JILU CHE

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RESEARCH INTEREST

Plant-microbe interactions, Screening and application of functional microorganisms

EDUCATION

- **Ph.D Candidate in Forestry** *September 2021 - Present*
Nanjing Forestry University
  - Supervisor: Prof. Weilin Li
- **Master of Science (M.Sc.(Agr.)) in Forestry** *September 2014 - June 2017*
Zhejiang Agriculture and Forestry University
  - Supervisor: Prof. Shuquan Yu
  - Thesis: *Heavy Metal Enrichment Efficiency of Urban Green Tree of Cinnamomum Camphora in Differnt Pollution Degrees*
- **Bachelor of Science (B.Sc.(Agr.)) in Landscape** *September 2009 - June 2014*
North West Agriculture and Forestry University

RESEARCH EXPERIENCE

Institute of Soil Science, Chinese Academy of Sciences September 2020 - August 2021
Research Associate *Adviser: Prof. Xin Song*

· Working towards sustainable remediation of soil with microbial coupling thermal treatment and phytoremediation. We focus on the exploration of microorganisms that degrade PAHs and plants that bioaccumulate PFASs, which contribute to sustainable remediation.

Nanjing Agriculture University September 2017 - August 2020
Research Associate *Adviser: Prof. Qingsheng Cai*

· Exploring plant responses to cadmium stress and functional genes in plant responses to cadmium stress; screening for Cd-tolerant PGPR. Explore the methods of molecular breeding or exogenous addition to alleviate cadmium stress to plants.

PUBLICATIONS

- Beneficial ecological networks dominate the dynamic root endosphere microbiome during long-term symbiosis with host plants,
Jilu Che, Yaqiong Wu, Hao Yang, Wenlong Wu, Lianfei Lyu, Weilin Li,
Plant and Soil, 2024.

- LC-MS and GC-MS Metabolomics Analyses Revealed That Different Exogenous Substances Improved the Quality of Blueberry Fruits under Soil Cadmium Toxicity,
Hao Yang, Yaqiong Wu, *Jilu Che*, Wenlong Wu, Lianfei Lyu, Weilin Li,
Journal of Agricultural and Food Chemistry, 2024, 72:904-915.

- Effects of short and long-term thermal exposure on microbial compositions in soils contaminated with mixed benzene and benzo[a]pyrene: A short communication,
Mukhtiar Ali, Xin Song, Qing Wang, Zhuanxia Zhang, Meng Zhang, Ma Min, Jilu Che, Rui Li, Xing Chen, Zhiwen Tang, Biao Tang, Xiaogfeng Huang,
Science of the Total Environment, 2024, 912:16886211.

- Bioaccumulation of PFASs in cabbage collected near a landfill site in China: Laboratory and field investigations,
Jilu Che, Chang Xu, Xin Song, Xiaoyan Ding, Hong Chen,
Science of the Total Environment, 2024, 906:167578.

- Root Niches of Blueberry Imprint Increasing Bacterial-Fungal Interkingdom Interactions along the Soil-Rhizosphere-Root Continuum,
Jilu Che, Yaqiong Wu, Hao Yang, Shaoyi Wang, Wenlong Wu, Lianfei Lyu, Weilin Li,
Microbiology Spectrum, 2023, 11(3):1-15.

- Long-term cultivation drives dynamic changes in the rhizosphere microbial community of blueberry,
Jilu Che, Yaqiong Wu, Hao Yang, Shaoyi Wang, Wenlong Wu, Lianfei Lyu, Weilin Li,
Frontiers in Plant Science, 2022, 13:962759.

- Mechanisms of biostimulant-enhanced biodegradation of PAHs and BTEX mixed contaminants in soil by native microbial consortium,
Mukhtiar Ali, Xin Song, Qing Wang, Zhuanxia Zhang, *Jilu Che*, Xing Chen, Zhiwen Tang, Xin Liu,
Environmental pollution, 2023, 318:120831.

- Utilization of biochar prepared by invasive plant species *Alternanthera philoxeroides* to remove phenanthrene co-contaminated with PCE from aqueous solutions,
Xin Liu, Qing Wang, Xin Song, Kang Li, Mukhtiar Ali, Changlong Wei, *Jilu Che*, Siwei Guo, Xuedan Dou,
Biomass conversion and biorefinery, 2022, 2190-6815.