Resnick Young Investigators Symposium, Caltech, April **2023**
Emerging Investigators Symposium, Division of Environmental Chemistry, ACS Spring **2023**
German-American Frontiers of Engineering, Julich, Germany, March, **2023**
Institute of Industrial Science, University of Tokyo, Tokyo, Japan, January, **2023**
Department of Chemical and Biomolecular Engineering, Cornell University, NY, October, **2022**
Discussion Leader, Gordon Research Conference on Chemical Separations, CA, October, **2023**
Argonne National Laboratory (ANL), IL, June **2022**.
Invited Symposium, ENFL Division, ACS Spring Meeting, March **2022**.
Merck Innovation Seminar, Meck EMD, Darmstadt, Germany. May, **2022**.
Organisch-Chemisches & Makromolekulares Kolloquium. U. of Saarland, Germany. May, **2022**.
Invited Symposium on Electrochemical Separations, AIChE Annual Meeting, November **2021**.
College of Engineering, Rochester Institute of Technology, August **2021**.
DOW Innovation Seminar, DOW, July, **2021**.
Department of Chemical Engineering, University of Illinois Chicago. April, **2021**
Department of Chemical and Biomolecular Engineering, Case Western Reserve U., February, **2021**
Victor K. LaMer Lectureship, 94th ACS Colloid & Surface Science Symposium, TX, June **2020**.
Keynote Talk, Electrochemical Society Fall Meeting, October **2019**.
Leibniz Institute for New Materials (INM), Saarbrucken, Germany. August, **2019**.
Department of Earth and Environmental Engineering, Columbia University, NY, April, **2018**.
Department of Chemical Engineering, McGill University, February, **2018**.
ACS Langmuir Student Oral Presentation Award, Harvard University, MA, June, **2016**.

SELECTED COMMITTEES AND SERVICE**American Institute of Chemical Engineers (AIChE)**

Programming Chair for AIChE Area 1E: Electrochemical Fundamentals *2022-Current*
 Programming Co-Chair for AIChE Area 1E: Electrochemical Fundamentals *2020-2021*
 Secretary for AIChE Area 1E: Electrochemical Fundamentals *2019*
 Organizer for “2E: Chromatography & SMB” *Annual Meeting 2021, 2023*
 Organizer for “2E: Adsorbent Materials for Sustainable Energy and Chemicals” *Annual Meeting 2020*
 Organizer for “Decarbonization of the Chemical Industry through Electrification” *Topical 2023*
 Organizer for Invited Electrochemical Separations Symposium (1E and 2E) *Annual Meeting 2019*
 Organizer for Area 1E Faculty Candidate Symposium *Annual Meeting 2019, 2020*

American Chemical Society (ACS)

ACS Energy & Fuels Division (ENFL) Program Committee *2021-Current*
 Organizer for “Electrochemical materials and interfaces for environment” *ACS Fall 2022*
 Session chair for “Electrokinetic Phenomena” *ACS Colloid Symposium 2019*
 Session chair for “Energy-Efficient Chemical Separations” *ACS Spring 2022*
 Poster judge for ENFL Student poster session *ACS Fall 2022*

Electrochemical Society (ECS)

IE&EE Technical Planning Committee Member, Electrochemical Society (ECS) *2020-Current*
 Organizer for “Electrochemical Water Remediation” ECS Symposium *Fall 2021*
 Organizer for “Electrochemical Recovery and Recycling” ECS Symposium *Fall 2021, Spring 2024*
 Organizer for “Electrochemical Separations” ECS Symposium *Fall 2021, Fall 2022, Fall 2023*

International Society of Electrochemistry (ISE)

Organizer for ISE “Electrochemistry for resource and energy recovery” *ISE Annual Meeting, 2023*
 Organizer for ISE “Cutting-Edge Electrolysis” symposium *ISE Annual Meeting, 2022*
 Session chair for Symposium 5 Applied Electrochemistry *ISE Regional Meeting in Prague, 2022*

Other Organizations

DOE BES CSGB Workshop on “Synergy between Chemical Separations and Reactions” *January 2021*
 Co-organizer for Capacitive Deionization and Electrosorption (CDI&E) Conference *Atlanta 2021*
 Member of international working group for CDI&E *2019-Current*
 Discussion Leader for Chemical Separations GRC *September 2022*

