



季荣
博士、教授、博导
(环境生物教研室)

教育背景

1996.4 - 2000.9: 博士, 德国康斯坦茨大学(University of Konstanz)生物系
1988.9 - 1991.7: 硕士, 青岛海洋大学化学系
1984.9 - 1988.7: 本科, 青岛海洋大学化学系

工作经历

2005.11 - 至今: 南京大学环境学院教授、博导
2005.12 - 2006.1: 德国马普所(Max-Planck-Institute for Terrestrial Microbiology, Marburg)生物地球化学系博士后研究员
2000.10 - 2005.11: 德国亚琛工业大学(RWTH Aachen University)生物5所-环境科学研究所博士后研究员, 放射性保护负责人
1991.8 - 1995.9: 青岛海洋大学化学系助教、讲师

进入季荣教授课题组

招收博士后

一、科研方向

1. 污染物的环境过程、行为和生物效应
2. 天然有机物的转化与全球环境变化
3. 污染环境的修复原理与技术
4. 同位素标记化合物的制备及应用

二、在研和完成的主要科研项目

1. 土壤中溴代阻燃剂-重金属复合污染的环境过程、生物效应及机制。国家自然科学基金(重点项目), 主持(2013.1-2017.12)。
2. 全球气候变化下微生物多样性对土壤中有机污染物降解的作用研究。中德CSC-DAAD交流合作项目(PPP), 中方主持(2013.1-2014.12)。
3. New Biotechnological approaches for biodegrading and promoting the environmental biotransformation of synthetic polymeric materials (BIOCLEAN)。欧盟FP7项目, PI之一(2012.9-2015.8)。
4. 四溴双酚A在土壤中环境归趋的C-14 和C-13 同位素示踪研究。国家自然科学基金面上项目, 主持(2012.1-2015.12)。
5. Institutional Partnership between Nanjing University and HLS-FHNW。瑞士中瑞科技合作(SSSTC)IP项目。主持人之一(2012.5-2015.4)。
6. Bioaugmentation/rhizodegradation for the degradation of polybrominated flame retardant tetrabromobisphenol A in water saturated soil。瑞士中瑞科技合作(SSSTC)JRP项目, 中方主持(2012.1-2014.12)。
7. A biodiversity approach to improve bioremediation strategies for PAH contaminated soils. 德国 BMBF中德合作项目, 中方主持(2011.1-2012.12)。
8. 水环境中雌激素共轭物的降解、转化研究。高等学校博士学科点基金(博士生导师类), 主持(2011.1-2013.12)。
9. 食土蚯蚓降解、转化土壤中苯酚类内分泌干扰物的研究。国家自然科学基金面上项目, 主持(2010.1-2012.12)。
10. Impact of microbial degradation processes on the fate of emerging pollutants in soil. 瑞士中瑞科技合作(SSSTC)EG项目, 中方主持(2010.9-2011.9)。
11. 水体和土壤体系中新型有机污染物的环境行为和分析。国家自然科学基金国际合作与交流项目, 主持(2010)。
12. 有机物污染场地土壤和地下水同时修复关键技术应用研究。江苏省自然科学基金重点项目, 参加(2010.7-2012.12)。
13. 地下水有机污染的风险评估技术与控制装备研发。江苏省环保厅课题, 参加(2010.7-2012.12)。
14. 蚯蚓对土壤中古有机碳降解影响研究。中德合作PPP项目, 中方主持(2009.1-2010.12)。
15. 水稻田环境中壬基酚转化过程、机制的C-14示踪研究。国家自然科学基金面上项目, 主持(2008.1-2010.12)。
16. 城市废水污泥农业资源化应用中蚯蚓对其所含内分泌干扰污染物的降解研究。国家人事部留学人员科技活动项目, 主持(2008)。
17. 有机污染土壤原位修复的蚯蚓强化技术。国家高技术研究发展计划(863计划)项目(探索类), 主持(2007.12-2010.12)。

三、代表性论文 (Peer Reviewed)

