

本课题组研究方向为：水处理高级氧化工艺、环境化学、污染物在环境中的迁移转化规律及其生态风险评价。欢迎有志于硕博连读、出国深造且英语基础好的同学报考！

Curriculum Vitae

姓名：陆隼鹤

单位：南京农业大学资源与环境科学学院

电话：(025) 8439 5164

电邮：jhlh@njau.edu.cn

一、教育及工作经历

- 1998.7, Nanjing University, Dept. Environmental Science & Engineering, BS.;
- 2001.7, Nanjing University, Dept. Environmental Science & Engineering, MS.;
- 2007.6, University of Washington, Dept. Civil & Environmental Engineering, Ph.D.;
- 2007.7-2010.8, University of Georgia, Dept. Crop & Soil Sciences, Postdoctoral Associate;
- 2010.9-, 南京农业大学环境科学与工程系, 教授

二、研究领域

- 环境水化学
- 水处理高级氧化工艺
- 消毒副产物的生成和控制
- 天然有机质的结构和反应活性
- 有机污染物（包括农药、持久性污染物、内分泌干扰物、药物等）环境行为
- 土壤腐殖化过程对污染物迁移转化的影响以及在水处理、污染修复中的应用

三、学术兼职

- American Chemical Society
- International Water Association
- Soil Science Society of America
- Chinese-American Professors in Environmental Engineering and Science
- 中国环境科学学会水处理与回用专业委员会委员

四、代表性论文

1. Fan, Y.; Ji, Y.; Zheng, G.; Lu, J.; Kong, D.; Yin, X.; Zhou, Q. Degradation of atrazine in heterogeneous Co_3O_4 activated peroxy monosulfate oxidation process: Kinetics, mechanisms, and reaction pathways. *Chemical Engineering Journal*, 330, 831-839 (2017).
2. Ji, Y.; Shi, Y.; Wang, L.; Lu, J. The role of nitrite in sulfate radical-based degradation of phenolic compounds: An unexpected nitration process relevant to groundwater remediation by in-situ chemical oxidation (ISCO). *Water Research*, 123, 249-257 (2017).
3. Jiang, M.; Lu, J.; Ji, Y.; Kong, D. Transformation of acetaminophen in bicarbonate activated persulfate oxidation. *Water Research*, 116, 324-331 (2017).

