Yiming Liu

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Purdue University, 500 Central Dr, West Lafayette, IN 47907

EDUCATION

Purdue University, West Lafayette, IN
Ph.D. in Sustainability Engineering and Environmental Engineering, August 2021- July 2026 (Expected)

Peking University, Beijing, China
M.S. in Environmental Sciences, July 2021

Beijing University of Chemical Technology, Beijing, China
B.E. in Chemical Engineering, July 2018

PROFESSIONAL EXPERIENCE

Purdue University, West Lafayette, IN, 2021-present
Graduate Research Assistant, School of Sustainability Engineering and Environmental Engineering

Peking University, Beijing, China, 2018-2021
Graduate Research Assistant, College of Environmental Sciences and Engineering

Beijing University of Chemical Technology, Beijing, China, *2016-2017*
Undergraduate Researcher, College of Material Sciences and Engineering

BioHumaNetics (BHN), Shanghai, China, 2016
Sales Intern

Suez Environment Co., Shanghai, China, 2015
Laboratory Technician Intern

HONORS & AWARDS

- Chinese-American Professors in Environmental Engineering and Science (CAPEES) Student Poster Competition Poster Award (2025)
- International Society for Industrial Ecology (ISIE) Scholarship, ISIE Student Chapter Board (2025)
- Frederick N. Andrews Environmental Travel Grant (2025)
- Bilsland Dissertation Fellowship, Purdue University (2024)
- ISF Travel Grant, Purdue University (2024)
- PGSG Travel Grant, Purdue University (2024)
- First Place Poster Award, Graduate Industrial Research Symposium, Purdue University (2024)
- Second Place Oral Presentation Award, Graduate Industrial Research Symposium, Purdue University (2024)
- International Society for Industrial Ecology (ISIE) Scholarship, ISIE Student Chapter Board (2023)
- First Place Poster Award, Graduate Industrial Research Symposium, Purdue University (2023)
- First Place Oral Presentation Award, Graduate Industrial Research Symposium, Purdue University (2023)
- Ross Fellowship, Purdue University (2021)
- Merit Student, Peking University (2020)

- Special Scholarship, Peking University (2020)
- School Scholarship, Peking University (2019)
- Award of National Chemical Engineering Design Competition, Beijing University of Chemical Technology (2017)
- National Scholarship, Beijing University of Chemical Technology (2016)

PROFESSIONAL AFFILIATION & SERVICE

- ***Reviewer (Journals)***

Journal of Cleaner Production

Expert Systems With Applications

The International Journal of Life Cycle Assessment

- ***Reviewer (Conferences)***

International Symposium on Sustainable Systems and Technologies (ISSST 2024), Baltimore, MD, USA

International Symposium on Sustainable Systems and Technologies (ISSST 2023), Fort Collins, CO, USA

- ***Membership***

NSS, Student Member (2025-present)

AEESP, Student Member (2024-present)

International Society for Industrial Ecology (ISIE), Student Member (2023-present)

Chinese-American Professors in Environmental Engineering & Science (CAPEES), Student Member (2023-present)

- ***Moderator***

National Sustainability Society (NSS) 2025 Conference

ACLCA 2025 Conference, Atlanta, GA

Industrial Ecology Gordon Research Seminar (GRS 2024), Les Diablerets, Vaud, Switzerland

- ***Internal service***

Purdue Graduate Student Government (PGSG), Senator (September 2024–present)

PUBLICATIONS

Published papers

1. **Liu, Y.,** Yin, Z. & Cai, H. Enhanced global oil spill dataset from 1967 to 2023 based on text-form incident information. *Sci Data* 12, 1394 (2025). https://doi.org/10.1038/s41597-025-05601-9.
2. Liang, E.; Tang, H.; **Liu, Y**.; Liu, S.; Wu, J.; Pan, W.; Shang, Y.; Yin, S. A global synthesis reveals the role of strategic hydropower planning in mitigating adverse impacts of reservoir flooding. Renewable and Sustainable Energy Reviews 2025, 217, 115723. DOI: https://doi.org/10.1016/j.rser.2025.115723 .

3. Zhong, H., Cheng, S., Li, X., **Liu, Y**., Li, Z., Zhao, Z., Xue, A., (2022) "The Impacts of Villages on Flood Evolution in the Floodplain of Lower Yellow River", *Yellow River*, 44(08):62-68. *(In Chinese)*
4. **Liu, Y.**, Jiang H., Li Z., (2021) "A Goal Optimization Method for Long-Distance Pipeline Transport of Sediments on the Yellow River Downstream". [J]. *Yellow River*, 43(05): 30-34. *(In Chinese)*

In Review

1. Wu, X., Roy, V., **Liu, Y**., Shakelly, N., Ghosh, T., Yang, X., Sutherland, J. W., & Zhao, F. (2026). Transforming E-Waste Into Strategic Resources: Techno-Economic Analysis of Gallium and By-products Recovery from LEDs via Bioleaching. Procedia CIRP

In Preparation

1. **Liu Y**, Cai H. (2025) Evaluating environmental impacts of Oil Spill Response Actions from the Life Cycle Perspective, *under preparation to be submitted to Environmental Science & Technology*.

