

# Curriculum Vitae

## PERSONAL DETAILS

Name: Liu Hongfei  
Date of birth: 2.14<sup>nd</sup>.1992  
Gender: Male  
Major: Ecology  
Email: [Hongfei.Liu@uni-bayreuth.de](mailto:Hongfei.Liu@uni-bayreuth.de)  
Tel: +49-17629850960  
Nationality: China



## EDUCATIONAL BACKGROUND

2019.10 – 2022.03                      Postdoctoral researcher  
Department of Agroecology, University of Bayreuth, Bayreuth,  
Germany

2014.9 – 2019.07                      Successive postgraduate and doctoral programs of study in Ecology  
College of Forestry, Northwest A&F University, Yangling, China

2010.9 – 2014.06                      B.Sc.in Bioscience  
Innovation Experimental College, Northwest A&F University,  
Yangling, China

## RESEARCH EXPERIENCE

2019.10 – now                      “Towards a predictive understanding of how mycorrhizal types influence  
the decomposition of soil organic matter” (Granted by DFG PA 2377/2-1)

2016.08 – 2019.07                      “Effects of nitrogen and phosphorus addition on interspecific relationship  
between *Bothriochloa ischaemum* and *Lespedeza davurica* mediated by  
common arbuscular mycorrhizal networks” (Granted by Natural Science  
Foundation of China NO. 41771557)

2015.10 – 2016.07                      “Interactive effects of microplastics and glyphosate on the dynamics of  
soil dissolved organic matter in a Chinese loess soil” (Granted by EU  
Horizon 2020 project—Interactive Soil Quality Assessment in Europe and  
China for Agricultural Productivity and Environmental Resilience,  
635750)

2015.03 – 2015.09                      “Effects of interaction between temperature and revegetation on the  
microbial degradation of soil dissolved organic matter (DOM)” (Granted  
by Natural Science Foundation of China NO. 41371510—Analysis of  
rhizosphere carbon cycle and microbial function during vegetation  
succession in the hilly-gully region of Loess Plateau)

2014.06 – 2015.02                      “Combined effects of elevated CO<sub>2</sub>, drought stress and nitrogen application

on the growth of *Bothriochloa ischaemum* and its soil microbial properties” (Granted by Natural Science Foundation of China NO. 41371510—Analysis of rhizosphere carbon cycle and microbial function during vegetation succession in the hilly-gully region of Loess Plateau)

2012.06 – 2014.05 “Effects of vegetation restoration soil carbon sequestration and carbon fractions in Northern Shaanxi” (Granted by Foundation for Western Young Scholars, Chinese Academy of Sciences XAB2015A05—Research about carbon fixation rate and potential of the Grain for Green Project)

### **ACADEMIC ABILITY**

1. Skilled in using statistical software such as R software, SPSS, Canoco, and Matlab. Especially proficiency in statistical analysis of soil microbial 16S and ITS rRNA sequencing using R software.
2. Proficiency in <sup>13</sup>C and <sup>15</sup>N stable isotope pulse and continuous labeling technique.
3. Skilled in cultivating and identifying mycorrhiza, including cultivating in vitro culture system of arbuscular mycorrhizal fungi and ectomycorrhizal fungi, cleaning and staining mycorrhizal roots, quantifying mycorrhizal roots, designating mycorrhizal and nonmycorrhizal roots.
4. Skilled in measuring and analyzing physiochemical properties of soil and plant.
5. Good command of a wide range of experimental apparatus such as ultraviolet spectrophotometer, atomic absorption spectrophotometer, fluorospectrophotometer, gas chromatography, high performance liquid chromatography, TOC analyzer, elementary analyzer, Li-6400XT portable photosynthesis system, molecular device SpectraMax M5 multi-mode microplate reader, and continuous flow isotope ratio mass spectrometer.

### **PROFESSIONAL INTERESTS**

Carbon and nutrient cycling, soil organic matter decomposition and stabilization, plant-soil-microorganism interactions, soil mycorrhizal fungi; microbial ecology; global climate change; ecological restoration.

### **PUBLICATIONS**

**Liu Hongfei**, Wu Yang, Xu Hongwei, Ai Zemin, Zhang Jiaoyang, Liu Guobin, Xue Sha. 2021. Mechanistic understanding of interspecific interaction between a C4 grass and a C3 legume via arbuscular mycorrhizal fungi as influenced by soil phosphorus availability using a <sup>13</sup>C and <sup>15</sup>N dual-labelled organic patch. PLANT JOURNAL. 2021, 108: 183-196.

**Liu Hongfei**, Wu Yang, Xu Hongwei, Ai Zemin, Zhang Jiaoyang, Liu Guobin, Xue Sha. 2021. N enrichment affects the arbuscular mycorrhizal fungi-mediated relationship between a C4 grass and a legume. PLANT PHYSIOLOGY. 2021, 187: 1519-1533.

**Liu Hongfei**, Xu Hongwei, Wu Yang, Ai Zemin, Zhang Jiaoyang, Liu Guobin, Xue Sha. Effects of natural vegetation restoration on dissolved organic matter (DOM) biodegradability and its temperature sensitivity. WATER RESEARCH. 2021, 191: 116792.

**Liu Hongfei**, Wang Xiukang, Liang Chutao, Ai Zemin, Wu Yang, Xu Hongwei, Xue Sha, Liu

Guobin. Glomalin-related soil protein affects soil aggregation and recovery of soil nutrient following natural revegetation on the Loess Plateau. *GEODERMA*. 2020, 357: 113921.

