

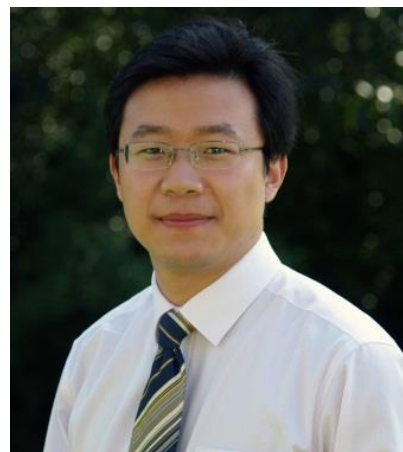
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教授，博士生导师，国家“青年千人计划”学者（2016）

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从事专业：

环境生物学、土壤污染与控制

研究方向：

重金属、微量元素生物地球化学

土壤重金属污染阻控原理与技术

纳米材料环境风险和纳米农业科技

同步辐射等先进的原位分析技术

招生方向：

农业资源与环境、植物营养、环境科学与工程

热忱欢迎对科学研究感兴趣的优秀学生加盟本实验室！

教育经历：

2006/09–2011/07，中国科学院，南京土壤研究所，博士

2002/09–2006/07，安徽大学，生命科学学院，学士

研究工作经历：

2016/01–至今，南京农业大学 资源与环境科学学院，教授、博导

2015/01–2016/12，澳大利亚 昆士兰大学，农业与食品科学学院，Research Fellow

2013/01–2015/12，澳大利亚 昆士兰大学，ARC DECRA Research Fellow

2011/08–2012/12，澳大利亚 昆士兰大学，农业与食品科学学院，博后

学术任职与服务：

- 国际 SCI 期刊《Plant and Soil》编委 (2015-)
- 江苏省土壤学会理事
- 多个学术期刊审稿人

获奖及荣誉：

CRRICULUM VITAE PENG WANG

- 2016 国家青年千人学者
- 2013 ARC Discovery Early Career Researcher Award (Australian Research Council) (澳大利亚“探索”青年学者奖)
- 2012 中国科学院 优秀博士学位论文
- 2011 中国科学院 院长特别奖

主持的科研项目：

1. 国家重点研发计划重点专项子课题，土壤砷、铬迁移转化和生物有效性研究，400 万，2016-2020. 主持
2. 国家自然科学基金面上项目，水稻土 Cd 生物有效性的控制过程解析与调控，66 万，2017-2020. 主持
3. 教育部中央高校基本业务费，重金属形态转化根际过程研究方法的建立，10 万，2016-2018. 主持
4. 南京农业大学资源与环境学院人才引进项目，30 万，2016-2017. 主持
5. 国家“千人计划”青年项目，300 万，2016-2020. 主持
6. 南京农业大学高层次引进人才启动基金，300 万，2016-2020. 主持
7. CSIRO (澳大利亚联邦科学与工业研究组织). Fate and behaviour of nanomaterials in terrestrial ecosystems and ecosystem health. Peter Kopittke, Neal Menzies, and Peng Wang. AU\$ 100,000. 2015-2019.
8. ARC (澳大利亚政府研究委员会) Discovery of Early Career Researcher Award: Improving risk-based assessments of trace metal bioavailability in soil-plant systems: A focus on cadmium (Cd). Peng Wang (Fellowship). ARC DECRA AU\$ 375,000. 2012-2015.
9. UQ (澳大利亚昆士兰大学) Early Career Research Scheme: Synchrotron-based XANES imaging for studying uptake, speciation, and translocation of selenium in soil-crop systems. Peng Wang. The University of Queensland. AU\$39,400. 2014.

