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联系方式

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教育背景

博士（环境化学，2001），美国德州农工大学（Texas A&M Univ., College Station）。

硕士（有机化学，1995），南开大学元素有机化学研究所。

学士（环境化学，1992），南开大学环境科学系。

科研工作经历

2005.12—: 南京大学环境学院教授，博士生导师。

2004.06—2005.06: 环境化学博士后研究员，美国普度大学(Purdue University)。

2002.02—2004.05: 环境化学博士后研究员，美国康州农业研究所(The Connecticut Agricultural Experiment Station)。

2003.01—2004.05: 环境科学兼职教授，美国圣心大学(Sacred Heart University)。

1998.08—2001.12: 环境化学助研，美国德州农工大学(Texas A&M University)环境工程系及地理系。

研究方向与研究生招收

环境有机污染过程与界面化学、土壤有机污染控制与化学修复、纳米材料的环境效应及应用、生物质对环境污染物的吸附。欢迎环境科学、化学及其它交叉领域（例如生物化学、材料科学、仪器分析）学生报考硕士、博士研究生。

奖励及学术兼职

Journal of Environmental Quality 副主编（Associate Editor，2008— ）。

Environmental Toxicology & Chemistry 编委（Member of Editorial Board，2012— ）。

2011年获国家自然科学二等奖（排名第五）。项目名称：典型污染物环境化学行为、毒理效应及生态风险早期诊断方法。

2009年获教育部自然科学一等奖（排名第三）。项目名称：典型污染物毒性效应机制与早期预警方法研究。

2009年获首届“Scopus 未来科学之星”环境科学领域银奖。

2006年入选教育部“新世纪优秀人才支持计划”。

2001年度美国化学协会（ACS）环境化学分会（Division of Environmental Chemistry）研究生优秀论文奖（Graduate Student Paper Award）。为该机构授予研究生最高奖项。

主持科研项目

（1）土壤中持久性有机有毒污染物的迁移转化规律及对地下水的影响（2007.01-2010.12），200万元，国家自然基金重点项目（20637030），已完成。

（2）土壤中煤源颗粒对有机污染物的吸附、解吸研究（2010.01-2012.12），35万元，国家自然基金面上项目（21077049），正在进行。

（3）黏土矿物中有机胺离子与多环芳烃间的阳离子-p键作用（2008.01-2010.12），28万元，国家自然基金面上项目（20777031），已完成。

（4）溶解态有机物对有机污染物在矿物表面吸附的影响（2006.01-2006.12），8万元，国家自然基金科学部主任基金（20647002），已完成。

（5）有机聚合物—黏土纳米吸附材料研究（2007.01-2009.12），50万元，教育部新世纪优秀人才支持计划（NCET-06-0453），已完成。

（6）功能化纳米碳管对医药等新型有机污染物吸附机制研究（2009.06-2011.12），9万元，江苏省自然基金面上项目（BK2009248），已完成。

（7）几种典型中国土壤有机质对非离子型有机污染物的吸附模型研究（2006.06-2008.12），7.5万元，江苏省自然基金面上项目（BK2006128），已完成。

（8）教育部留学回国人员科研启动基金（2008.09-2009.12），3万元，已完成。

发表论文

(1) Lv, D., Y. Wan*, X. Shi, H. Xu, W. Chen, and D. Zhu. **2012**. Effect of heat treatment on sorption of polar and nonpolar compounds to montmorillonites and soils. ***J. Environ. Qual.*** Accepted.

(2) Fu, H., and D. Zhu*. **2012**. In-situ hydrothermal grown silicalite-1 coating for solid-phase microextraction. ***Anal. Chem.*** 84:2366–2372.

(3) Zhang, L., D. Zhu, H. Wang, L. Hou, and W. Chen*. **2012**. Humic acid-mediated transport of tetracycline and pyrene in saturated porous media. ***Environ. Toxicol. Chem.*** 31:534–541.

(4) Tang, Y., E. Zong, H. Wan*, Z. Xu, S. Zheng, and D. Zhu. **2012.** Zirconia functionalized SBA-15 as effective adsorbent for phosphate removal. ***Micropor. Mesopor. Mater.*** 155:192–200.

