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教育经历

2006.03—2009.06, 同济大学环境科学与工程学院 环境工程 专业, 工学博士学位
(导师: 何品晶 教授)

2003.09—2006.03, 青岛理工大学环境与市政工程学院 环境工程 专业, 工学硕士学位
(导师: 徐晓军 教授)

1999.09—2003.07, 济南大学应用化学与环境工程学院 环境工程 专业, 学士学位

工作经历

| | | |
|-----------------|-----------|-------|
| 2015.03—2016.04 | 北卡罗来纳州立大学 | 访问学者 |
| 2013.12—至今 | 南京农业大学 | 博士生导师 |
| 2011.6—2013.12 | 南京农业大学 | 硕士生导师 |
| 2011.1—至今 | 南京农业大学 | 副教授 |
| 2010.06—2013.06 | 南京农业大学 | 博士后 |
| 2009.10—2010.12 | 南京农业大学 | 讲师 |
| 2008.06—2008.10 | 台湾大学 | 学术访问 |

研究方向与学术成果



本人一直从事固体废弃物处理与资源化利用方面的研究工作，主要包括农业固体有机废弃物资源化利用、土壤纳米矿物调控机制和土壤有机质累积等方面。近 5 年来，已获得国家自然科学基金、973 项目子课题、中央高校基本科研业务费重点研究项目、中国博士后特别资助等项目的资助。已在 Environmental Science and Technology、Water Research、Bioresource Technology 等期刊公开发表 SCI 论文 60 余篇，其中，第一和通讯作者论文 30 余篇。被引用 1100 余次，H 指数 18。申请国家发明专利 5 项（其中 3 项已授权）。参编英文专著 1 部。

文章及专著详见

Google Scholar: <https://scholar.google.com/citations?user=dtc7bKEAAAAJ&hl=en>

Research ID: <http://www.researcherid.com/rid/H-4968-2013>

本实验室具有浓厚的学术氛围、先进的实验设备。热忱欢迎校内外
保送或报考本人的硕士和博士研究生！

主要科研项目

- ✚ 2014.01–2017.12, 有机肥促进红壤中非晶形纳米矿物形成的机制研究 国家自然科学基金面上项目（编号 41371248），主持人；
- ✚ 2011.01–2013.12, 荧光标记方法原位研究接种优势菌种加速堆肥腐熟机理 国家青年基金项目（编号 21007027），主持人；
- ✚ 2013.07–2016.07, 土壤胶体中非晶形纳米矿物的形成机制和结构特征研究 江苏省自然科学基金面上项目（编号 BK20131321），主持人；
- ✚ 2011.01–2015.12, “土壤有机质转化累积机制与提高途径”，国家重点基础研究发展计划（973 计划）课题（编号 2011CB100503），学术骨干；
- ✚ 2012.06–2013.06, 基于广义二维相关光谱和多重荧光标记方法的堆肥腐熟及调控机制研究 中国博士后科学基金第四批特别资助（编号 201104571），主持人；
- ✚ 2011.06–2014.07, 哈兹木霉及其生物有机肥对黄瓜和香蕉的促生机理 中央高校基本科研业务费第二批自主创新重点研究项目（编号 KYZ201143），主持人；
- ✚ 2011.01–2013.12, 荧光标记方法原位研究堆肥腐熟机理 高等学校博士学科点专



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项科研基金项目 (编号 20100097120015), 主持人;

2011.06–2013.06, 荧光标记方法原位研究接种优势菌种加速堆肥腐熟机理 中国博士后科学基金项目 (编号 20100481156), 主持人;

2011.06–2013.06, 荧光标记方法原位研究接种优势菌种加速堆肥腐熟机理 江苏省博士后科研资助计划项目 (编号 1002017B), 主持人;

主要 SCI 论文(*通讯作者)

