

Yujia Wan

Department of Civil and Environmental Engineering, University of California, Berkeley
Mobile: (510)-977-3778 Email: jasminewan@berkeley.edu Portfolio: yujiajasminewan.github.io LinkedIn: linkedin/in/yujia-wan

EDUCATION

University of California, Berkeley	Berkeley, CA, USA
• M.S., Civil and Environmental Engineering, GPA: 4.0/4.0	08/2024-05/2026
• Thesis: Electrified porous membrane integrated reduction-filtration system for Cr (VI) removal (In preparation)	
Hubei University	Wuhan, China
• B.E. (with honors), Environmental Engineering, GPA: 3.74/4.0 (WES)	09/2016-06/2020
• Graduation Project: Sewage treatment project design in a mountainous town (<u>including 14 CAD technical drawings</u>)	

RESEARCH EXPERIENCES

<i>Instructed by Prof. Baoxia Mi, University of California, Berkeley</i>	<i>Graduate Research</i>
Project 1: Electrified Porous Membrane System for Cr (VI) Reduction	08/2025-Present
• Conducted literature review to identify limitation of current technologies; applied an electrified porous membrane for Cr (VI) reduction; operated and optimized the electroreduction reactor; quantified the inlet and outlet Cr concentration by ICP-MS; evaluated removal efficiency, energy consumption, process economics and feasibility to scale up.	
• Employed EQCM-D to monitor mass adsorption, surface fouling, and interfacial interactions during electroreduction.	
Project 2: 3D Interfacial Solar Evaporator for Resource Recovery	05/2025-Present
• Fabricated GO-based 3D interfacial solar evaporator to enhance photothermal conversion and evaporation performance.	
• Performed evaporation tests under one sun illumination and real outdoor conditions using realistic mixtures and synthetic brackish water; used IC analysis to quantify solution concentrations and evaluate mineral recovery efficiency; proposed a hypothesis to explain the interfacial phenomena; assisted postdoc to design experiments to validate it.	
Project 3: Redox-Active MoS₂ Filtration System for Cr (VI) Removal	12/2024-04/2025
• Designed and tested the 3D filtration system by Autodesk Fusion; learned to synthesize 1T and 2H phase MoS ₂ .	
• Performed tracer test using Rhodamine dye and processed data; coated MoS ₂ inside the 3D filtration column; learned to operate the MoS ₂ filtration system by running wastewater that contains Cr (VI); evaluated the adsorption capacity.	
<i>Mentored by Prof. Zhiyong Jason Ren, Princeton University</i>	<i>Online Program</i>
Project: Emerging Environmental Issues and Solutions	11/2020-03/2021
• Analyzed and Applied knowledge gained from SDGs, Climate Change, Decarbonization, Water-Energy Nexus, etc.	
• Completed a project with a team called <i>Strengthen the Nexus of Energy and Climate Change in Wastewater Treatment</i> .	
<i>Instructed by Prof. Zhaohua Li, Hubei University</i>	<i>Full-Time Research</i>
Project 1: The Ecological Civilization Construction Plan of Wuhan City	11/2020-08/2021
• Conducted literature review on ecological indicators and ecological civilization construction frameworks; assisted the professor in writing and revising chapters on sustainable water supply, decarbonization, green infrastructure planning.	
Project 2: Wooden Biofilm Carriers for Decentralized Wastewater Treatment	09/2020-05/2021
• Conducted anaerobic purification of eight natural wooden biofilm carriers to enhance biodegradability and porosity for wastewater treatment; designed a SBR reactor using wooden media for treating rural sewage, tested removal efficiencies.	
<i>Instructed by Prof. Liya Zhao, Hubei University</i>	<i>Undergraduate Research</i>
Project 1: Willingness-to-pay for Recreation Services and its Value Assessment (12th Challenge Cup)	05/2018-05/2020
• Performed a survey by distributing 2230 questionnaires, analyzed residents' willingness to pay for green services using binary logistic models & ordinal models by SPSS; generated graphical representations, and organized research papers.	
• Exhibited the research in "Green Ecological Environment" of <i>Human, Environment and Future</i> on the UOOC platform.	
Project 2: Global Development of Domestic Waste Treatment and Disposal	01/2019-08/2019
• Researched domestic and international waste classification, conducted on-site visits to two local landfills, and completed the video "Lost in the Trash" of an online course called <i>Human, Environment and Future</i> on the UOOC platform.	

