# 环境科学与工程学院

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当前位置: 首页 | 师资队伍 | 博士生导师

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### 简历:

2011-现在	副主编	European Journal of Soil Science
2012. 8-现在	院长	昆明理工大学环境科学与工程学院
2009. 7-现在	博士生导师	昆明理工大学
2008.12-现在	主任	昆明理工大学环境土壤科学实验室
2008. 8-现在	教授	昆明理工大学
2006. 4-2008. 12	博士后	美国麻省大学自然资源与环境学院,环境土壤化学
2001. 7-2001. 12	交换学生	德国弗莱堡大学水文学研究所,环境化学
1999. 9–2006. 1	博士	北京大学城市与环境学院,环境地理学
1995. 9–1999. 7	学士	昆明理工大学环境科学与工程学院,环境工程

主要承担课程:

环境毒理学(双语、本科生)、环境土壤化学(本科生)、环境化学(博士生)

### 主要获奖:

- 2012年国家自然科学基金优秀青年基金(首批)
- 2012年获伍达观教育基金杰出教师奖
- 2011年获云南省百名海外引进人才称号
- 2011年霍英东教育基金会高等院校青年教师基金
- 2011年"环境毒理学"云南省双语教学示范课程负责人
- 2011年受聘为昆明理工大学环境生态科学与工程创新团队首席教授
- 2011年受聘为环境土壤科学昆明理工大学重点实验室主任
- 2011年获"红云园丁模范教师"奖
- 2010年获教育部新世纪优秀人才称号
- 2010年获SCOPUS寻找青年科学之星新人奖
- 2009年云南省学术带头人后备人才

### 主要研究经历

从污染物(重点关注重金属、持久性有机污染物、药物及个人护理用品、工程纳米材料等)环境归趋行为研究入手,针对土壤修复、土壤改良中的关键科学问题展开基础性研究,以环境土壤科学为依托,系统探讨影响污染物在土壤环境中行为的环境因素,包括土壤各组分的独立作用和协同作用,环境中纳米级颗粒的存在形态等;截至2013年4月,发表学术论文被SCI收录51篇,其中36篇为第一作者或者通讯作者;所有论文中影响因子高于3.0的论文有34篇(第一作者或者通讯作者26篇),他引次数超过700次,个人H因子为16。已获资助的人才项目有:

- 2012年国家自然科学基金优秀青年基金(首批),工作内容"环境地化条件影响下工程纳米颗粒的分散 迁移及吸附特征"(100万元,2013.1-2015.12,41222025),项目执行中。
- ●2010年获教育部新世纪优秀人才称号,工作内容是: "憎水性和抗生素类有机污染物在高原红壤中的吸附行为比较"(50万元,2011.1-2013.12),项目执行中。
- ●2011年获云南省百名海外引进人才称号(首批),以建设环境土壤科学学科为重点工作内容(100万元,2011.8-2014.8),项目执行中。
- ●2011年获霍英东教育基金会高等院校青年教师基金(基础性研究),工作内容是: "富铝土与有机污染物之间的相互作用机理研究"(2万美元,2012.1-2014.12),项目执行中。
- ●2009年获云南省学术带头人后备人才称号,并立项进行建设"有机污染物与云南典型土壤相互作用机理" (12万元,2009.8-2012.8),项目执行中。

己获资助的其他项目有:

- 主持国家面上基金"富铝土·有机化合物相互作用中环境可持续性自由基的产生及迁移" (90万元, 2013.1-2016.12, 41273138), 项目执行中。
- 主持国家青年基金"溶解胡敏酸对碳管-药物吸附体系的影响" (20万元, 2009.1-2011.12, 40803034), 已结题。
- 主持国家面上基金"阳离子存在形态对抗生素-DOM作用机理的影响" (42万元, 2010.1-2012.12, 40973081), 已结题。
- 主持教育部留学回国人员启动基金"抗生素与溶解有机质的相互作用机理" (4万元, 2010.1-2012.12),项目执行中。
- 主持校级平台建设项目:环境土壤科学昆明理工大学重点实验室(150万元, 2011-2015),项目执行中。
- 主持校级平台建设项目: 昆明理工大学环境生态科学与工程创新团队(50万元,2011-2015),项目执行中

先后参与的国家自然科学基金: "持久性有机污染物在土壤中的锁定和降解"、"土壤中DDT的锁定过程与微生物降解性"、"可溶性有机物对重金属污染物在土壤中迁移过程的影响"、"作物叶面对多环芳烃的吸收"和"湖泊生态系统健康影响因素及其动力学机制"的相关工作。目前的主要研究领域包括:

- A、 重金属的存在形态及其环境迁移行为对其生物有效性的影响。
- B、 有机污染物的环境行为机理和修复技术研究。
- C、纳米级颗粒物的环境应用及其风险。

### 学术成果一览

### 学术专著

1. Pan B and Xing BS. Pharmaceuticals and Personal Care Products in Soils and Sediments, in "Biophysico-Chemical Processes of Anthropogenic Organic Compounds in Environmental Systems".