4. Wang, L.; Kong, D.; Ji, Y.; Lu, J.; Yin, X.; Zhou, Q. Formation of iodinated by-products in heat activated persulfate oxidation process in the presence of iodide. *Chemosphere*, 181, 400-408 (2017).
5. Ji, Y.; Shi, Y.; Wang L.; Lu, J.; Ferronato, C.; Chovelon, J-M. Sulfate radical-based oxidation of antibiotics sulfamethazine, sulfapyridine, sulfadiazine, sulfadimethoxine, and sulfachloropyridazine: Formation of SO₂ extrusion products and effects of natural organic matter. *Science of the Total Environment*, 593-594, 704-712 (2017).
6. Ji, Y.; Shi, Y.; Wang L.; Lu, J. Denitration and renitration processes in sulfate radical-mediated degradation of nitrobenzene. *Chemical Engineering Journal*, 315, 591-597 (2017).
7. Luo, Q.; Wang, Z.; Feng, M.; Chiang, D.; Woodward D.; Liang, S.; Lu, J.; Huang, Q. Factors controlling the rate of perfluorooctanoic acid degradation in laccase-mediator systems: The impact of metal ions. *Environmental Pollution*, 224, 649-657 (2017)
8. Lu, J.; Shi, Y.; Ji, Y.; Kong, D.; Huang, Q. Transformation of triclosan by laccase catalyzed oxidation: the influence of humic acid-metal binding process. *Environmental Pollution*, 220, 1418-1423 (2017).
9. Zhao, L.; Ji, Y.; Kong, D.; Lu, J.; Zhou, Q.; Yin, X. Simultaneous removal of bisphenol A and phosphate in zero-valent iron activated persulfate oxidation process. *Chemical Engineering Journal*, 303, 458-166 (2016).
10. Lu, J.; Dong, W.; Ji, Y.; Kong, D.; Huang, Q. Natural organic matter exposed to sulfate radicals increases its potential to form halogenated disinfection byproducts. *Environmental Science & Technology*, 50(10), 5060-5067 (2016).
11. Ji, Y.; Kong, D.; Lu, J.; Kang, F.; Yin, X.; Zhou, Q. Cobalt catalyzed peroxymonosulfate oxidation of tetrabromobisphenol A: Kinetics, reaction pathways, and formation of brominated by-products. *Journal of Hazardous Materials*, 313, 229-237 (2016).
12. Xie, W.; Dong, W.; Kong, D.; Ji, Y.; Lu, J.; Yin, X. Formation of halogenated disinfection by-products in cobalt-catalyzed peroxymonosulfate oxidation processes in the presence of halides. *Chemosphere*, 154, 613-619 (2016).
13. Ji, Y.; Shi, Y.; Dong, W.; Jiang, M.; Wen, X.; Lu, J. Thermo-activated persulfate oxidation system for tetracycline antibiotics degradation in aqueous solution. *Chemical Engineering Journal*, 298, 225-233 (2016).
14. Ji, Y.; Xie, W.; Fan, Y.; Shi, Y.; Kong, D.; Lu, J. Degradation of trimethoprim by thermo-activated persulfate oxidation: Reaction kinetics and transformation mechanisms. *Chemical Engineering Journal*, 286, 16-24 (2016).
15. Luo, Q.; Lu, J.; Zhang, H.; Wang, Z.; Feng, M.; Chiang, D.; Woodward, D.; Huang, Q. Laccase catalyzed degradation of perfluorooctanoic acid. *Environmental Science & Technology Letters*, 2(7), 198-203 (2015).
16. Lu, J.; Shao, J.; Wang, Z.; Liu, H.; Huang, Q. Formation of halogenated polyaromatic compounds in laccase catalyzed transformation of halophenols. *Environmental Science & Technology*, 49(14), 8850-8857 (2015).
17. Ji, Y.; Fan, Y.; Liu, K.; Kong, D.; Lu, J. Thermo activated persulfate oxidation of antibiotic sulfamethoxazole and structurally related compounds. *Water Research*, 87, 1-9 (2015).
18. Liu, K.; Lu, J.; Ji, Y. Formation of brominated disinfection by-products and bromate in cobalt catalyzed peroxymonosulfate oxidation of phenol. *Water Research*, 84, 1-7 (2015).
19. Lu, J.; Wu, J.; Ji, Y.; Kong, D. Transformation of bromide in thermo activated persulfate oxidation processes. *Water Research*, 78, 1-8 (2015).