PUBLICATIONS

- Wan Y, Yan N, Zhao J, et al. *Trends and progress in Microalgae-based wastewater treatment technologies: A review*, [C]//E3S Web of Conferences. 2021, 308: 01014
- Zhao M, Wan Y, et al., *Assessment of Willingness to Pay and Value of Leisure and Recreation Services in Urban Green Ecosystems--The Case of Wuhan Hanyang District* [J] Advances in Environmental Protection, 2019,9(3): 315-321. DOI:10.12677/aep.2019.93044
- Wen C, Wan Y, Guo Z, et al., *Assessment of Willingness to Pay and Value of Recreational Services in Urban Green Ecosystems--The Case of Wuhan Qingshan District* [J] Green Technology, 2019(11): 154-157+161
- Zhao M, Wan Y, Zhao L, *Study on recreational service value of green ecosystem in Wuhan Jianghan District by CVM* [J] Sustainable Development, 2019,9(2): 206-213, DOI: 10.12677/sd.2019.92027

SKILLS

- **Lab Skills:** IC, ICP-MS, UV-Vis, Potentiostat, Potential Control, Amperometry, Cyclic Voltammetry, EQCM-D, 1T and 2H MoS₂ Synthesis, GO-based 3D Evaporator Fabrication, Layer-by-Layer Assembly of Membrane Fabrication, Tracer Test, Microscopy, Plate Counting
- **Software Skills:** AutoCAD, Autodesk Fusion 360 (3D design), ArcGIS, SPSS, Python, R, MATLAB, Origin
- **Soft Skills:** Project Leadership and Coordination, Scientific Communication, Cross Cultural Collaboration, Teaching
- **Language Skills:** English (Proficient), Chinese (Native), Japanese (Intermediate)

WORK EXPERIENCES

Teaching Assistant - GEC Academy, Online Program mentored by Prof. Zhiyong Jason Ren	05/2024-07/2024
• Assisted in teaching a program called “New Energy System Development and Optimization under Carbon Neutrality”. • Graded students’ homework, prepared materials and led discussion sessions, provided detailed feedback in final projects.	
Environmental Monitor - Hubei Xingfa Environmental Technology Company, China	03/2023-05/2023
• Assisted in sampling, testing, and analyzing water quality changes, monitored wastewater discharges from various units. • Ensured the proper functioning of the water quality online monitoring system, promptly addressed any data anomalies.	
Research Assistant - For Prof. Zhaohua Li, Dean of Graduate School, Hubei University	09/2020-08/2021
• Assisted the professor in writing and revision of the Ecological Civilization Construction Plan of Wuhan City awarded by Wuhan Ecological Environment Bureau, facilitated the communication and coordination with the project leader. • Supported graduate students’ research projects and responsible for part of experimental operations and data analysis.	
Water Engineering Internship - Yixing Environmental Science and Technology Industrial Park	07/2019
• Joined in ten seminars at the base in Yixing, visited local sewage treatment plants and bioremediation sites. • Engaged in simulated interviews, participated in water quality monitoring, operated software for real-time data analysis.	

HONORS & AWARDS

- Outstanding Graduate Award Hubei University, 2020
- 1st class excellent scholarship, academic year, 2016-2017, 2018-2019, 2019-2020
- 3rd Prize of the 12th Challenge Cup College Students' Extracurricular Academic & Scientific Competition, 2019
- Top 10 Excellent College Student of Faculty of Resources and Environment Science Hubei University, 2018
- 2nd Prize of the Star of Outlook English Talent Competition Hubei Province, 2017
- Practical Innovation Individual of Faculty of Resources and Environment Science Hubei University, 2017
- Excellent Student Leader of Faculty of Resources and Environment Science Hubei University 2016

LEADERSHIP & OUTREACH

(CEE)² Ambassador - Civil and Environmental Engineering, UC Berkeley	09/2025-Present
GA Delegate - Graduate Assembly, University of California, Berkeley	08/2025-Present
Committee of Outreach Department - Berkeley China Summit	07/2025-10/2025
Volunteer of Green Ecological Study Tour Class for K-12 Students in Wuhan City	05/2018-11/2018
Committee of Outreach Department - Undergraduate Student Association, Hubei University	05/2016-09/2017