

## Zhonghua CUI

**Date of birth:** 05/1994

### EDUCATION

**BABES-BOLYAI UNIVERSITY** **PhD Student** **2022.10-Present**

- **Major:** Soil Heavy Metal Pollution Control and Remediation
- **Research Topic:** Effects of Swine Manure Biochar on the Bioavailability and Accumulation of Heavy Metals in Rice and Wheat in Soils

**ZHEJIANG UNIVERSITY OF SCIENCE AND TECHNOLOGY** **Master** **2018.09-2021.06**

- **Major:** Soil Heavy Metal Pollution Control and Remediation
- **Research Topic:** Influence of swine manure-derived biochar on Cd availability and uptake by rice in acidic and alkaline paddy soils
- **Third year major course:** 83 / 100 (Rank: Top 11%)

**JILIN AGRICULTURAL UNIVERSITY** **Bachelor** **2014.09-2018.06**

- **Major:** Environmental Science
- **GPA(Overall):** 3.55 / 4.0 (Rank: Top 13%)
- **Third year major course:** 86.75/ 100 (Rank: Top 13%)

### RESEARCH INTERESTS

Soil heavy metal pollution control and remediation, Transfer of heavy metals from soil to plants

### PROJECTS PARTICIPATED BUSINESS BACKGROUND

**Research Assistant in the School of Zhejiang University of Science & Technology** **2021.6-2022.09**

- Responsible for biochar preparation and characterization. Biochar was prepared by mixing polypropylene and sludge in a certain proportion, and its physical and chemical properties and characterization data were explored.

### PROJECTS PARTICIPATED

- **The National Natural Science Foundation of China:**  
Availability of Cu and Zn in biochar and its transformation and migration in the charosphere
- **Public Welfare Projects in Zhejiang Province:**  
Preparation of swine manure-derived biochar and its application in remediation of cadmium contaminated soil
- **Open Fund Project of State Key Laboratory on Quality and Safety of Agricultural Products:**

Preparation of Pig Manure Charcoal and Its Inhibition and Control on Accumulation of Heavy Metals in Wheat

- **Zhejiang Cultivated Land Quality and Fertilizer Management Station Project:**

Remediation Research and Demonstration of Heavy Metal Pollution in Biochar Soil of Zhejiang Province

As the main accomplisher of the aboved projects, I was responsible for project implementation, sample collection and characterization, data analysis and statistics, and writing relevant papers and patents.

## AWARDS & HONORS

- Second-class Academic Scholarship of Zhejiang University of Science and Technology. 2018, 2019
- Zhejiang Environmental Science Society 2020 Paper Excellence Award. 2020
- Third-Class Academic Scholarship of Zhejiang University of Science and Technology. 2020