(5) Liu, J., E. Zong, H. Fu, S. Zheng, Z. Xu*, and D. Zhu. **2012**. Adsorption of aromatic compounds on porous covalent triazine-based framework. ***J. Colloid. Interf. Sci.*** 372:99–107.

(6) Li, Y., X. Cao, D. Zhu, M. A. Chappell, L. F. Miller, and J. Mao*. **2012**. Characterization of coals and their laboratory-prepared black carbon using advanced solid-state ^{13}C nuclear magnetic resonance spectroscopy. ***Fuel Processing Technol.*** 96:56–64.

(7) Wang, F., D. Zhu, and W. Chen*. **2012**. Effect of copper ion on adsorption of chlorinated phenols and 1-naphthylamine to surface-modified carbon nanotubes. ***Environ. Toxicol. Chem.*** 31:100–107.

(8) Xu, H., Y. Wan, H. Li, S. Zheng, and D. Zhu*. **2011**. Sorption of aromatic ionizable organic compounds to HDTMA- and PDADMA-modified montmorillonites. ***J. Environ. Qual.*** 40:1895–1902.

(9) Fu, H., L. Yang, Y. Wan, Z. Xu, and D. Zhu*. **2011**. Adsorption of pharmaceuticals to microporous activated carbon treated with KOH, CO_2 and steam. ***J. Environ. Qual.*** 40:1886–1894.

(10) Tang, H., D. Zhu, T. Li, H. Kong, and W. Chen*. **2011**. Reductive dechlorination of activated carbon-adsorbed trichloroethylene by zero-valent iron: Carbon as electron shuttle. ***J. Environ. Qual.*** 40:1878–1885.

(11) Ji, L., Y. Wan, S. Zheng, and D. Zhu*. **2011.** Adsorption of tetracycline and sulfamethoxazole on crop residue-derived ashes: Implication for the relative importance of black carbon to soil sorption. ***Environ. Sci. Technol.*** 45:5580–5586.

(12) Shao, Y., Z. Xu, H. Wan*, Y. Wan, H. Chen, S. Zheng*, and D. Zhu. **2011.** Enhanced liquid phase catalytic hydrodechlorination of 2,4-dichlorophenol over mesoporous carbon supported Pd catalysts. ***Catal. Comm.*** 12:1405–1409.

(13) Chen, H., Y. Shao, Z. Xu, H. Wan, Y. Wan, S. Zheng*, and D. Zhu. **2011.** Effective Cr(VI) reduction by catalytic hydrogenation over TiO_2 nanotube supported Pd catalysts. ***Appl. Catal. B: Environ.*** 105:255–262.

(14) Shi, X., H. Fu, Y. Li, J. Mao, S. Zheng, and D. Zhu*. **2011.** Impact of coal structural heterogeneity on the nonideal sorption of organic contaminants. ***Environ. Toxicol. Chem.*** 30:1310–1319.

(15) Liu, F., Z. Xu, H. Wan, Y. Wan, S. Zheng*, and D. Zhu. **2011**. Enhanced adsorption of humic acids on ordered mesoporous carbon compared with microporous activated carbon**.** ***Environ. Toxicol. Chem.*** 30:793–800.

(16) Qu, X., Y. Zhang, H. Li, S. Zheng, and D. Zhu*. **2011.** Probing the specific sorption sites on montmorillonite using nitroaromatic compounds and hexafluorobenzene. ***Environ. Sci. Technol.*** 45:2209–2216.

(17) Ji, L., W. Chen, J. Bi, S. Zheng, Z. Xu, D. Zhu*, and P. J. Alvarez**. 2010**. Adsorption of tetracycline on single-walled and multi-walled carbon nanotubes as affected by aqueous solution chemistry**.** ***Environ. Toxicol. Chem.*** 29:2713–2719.

(18) Sun, H., X. Shi, J. Mao, and D. Zhu*. **2010**. Tetracycline sorption to coal and soil humic acids: An examination of humic structural heterogeneity. ***Environ. Toxicol. Chem.*** 29:1934–1942.