主要论文 (*:通讯作者)：

Updated on August 10, 2017

2017

1. Xu X, Chen C, **Wang P**, Kretzschmar R, Zhao FJ. 2017. Control of arsenic mobilization in paddy soils by manganese and iron oxides. *Environmental Pollution*. 231, 37-47.
2. Kopittke PM, McKenna BA, Karunakaran C, Dynes JJ, Arthur Z, Gianoncelli A, Kourousias G, Menzies NW, Ryan PR, **Wang P***, Green K, Blamey FPC. 2017. Aluminum Complexation with Malate within the Root Apoplast Differs between Aluminum Resistant and Sensitive Wheat Lines. *Frontiers in Plant Science*. In Press. Doi: 10.3389/fpls.2017.01377

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3. Kopittke PM, **Wang P***. 2017. Kinetics of metal toxicity in plant roots and its effects on root morphology. *Plant and Soil*. In Press. doi:10.1007/s11104-017-3342-6.
4. Li C, **Wang P***, Menzies NW, Lombi E and Kopittke PM. 2017. Effects of changes in leaf properties mediated by methyl jasmonate (MeJA) on foliar absorption of Zn, Mn, and Fe. *Annals of Botany*. mcx063.
5. Li M, **Wang P**, Dang F and Zhou DM. 2017. The transformation and fate of silver nanoparticles in a paddy soil: Effects of soil organic matter and redox conditions. *Environmental Science: Nano*. 4, 919-928.
6. Kopittke PM, **Wang P***, Lombi E, and Donner E. 2017. Synchrotron-based X-ray approaches for examining toxic trace metal(loid)s in soil-plant systems. *Journal of Environmental Quality*. DOI: 10.2134/jeq2016.09.0361.
7. **Wang P***, Lombi E, Sun S, Scheckel KG, Malysheva A, McKenna B, Menzies N, Zhao FJ and Kopittke PM. 2017. Characterizing the uptake, accumulation and toxicity of silver sulfide nanoparticles in plants. *Environmental Science: Nano*. 4, 448-460.
8. Yang X, Pan H, **Wang P***, and Zhao FJ. 2017. Particle-specific toxicity and bioavailability of cerium oxide (CeO₂) nanoparticles to *Arabidopsis thaliana*. *Journal of Hazardous Materials*. 332, 292-300.

2016

9. **Wang P**, Liu YJ, Menzies NM, Wehr JB, de Jonge M, Howard D, Kopittke PM, and Huang L. 2016. Ferric minerals and organic matter change arsenic speciation in copper mine tailings. *Environmental Pollution*. 218, 835-843.
10. Cheng M, **Wang P**, Kopittke PM, Wang A, Sale PWG, and Tang C. 2016. Cadmium accumulation is enhanced by ammonium compared to nitrate in two hyperaccumulators, without affecting speciation. *Journal of Experimental Botany*. 67, 5041-5050.
11. **Wang P***, Menzies NW, Dennis PG, Guo J, Forstner C, Sekine R, Lombi E, Kappen P, Bertsch PM and Kopittke PM. 2016. Silver nanoparticles entering soils via the wastewater-sludge-soil pathway pose low risk to plants but elevated Cl concentrations increase Ag bioavailability. *Environmental Science & Technology*. 50, 8274-8281. (**Highlighted by European Commission “Science for Environmental Policy”**)
12. **Wang P***, Lombi E, Zhao F-J, and Kopittke PM. 2016. Nanotechnology: A new opportunity in plant sciences. *Trends in Plant Science*. 22, 699-712. (**ESI-‘Hot Paper’, ‘Highly-Cited Paper’**)

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13. Kopittke PM, Menzies NW, **Wang P***, and Blamey FP. 2016. Kinetics and nature of aluminium rhizotoxic effects: A review. *Journal of Experimental Botany*. 67, 44514-4467.
14. Forstner C, **Wang P**, Kopittke PM and Dennis Paul. 2016. The effects of graphene oxide on soil bacterial diversity remain unknown. *RCS Advances*. 6, 51203-51204.
15. Yan J, Wang P, **Wang P**, Tang Z, Huang C, Yang M, Lian X, Salt DE, and Zhao F-J. 2016. A loss-of-function allele of *OsHMA3* associated with high cadmium accumulation in shoots and grain of *Japonica* rice cultivars. *Plant, Cell & Environment*. 39, 1941-1954.