1. Liu J; Wang YF; Jiang BQ; Wang LH; Chen JQ; Guo HY; Ji R* (2013) Degradation, metabolism, and bound-residue formation and release of tetrabromobisphenol A in soil during sequential anoxic-oxic incubation. *Environ. Sci. Technol.* 47: 8348-8354.
2. Du W; Ji R; Sun Y*; Zhu J; Wu J; Guo H (2013) Fate and ecological effects of decabromodiphenyl ether in a field lysimeter. *Environ. Sci. Technol.*

- 47: 9167-9174.
3. Shan J; Li J; Wang YF; Yan XY; Guo HY; Li XZ; **Ji R*** (2013) Digestion and residue stabilization of bacterial and fungal cells, protein, peptidoglycan, and chitin by the geophagous earthworm *Metaphire guillelmi*. **Soil Biol. Biochem.** 64: 9-17.
 4. Floehr T; Xiao HX; Scholz-Starke B; Wu LL; Hou JL; Yin DQ; Zhang XW; **Ji R**; Yuan XZ; Ottermanns R; Ross-Nickoll M; Schaffer A; Hollert H* (2013) Solution by dilution? A review on the pollution status of the Yangtze River. **Environ. Sci. Pollut. Res.** (in press).
 5. Wang NX; Li Y; Deng XH; Miao AJ*; **Ji R***; Yang LY (2013) Toxicity and bioaccumulation kinetics of arsenate in two freshwater green algae under different phosphate regimes. **Water Res.** 47: 2497-2506.
 6. Zhou WQ; Shan J; Jiang BQ; Wang LH; Feng JF; Guo HY; **Ji R*** (2013) Inhibitory effects of carbon nanotubes on the degradation of ¹⁴C-2,4-dichlorophenol in soil. **Chemosphere** 90: 527-534.
 7. Bian XS; Chen JQ*; **Ji R*** (2013) Degradation of methyl blue using Fe-tourmaline as a novel photocatalyst. **Molecules** 18: 1457-1463.
 8. Bian XS; Chen JQ*; **Ji R*** (2013) Degradation of 2,4-dichlorophenoxyacetic acid (2,4-D) by novel photocatalytic material of tourmaline-coated TiO₂ nanoparticles: kinetic study and model. **Materials** 6: 1530-1542.
 9. Chen JQ; Hu ZJ; Wang NX; **Ji R*** (2013) Interactions between *m*-phenylenediamine and bovine serum albumin measured by spectroscopy. **Luminescence** 28: 226-231.
 10. Li CL; Schaeffer A; Vereecken H; **Ji R**; Klumpp, E (2013) Influences of perfluorooctanoic acid on the aggregation of multi-walled carbon nanotubes. **J. Environ. Sci.-China** 25: 466-472.
 11. Sun YY; Ren LJ; Li JH; Yin Y; Wu JC; **Ji R**; Shi, XQ; Guo, HY (2013) The co-application of willow and earthworms / horseradish for removal of pentachlorophenol from contaminated soils. **Soil and Sediment Contamination** 22: 498-509.
 12. Li CL; Zhang B; Ertunc T; Schaeffer A; **Ji R*** (2012) Birnessite-induced binding of phenolic monomers to soil humic substances and nature of the bound residues. **Environ. Sci. Technol.** 46: 8843-8850.
 13. Li CL, **Ji R***; Schaeffer A; Sequaris JM; Amelung W; Vereecken H; Klumpp E* (2012) Sorption of a branched nonylphenol and perfluorooctanoic acid on Yangtze River sediments and their model components. **J. Environ. Monit.** 14: 2653-2658.
 14. Ying F; Ding C; Ge R; Wang XT; Li FJ; Zhang YH; Zeng QQ; Yu B; **Ji R***; Han, XD* (2012) Comparative evaluation of nonylphenol isomers on steroidogenesis of rat Leydig Cells. **Toxicol. in Vitro** 26: 1114-1121.
