

Tianming Cai

Professor of Environmental technology

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Education:

- Ph.D., Nanjing Agricultural University; Biological Sciences, 2005

Research interests and expertise:

- My research interests include water pollution control, soil remediation, biological reduction of sludge and its utilization. I am currently the director of the institute of environmental engineering of Nanjing Agricultural University and a member of the environmental microbiology committee of Chinese Society for Microbiology.
- Main research directions: (i) Screening functional strains to treat toxic and refractory industrial wastewater and explore its molecular mechanism; and (ii) removal of nitrogen and phosphorus from industrial wastewater.
- More than 60 research papers are published on "Water Research", "Bioresource Technology", "Chemical Engineering Journal" and others. 8 national invention patents and more than 20 industrial wastewater treatment projects, such as VE wastewater, pharmaceutical and chemical wastewater and solvent wastewater treatment.

Current projects:

- Development and comprehensive demonstration of river pollution control and tail water deep purification technology in Wangyu River Network. 201712-202012.
- Taihu Lake Water Pollution Control Project, Research and Demonstration of New Technologies for Economic and Efficient Reduction and Resource Utilization of Municipal Sewage Treatment Plant Sludge. 201412-201512.
- Environmental protection research project in Jiangsu Province, research and engineering demonstration on treatment technology of industrial wastewater with high salinity, nitrogen and toxicity and wastewater containing heavy metals, 2017-11-2019-11.

Current teaching:

- Environmental Management Science spring term
- Environment Engineering Technology autumn term
- Advances in Environmental Engineering and Pollution Control autumn term

Selected publications:

- Canlan Jiang, Yuefei Ji, Yuanyuan Shi, Jifei Chen, Tianming Cai*. Sulfate radical-based oxidation of fluoroquinolone antibiotics: Kinetics, mechanisms and effects of natural water matrices. *Water Research*, 2016, 106: 507-517.
- Dahu Ding, Chao Liu, Yuefei Ji, Qian Yang, Lulu Chen, Canlan Jiang, Tianming Cai*. Mechanism insight of degradation of norfloxacin by magnetite nanoparticles activated persulfate: Identification of radicals and degradation pathway. *Chemical Engineering Journal*, 2016, 308:330-339.
- Dahu Ding*, Zhenya Zhang, Rongzhi Chen, Tianming Cai*, Selective removal of cesium by ammonium molybdophosphate–polyacrylonitrile bead and membrane. *Journal of Hazardous Materials*, 2017, 324: 753-761.
- LiweiChen, Dahu Ding, Chao Liu, Hao Cai, YingQu, Shengjiong Yang, Yu Gao, Tianming Cai*. Degradation of norfloxacin by CoFe₂O₄-GO composite coupled with peroxymonosulfate: A comparative study and mechanistic consideration. *Chemical Engineering Journal*, 2018, 334: 273-284.
- Shu Cai, Xin Li, TianMing Cai*, Jian He. Degradation of piperazine by *Paracoccus* sp. TOH isolated from activated sludge. *Bioresource Technology* (2013) 130: 536–542.

Prizes, awards, honors:

- The third prize of Jiangsu Environmental Protection Science and Technology achievements.
- The first batch of "321" leading entrepreneurial talents of Nanjing.