- 2. 潘波,杨坤,Xing BS. 合成纳米颗粒与有机物间的相互作用及环境效应,环境化学学科前沿与展望,科学出版社,2011
- 3. Pan B and Xing BS. Sorption comparison between pharmaceuticals and hydrophobic organic chemicals in soils and sediments. Molecular Environmental Soil Science at Critical Zone Interfaces. ISMESS. 2011
- 4. 潘波, Xing BS. 溶解有机质与憎水性有机污染物之间的非理想相互作用,天然有机质及其在地表环境中的作用和重要性,科学出版社,2011

### 被SCI收录的研究论文(\*为通讯作者)

- 1. Pan B\*, Zhang D, Li H, Wu M, Wang ZY, and Xing BS. Increased adsorption of sulfamethoxazole on suspended carbon nanotubes by dissolved humic acid. 2013, Environ. Sci. Technol. In press.
- 2. Yang SL, Zhou DQ, Yu HY, Wei R, Pan B\*. Distribution and speciation of metals (Cu, Zn, Cd, and Pb) in agricultural and non-agricultural soils near a stream upriver from the Pearl River, China. Environmental Pollution. 2013, 177, 64-70.
- 3. Wu M, Pan B, Zhang D, Xiao D, Li H, Wang C, Ning P. The sorption of organic contaminants on biochars derived from sediments with high organic carbon content. Chemosphere. 2013, 90, 782-788.
- 4. Pan B\*, Han XJ, Wu M, Peng HB, Zhang D, Li H, Xing BS. Temperature dependence of ofloxacin fluorescence quenching and complexation by Cu(II). Environmental Pollution. 2012, 171, 168-173.
- 5. Wu FC, Bai YC, Mu YS, Pan B, Xing BS, Lin Y, Fluorescence quenching of fulvic acids by fullerene in water. Environmental Pollution. 172: 100-107
- 6. Pan B\*, Wang Q, Zhao F. Chinese virtual issue. European Journal of Soil Science. 2012, 63: 773-775.
- 7. Pan B\*, Wang P, Wu M, Li J, Zhang D, Xiao D. Sorption kinetics of ofloxacin in soils and mineral particles. Environmental Pollution. 2012. 171, 185-190.
- 8. Pan B\*, Xing BS. Applications and implications of manufactured nanoparticles in soils: a review. European Journal of Soil Science, 2012, 63, 437-456.
- 9. Wu D, Pan B\*, Wu M, Peng HB, Zhang D, and Xing BS. Coadsorption of Cu and Sulfamethoxazole on Hydroxylized and Graphitized Carbon Nanotubes. Science of the total environment. 2012, 427, 247-252.
- 10. Peng HB, **Pan B\***, Wu M, Liu R, Zhang D, Wu D, and Xing BS. Adsorption of ofloxacin on carbon nanotubes: solubility, pH and cosolvent effects. Journal of Hazardous Materials. 2012, 211, 342-348.
- 11. Peng HB, Pan B\*, Wu M, Liu R, Zhang D, Wu D, and Xing BS. Adsorption of ofloxacin and norfloxacin on carbon nanotubes: Hydrophobicity- and structure-controlled process. Journal of Hazardous Materials. 2012, 233, 89-96.
- 12. Zhang D, Pan B\*, Wu M, Zhang H, Peng HB, Xing BS. Cosorption of organic chemicals with different properties: their shared and different sorption sites. Environmental Pollution, 2012, 178-184.
- 13. **Pan B\***, Huang P, Wu M, Wang ZY, Wang P, Jiao XC, and Xing BS. Physicochemical and sorption properties of thermally-treated sediments with high organic matter content. Bioresource Technology, 2012, 367-373.
- 14. Pan B\*, Qiu MY, Wu M, Zhang D, Peng HB, Wu D, Xing BS. The opposite impacts of Cu and Mg cations on dissolved organic matter-ofloxacin interaction. Environmental Pollution, 2012, 76-82.

