周立祥、教授、南京农业大学固体废物研究所所长，环境科学与工程学科点点长。研发的污泥生物沥浸技术、生物聚沉氧化技术已在我国许多污水处理厂、规模化养殖场、餐厨垃圾处理厂得到实际应用。

一、教育经历

1992.9-1995.9 南京农业大学 有机固废处理方向 博士研究生

1987.9-1990.6 南京农业大学 有机固废处理方向 硕士研究生

1981.9-1985.6 湖南农业大学 土化专业 本科生

二、工作经历

1999．7-至今 南京农业大学 环境科学与工程系 教授、博士生导师

1998.1-1999.6 南京农业大学 环境科学与工程系 副教授、硕士生导师

1996.1-1998.1 中国科学院地理研究所 博士后研究，副研究员

1995.10-1996.1 哈尔滨工业大学，水污染控制中心，访问研究

1990.7-1992.8 湖南农业大学 资源环境学院 讲师

1985.7-1987.8 湖南农学院分院 助教

三、研究领域

1.有机固体废物处理。涉及污泥、餐厨/厨余垃圾、畜禽粪便等处理、生物转化与资源化。

2.高浓度有机废水处理。涉及餐厨垃圾沼液、畜禽养殖废水、垃圾渗滤液等的物化与生化处理。

3.酸性矿山废水和含重金属废水处理。重点研究生物矿化法在该

类废水处理中的作用机理、效果及工程应用。

4. 环境生物地球化学。研究土壤和水体环境中微生物-矿物-有毒金属的相互关系，重点研究微生物促进下铁矿物的形成及其在地下水除 As 除 F 以及阻控水稻对 As 积累的效果与机制等。

四、获奖情况

1. 2018 中国专利优秀奖 （第一完成人）

2. 2018 中国产学研合作创新奖 （个人奖）

3. 2016 教育部技术发明奖 一等奖 （第一完成人）

4. 2014 第七届中国技术市场金桥奖 （个人奖）

5. 2014 简浩然环境微生物基金优秀环境工程奖 （第一完成人）

6. 2012 环保部环境保护科学技术奖 二等奖 （第四完成人）

7. 2007 江苏建设科学技术奖 一等奖 （第一完成人）

8. 2004 江苏省科学技术进步奖 二等奖 （第一完成人）

五、教学情况

讲授环境工程专业本科生课程《固体废物处理处置与资源化》、硕士生和博士生课程《环境工程专题》、《环境工程研究班讨论》

六、学术与社会兼职

1.中国勘察设计注册环保工程师资格考试专家委员会委员

2.中国工程教育认证专家

3.国家畜禽养殖废弃物资源化科技创新联盟常务理事

4.中国土壤学会土壤环境专业委员会 副主任

5.中国城市环境卫生协会污泥处理处置专业委员会 委员

6.《南京农业大学学报》、《湖南农业大学学报》、《环境卫生工程》、《生态学杂志》等编委

七、主持项目

1.国家自然科学基金重点项目：含重金属酸性矿山废水的生物矿化处理新技术原理（21637003），291 万元，2017.1-2021.12,

2.国家自然科学基金重点项目：微生物成因矿物对酸性矿山废水中有毒金属清除的作用、机制及其调控(40930738),180 万元,2010.1-2013.12

3.国家自然科学基金面上项目：生物成因施氏矿物阻控水稻吸收转运 As 的效果与机制研究（41977338）,62 万元，2020.1-2023.12

4.国家自然科学基金面上项目：嗜酸性氧化亚铁硫杆菌促进酸性矿山废水石灰沟渠法处理效果的机制研究（41371476），75 万元，2014.1-2017.12

5.国家自然科学基金面上项目：微生物胞外聚合物在污泥生物沥浸处理中的作用机理及其调控(21177060),65 万元,2012.1-2015.12

6.国家重点研究计划项目子课题：华南镉铅污染农田修复与安全利用技术示范（2018YFD0800700），54 万元，2018.8-2022.8

7.国家 863 计划重点项目课题:节能降耗污泥脱水装备及制备建材技术与示范(2012AA063501),300 万元，2012.1-2015.12

8.国家 863 计划专题课题：生物沥浸法促进城市污泥高效脱水与资源化利用的技术及其中试工程示范（2009AA06Z317），96 万元，2009.1-2012.12

9. 校企产学研合作项目：“餐厨垃圾沼液及畜禽粪污废水高效处理与资源化技术及工程应用”（0YHD-B-201908001），2018.8-2023.8

八、发表论文

1.Yongwei Song, Linlin Yang, Heru Wang, Xinxin Sun, Shuangyou Bai, Ning Wang, Jianru Liang, Lixiang Zhou*. The coupling reaction of Fe^{2+} bio-oxidation and resulting Fe3+ hydrolysis drastically improve the formation of iron hydroxysulfate minerals in AMD, Environmental Technology, 2019, DOI: 10.1080/09593330.2019.1701564

2.Wang Ning#, Di Fang#, Guanyu Zheng, Jianru Liang, Lixiang Zhou*. A novel approach coupling ferrous iron biooxidation and ferric iron chemo-reduction to promote biomineralization in simulated acidic mine drainage. RSC Advances, 2019,9:5083-5090

3.Decheng Jin,Lanlan Liu, Guanyu Zheng, Jianru Liang, Lixiang Zhou*. A rapid method to quantify the biomass of viable Acidithiobacillus ferrooxidans in iron-based bioleaching matrix of sewage sludge. Biochemical Engineering Journal, 2019,152: 107360

4.Xiaomeng Wang, Hekai Jiang, Di Fang, Jianru Liang, Lixiang Zhou*. A novel approach to rapidly purify acid mine drainage through chemically forming schwertmannite followed by lime neutralization. Water Research, 2019,151:515-522

5.Guanyu Zheng, Yi Lu, Dianzhan Wang, Lixiang Zhou*. Importance of sludge conditioning in attenuating antibiotic resistance:Removal of antibiotic resistance genes by bioleaching and chemical conditioning with Fe[III]/CaO. Water Research, 2019,152:61-73

6.Yi Lu, Guanyu Zheng*, Wenbin Zhou, Jiajun Wang, Lixiang Zhou. Bioleaching conditioning increased the bioavailablity of polycyclic aromatic hydrocarbons to promote their removal during co-composting of industrial and municipal sewage sludges. Science of the Total Environment, 2019, 665:1073-1082.(NSFC 21477055,21637003)

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9.Wang Genmei, Lixiang Zhou*. Application of green manure and pig manure to Cd-contaminated paddy soil increases the risk of Cd uptake by rice and Cd downward migration into groundwater: Field micro-plot trials. Water Air Soil Pollut 2017, 228(1):29.DOI 10.1007/s11270-016-3207-2.

10.Xu Zhihui,Yu Yaqun,Fang Di., Liang Jianru, Zhou Lixiang*. Simulated solarlight catalytic reduction of Cr(VI) on microwaveeultrasonication synthesized flower-like CuO in the presence of tartaric acid. Materials Chemistry and Physics, 2016,171:386-393

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14.Zhihui Xu*,Yaqun Yu,Di Fang,Jiangyan Xu,Jianru Liang,Lixiang Zhou*.Microwave–ultrasound assisted synthesis of β-FeOOH and its catalytic property in a photo-Fenton-like process. Ultrasonics Sonochemistry.2015,27:287-295.

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