1. Xiao Jian, He Xin-hua, Zhou Ying, Zheng Li-rong, Hao Jia-long, Ran Wei, Shen Qi-rong, **Yu Guang-hui***. *In situ* interactive characteristics of reactive minerals in soil colloids and soil carbon preservation differentially revealed by nanoscale secondary ion mass spectrometry and X-ray absorption fine structure spectroscopy. *Biogeoscience Discuss*, 2016, doi:10.5194/bg-2015-625.
2. Huang Chi-chao, Liu Sha, Li Rui-zhi, Sun Fu-sheng, Zhou Ying, **Yu Guang-hui***. Spectroscopic evidence of the improvement of reactive iron mineral content in red soil by long-term application of swine manure. *PLoS ONE*, 2016, 11(1): e0146364.
3. Xiao Jian, Wen Yong-li, Li Huan, Shen Qi-rong, Ran Wei, Mei Xin-lan, He Xin-hua, **Yu Guang-hui***. *In situ* visualization and characterization of the capacity of highly reactive minerals preserving soil organic matter (SOM) in colloids at submicron scales. *Chemosphere*, 2015, 138: 225–232.
4. Wang Chang, Huang Chi-chao, Qian Jian, Xiao Jian, Li Huan, Wen Yong-li, He Xin-hua, Ran Wei, Shen Qi-rong, **Yu Guang-hui***. Rapid and accurate evaluation of the quality of commercial organic fertilizers using near infrared spectroscopy. *PLoS ONE*, 2014, 9(2): e88279.
5. Wu Jun, Wu Min-Jie, Li Chun-Ping, **Yu Guang-hui***. Long-term fertilization modifies the structures of soil fulvic acids and their binding capability with Al. *PLoS ONE*, 2014, 9(8): e105567.
6. Wen Yong-li, Li Huan, Xiao Jian, Wang Chang, Shen Qi-rong, Ran Wei, He Xin-hua, Zhou Quan-suo, **Yu Guang-hui***. Insights into complexation of dissolved organic matter and Al(III) and nanominerals formation in soils under contrasting fertilizations using two-dimensional correlation spectroscopy and high resolution-transmission electron microscopy techniques. *Chemosphere*, 2014, 111: 441–449.



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7. Wen Yong-li, Xiao Jian, Li Huan, Shen Qi-rong, Ran Wei, Zhou Quan-suo, **Yu Guang-hui***, He Xin-hua. Long-term fertilization practices alter soil aluminum fractions and coordinate state in soil colloids. *Soil Science Society of America Journal*, 2014, 78(6): 2083–2089.
8. Li Xiao-ming, Shen Qi-rong, Zhang Dong-qing, Mei Xin-lan, Ran Wei, Xu Yang-chun, **Yu Guang-hui***. Functional groups determine biochar properties (pH and EC) as studied by two-dimensional ¹³C NMR correlation spectroscopy. *PLoS ONE*, 2013, 8(6): e65949.
9. Luo Yi-hong, Zhang Dong-qing, **Yu Guang-hui***, Shen Qi-rong. Aromatic moieties from matured chicken manure and agriculture residues compost suppress the growth of *Lepidium sativum* L. and *Trichoderma harzianum*. *Pedosphere*, 2013, 23(6): 826–834.
10. **Yu Guang-hui**, Wu Min-jie, Wei Guan-ran, Luo Yi-hong, Ran Wei, Wang Bo-ren, Zhang Jian-chao, and Shen Qi-rong. Binding of organic ligands with Al(III) in dissolved organic matter from soil: implications for soil organic carbon storage. *Environmental Science and Technology*, 2012, 46(11): 6102–6109.
11. Wang Li-ping, Shen Qi-rong, **Yu Guang-hui***, Ran Wei, Xu Yang-chun. Fate of biopolymers during rapeseed meal and wheat bran composting as studied by two-dimensional correlation spectroscopy in combination with multiple fluorescence labeling techniques. *Bioresource Technology*, 2012, 105: 88–94.
12. Wu Min-jie, Mei Xin-lan, Shen Qi-rong, **Yu Guang-hui***. Molecular structures and biofilm characterization in compost at different maturity stages using ¹³C NMR spectroscopy and multiple fluorescence labeling techniques. *Journal of Residuals Science & Technology*, 2012, 9(2): 65–72.
13. **Yu Guang-hui**, Tang Zhu, Xu Yang-chun, Shen Qi-rong. Multiple fluorescence labeling and two dimensional FTIR-¹³C NMR heterospectral correlation spectroscopy to characterize extracellular polymeric substances in biofilms produced during composting. *Environmental Science and Technology*, 2011, 45(21), 9224–9231.
14. **Yu Guang-hui**, Wu Min-jie, Luo Yi-hong, Yang Xing-ming, Ran Wei, Shen Qi-rong. Fluorescence excitation–emission spectroscopy with regional integration