- 15. Pan B\*, Liu Y, Xiao D, Wu FC, Wu M, Zhang D, and Xing BS. Quantitative identification of dynamic and static quenching of ofloxacin by dissolved organic matter using temperature-dependent kinetic approach. Environmental Pollution, 2012, 192-198.
- 16. Xiao D, Pan B\*, Wu M, Liu Y, Zhang D, and Peng HB. Sorption comparison between phenanthrene and its degradation intermediates, 9, 10-phenanthrenequinone and 9-phenanthrol. Chemosphere, 2012, 183-189.
- 17. Pan B, Tao S, Wu D, Zhang D, Peng HB, Xing BS. Phenanthrene sorption/desorption sequences provide new insight to explain high sorption coefficients in field studies. Chemosphere 2011, 1578-1583
- 18. Zhang D, Pan B, Wu M, Wang B, Zhang H, Peng HB, Wu D, Ning P. Adsorption of sulfamethoxazole on functionalized carbon nanotubes as affected by cations and anions. Environmental Pollution, 2011, 2616-2621.
- 19. Pan B, Tao S, Dawson RW, Xing BS. Formation of Organo-Mineral Complexes as Affected by Particle Size, pH, and Dry-Wet Cycles. Australian Journal of Soil Research. 2010. 48(8):712-719
- 20. Chen MS, Liu SY, Wu WW, Yang FL, Chen JZ, and Pan B\*. Adsorption and Release of Phosphate in the case of Dianchi Sediments. Journal of Chemical Engineering of Japan. 2010. 43. 10: 913-920.
- 21. **Pan B** and Xing BS. Manufactured Nanoparticles and their Sorption of Organic Chemicals, Advances in Agronomy, 2010, 108. 137-181.
- 22. **Pan B** and Xing BS. Competitive and Complementary Adsorption of Bisphenol A and 17a Ethinyl Estradiol on Carbon Nanomaterials. Journal of Agricultural and Food Chemistry. 2010. 58 (14): 8338-8343.
- 23. Zhang X, Pan B\*, Yang K, Zhang D, Hou J. Adsorption of sulfamethoxazole on different types of carbon nanotubes in comparison to other natural adsorbents. Journal of Environmental Science and Health, Part A. 2010, 45(12):1625.
- 24. Hou J, Pan B\*, Niu XK, Chen JZ, Xing BS. Sulfamethoxazole sorption by sediment fractions in comparison to pyrene and bisphenol A. Environmental Pollution. 2010, 158(9): 2826-2832.
- 25. Zhang D, **Pan B\***, Zhang H, Ning P, Xing BS. Contribution of Different Sulfamethoxazole Species to Their Overall Adsorption on Functionalized Carbon Nanotubes. Environ. Sci. Technol. 2010. 44(10): 3806 3811.
- 26. Pan B, Xing BS. Adsorption kinetics of 17a-ethinyl estradiol and bisphenol A on carbon nanomaterials. I. Several concerns regarding pseudo-first order and pseudo-second order models. Journal of soils and sediments. 2010, 10(5): 838.
- 27. Pan B, Sun K, Xing BS. Adsorption kinetics of 17a-ethinyl estradiol and bisphenol A on carbon nanomaterials. II. Concentration-dependence. Journal of soils and sediments. 2010, 10 (5):845.
- 28. Liu, WX; Xu, SS; Xing, BS, Pan B, Tao S. Nonlinear binding of phenanthrene to the extracted fulvic acid fraction in soil in comparison with other organic matter fractions and to the whole soil sample. Environmental Pollution. 2010, 158(2): 566-575.
- 29. Wang ZY, Yu XD, Pan B, and Xing BS. Norfloxacin Sorption and Its Thermodynamics on Surface-modified Carbon Nanotubes. Environ. Sci. Technol. 2010, 44(3): 978-984.
- 30. Oleszczuk P, Pan B, Xing BS. Adsorption and desorption of oxytetracycline and carbamazepine by multiwalled carbon nanotubes. Environ. Sci. Technol. 2009, 43(24): 9167-9173.
- 31. Ning P, Wang HB, Pan B, Bart H.J. Yang M. Isolation and Sorption Behavior of Humic Acid from Zhongdian Peat of Yunnan Province, China. Pedosphere. 2009, 19, 606-614
- 32. Pan B, Ning P and Xing BS. HUMIC SUBSTANCES. REVIEW SERIES. Part V-sorption of pharmaceuticals and personal care products. Environmental Science and Pollution Research. 2009, 16(1): 106.
- 33. Pan B, Ning P and Xing BS. HUMIC SUBSTANCES. REVIEW SERIES. Part IV-sorption of hydrophobic organic contaminants. Environmental Science and Pollution Research. 2008, 15(7): 554-564
- 34. Pan B and Xing BS. Adsorption mechanism of organic chemicals on carbon nanotubes. Environ. Sci. Technol. 2008, 42(24): 9005-9013.
- 35. Pan B, Lin DH and Xing BS. Adsorption and hysteresis of bisphenol A and 17a-ethinyl estradiol on carbon nanomaterials. Environ. Sci. Technol. 2008, 42, 5480.