2015

16. Qiu H, Vijver M, He E Liu, Y, **Wang P**, Xia B, Smolders E, Versieren L, and Peijnenburg WGM. 2015. Incorporating bioavailability into toxicity assessment of Cu-Ni, Cu-Cd, and Ni-Cd mixtures with the extended biotic ligand model and the WHAM-F tox approach. *Environmental Science and Pollution Research*. 22, 19213-19233.
17. **Wang P***, Menzies NW, Lombi E, McKenna B, James S, Caixian T, and Kopittke PM. 2015. Synchrotron-based XANES imaging for laterally resolved speciation of selenium in fresh roots and leaves of wheat and rice. *Journal of Experimental Botany*. 66, 4795-4806.
18. **Wang P***, Menzies NW, Lombi E, Sekine R, Blamey FPC, Hernandez-Soriano M, Miaomiao C, Kappen P, Peijnenburg W, Caixian T, and Kopittke PM. 2015. Silver sulfide nanoparticles (Ag₂S-NPs) are taken up by plants and are phytotoxic. *Nanotoxicology*. 9, 1041-1049.
19. Kopittke P, Moore KL, Lombi E, Gianoncelli A, Ferguson BJ, Blamey FPC, Menzies NW, Nicholson M, McKenna BA, **Wang P**, Gresshoff PM, Kourousias G, Webb RI, Green K, and Tollenaere A. 2015. Identification of the primary lesion of toxic aluminum (Al) in plant roots. *Plant Physiology*. 167: 1402-1411. (**Highly-Cited Paper**)
20. Yen Le TT, Swartjes F, Römken P, Groenenberg JE, **Wang P**, Lofts S, and Hendriks AJ. 2015. Modelling metal accumulation using humic acid as a surrogate for plant roots. *Chemosphere*. 124: 61-69.

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21. Wang YM, **Wang P**, Ni LF, Hao XZ, Zhou DM. 2014. Assessment of the Zn-Co mixtures rhizotoxicity under Ca deficiency: Using two conventional mixture models based on the cell membrane surface potential. *Chemosphere*. 112, 232-239.

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22. Wang YM, Kinraide TB, **Wang P**, Hao XZ, Zhou DM. 2014. Surface electrical potentials of root cell plasma membranes: implications for ion interactions, rhizotoxicity, and uptake. *International Journal of Molecular Sciences*. 15, 22661-22677.
23. Le TTY, **Wang P**, Vijver MG, Kinraide TB, Hendriks AJ, and Peijnenburg WJGM. 2014. Delineating ion-ion interactions by electrostatic modeling for predicting rhizotoxicity of metal mixtures to lettuce *Lactuca sativa*. *Environmental Toxicology and Chemistry*. 33, 1988-1995.
24. Blamey FPC, Wehr JB, **Wang P**, Menzies NW, and Kopittke PM. 2014. Kinetics and mechanisms of cowpea root adaptation to changes in solution calcium. *Plant and Soil*. 379, 301-314.
25. Kopittke PM, de Jonge MD, **Wang P**, McKenna BA, Lombi E, Paterson DJ, Howard DL, James SA, Spiers KM, Ryan CG, Johnson AAT, and Menzies NW. 2014. Laterally resolved speciation of arsenic in roots of wheat and rice using fluorescence-XANES imaging. *New Phytologist*. 201, 1251-1262.
26. Kopittke PM, **Wang P**, Menzies NM, Naidu R, and Kinraide TB. 2014. A web-accessible computer program for calculating electrical potentials and ion activities at cell-membrane surfaces. *Plant and Soil*. 375, 35-46.
27. Kopittke PM, Menzies NW, **Wang P**, McKenna BA, Wehr JB, Lombi E, Kinraide TB, and Blamey FPC. 2014. The rhizotoxicity of metal cations is related to their strength of binding to hard ligands. *Environmental Toxicology and Chemistry*. 33, 268-277.