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- analysis for assessment of compost maturity. *Waste Management*, 2011, 31(8): 1729–1736.
15. **Yu Guang-hui**, Luo Yi-hong, Wu Min-jie, Tang Zhu, Liu Dong-yang, Yang Xing-ming, Shen Qi-rong. PARAFAC modeling of fluorescence excitation–emission spectra for rapid assessment of compost maturity. *Bioresource Technology*, 2010, 101(21): 8244–8251.
 16. **Yu Guang-hui**, He Pin-jing, Shao Li-ming. Novel insights into sludge dewaterability by fluorescence excitation–emission matrix combined with parallel factor analysis. *Water Research*, 2010, 44(3): 797–806.
 17. **Yu Guang-hui**, He Pin-jing, Shao Li-ming. Reconsideration of anaerobic fermentation from excess sludge at pH 10.0 as an eco–friendly process. *Journal of Hazardous Materials*, 2010, 175(1–3): 510–517.
 18. **Yu Guang-hui**, He Pin-jing, Shao Li-ming, Lee Duu-jong, Mujurndar Arum S. Extracellular polymeric substances (EPS) and extracellular enzymes in aerobic granules. *Drying Technology*, 2010, 28(7): 910–915.
 19. **Yu Guang-hui**, Lee Duu-jong, He Pin-jing, Shao Li-ming, Lai Juin-yih. Fouling layer with fractionated extracellular polymeric substances of activated sludge. *Separation Science and Technology*, 2010, 45(7): 993–1002.
 20. **Yu Guang-hui**, He Pin-jing, Shao Li-ming. Characteristics of extracellular polymeric substances (EPS) fractions in sludge flocs and their effects on flocculability. *Bioresource Technology*, 2009, 100(13): 3193–3198.
 21. **Yu Guang-hui**, Juang Yu-chuan, Lee Duu-jong, He Pin-jing, Shao Li-ming. Enhanced aerobic granulation with extracellular polymeric substances (EPS)–free pellets. *Bioresource Technology*, 2009, 100(20): 4611–4615.
 22. **Yu Guang-hui**, Juang Yu-chuan, Lee Duu-jong, He Pin-jing, Shao Li-ming. Filterability and extracellular polymeric substances in aerobic granules for AGMBR process. *Journal of the Taiwan Institute of Chemical Engineers*, 2009, 40(4): 479–483.
 23. **Yu Guang-hui**, He Pin-jing, Shao Li-ming. Breakage and re–growth of sludge flocs by removal and re–addition of extracellular polymeric substances (EPS) fractions. *Environmental Engineering Science*, 2009, 26(10): 1533–1540.



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24. **Yu Guang-hui**, He Pin-jing, Shao Li-ming, Zhu Yi-shu. Enzyme extraction by ultrasound from sludge flocs. *Journal of Environmental Sciences-China*, 2009, 21(2): 204–210.
25. **Yu Guang-hui**, He Pin-jing, Shao Li-ming. Characteristics of different extracellular polymeric substances (EPS) fractions of sludge flocs from brewery wastewater treatment plant (WWTP). *Journal of Residuals Science & Technology*, 2009, 6(3): 105–111.
26. **Yu Guang-hui**, He Pin-jing, Shao Li-ming, He Pei-pei. Stratification structure of sludge flocs with implications to dewaterability. *Environmental Science and Technology*, 2008, 42(21), 7944–7949.
27. **Yu Guang-hui**, He Pin-jing, Shao Li-ming, Zhu Yi-shu. Extracellular proteins, polysaccharides and enzymes impact on sludge aerobic digestion after ultrasonic pretreatment. *Water Research*, 2008, 42(8–9): 1925–1934.
28. **Yu Guang-hui**, He Pin-jing, Shao Li-ming, He Pei-pei. Toward understanding the mechanism of improving the production of volatile fatty acids from activated sludge at pH 10.0. *Water Research*, 2008, 42(18): 4637–4644.
29. **Yu Guang-hui**, He Pin-jing, Shao Li-ming, Lee Doo-jong. Extracellular enzymes in sludge flocs collected at fourteen full-scale wastewater treatment plants. *Journal of Chemical Technology and Biotechnology*, 2008, 83(12): 1717–1725.
30. **Yu Guang-hui**, He Pin-jing, Shao Li-ming, Lee Doo-jong. Enzyme activities in activated sludge flocs. *Applied Microbiology and Biotechnology*, 2007, 77(3): 605–612.
31. **Yu Guang-hui**, Xu Xiao-Jun, He Pin-Jing. Isolates identification and characteristics of microorganisms in biotrickling filter and biofilter system treating H₂S and NH₃. *Journal of Environmental Sciences-China*, 2007, 19 (7): 859–863.

Book Chapters

Yu Guang-hui, Ran-Wei, Shen Qi-rong. "Process and application of organic fertilizers in China", In: Marcelo Larramendy and Sonia Soloneski (eds.) **Organic Fertilizers**, 2016, InTech - Open Access Publisher (ISBN 978-953-51-4701-5).



荣誉及获奖

- 2015 年 国家科技进步二等奖（本人排名第 12 位）
- 2015 年 中华农业科技奖（优秀创新团队奖）（本人排名第 9 位）
- 2013 年 教育部科技进步奖一等奖（本人排名第 12 位）
- 2012 年 全国优秀博士学位论文提名
- 2012 年 高校“青蓝工程”优秀青年骨干教师培养对象
- 2012 年 南京农业大学“钟山学者”学术新秀
- 2012 年 “江苏省优秀硕士学位论文”指导教师
- 2012 年 上海市优秀博士学位论文
- 2010 年 同济大学优秀博士学位论文