(19) Ji, L., Y. Shao, Z. Xu, S. Zheng, and D. Zhu*. **2010**. Adsorption of monoaromatic compounds and pharmaceutical antibiotics on carbon nanotubes activated by KOH etching. ***Environ. Sci. Technol.*** 44:6429–6436.

(20) Wang, L., D. Zhu, L. Duan, F. Wang, and W. Chen*. **2010**. Adsorption of single-ringed N- and S-heterocyclic aromatics on carbon nanotubes. ***Carbon*** 48:3906–3915.

(21) Wang, J., S. Zheng*, Y. Shao, J. Liu, Z. Xu*, and D. Zhu. **2010**. Amino-functionalized Fe_3O_4@SiO_2 core-shell magnetic nanomaterial as novel adsorbent for aqueous heavy metals removal. ***J. Colloid. Interf. Sci.*** 349:293–299.

(22) Zhang, D.; D. Zhu, and W. Chen*. **2010**. Response to comment on “Sorption of nitroaromatics to typical Chinese soils: Roles of soil organic matter versus clay minerals.” ***Environ. Toxicol. Chem.*** 29:1022–1024.

(23) Ji, L., F. Liu, Z. Xu, S. Zheng*, and D. Zhu*. **2010**. Adsorption of pharmaceutical antibiotics on template-synthesized ordered micro- and mesoporous carbons. ***Environ. Sci. Technol.*** 44:3116–3122.

(24) Shi, X., L. Ji, and D. Zhu*. **2010**. Investigating roles of organic and inorganic soil components in sorption of polar and nonpolar aromatic compounds. ***Environ. Pollut.*** 158:319–324.

(25) Ji, L., F. Liu, Z. Xu, S. Zheng*, and D. Zhu*. **2009**. Zeolite-templated microporous carbon as a superior adsorbent for removal of monoaromatic compounds from aqueous solution. ***Environ. Sci. Technol.*** 43:7870–7876.

(26) Ji, L., W. Chen, S. Zheng, Z. Xu, and D. Zhu*. **2009**. Adsorption of sulfonamide antibiotics to multi-walled carbon nanotubes. ***Langmuir*** 25: 11608–11613.

(27) Chen, W., L. Duan, L. Wang, and D. Zhu*. **2009**. Response to comment on “Adsorption of hydroxyl- and amino-substituted aromatics to carbon nanotubes.” ***Environ. Sci. Technol.*** 43:3400–3401.

(28) Zhang, D.; D. Zhu, and W. Chen*. **2009**. Sorption of nitroaromatics to typical Chinese soils: Roles of soil organic matter versus

clay minerals. ***Environ. Toxicol. Chem.*** 28:1447–1454.

(29) Ji, L., W. Chen, L. Duan, and D. Zhu*. **2009**. Mechanisms for strong adsorption of tetracycline to carbon nanotubes: A comparative study using activated carbon and graphite as adsorbents. ***Environ. Sci. Technol.*** 43:2322–2327.

(30) Zhu, D., H. Zhang, Q. Tao, Z. Xu, and S. Zheng*. **2009**. Surface functionalized mesoporous silicas as adsorbents for aromatic contaminants in aqueous solution. ***Environ. Toxicol. Chem.*** 28:1400–1408.

(31) Chen, J., W. Chen, and D. Zhu*. **2008**. Adsorption of nonionic aromatic compounds to single-walled carbon nanotubes: Effects of aqueous solution chemistry. ***Environ. Sci. Technol.*** 42:7225–7230.

(32) Chen, W., L. Duan, L. Wang, and D. Zhu*. **2008**. Adsorption of hydroxyl- and amino-substituted aromatics to carbon nanotubes. ***Environ. Sci. Technol.*** 42:6862–6868.

(33) Sun, H., D. Zhu*, and J. Mao. **2008**. Sorption of polar and nonpolar aromatic compounds to two humic acids with varied structural heterogeneity. ***Environ. Toxicol. Chem.*** 27:2449–2456.

(34) Liu, P., D. Zhu*, H. Zhang, X. Shi, H. Sun, and F. Dang. **2008**. Sorption of polar and nonpolar aromatic compounds to four surface soils of eastern China. ***Environ. Pollut.*** 156:1053–1060.

