

一、简历：



1985、1988 年分别获得南京农业大学土壤农化专业学士、植物营养学硕士学位，2000 年获得以色列 Hebrew University of Jerusalem 植物生物学博士学位。2001 年以色列 Agricultural Research Organization 博士后，2001-2004 年 Weizmann Institute of Sciences 博士后。

1988-1995 年为南京农业大学助教、讲师、副教授。2004 年至今，南京农业大学教授(二级)、博士生导师。2006-2007 年南京农大资环学院副院长(主持工作)，2007 年至今，南京农大资环学院院长。

兼任作物遗传与种质创新国家重点实验室副主任，农业部长江中下游植物营养与肥料重点实验室主任，中国植物营养与肥料学会理事，中国土壤学会常务理事和江苏省土壤学会副理事长、理事长(2004-2016)，Frontiers in Plant Science、Scientific Reports、Chemical and Biological Technologies in Agriculture (Associated Editor)、中国农业科学、土壤学报、植物营养与肥料学报、南京农业大学学报编委等。

被评为全国农业科研杰出人才(2011 年)，全国百篇优秀博士论文指导教师(2011 年)，入选爱思唯尔(Elsevier)中国高被引学者榜单，江苏省“333 高层次人才”第二层次培养对象，“青蓝工程”中青年学术带头人培养对象，农业部“作物养分高效生物学研究创新团队”带头人，江苏高等学校创新团队“农业资源的生物学利用”的带头人。“作物高效吸收利用氮磷养分的生理过程和分子调控途径”获得 2015 年度江苏省科学技术奖(基础类)一等奖(第一完成人)。

二、研究领域：

- 1、植物营养分子遗传学
- 2、植物菌根和生物固氮

三、发表 SCI 论文 (2007 年以来) :

1. Guohua Xu*. 2017. Sensing and transport of nutrients in plants. **Seminars in Cell & Developmental Biology** doi: 10.1016/j.semcd.2017.09.020
2. Jia H, Zhang S, Wang L, Yang Y, Zhang H, Cui H, Shao H, Xu GH*. 2017. OsPht1;8, a phosphate transporter, is involved in auxin and phosphate starvation response in rice. **Journal of Experimental Botany** doi:10.1093/jxb/erx317.
3. Xuan W, Beeckman T, Xu GH*. 2017. Plant nitrogen nutrition: sensing and signaling. **Current Opinion in Plant Biology** 39, 57-65.
4. Zeng Y, Li Q, Wang HY, Zhang J, Du J, Feng HM, Blumwald E, Yu L*, Xu GH*. 2017. Two NHX-type transporters from Helianthus tuberosus improve the tolerance of rice to salinity and nutrient deficiency stress. **Plant Biotechnology Journal** doi: 10.1111/pbi.12773.
5. Chen AQ, Gu M, Wang SS, Chen J, Xu GH*. 2017. Transport properties and regulatory roles of nitrogen in arbuscular mycorrhizal symbiosis. **Seminars in Cell & Developmental Biology** doi: 10.1016/j.semcd.
6. Li WH, Xu GH, Alli A. Yu L. 2017. Plant HAK/KUP/KT K⁺ transporters: function and regulation. **Seminars in Cell & Developmental Biology** doi: 10.1016/j.semcd.
7. Feng HM, Li B, Zhi Y, Chen J, Li R, Xia XD, Xu GH, Fan XR. 2017. Overexpression of the nitrate transporter, OsNRT2.3b, improves rice phosphorus uptake and translocation. **Plant Cell Reports** doi: 10.1007/s00299-017-2153-9.
8. Gu M, Zhang J, Li HH, Meng DQ, Li R, Dai XL, Wang SC, Liu W, Qu HY, Xu GH*. 2017. Maintenance of phosphate homeostasis and root development are coordinately regulated by MYB1, an R2R3-type MYB transcription factor in rice. **Journal of Experimental Botany** doi: 10.1093/jxb/erx174.
9. Guo H, Zhou H, Zhang J, Guan W, Xu S, Shen W, Xu GH, Xie Y, Foyer C. 2017. L -cysteine desulphhydrase-related H₂ S production is involved in OsSE5-promoted ammonium tolerance in roots of Oryza sativa. **Plant, Cell & Environment** DOI:10.1111/pce.12982
10. Chen J, Fan XR, Qian K, Zhang Y, Song M, Liu Y, Xu GH, Fan XR. 2017. pOsNAR2.1:OsNAR2.1 expression enhances nitrogen uptake efficiency and grain yield in transgenic rice plants. **Plant Biotechnology Journal** DOI: 10.1111/pbi.12714.
11. Fan XR; Naz M; Fan XR; Xuan W; Miller AJ; Xu GH* 2017. Plant nitrate transporters: from gene function to application. **Journal of Experimental Botany** DOI:10.1093/jxb/erx011.
12. Chen X, Liao DH, Yang XF, Ji MJ, Wang SS, Gu M, Chen AQ*, Xu GH. 2017. Three cis-Regulatory Motifs, AuxRE, MYCRS1 and MYCRS2, are Required for Modulating the Auxin- and Mycorrhiza-Responsive Expression of a Tomato GH3 Gene. **Plant & Cell Physiology** 58:770-778.
13. Li J, Yue L, Shen Y, Sheng Y, Zhan X, Xu G, Xing B. 2017. Phenanthrene-responsive microRNAs and their targets in wheat roots. **Chemosphere**. 186: 588-598.
14. Sun, Huawei; Tao, Jinyuan; Zhao, Quanzhi; Xu, Guohua; Zhang, Yali. 2017. Multiple roles of nitric oxide in root development and nitrogen uptake. **Plant Signaling & Behavior** 12(1): e1274480.