- 36. Pan B, Ghosh S, Xing BS. Dissolved organic matter conformation and its interaction with Pyrene as affected by water chemistry and concentration. Environ. Sci. Technol. 2008, 42, 1594-1599.
- 37. Pan B, Ghosh S, Xing BS. Nonideal binding between dissolved humic acids and polyaromatic hydrocarbons. Environ. Sci. Technol. 2007, 41, 6472-6478.
- 38. Pan B, Xing BS, Tao S, Liu WX, Lin XM, Xiao Y, Dai HC, Zhang XM, Zhang YX, Yuan H. Effect of physical forms of soil organic matter on phenanthrene sorption. Chemosphere. 2007, 68, 1262-1269.
- 39. Pan B, Xing BS, Liu WX, Xing GH, Tao S: Investigating interactions of phenanthrene with dissolved organic matter: Limitations of Stern-Volmer plot. Chemosphere. 2007, 69, 1555-1562.
- 40. Pan B, Xing BS, Liu WX, Tao S. Distribution of Sorbed <u>Phenanthrene and Pyrene</u> in Different Humic Fractions of Soils and Importance of Humin. Environmental Pollution. 2006, 143, 24-33.
- 41. Pan B, Xing B S, Liu W X, Tao S. Two-Compartment Sorption of Phenanthrene on Eight Soils with Various Organic Carbon Contents. Journal of Environmental Science and Health. Part B. 2006, 41(8): 1333-1347
- 42. Pan B, Liu WX, Shi Z, Cao J, Shen WR, Qing BP, Sun R, Tao S. Sample purification for analysis of organochlorine pesticides in sediment and fish muscle. Journal of Environmental Science and Health Part B-Pesticides Food contaminants and Agricultural Wastes, 2004, 39(3): 353-365.
- 43. Iorio M., Pan B., Capasso R., Xing B. Sorption of phenanthrene by polymerin and its complex with aluminum oxide nanoparticles. Environmental Pollution. 2008, 156(3): 1021-1029.
- 44. Lin DH, Pan B, Zhu LZ and Xing BS. Characterization and phenanthrene sorption of tea leaf powders. Journal of Agricultural and Food Chemistry. 2007, 55 (14): 5718-5724.
- 45. Ghosh S, Mashayekhi H, Pan B, Bhowmik P, Xing BS. Colloidal Behavior of Aluminum Oxide Nanoparticles as Affected by pH and Natural Organic Matter. Langmuir, 2008, 24 (21): 12385-12391
- 46. Shi Z, Tao S, Pan B, Fan W, He XC, Zuo Q, Wu SP, Li BG, Cao J, Liu WX, Xu FL, Wang XJ, Shen WR, Wong PK. Contamination of rivers in Tianjin, China by polycyclic aromatic hydrocarbons. Environmental Pollution, 2005, 134 (1): 97-111.
- 47. Shi Z, Tao S, Pan B, et al. Partitioning and source diagnostics of polycyclic aromatic hydrocarbons in rivers in Tianjin, China. Environmental Pollution. 2007, 146 (2): 492-500.
- 48. Tao S, Long AM, Pan B, Xu FL, Dawson RW. The uptake of copper complexed to EDTA, diaminoethane, oxalic acid, or tartatic acid by neon tetra, Ecotoxicology and Environmental safety, 2002, 53(2):317-322.
- 49. Tao S, Liu GJ, Xu FL, Pan B. Estimation of conditional stability constant for copper binding to fish gill surface with consideration of chemistry of fish gill microenvironment. Comparative Biochemistry and Physiology C-Toxicology and Pharmacology, 2002, 133(1-2):219-226.
- 50. Pan B and Xing BS. Sorption of endocrine disrupting chemicals on carbon nanomaterials. Abstracts of the American Chemical Society. New Orleans, LA. 2008.
- 51. Iorio M, Pan B, Capasso R, Xing BS. Interaction of polymerin with aluminum oxide nanoparticles for potential water remediation. Abstracts of the American Chemical Society. New Orleans, LA. 2008.
- 52. Ghosh S, Pan B, Bhowmik CP, Xing BS. Sorption and influence of humic acid (HA) on colloidal stability of aluminium oxide nanoparticles. Abstracts of the American Chemical Society. New Orleans, LA. 2008.