## SCIENTIFIC RESEARCH ACHIEVEMENT

### Papers:

1. **Zhonghua Cui**, Yu Pan, Zhangtao Li, Jian Liu, Alexandru Ozunu, Jun Meng, Kiril Manevski, & Shengdao Shan. (2026). Impact of node restriction on Cd and Zn transportation in wheat plant treated with swine manure and its biochar: a field experiment. Food Chemistry, 511, 148820. (First Author, **IF = 9.8**)
2. **Zhonghua Cui**, Alexandru Ozunu, Ying Li, Carmen Roba, Marin Şenilă, and Jun Meng. (2024). Preparation of Biochar from Co-Pyrolysis of Carbide Slag and Swine Manure for Adsorption of Heavy Metal Cadmium. Journal of Engineering Sciences and Innovation, 9(3):313–20.
3. Jun Meng, **Zhonghua Cui**, Zhangtao Li, J. Li, Minjun Hu, Jun Xu, & Huaihai Chen. (2026). Biochar orchestrates coordinated soil-microbe-metabolite responses in acidifying paddy soils: evidence from a 5-year field study. Biochar, 8(1), 83. (**IF = 13.1**)
4. Jun Meng, Chengmei Diao, Zhonghua Cui, Zhangtao Li, Jiayi Zhao, Haibo Zhang, Minjun Hu, Jun Xu, Yugen Jiang, Ghulam Haider, Dong Yang, Shengdao Shan, & Huaihai Chen. (2024). Unravelling the influence of microplastics with/without additives on radish (*Raphanus sativus*) and microbiota in two agricultural soils differing in pH. Journal of Hazardous Materials, 478, 135535. (**IF = 11.3**)
5. Alexandru Ozunu, Elisephane Irankunda, Valeria Pop, **Zhonghua Cui**, and Alexandra-Ioana Crăciun. (2024). The Critical Analysis of Air Pollution and Soil Pollution with Microplastics and Heavy Metal in Rwanda, Roumania and China. Revue Roumaine de Chimie, 69(9):483–90.
6. Jun Meng, Henglei Zhang, **Zhonghua Cui**, Haipeng Guo, Ondrej Masek, Binoy Sarkar, Hailong Wang, Nanthi Bolan, & Shengdao Shan. (2022). Comparative study on the characteristics and environmental risk of potentially toxic elements in biochar obtained via pyrolysis of swine manure at lab and pilot scales. Science of The Total Environment, 825, 153941. (**IF = 8.0**)
7. Jun Meng, **Zhonghua Cui**, Henglei Zhang, Jin Zhang, Xianjin Tang, Ming Hung Wong, & Shengdao Shan. (2021). Combined effects of arbuscular mycorrhizae fungus and composted pig manure on the growth of ryegrass and uptake of Cd and Zn in the soil from an e-waste recycling site. Environmental Science and Pollution Research, 28(10), 12677-12685. (**IF = 5.6**)

8. Dongni Sun, Xiaoting Hong, **Zhonghua Cui**, Yingying Du, K. S. Hui, Enhao Zhu, Keming Wu, & K. N. Hui. (2020). Treatment of landfill leachate using magnetically attracted zero-valent iron powder electrode in an electric field. *Journal of Hazardous Materials*, 388, 121768. (IF = 11.3)
9. Yue Chen, Kai Ding, Yu Pan, Zhangtao Li, **Zhonghua Cui\***, & Jun Meng. (2026). Combination of swine manure and its biochar enhance Cd resistance and Zn accumulation in rice grains. *Journal of Agro-Environment Science*, 1-16. (Corresponding Author, in Chinese, CNKI IF = 3.628)
10. Yu Pan, Qingjiu Meng, Jun Xu, **Zhonghua Cui**, Zhangtao Li, Jian Liu, & Jun Meng. (2026). Effects of biochar and lime on heavy metal accumulation and intestinal microbiota of *Pomacea canaliculata* in paddy fields. *Ecology and Environmental Sciences*, 1-12. (in Chinese, CNKI IF = 4.213)
11. Jianqing Pan, Weiying Ji, Jiatao Gu, Wenjin Li, Chengmei Diao, **Zhonghua Cui**, & Zhangtao Li. (2023). Passivation effect of phytic acid-modified composite biochar on cadmium-contaminated paddy soil. *Journal of Shandong Agricultural University (Natural Science Edition)*, 54(4), 570-576. (in Chinese, CNKI IF = 1.346)

#### Patent:

1. Jun Meng, **Zhonghua Cui**, Jiajia Yang, Jun Xu, Minjun Hu, Kailun Ni, Zhangtao Li, & Shengdao Shan. (2026). A kind of biochar, its preparation method and application, and treatment method for heavy metals in water bodies. Chinese Patent, Publication No.: CN121493945A.
2. Jun Meng, **Zhonghua Cui**, & Shengdao Shan. (2019) Method for extracting thallium from soil contaminated by lead-zinc mine tailings and the adsorbent used. Chinese Patent, Publication No.: CN109837391A.

#### SKILLS

- 5 years of experience working in field trials.
- ICP-MS, SEM, TOC, FTIR, BET, AAS, TGA, FCM, qPCR, Automatic Pipetting Workstation, Microplate Read.
- Proficient in Excel, Origin, SPSS and other data processing software and PS, C4D, CAD, Office, Word and other mapping Office software.
- National Computer Rank Examination (C language) 2 Grade / Mandarin II B.