

CURRICULUM VITAE

Peng CAI

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EDUCATION

Postdoctoral Scholar, University of California, Riverside, USA
2011-2012
Ph.D. in Soil Science, HZAU, Wuhan, China
2007
B.S. in Soil Science, HZAU, Wuhan, China 1998

APPOINTMENTS

Professor, Soil Biofilms and Microbial Ecology, HZAU, China 2013-present
Associate Professor, Soil Biofilms and Microbial Ecology, HZAU, China
2009-2013
Assistant Professor, Soil Biofilms and Microbial Ecology, HZAU, China
2007-2009

RESEARCH INTERESTS

Functional roles of microbial biofilms in soil via understanding microbial biofilms development and interspecies interactions at molecular and community levels, microbial feedbacks to environmental changes, and bacterial pathogens survival and horizontal gene transfer in soil.

PUBLICATIONS

I have published 100 total peer-review articles that have been cited more than 4000 times as of June 2022. I have an H index 40 (as of 6/30/2022 on web of science). I am the first author or corresponding author for 52 of these peer-reviewed articles papers as first author or corresponding author. Five most relevant publications in the past three years are listed below. (*corresponding author)

1. Chunhui Gao, Hui Cao, **Peng Cai***, Søren J. Sørensen. The initial inoculation ratio regulates bacterial coculture interactions and metabolic capacity. The ISME Journal. 2021, 15, 29-40.
2. Ming Zhang, Caroline L. Peacock, **Peng Cai***, Ke-Qing Xiao, Chenchen Qu, Yichao Wu, Qiaoyun Huang. Selective retention of extracellular polymeric substances induced by adsorption to and coprecipitation with ferrihydrite. 2021, 299, 15-34.

3. Xinxin Jing, Yichao Wu, Liang Shi, Caroline L. Peacock, Noha Mohamed Ashry, Chunhui Gao, Qiaoyun Huang, **Peng Cai***. Outer membrane c-Type cytochromes OmcA and MtrC play distinct roles in enhancing the attachment of *Shewanella oneidensis* MR-1 cells to goethite. Applied and Environmental Microbiology. 2020, 86, e01941-20.
4. Yichao Wu, **Peng Cai***, Xinxin Jing, Xueke Niu, Dandan Ji, Noha Mohamed Ashry, Chunhui Gao, Qiaoyun Huang. Soil biofilm formation enhances microbial community diversity and metabolic activity. Environment International. 2019, 132, 105116.
5. Shuang Wang, Marc Redmile-Gordon, Monika Mortimer, **Peng Cai***, Yichao Wu, Chunhui Gao, Qiaoyun Huang. Extraction of extracellular polymeric substances (EPS) from red soils (Ultisols). Soil Biology and Biochemistry. 2019, 135, 283-285.

RESEARVH GRANTS

I have received 14 funding as a PI or Co-PI from National Natural Science Foundation of China, Ministry of Science and Technology of China, Ministry of Education of China, and The Royal Society since 2009. A total of ten million (RMB) has been awarded to my program. Four representative grants in the five years are listed below.

1. Soil biofilms roles in the environmental health. RMB 4,000,000. 1/1/2023-12/31/2027. Role: PI. National Natural Science Foundation of China.
2. Extracellular polymeric substances (EPS) binding and stability mechanisms on soil iron (hydr)oxides. Euro110, 000 plus RMB 500,000. 1/1/2019-12/31/2021. Role: Co-PI. Royal Society-Newton Advanced Fellowship.
3. Bacterial extracellular polymeric substances (EPS) interactions with soil active particles control soil micro-aggregate formation mechanisms. RMB 800,000. 1/1/2019-12/31/2022. Role: PI. National Natural Science Foundation of China.
4. Soil Biofilms and Microbial Ecology. RMB 1,500,000. 1/1/2016-12/31/2018. Role: PI. National Natural Science Foundation of China.
5. Bacterial pathogens survival and transport in soils. RMB 2,700,000. 1/1/2016-12/31/2018. Role: PI. National Key Scientific Research Project of China.

AWARDS AND HONORS

Yangtze River Youth Scholar, Ministry of Education, China
2017

Outstanding Youth Scholar, National Natural Science Foundation of China
2015

Wolf Vishniac Award, Interactional Society for Environmental Biogeochemistry 2013

PROFESSIONAL SERVICE

Since 2015, I reviewed 1-2 international grant proposals per year, 2-3 manuscripts per month from scientific journals. I have been serving as a Subject Editor for Journal of Soils and Sediments since 2018. Currently, I am also serving on the Editorial Advisory Board for Soil Ecology Letters (2018 – present) and Chinese Society of Soil Biology and Biochemistry Committee member (2012 – present).