20. Fan, Y.; Ji, Y.; Kong, D.; Lu, J.; Zhou, Q. Kinetic and mechanistic investigation of the degradation of sulfamethazine in heat-activated persulfate oxidation process. *Journal of Hazardous Materials*, 300, 39-47 (2015).
21. Ji, Y.; Dong, C., Kong, D.; Lu, J. New insights into atrazine degradation by cobalt catalyzed peroxymonosulfate oxidation: kinetics, reaction products and transformation mechanisms. *Journal of Hazardous Materials*, 285, 491-500 (2015).
22. Lu, J.; Shao, J., Kong, D. Nucleophilic substitution as a mechanism of atrazine sequestration in soil. *Journal of Hazardous Materials*, 284, 103-107 (2015).
23. Ji, Y.; Dong, C., Kong, D.; Lu, J.; Zhou, Q. Heat-activated persulfate oxidation of atrazine: implications for remediation of groundwater. *Chemical Engineering Journal*, 263, 45-54 (2015).
24. Kong, D.; Xia, Q.; Huang, Q.; Lu, J. Covalent bonding of chloroanilines to humic constituents: Pathways, kinetics, and stability. *Environmental Pollution*, 180, 48-54 (2013).
25. Luo, Q.; Adams, P.; Lu, J.; Cabrera, M.; Huang, Q. Influence of poultry litter land application on the concentrations of estrogens in water and sediment within a watershed. *Environmental Science: Processes & Impacts*, 15, 1383-1390 (2013).
26. Mao, L.; Lu, J.; Habteselassie, M.; Luo, Q.; Gao, S.; Cabrera, M.; Huang, Q. Ligninase-mediated removal of natural and synthetic estrogens from water: II. Reactions of 17 β -estradiol. *Environmental Science & Technology*, 44(7), 2599-2604 (2010).
27. Lu, J.; Huang, Q. Removal of acetaminophen using enzyme mediated oxidative coupling processes: I. Kinetics and reaction pathways. *Environmental Science & Technology*, 43(18), 7062-7067 (2009).
28. Lu, J.; Huang, Q. Removal of acetaminophen using enzyme mediated oxidative coupling processes: II. Interactions with natural organic matter (NOM). *Environmental Science & Technology*, 43(18), 7068-7073 (2009).
29. Mao, L.; Huang, Q.; Lu, J.; Gao, S. Ligninase-mediated removal of natural and synthetic estrogens from water: I. Reaction behaviors. *Environmental Science & Technology*, 43(2), 374-379 (2009).
30. Lu, J.; Korshin, G.V. A spectroscopic study of the bromination of the endocrine disruptor ethynylestradiol. *Chemosphere*, 72(3), 504-508 (2008).
31. Lu, J.; Benjamin, M.M.; and Korshin, G.V. Reactions of the flavonoid hesperetin with chlorine: A spectroscopic study of the reaction pathways. *Environmental Science & Technology*, 38(17), 4603-4612 (2004).
32. Zou, H.; Yu, Z., Lu, J.; Xu, X.; and Zhang, J. A possible new disinfection by-product [2-chloro-5-oxo-3-hexene diacyl chloride (COHC)] in formation of MX by chlorinating model compounds. *Water Research* 36(18), 4535-4542 (2002).
33. Lu, J.; Zou, H.; Yu, Z.; Xu, X.; and Zhang, J. The interference of 2-chloro-5-oxo-3-hexene diacyl chloride (COHC) in the detection of strong mutagen MX. *Chemosphere* 48(1), 29-33 (2002).
34. Lu, J.; Zou, H.; Yang, C.; Yu, Z.; and Zhang, J. Some problems in the detection of strong mutagen MX formed by chlorinating the aromatic acids and phenolic compounds. *Water Research* 36(4), 970-974 (2002).
35. Lu, J.; Zou, H.; Chen, Z.; Yang, C.; Zhang, J.; and Zhou, W. Screening the precursors of strong mutagen MX from chlorinated water. *Water Research* 34(1), 225-229 (2000).
36. Chen, Z.; Yang, C.; Lu, J.; Zou, H.; and Zhang, J. Factors on the formation of disinfection by-products MX, DCA and TCA by chlorination of fulvic acid from lake sediments. *Chemosphere* 45, 379-385 (2001).

37. Yang, C.; Chen, Z.; Zou, H.; Lu, J.; and Zhang, J. Factors on the formation of strong mutagen [3-chloro-4-(dichloromethyl)-5-hydroxy-2(5H)-furanone] MX by chlorination of syringaldehyde. *Water Research* 34(17), 4313-4317 (2000).
38. 刘阔, 金浩, 董为, 季跃飞, 陆隽鹤, 钴活化过一硫酸盐氧化过程中卤代副产物的生成, **环境科学**, 37(5), 1823-1830(2016).
39. 师元元, 季跃飞, 陆隽鹤, 漆酶转化对氨基苯肿酸的研究, **农业环境科学学报**, 35(4), 706-710 (2016).
40. 廖云燕, 刘国强, 赵力, 孔德洋, 陆隽鹤, 利用热活化过硫酸盐技术去除阿特拉津, **环境科学学报**, 34(4), 931-937 (2014).
41. 刘国强, 王斌楠, 廖云燕, 邵娟, 武瑾伟, 孔德洋, 陆隽鹤, 热活化过硫酸盐降解水中的 2-氯苯酚, **环境化学**, 33(8), 1396-1403 (2014).
42. 王斌楠, 刘国强, 谢卫平, 孔德洋, 陆隽鹤, 磺酰胺类除草剂在饮用水处理过程中的去除研究, **农业环境科学学报**, 32(8), 1633-1638 (2013).
43. 夏青, 谢卫平, 刘国强, 廖云燕, 王斌楠, 孔德洋, 陆隽鹤, 漆酶催化氧化水中雌激素的研究, **环境科学**, 34(8), 3119-3124(2013).
44. 王斌楠, 刘国强, 孔德洋, 陆隽鹤, 炔雌醇氯化反应的动力学和机制研究, **环境科学**, 34(6), 2225-2231 (2013).
45. 陆隽鹤; 邹慧仙, 余子锐, 徐旭, 张进琪, 自来水中强致突变物 MX 的测定, **环境科学**, 23(2), 123-125 (2002).