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28. **Wang P***, Menzies NW, Lombi E, McKenna BA, Johannessen B, Glover CJ, Kappen P, and Kopittke PM. 2013. Fate of ZnO nanoparticles in soils and cowpea (*Vigna unguiculata*). *Environmental Science & Technology*. 47, 13822-13830.
29. **Wang P***, Menzies NW, Lombi E, McKenna BA, de Jonge MD, Donner E, Blamey FPC, Ryan CG, Paterson DJ, Howard DL, James SA, and Kopittke PM. 2013. Quantitative determination of metal and metalloid spatial distribution in hydrated and fresh roots of cowpea using synchrotron-based X-ray fluorescence microscopy. *Science of the Total Environment*. 463-464, 131-139.
30. **Wang P***, Menzies NW, Lombi E, McKenna BA, de Jonge MD, Paterson DJ, Howard DL, Glover CJ, James S, Kappen P, Johannessen B, and Kopittke PM. 2013. In situ speciation and distribution of toxic selenium in hydrated roots of cowpea. *Plant Physiology*. 163, 407-418.
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32. Wang YM, Kinraide TB, **Wang P**, Zhou DM, and Hao XZ. 2013. Modeling rhizotoxicity and uptake of Zn and Co singly and in binary mixture in wheat in terms of the cell membrane surface electrical potential. *Environmental Science & Technology*. 47, 2831-2838.
33. Kopittke PM, Lombi E, McKenna BA, **Wang P**, Donner E, Webb RI, Blamey FPC, de Jonge MD, Paterson D, Howard DL, and Menzies NW. 2013. Distribution and speciation of Mn in hydrated roots of cowpea at levels inhibiting root growth. *Physiologia Plantarum*. 147, 453-464.

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34. **Wang P**, Menzies N, Wang YM, Zhou DM, Zhao FJ, and Kopittke P. 2012. Identifying the species of copper that are toxic to plant roots in alkaline nutrient solutions. *Plant and Soil*. 361, 317-327.
35. **Wang P**, De Schamphelaere KAC, Kopittke PM, Zhou DM, and Peijnenburg WJGM. 2012. Development of an electrostatic model predicting copper toxicity to plants. *Journal of Experimental Botany*. 63, 659-668.
36. Kopittke PM, de Jonge MD, Menzies NW, **Wang P**, Donner E, McKenna BA, Paterson DJ, Howard DL, and Lombi E. 2012. Examination of the distribution of arsenic in hydrated and fresh cowpea roots using two- and three-dimensional techniques. *Plant Physiology*. 159, 1149-1158.
37. Zhou DM, Jin SY, Wang YJ, **Wang P**, Weng NY, and Wang Y. 2012. Assessing the impact of iron-based nanoparticles on pH, dissolved organic carbon, and nutrient availability in soils. *Soil & Sediment Contamination*. 21, 101-104.

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38. **Wang P**, Kinraide TB, Zhou DM, Kopittke PM, and Peijnenburg W. 2011. Plasma membrane surface potential: Dual effects upon ion uptake and toxicity. *Plant Physiology*. 155, 808-820.
39. **Wang P**, Kopittke PM, De Schamphelaere KAC, Zhao FJ, Zhou DM, Lock K, Ma YB, Peijnenburg W, and McGrath SP. 2011. Evaluation of an electrostatic toxicity model for predicting Ni²⁺ toxicity to barley root elongation in hydroponic cultures and in soils. *New Phytologist*. 192, 414-427.
40. **Wang P**, Zhou DM, Weng NY, Wang DJ, and Peijnenburg W. 2011. Calcium and magnesium enhanced arsenate rhizotoxicity and uptake in *Triticum aestivum*. *Environmental Toxicology & Chemistry*. 30, 1642-1648.

