

# Yujia Wan

Department of Civil and Environmental Engineering, University of California, Berkeley

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## EDUCATION

<b>University of California, Berkeley</b>	<b>Berkeley, CA, USA</b>
<ul style="list-style-type: none"><li>M.S., Civil and Environmental Engineering, GPA: 4.0/4.0</li><li>Thesis: <i>Electrified porous electrode integrated reduction-filtration system for Cr (VI) removal</i> (In preparation)</li></ul>	08/2024-05/2026
<b>Hubei University</b>	<b>Wuhan, China</b>
<ul style="list-style-type: none"><li>B.E. (with honors), Environmental Engineering, GPA: 3.74/4.0 (WES)</li><li>Graduation Project: <i>Sewage treatment project design in a mountainous town</i> (including 14 CAD technical drawings)</li></ul>	09/2016-06/2020

## RESEARCH EXPERIENCES

<i>Instructed by Prof. Baoxia Mi, University of California, Berkeley</i>	<i>Graduate Research</i>
<b>Project 1: Electrochemical Hexavalent Chromium [Cr (VI)] Reduction</b>	08/2025-Present
<ul style="list-style-type: none"><li>Conducted literature review to identify limitation of current technologies; applied a porous electrode 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.</li><li>Employed EQCM-D to monitor mass adsorption, surface fouling, and interfacial interactions during electroreduction.</li></ul>	
<b>Project 2: 3D interfacial Solar Evaporator for Mineral Recovery</b>	05/2025-Present
<ul style="list-style-type: none"><li>Coated solar evaporator with GO suspension to enhance photothermal conversion and evaporation performance.</li><li>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.</li></ul>	
<b>Project 3: MoS<sub>2</sub>-Based Filtration System for [Cr (VI)] Removal</b>	12/2024-04/2025
<ul style="list-style-type: none"><li>Designed and tested the 3D filtration system by Autodesk Fusion; learned to synthesize 1T and 2H phase MoS<sub>2</sub>.</li><li>Performed tracer test using Rhodamine dye and processed data; coated MoS<sub>2</sub> inside the 3D filtration column; learned to operate the MoS<sub>2</sub>-based filtration system by running wastewater that contains Cr (VI); evaluated the adsorption capacity.</li></ul>	
<i>Mentored by Prof. Zhiyong Jason Ren, Princeton University</i>	<i>Online Program</i>
<b>Project: Emerging Environmental Issues and Solutions</b>	11/2020-03/2021
<ul style="list-style-type: none"><li>Analyzed and Applied knowledge gained from Sustainable Development Goals, Global Climate Change, and Carbon Capture and Utilization, Water-Energy Nexus, Resource Recovery, evidenced by completion of weekly assignments.</li><li>Completed a project with a team called <i>Strengthen the Nexus of Energy and Climate Change in Wastewater Treatment</i>.</li></ul>	
<i>Instructed by Prof. Zhaohua Li, Hubei University</i>	<i>Full-Time Research</i>
<b>Project 1: the Ecological Civilization Construction Plan of Wuhan City</b>	11/2020-08/2021
<ul style="list-style-type: none"><li>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.</li></ul>	
<b>Project 2: Wooden Biofilm Carriers for Decentralized Wastewater Treatment</b>	09/2020-05/2021
<ul style="list-style-type: none"><li>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.</li></ul>	
<i>Instructed by Prof. Liya Zhao, Hubei University</i>	<i>Undergraduate Research</i>
<b>Project 1: Willingness-to-pay for Recreation Services and its Value Assessment (12<sup>th</sup> Challenge Cup)</b>	05/2018-05/2020
<ul style="list-style-type: none"><li>Performed a survey by distributing 2230 questionnaires, analyzed residents' willingness to pay for green services using binary logistic models &amp; ordinal models by SPSS; generated graphical representations, and organized research papers.</li><li>Exhibited the research in "Green Ecological Environment" of <i>Human, Environment and Future</i> on the UOOC platform.</li></ul>	
<b>Project 2: Global Development of Domestic Waste Treatment and Disposal</b>	01/2019-08/2019
<ul style="list-style-type: none"><li>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.</li></ul>	

## 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 Jiangnan 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, Ismatec IPC Pump, Potentialstat, Potential Control, Amperometry, Cyclic Voltammetry, EQCM-D, 1T and 2H MoS<sub>2</sub> Synthesis, GO-based 3D Evaporator Fabrication, Microscopy, Plate Counting, SBR operation, Tracer Test, Water Quality Monitoring
- **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
- 1<sup>st</sup> class excellent scholarship, academic year, 2016-2017, 2018-2019, 2019-2020
- 3<sup>rd</sup> 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
- 2<sup>nd</sup> 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)<sup>2</sup> 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