CONFERENCE PRESENTATIONS

1. **Liu, Y**., Cai, H. "Integrating Risk into Life Cycle Assessment: Enabled by AI's Capabilities to Process Unstructured Data" *Oral presentation*, 2nd NSS Conference, Notre Dame, IN, Oct 21, 2025.
2. **Liu, Y**., Cai, H. "A Risk-Modified LCA framework: Enabled by AI-Based Unstructured Data Analytics" *Oral presentation*, 2025 ACLCA Conference, Atlanta, GA, Sept 19, 2025.
3. **Liu, Y**., Cai, H. "From Routine to Risk: Integrating Unintentional Substance Releases into Life Cycle Assessment" *Poster presentation*, 2025 Chinese-American Professors in Environmental Engineering & Science (CAPEES) Student Poster Competition, Virtual, July 19, 2025, (**Received Poster Award**)
4. **Liu, Y**., Cai, H. "From Routine to Risk: Integrating Unintentional Substance Releases into Life Cycle Assessment" *Poster presentation*, 12th International Conference on Industrial Ecology (ISIE2025), National University of Singapore, Singapore, July 1, 2025.
5. **Liu, Y**., Cai, H. "Risk-Modified Life Cycle Assessment Framework: A Case Study on Petroleum Products" *Oral presentation*, AEESP 2025 Research and Education Conference, Duke University, Durham, May 20, 2025
6. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of U.S. historical oil spill incidents" *Oral presentation*, International Symposium for Sustainable Systems and Technology (ISSST), Baltimore, MD, June 20, 2024.
7. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of U.S. historical oil spill incidents" *Poster presentation*, Institute for a Sustainable Future (ISF) Fall 2024 Research Expo, Purdue University, IN, Oct 14, 2024.
8. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of historical oil spill incidents in North America from the life cycle perspective" *Poster presentation*, Industrial Ecology Gordon Research Conference (GRC 2024), Les Diablerets, Vaud, Switzerland, May 30, 2024.

9. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of historical oil spill incidents in North America from the life cycle perspective" *Poster presentation*, Industrial Ecology Gordon Research Seminar (GRS 2024), Les Diablerets, Vaud, Switzerland, May 26, 2024.
10. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of U.S. historical oil spill in North America" *Poster presentation*, 2024 Office of Interdisciplinary Graduate Programs' Spring Reception, Purdue University, IN, May 1, 2024.
11. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of U.S. historical oil spill incidents" *Poster presentation*, 29th Environmental Engineering and Science Symposium & 2023-2024 AEESP Distinguished Lecture, University of Illinois Urbana-Champaign, IL, April 12, 2024.
12. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of U.S. historical oil spill incidents" *Poster presentation*, 11th Annual Graduate Industrial Research Symposium 2024, Purdue University, IN, Mar 7, 2024, (**Received 1st Place Best Poster Award**)
13. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of historical oil spill incidents in North America from the life cycle perspective" *Oral presentation*, 11th Annual Graduate Industrial Research Symposium 2024, Purdue University, IN, Mar 7, 2024, (**Received 2nd Place Best Oral Presentation Award**).
14. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of historical oil spill incidents in North America from the life cycle perspective" *Oral presentation*, 11th International Conference on Industrial Ecology (ISIE2023), Leiden, The Netherlands, July 2, 2023.
15. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of U.S. historical oil spill incidents" *Poster presentation*, AEESP Distinguished Lecture, University of Notre Dame, IN, March 31, 2023.
16. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of U.S. historical oil spill incidents" *Poster presentation*, 10th Annual Graduate Industrial Research Symposium, Purdue University, IN, March 2, 2023, (**Received 1st Place Best Poster Award**)
17. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of U.S. historical oil spill incidents" *Oral presentation*, 10th Annual Graduate Industrial Research Symposium, Purdue University, IN, March 2, 2023, (**Received 1st Place Best Oral Presentation Award**).
18. **Liu, Y**., Cai, H. "Evaluating the environmental impacts of U.S. historical oil spill incidents" *Poster presentation*, ESE Symposium 2023, Purdue University, IN, Feb 23, 2023.

TEACHING & MENTORING EXPERIENCE

Teaching Assistant, Environmental System Analysis, Peking University (2021)
Mentored undergraduate student, **Matthew E. Spacone** on research projects (Sept 2025 – Present)