(35) Qu, X., L. Xiao, and D. Zhu*. **2008**. Site-specific adsorption of 1,3-dinitrobenzene to bacterial surfaces: A mechanism of *n*-π electron-donor-acceptor (EDA) interactions. ***J. Environ. Qual.*** 37:824–829.

(36) Zhang, Y., D. Zhu*, and H. Yu. **2008**. Sorption of aromatic compounds to clay mineral and model humic substance-clay complex: Effects of solute structure and exchangeable cation. ***J. Environ. Qual.*** 37:817–823.

(37) Qu, X., P. Liu, and D. Zhu*. **2008**. Enhanced sorption of PAHs to tetra-alkyl ammonium modified smectites via cation-π interactions. ***Environ. Sci. Technol.*** 42:1109–1116.

(38) Qu, X., X. Wang, and D. Zhu*. **2007**. The partitioning of PAHs to egg phospholipids facilitated by copper and proton binding via cation-π interactions. ***Environ. Sci. Technol.*** 41:8321–8327.

(39) Chen, W., L. Duan, and D. Zhu*. **2007**. Adsorption of polar and nonpolar organic chemicals to carbon nanotubes. ***Environ. Sci. Technol.*** 41:8295–8300.

(40) Xiao, L., X. Qu, and D. Zhu*. **2007**. Biosorption of nonpolar hydrophobic organic compounds to *Escherichia coli* facilitated by metal and proton surface binding. ***Environ. Sci. Technol.*** 41:2750–2755.

(41) Chen, J., D. Zhu*, and C. Sun. **2007**. Effect of heavy metals on the sorption of hydrophobic organic compounds to wood charcoal. ***Environ. Sci. Technol.*** 41:2536–2541.

(42) De Oliveria, M. F., C. T. Johnston*, G. S. Premachandra, B. J. Teppen, H. Li, D. A. Laird, D. Zhu, and S. A. Boyd. **2005**. Spectroscopic study of carbaryl sorption on smectite from aqueous suspension. ***Environ. Sci. Technol.*** 39:9123–9129.

(43) Zhu, D., and J. J. Pignatello*. **2005**. A concentration-dependent multi-term linear free energy relationship for sorption of organic compounds to soils based on the hexadecane dilute solution reference state. ***Environ. Sci. Technol.*** 39:8817–8828.

(44) Zhu, D., S. Kwon, and J. J. Pignatello*. **2005**. Adsorption of single-ring organic compounds to wood charcoals prepared under different thermochemical Conditions. ***Environ. Sci. Technol.*** 39:3990–3998.

(45) Zhu, D., and J. J. Pignatello*. **2005**. Characterization of aromatic compound sorptive interactions with black carbon (charcoal) assisted by graphite as a model. ***Environ. Sci. Technol.*** 39:2033–2041.

(46) Zhu, D., S. Hyun, J. J. Pignatello*, and L. S. Lee. **2004**. Evidence for π-π electron donor-acceptor interactions between π-donor aromatic compounds and π-acceptor sites in soil organic matter through pH effects on sorption. ***Environ. Sci. Technol.*** 38:4361–4368.

(47) Zhu, D.*, B. E. Herbert, M. A. Schlautman, E. R. Carraway, and J. Hur. **2004**. Cation-π bonding: A new perspective on the sorption of polycyclic aromatic hydrocarbons to mineral surfaces. ***J. Environ. Qual.*** 33:1322–1330.

(48) Zhu, D.*, B. E. Herbert, M. A. Schlautman, and E. R. Carraway. **2004**. Characterization of cation-π interactions in aqueous solution using deuterium NMR spectroscopy. ***J. Environ. Qual.*** 33:276–284.

(49) Zhu, D.*, B. E. Herbert, and M. A. Schlautman. **2003**. Sorption of pyridine to suspended soil particles studied by deuterium nuclear magnetic resonance. ***Soil Sci. Soc. Am. J.*** 67:1370–1377.

(50) Zhu, D.*, B. E. Herbert, and M. A. Schlautman. **2003**. Molecular-level investigation of monoaromatic compound sorption to suspended soil particles by deuterium NMR. ***J. Environ. Qual.*** 32:232–239.