**Liu Hongfei**, Yang Xiaomei, Liang Chutao, Li Yuanze, Qiao, Leilei, Ai Zemin, Xue Sha, Liu Guobin. Interactive effects of microplastics and glyphosate on the dynamics of soil dissolved organic matter in a Chinese loess soil. *CATENA*. 2019, 182: 104177.

**Liu, Hongfei**, Liang Chutao, Ai Zemin, Zhang Jiaoyang, Wu Yang, Xu Hongwei, Xue Sha, Liu Guobin. Plant-mycorrhizae association affects plant diversity, biomass, and soil nutrients along temporal gradients of natural restoration after farmland abandonment in the Loess Plateau, China. *LAND DEGRADATION & DEVELOPMENT*. 2019, 30: 1677-1690.

**Liu Hongfei**, Wu Yang, Ai Zemin, Zhang Jiaoyang, Zhang Chao, Xue Sha, Liu Guobin. Effects of the interaction between temperature and revegetation on the microbial degradation of soil dissolved organic matter (DOM) - A DOM incubation experiment. *GEODERMA*. 2019, 337: 812-824.

**Liu Hongfei**, Zhang Jiaoyang, Ai, Zemin, Wu, Yang, Xu, Xu Hongwei, Li Qiang, Xue Sha, Liu Guobin. 16-Year fertilization changes the dynamics of soil oxidizable organic carbon fractions and the stability of soil organic carbon in soybean-corn agroecosystem. *AGRICULTURE ECOSYSTEMS & ENVIRONMENT*. 2018, 265: 320-330.

**Liu Hongfei**, Xue Sha, Wang Guoliang, Liu Guobin. Effects of nitrogen addition on soil oxidizable organic carbon fractions in the rhizospheric and bulk soils of Chinese pines in north-western China. *SOIL RESEARCH*. 2018, 56: 192-203.

**Liu Hongfei**, Yang Xiaomei, Liu Guobin, Liang Chutao, Xue Sha, Chen Hao, Ritsema Coen J., Geissen, Violette. Response of soil dissolved organic matter to microplastic addition in Chinese loess soil. *CHEMOSPHERE*. 2017, 185: 907-917.

Wu Yang, Zhou Huakun, Chen Wenjing, Zhang Yue, Wang Jie, **Liu Hongfei**, Zhao Ziwen, Li Yuanze, You Qiming, Yang Bing, Liu Guobin, Xue Sha. Response of the soil food web to warming and litter removal in the Tibetan Plateau, China. *GEODERMA*. 2021, 401: 115318.

Wu Yang, Chen Wenjing, Entemake Wulan, Wang Jie, **Liu Hongfei**, Zhao Ziwen, Li Yuanze, Qiao Leilei, Yang Bin, Liu Guobin, Xue Sha. Long-term vegetation restoration promotes the stability of the soil micro-food web in the Loess Plateau in North-west China. *CATENA*. 2021, 202: 105293.

Zhang Jiaoyang, Ai Zemin, Xu Hongwei, **Liu Hongfei**, Wang Guoliang, Deng Lei, Liu Guobin, Xue Sha. Plant-microbial feedback in secondary succession of semiarid grasslands. *SCIENCE OF THE TOTAL ENVIRONMENT*. 2021, 760: 143389.

Ai Zemin, Zhang Jiaoyang, **Liu Hongfei**, Liang Chutao, Xue Sha, Liu Guobin. Influence of slope aspect on the macro- and micronutrients in *Artemisia sacrorum* on the Loess Plateau in China. *ENVIRONMENTAL SCIENCE AND POLLUTION RESEARCH*. 2020, 27: 20160-20172.

Zhang Jiaoyang, Yang Xiaomei, Song Yahui, **Liu Hongfei**, Wang Guoliang, Xue Sha, Liu Guobin, Ritsema Coen J, Geissen Violette. Revealing the nutrient limitation and cycling for microbes under forest management practices in the Loess Plateau - Ecological stoichiometry. *GEODERMA*.

2020, 361: 114108.

Qiao Leilei, Chen Wenjing, Wu Yang, **Liu Hongfei**, Zhang Jiaoyang, Liu Guobin, Xue Sha. Rehabilitation time has greater influences on soil mechanical composition and erodibility than does rehabilitation land type in the hilly-gully region of the Loess Plateau, China. PEERJ. 2019, 7: e8090.

Ai Zemin, Zhang Jiaoyang, **Liu Hongfei**, Xue Sha, Liu Guobin. Influence of slope aspect on the microbial properties of rhizospheric and non-rhizospheric soils on the Loess Plateau, China. SOLID EARTH. 2018, 9: 1157-1168.

Ai Zemin, Zhang Jiaoyang, **Liu Hongfei**, Xin Qi, Xue Sha, Liu Guobin. Soil nutrients influence the photosynthesis and biomass in invasive *Panicum virgatum* on the Loess Plateau in China. PLANT AND SOIL. 2017, 418: 153-164.

Ai Zemin, Wang Guoliang, Liang Chutao, **Liu Hongfei**, Zhang Jiaoyang, Xue Sha, Liu Guobin. The Effects of Nitrogen Addition on the Uptake and Allocation of Macro- and Micronutrients in *Bothriochloa ischaemum* on Loess Plateau in China. FRONTIERS IN PLANT SCIENCE. 2017, 8: 1476.