GUEST EDITORSHIP

Guest Editor for Desalination, “Capacitive Deionization & Electrosorption”, co-editor team: Xiao Su, Linda Zou, Matthew Suss, Choonsoo Kim, Chia-Hung Hou. *2022*
 Guest Editor for Journal of Electrochemical Society (JECS), “Electrochemical Separations and Sustainability”, co-editor team: Hui Xu, Gerri Botte, Gang Wu, John Staser, Xiao Su. *2022*
 Guest Editor for Electrochemical Society Interface (ECS) Fall 2021 Issue: *Electrochemical Recycling*, co-editor team: Xiao Su, Zheng Chen, Jean St-Pierre, Natasa Vasiljevic. *2021*

CURRENT AND FORMER GROUP MEMBERS**Supervised Graduate Students**

Name	Degree	Graduation Date
Emmanuel Kayiwa	MSc, CEE	06/2021
Raylin Chen	Ph.D. ChBE	06/2023
Stephen Cotty	Ph.D. ChBE	06/2023
Haley Vapnik	Ph.D. ChBE	07/2023 (scheduled)

Current Graduate Students

Name	Degree	Expected Graduation Date
Jemin Jeon	MSc, CEE	2024
Paola Baldaquez Medina	Ph.D. ChBE	2024
Nayeong Kim	Ph.D. ChBE	2025
Riccardo Candego	Ph.D. ChBE	2025
Anaira Roman Santiago	Ph.D. ChBE	2025
Darien Raymond	Ph.D. ChBE	2025
Jaeyoung Hong	Ph.D. MatSE	2025
Ching-Hsiu Hung	Ph.D. ChBE	2026
Aderiyike Faniyan	Ph.D. ChBE	2027
Melanie Fournier	Ph.D. ChBE	2027
Ching-Yu Chen	Ph.D. ChBE	2027

Supervised Postdoctoral Associates and Visiting Scholars

Name	Dates	Current Position
Dr. Kwiyong Kim	2019 – 2022	Assistant Professor, UNIST, South Korea
Dr. Yonghwan Kim	2021 – 2023	Samsung, Korea
Prof. Kyle Knust	2022 – 2023	Milikin University
Prof. Fabio Galetto	2022 – 2023	Universidade Federal de Santa Catarina (UFSC)

Current Postdoctoral Associates and Visiting Scholars

Name	Dates	Position
Dr. Johannes Elbert	2020 – Current	Research Scientist
Dr. Kihyun Cho	2021 – Current	Research Scientist
Dr. Jiho Lee	2020 – Current	Postdoc
Dr. Wangsuk Oh	2020 – Current	Postdoc
Dr. Yuri Kappenberg	2020 – Current	Postdoc
Dr. Hee-Eun Kim	2020 – Current	Postdoc
Dennis Rucker	2023 – Current	Visiting PhD Student, TU Munich
Jhen-Cih Wu	2023 – Current	Visiting PhD Student, NTU

Supervised Undergraduate Researchers

Name	Dates	Program
Shio Kinoshita	2019	Chemistry
Matthew Brucks	2019 - 2020	ChBE
Mateus Arauko Almeida	2019	ABE, Visiting student from U. Sao Paulo
Leticia de Souza Stefanini	2020	ABE, Visiting student from U. Sao Paulo
Waliyat Oyewole	2019 - 2020	ChBE
Thomas Sheehan	2019 - 2020	ChBE
Angelique Klimek	2019 - 2021	ChBE
Kristina Roth	2019 - 2021	ChBE
Jing Lian Ng	2020 - 2021	ChBE
Emily Bolger	2020 - 2021	ChBE
Seungyeop Kim	2020 - 2021	MatSE
Ruth Lam	2021 - 2022	ChBE
David Xiong	2021 - 2022	ChBE
Alexandra Marchert	2021 - 2022	ChBE
Lily Bizub-Rodriguez	2021 - 2022	ChBE
Erfren Guerrero	2021 - 2022	ChBE
Sung Jin Seo	2021 - 2022	ChBE
Junice Chae	2021 - 2022	ChBE
Jisoo Choi	2021 - 2022	ChBE
Jiho Lee	2022	ChBE
Valentina Adrillas Contreras	2022	ChBE
Kwanghyun Kim	2022	ChBE