 15. Li CL; Schaeffer A; Sequaris JM; Laszlo K; Toth A; Tombacz E; Vereecken H; **Ji R***; Klumpp E* (2012) Surface-associated metal catalyst enhances the sorption of perfluorooctanoic acid to multi-walled carbon nanotubes. **J. Coll. Interf. Sci.** 377: 342-346.
 16. Wang, NX; Zhang, XY; Wu, J; Xiao, L; Yin, Y; Miao, AJ*; **Ji, R***; Yang, LY (2012) Effects of microcystin-LR on the metal bioaccumulation and toxicity in *Chlamydomonas reinhardtii*. **Water Res.** 46: 369-377.
 17. Shan J, Jiang BQ, Yu B, Li CL, Sun YY, Guo HY, Wu JC, Klumpp E, Schäffer A, **Ji R*** (2011) Isomer-specific degradation of branched and linear 4-nonylphenol isomers in an oxic soil. **Environ. Sci. Technol.** 45: 8283-8289.
 18. Guo HY*, Zhu JG*, Zhou H, Sun YY, Ying Y, Pei DP, **Ji R**, Wu JC, Wang XR (2011) Elevated CO₂ levels affects the concentrations of copper and cadmium in crops grown in soil contaminated with heavy metals under fully open-air field conditions. **Environ. Sci. Technol.** 45: 6997-7003.
 19. Li CL, Berns AE, Schäffer A, Séquaris J-M, Vereecken H, **Ji R***, Klumpp E* (2011) Effect of structural composition of humic acids on the sorption of a branched nonylphenol isomer. **Chemosphere** 84: 409-414.
 20. Du WC, Sun YY, **Ji R**, Zhu JG, Wu JC, Guo HY* (2011) TiO₂ and ZnO nanoparticles negatively affect wheat growth and soil enzyme activities in agricultural soil. **J. Environ. Monit.** 13: 822-828.
 21. Du WC, Sun YY, Cao L, Huang J, **Ji R**, Wang XR, Wu JC, Zhu JG, Guo HY, 2011. Environmental fate of phenanthrene in lysimeter planted with wheat and rice in rotation. **J. Hazard. Mater.** 188: 408-413.
 22. Ngugi DK, **Ji R**, Brune A* (2011) Nitrogen mineralization, denitrification, and nitrate ammonification by soil-feeding termites: a ¹⁵N-based approach. **Biogeochemistry** 103: 355-369.
 23. Shan J, Xu J, Zhou WQ, Ji LL, Cui YB, Guo HY, **Ji R*** (2011) Enhancement of chlorophenol sorption on soil by geophagous earthworms (*Metaphire guillelmi*). **Chemosphere** 82: 156-162.
 24. Li JH, Sun YY, Yin Y, **Ji R**, Wu JC, Wang XR, Guo HY* (2010) Ethyl lactate-EDTA composite system enhances the remediation of the cadmium-contaminated soil by autochthonous willow (*Salix aureo-pendula* CL 'J1011') in the lower reaches of the Yangtze River. **J. Hazard. Mater.** 181: 673-678.
 25. Jiang MX, Wang LH, **Ji R*** (2010) Biotic and abiotic degradation of four cephalosporin antibiotics in a lake surface water and sediment. **Chemosphere** 80: 1399-1405.
 26. Chen JQ, Hu ZJ, Wang D, Gao CJ, **Ji R*** (2010) Photocatalytic mineralization of dimethoate in aqueous solutions using TiO₂: Parameters and by-products analysis. **Desalination** 258: 28-33.
 27. Shan J, Brune A, **Ji R*** (2010) Selective digestion of the proteinaceous component of humic substances by the geophagous earthworms *Metaphire guillelmi* and *Amyntas corrugatus*. **Soil Biol. Biochem.** 42: 1455-1462.
 28. Shan J, Wang T, Li CL, Klumpp E, **Ji R*** (2010) Bioaccumulation and