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41. Li LZ, Zhou DM, Peijnenburg W, van Gestel CAM, Jin SY, Wang YJ, and **Wang P**. 2011. Toxicity of zinc oxide nanoparticles in the earthworm, *Eisenia fetida* and subcellular fractionation of Zn. *Environment International*. 37, 1098-1104.
42. Kopittke PM, Kinraide TB, **Wang P**, Blarney FPC, Reichman SM, and Menzies NW. 2011. Alleviation of Cu and Pb rhizotoxicities in cowpea (*Vigna unguiculata*) as related to ion activities at root-cell plasma membrane surface. *Environmental Science & Technology*. 45, 4966-4973.
43. Kopittke PM, Blamey FPC, **Wang P**, and Menzies NW. 2011. Calculated activity of Mn^{2+} at the outer surface of the root cell plasma membrane governs Mn nutrition of cowpea seedlings. *Journal of Experimental Botany*. 62, 3993-4001.
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45. Kopittke PM, Blamey FPC, McKenna BA, **Wang P**, and Menzies NW. 2011. Toxicity of metals to roots of cowpea in relation to their binding strength. *Environmental Toxicology and Chemistry*. 30, 1827-1833.
46. Li DD, Zhou DM, **Wang P**, and Li LZ. 2011. Temperature affects cadmium-induced phytotoxicity involved in subcellular cadmium distribution and oxidative stress in wheat roots. *Ecotoxicology and Environmental Safety*. 74, 2029-2035.
47. Li DD, Zhou DM, **Wang P**, Weng NY, and Zhu XD. 2011. Subcellular Cd distribution and its correlation with antioxidant enzymatic activities in wheat (*Triticum aestivum*) roots. *Ecotoxicology and Environmental Safety*. 74, 874-881.
48. Zhou DM, Li LZ, Peijnenburg W, Ownby DR, Hendriks AJ, **Wang P**, and Li DD. 2011. A QICAR approach for quantifying binding constants for metal-ligand complexes. *Ecotoxicology and Environmental Safety*. 74, 1036-1042.

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49. **Wang P**, Zhou DM, Peijnenburg W, and Li LZ. 2010. Evaluating mechanisms for plant-ion (Ca^{2+} , Cu^{2+} , Cd^{2+} or Ni^{2+}) interactions and their effectiveness on rhizotoxicity. *Plant and Soil*. 344, 277-288.
50. **Wang P**, Zhou DM, Li LZ, and Luo XS. 2010. Evaluating the biotic ligand model for toxicity and the alleviation of toxicity in terms of cell membrane surface potential. *Environmental Toxicology*

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and Chemistry. 29, 1503-1511.

51. Kinraide TB and **Wang P**. 2010. The surface charge density of plant cell membranes (σ): An attempt to resolve conflicting values for intrinsic σ . *Journal of Experimental Botany*. 61, 2507-2518.
52. Li LZ, Zhou DM, Peijnenburg W, **Wang P**, van Gestel CAM, Jin SY, and Wang QY. 2010. Uptake pathways and toxicity of Cd and Zn in the earthworm *Eisenia fetida*. *Soil Biology & Biochemistry*. 42, 1045-1050.

2009

53. **Wang P**, Zhou DM, Luo XS, and Li LZ. 2009. Effects of Zn-complexes on zinc uptake by wheat (*Triticum aestivum*) roots: A comprehensive consideration of physical, chemical and biological processes on biouptake. *Plant and Soil*. 316, 177-192.

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54. **Wang P**, Zhou DM*, Kinraide TB, Luo XS, Li LZ, Li DD, and Zhang HL. 2008. Cell membrane surface potential (ψ_0) plays a dominant role in the phytotoxicity of copper and arsenate. *Plant Physiology*. 148, 2134-2143.

论文及引用统计数据见:

<http://www.researcherid.com/rid/E-2008-2012> (ISI);

<https://scholar.google.com.au/citations?user=2vL71yYAAAAJ&hl=en> (Google Scholar)

https://www.researchgate.net/profile/Peng_Wang148 (Researchgate)