Current Undergraduate Researchers

Name	Dates	Program
Sean Roh	2022 - Current	Chemistry
Olivia Hunsberger	2022 - Current	NPRE
Brian Wu	2022 - Current	ChBE
Matthew Faustino	2022 - Current	ChBE
Freemon Chiu	2022 - Current	ChBE
Danielle Chao	2023 - Current	Chemistry
Celine Sutio	2023 - Current	ChBE
Katie Schukina	2023 - Current	ChBE
Junuh Hyun	2023 - Current	ChBE
Martin Joseph Pouliot	2023 - Current	ChBE
Edwin Choi	2023 - Current	ChBE
Shoya Takeda	2023 - Current	ChBE
Iyer Adwaita Sunder	2023 - Current	ChBE

TEACHING, OUTREACH AND EDUCATIONAL ACTIVITIES

Instructor, ChBE 422 Mass Transfer Operations

Semesters: Spring 2019, Fall 2019, Fall 2020, Fall 2021, Fall 2022.

List of Teachers Ranked as Excellent (Fall 2019, Fall 2022).

Instructor, ChBE 453 Electrochemical Engineering

Semesters: Spring 2020, Spring 2021.

Electrochemical Society (ECS) Student Chapter Faculty Advisor, 2022-current.

Department of Chemical and Biomolecular Engineering, Undergraduate Committee, 2019-current.

Illinois Scholar Undergraduate Research Program (ISUR) mentor, 2019 – current.

Coordinator for undergraduate student abroad in ChBE, 2019 – current.

Coordinator for WYSE and ChBE women-focused summer workshop, 2019 – current.

Illini Day Recruitment, 2020 – current.

Gordon Research Seminar (GRS) Mentorship Career Panel, 2022

ChBE Grad Recruitment Energy Talk, 2020 – current.

MEMBERSHIP IN PROFESSIONAL SOCIETIES

American Institute of Chemical Engineers	2011–Current
American Chemical Society	2011–Current
Electrochemical Society	2019–Current
International Society of Electrochemistry	2015–Current
International Society for Porous Media	2017–2018
International Adsorption Society	2021–2023

MEDIA OUTREACH

- “Mirror, mirror: Su group demonstrates new method of recognizing reverse-image molecules”. May 5, 2023. [Beckman Institute News](#).
- “PFAS lurking in US water supply as U of Illinois researchers develop filter technology”. April 20, 2023. [ABC 7 Chicago News](#).
- “Advanced electrode to help remediation of stubborn new ‘forever chemicals’”. March 27, 2023. [Illinois News Bureau](#).
- “Study demonstrates energy-efficient conversion of nitrate pollutants into ammonia”. February 16, 2023. [Illinois News Bureau](#).
- “Redox, reuse, recycle: novel process extends life cycle of valuable catalysts”. *Beckman Institute News*. October 19, 2022, Links: <https://chbe.illinois.edu/news/stories/51695>, [ChemistryWorld](#), [RSC Education in Chemistry](#).
- “Copolymer helps remove pervasive PFAS toxins from environment”. *Illinois News Bureau*. October 29, 2020, Link: <https://news.illinois.edu/view/6367/1939248119>
- “Professor Xiao Su wins NSF CAREER Award”. *UIUC ChBE Department*. 16 December 2019, Link: <https://chbe.illinois.edu/professor-xiao-su-wins-nsf-career-award/>
- “Advanced polymers help streamline water purification, environmental mediation”. *UIUC ChBE, Phys.org*. 21 January 2020. Link: <https://phys.org/news/2020-01-advanced-polymers-purification-environmental-remediation.html>, [Advanced Science News](#).
- “MIT Water Redox Solutions.” *Massachusetts Clean Energy Center – Success Stories*, 2018, Link: <https://www.masscec.com/success-stories/mit-redox-water-solutions>
- “MIT scientists develop new technique for cleaning contaminated water.” *Reuters Editor Pick*, 28 December 2017, Link: <https://reut.rs/2zF19D2>
- “MIT researchers develop new way to clear pollutants from water”. *MIT News Office*. 10 May 2017, Link: <http://news.mit.edu/2017/electrochemical-clear-pollutants-water-0510>