会议录

- 53. Pan B, Hou J, and Xing BS. Adsorption of Sulfamethoxazole by different soil fractions in comparison to pyrene and bisphenol A. 13th Humics Substances Science and Technology, Northeast University, Boston, 2010.
- 54. Pan B, Zhang D, Ning P, and Xing BS. Adsorption of Sulfamethoxazole on carbon nanotubes as affected by phosphate. International Conference on the Environmental Implications and Applications of Nanotechnology. Amherst, University of Massachusetts, USA. June 9-11, 2009
- 55. Pan B, Ghosh S, and Xing BS. Conformation of dissolved humic acid and its interaction with pyrene. Proceeding of 100th ASA-CSSA-SSSA International Annual Meetings, New Orleans, LA, Nov. 4-8, 2007.

- 56. Pan B and Xing BS. Nonideal Sorption between DOM and PAHs: Competition and Desorption Hysteresis. Proceeding of 10th International conference of Humics Substances Science and Technology, Northeast University, Boston, March, 2007
- 57. Pan B and Xing BS. Adsorption of hydrophobic organic contaminants on carbon nanotubes in different organic solvents. 101th ASA-CSSA-SSSA International Annual Meetings, October, 2008, Houston, Texas
- 58. Pan B and Xing BS. Sorption of endocrine disrupting chemicals on carbon nanomaterials. 235th American chemical society annual meeting. DIVISION: Division of Environmental Chemistry, SESSION: Environmental Behavior and Fate of Manufactured Nanomaterials. April 2008, New Orleans, Louisiana
- 59. Pan B and Xing BS. Competitive adsorption of endocrine disrupting chemicals on carbon nanotubes. The 24th annual international conference on Soil, Sediments and Water, October, 2008, Amherst, Massachusetts
- 60. Iorio M., Pan B., Capasso R., Xing BS. Sorption of phenanthrene on micro- and nanoparticles of aluminum oxide in the presence of polymerin. 25th National Congress of the Italian Agro-Chemical Society. Pisa, Italy. September 18-21, 2007.
- 61. Iorio M., Pan B., Capasso R., Xing BS. Behavior of phenanthrene in water-polymerinalumina three-phase system. XXIII Annual International Conference on Soils, Sediments and Water. University of Massachusetts, USA. October 15-18, 2007.

### 国际会议发言及受邀请学术报告

- ●Adsorption of Sulfamethoxazole by different soil fractions in comparison to pyrene and bisphenol A. 第十三届腐殖质科学与技术国际会议(13th Humics Substances Science and Technology,2010年3月,Northeast University, Boston);
- ●Adsorption of Sulfamethoxazole on carbon nanotubes as affected by phosphate. 纳米技术的环境应用及风险国际会议International Conference on the Environmental Implications and Applications of Nanotechnology. 2009年6月9-11日, Amherst, University of Massachusetts, USA.
- ●Sorption of endocrine disrupting chemicals on carbon nanomaterials. 第235届美国化学学会国际会议, DIVISION: Division of Environmental ChemistrySESSION: Environmental Behavior and Fate of Manufactured Nanomaterials. 2008年4月, New Orleans, Louisiana;
- ●Adsorption and Hysteresis of Bisphenol A and 17a-Ethinyl Estradiol on Carbon Nanomaterials. 美国麻省大学自然资源与环境学院邀请学术报告,2007年12月,University of Massachusetts,Amherst:
- ●Conformation of dissolved humic acid and its interaction with pyrene. 第100届美国农学会-美国植物学会-美国土壤学会2007年国际年会(100th ASA-CSSA-SSSA International Annual Meetings, 2007年11月, New Orleans, Louisiana);
- ●Nonideal Sorption between DOM and PAHs: Competition and Desorption Hysteresis. 第十届腐殖质科学与技术国际会议(10th Humics Substances Science and Technology,2007年3月,Northeast University, Boston);
- Bioavailability of free and particle-bound copper (Cu) to fish gills. 德国弗莱堡大学水文研究所邀请研究报告, 2001年11月, University of Freiburg, Germany.
- ●Competitive adsorption of endocrine disrupting chemicals on carbon nanotubes. 第24届土壤、沉积物和土壤国际会议(The 24th annual international conference on Soil, Sediments and Water, 2008年10月, Amherst, Massachusetts)
- ●Adsorption of hydrophobic organic contaminants on carbon nanotubes in different organic solvents. 第100届美国农学会-美国植物学会-美国土壤学会2007年国际年会(101th ASA-CSSA-SSSA International Annual Meetings,2008年10月, Houston, Texas)