

# 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*, 10<sup>th</sup> 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*, 10<sup>th</sup> 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)