- bound-residue formation of a branched 4-nonylphenol isomer in the geophagous earthworm *Metaphire guillelmi* in a rice paddy soil. **Environ. Sci. Technol.** 44: 4558-4563.
29. Chai XL*, Ji R, Wu J, Tong HH, Zhao YC (2010) Abiotic association of PAEs with humic substances and its influence on the fate of PAEs in landfill leachate. **Chemosphere** 78: 1362-1367.
 30. Butenschoen O*, Ji R, Schaffer A, Scheu S (2009) The fate of catechol in soil as affected by earthworms and clay. **Soil Biol. Biochem.** 41: 330-339.
 31. Liu Q*, Ji R, Hommes G, Schaffer A, Corvini PFX (2008) Fate of a branched nonylphenol isomer in submerged paddy soils amended with nitrate. **Water Res.** 42: 4202-4808.
 32. Marschner B*, Brodowski S, Dreves A, Gleixner G, Gude A, Grootes PM, Hamer U, Heim A, Jandl G, Ji R, Kaiser K, Kalbitz K, Kramer C, Leinweber P, Rethemeyer J, Schäffer A, Schmidt MWI, Schwark L, Wiesenberger GLB (2008) How relevant is recalcitrance for the stabilization of organic matter in soils. **J. Plant Nutr. Soil Sci.** 171: 91-110.
 33. Schmidt B*, Ebert J, Lamshöft M, Thiede B, Schumacher-Buffel R, Ji R, Corvini PFX, Schäffer A (2008) Fate in soil of ¹⁴C-sulfadiazine residues contained in manure of young pigs which were treated with the veterinary antibiotic. **J. Environ. Sci. Health, Part B** 43: 8-20.
 34. Li CL, Ji R, Vinken R, Hommes G, Bertmer M, Schäffer A, Corvini PFX* (2007) Role of humic acids in the biodegradation of nonylphenol by *Sphingomonas* sp. strain TTNP3 – increased bioavailability and formation of bound residues. **Chemosphere** 68: 2172-2180.
 35. Boga HI, Ji R, Ludwig W, Brune A* (2007) *Sporotalea propionica* gen. nov. sp. nov., a hydrogen-oxidizing, oxygen-reducing, propionigenic firmicute from the intestinal tract of a soil-feeding termite. **Arch. Microbiol.** 187: 15-27.
 36. Li XZ*, Ji R, Schäffer A, Brune A (2006) Mobilization of soil phosphorus during passage through the gut of larvae of *Pachnoda ephippiata* (Coleoptera: Scarabaeidae). **Plant Soil** 288: 263-270.
 37. Ji R, Brune A* (2006) Nitrogen mineralization, ammonia accumulation, and emission of gaseous NH₃ by soil-feeding termites. **Biogeochemistry** 78: 267-283.
 38. Corvini PFX*, Hollender J, Ji R, Schumacher S, Prell J, Hommes G, Priefer U, Vinken R, Schäffer A (2006) The degradation of α-quaternary nonylphenol isomers by *Sphingomonas* sp. strain TTNP3 involves a type II ipso-substitution mechanism. **Appl. Microbiol. Biotechnol.** 70: 114-122.
 39. Ji R, Brune A* (2005) Digestion of peptidic residues in humic substances by an alkali-stable and humic-acid-tolerant proteolytic activity in the gut of soil-feeding termites. **Soil Biol. Biochem.** 37: 1648-1655.
 40. Vinken R, Schäffer A, Ji R* (2005) Abiotic association of soil-borne monomeric phenols with humic acids. **Org. Geochem.** 36: 583-593.
 41. Ji R*, Chen ZX, Corvini PFX, Kappler A, Brune A, Haider A, Schäffer A. (2005) Synthesis of [¹³C]- and [¹⁴C]-labeled phenolic humus and lignin monomers. **Chemosphere** 60: 1169-1181.
 42. Corvini PFX*, Elend M, Hollender J, Ji R, Preiss A, Vinken R, Schäffer A (2005) Metabolism of the single nonylphenol isomer 4(2',6'-dimethyl-2'-heptyl)-phenol by *Sphingomonas* sp. Strain TTNP3: formation of an alkyl shifted hydroquinone and of a further metabolite. **Environ. Chem. Lett.** 2: 185-189.
 43. Ji R*, Schäffer A (2004) Synthesis of [uniformly ring-¹⁴C]-labelled 4-hydroxybenzaldehyde, vanillin, and protocatechualdehyde. **J. Labelled Compd. Radiopharm.** 47: 209-216.
 44. Ji R*, Schäffer A (2002) Synthesis of ¹³C- and ¹⁴C-labelled catechol. **J.**