五、学术会议报告

1. 陆隽鹤, 漆酶催化氧化酚类污染物的动力学研究, 持久性有机污染物论坛, 武汉, 2017。
2. Lu, J.; Ji, Y. Formation of halogenated by-products in sulfate radical based oxidation process, *Proceedings of the 253rd ACS National Meeting*, San Francisco, CA, 2017
3. Lu, J. Kinetic investigation of laccase catalyzed oxidation of phenolic compounds. 2016 Livestock Waste Conference, Galway, Ireland, 2016.
4. 陆隽鹤, 漆酶催化氧化动力学的研究, 环境化学水处理化学大会, 南京, 2016。
5. 陆隽鹤, 卤素在硫酸根自由基高级氧化过程中的转化, 第七届全国环境化学会议, 广州, 2015。
6. Lu, J.; Ji, Y. Formation of halogenated by-products in cobalt catalyzed peroxy monosulfate oxidation process, 1st International Water Nexus Conference, Daegu, Korea, 2015.
7. 陆隽鹤, 硫酸根自由基高级氧化过程中卤代副产物的生成, 环境化学水处理化学大会, 广州, 2014。
8. Formation of brominated by-products in sulfate radical based oxidation processes, University of California, Davis, 2015.
9. Lu, J.; Huang, Q. Removal of acetaminophen in enzyme-mediated oxidative coupling processes: reaction rates and pathways. *Proceedings of the 237th ACS National Meeting & Expositions*, Salt Lake City, UT, 2009.
10. Lu, J.; Huang, Q.; Mao, L. occurrence and transformation of hormones from chicken litter in land application. *ASA-CSSA-SSSA Joint Annual Meeting*, Houston, TX, 2008
11. Lu, J.; Huang, Q.; Mao, L. reactions of natural and synthetic hormones mediated by soil enzymes. *ASA-CSSA-SSSA Joint Annual Meeting*, Houston, TX, 2008
12. Lu, J.; Mao, L.; Gao, S.; Huang, Q. Ligninase-mediated removal of natural and synthetic hormones from water. *Proceedings of the 236th ACS National Meeting*, Philadelphia, PA, 2008.

13. Lu, J.; Mao, L.; Huang, Q. Removal of hormones in water using oxidative coupling reactions. Proceedings of AWWA Annual Conference & Exposition, Atlanta, GA, 2008
14. Lu, J.; Mao, L.; Huang, Q.; Gao, S. Peroxidase-mediated removal of estradiol from water containing dissolved natural organic matter. *Proceedings of AWWA Annual Conference & Exposition*, Atlanta, GA, 2008
15. Lu, J.; Korshin, G.V. Stop-flow studies of the kinetics of halogenation of the endocrine disruptor ethynylestradiol (EE2). *Proceedings of the 233rd ACS National Meeting*, Chicago, IL, 2007
16. Lu, J.; Korshin, G.V.; Benjamin, M.M. Use of the flavonoid hesperetin to model formation of chlorinated disinfection by-products. *Proceedings of the AWWA Water Quality Technology Conference*, Seattle, WA, 2002.