15. Gao CM, Ding L, Li YR, Chen YP, Zhu JW, Gu M, Li Y, **Xu GH**, Shen QR, Guo SW. 2017. Nitrate increases ethylene production and aerenchyma formation in roots of lowland rice plants under water stress. **Functional Plant Biology** 44: 430-442.
16. Li C, Tang Z, Wei J, Qu HY, Xie YJ, **Xu GH***. 2016. The OsAMT1.1 gene functions in ammonium uptake and ammonium-potassium homeostasis over low and high ammonium concentration ranges. **Journal of Genetics and Genomics** 43(11): 639-649.
17. Wang PT, Zhang WW, Mao CZ, **Xu GH**, Zhao FJ. 2016. The role of OsPT8 in arsenate uptake and varietal difference in arsenate tolerance in rice. **Journal of Experimental Botany** 67: 6051-6059.
18. Liu J, Liu J, Chen A, Ji M, Chen J, Yang X, Gu M, Qu H, **Xu G**. 2016. Analysis of tomato plasma membrane H⁺-ATPase gene family suggests a mycorrhiza-mediated regulatory mechanism conserved in diverse plant species. **Mycorrhiza** 26: 645-656.
19. Fan XR, Tang Z, Tan YW, Zhang Y, Luo BB, Yang M, Lian XM, Shen QR, Miller AJ, **Xu GH***. 2016. Overexpression of a pH-sensitive nitrate transporter in rice increases crop yields. **Proceedings of the National Academy of Sciences of the United States of America**. 113 (26), 7118-7123.
20. Chen JG, Zhang Y, Tan YW, Zhang M, Zhu LL, **Xu GH**, Fan XR. 2016. Agronomic nitrogen-use efficiency of rice can be increased by driving OsNRT2.1 expression with the OsNAR2.1 promoter. **Plant Biotechnology Journal** 14(8):1705-15.
21. Sun HW, Bi Y, Tao JY, Huang SJ, Hou MM, Xue R, Ling ZH, Gu PY, Yoneyama K, Xie XN, Shen QR, **XU GH**, Zhang YL. 2016. Strigolactones are required for nitric oxide to induce root elongation in response to nitrogen- and phosphate-deficiency in rice. **Plant Cell & Environment** 39: 1473-84.
22. Wang HD, Sun R, Cao Y, Pei WX, Sun YF, Zhou HM, Wu XN, Zhang F, Luo L, Shen QR, **Xu GH**, Sun SB. 2015. OsSIZ1, a SUMO E3 Ligase Gene, is Involved in the Regulation of the Responses to Phosphate and Nitrogen in Rice. **Plant & Cell Physiology** 56(12):2381-95.
23. Gu M, Chen AQ, Sun SB, **Xu GH***. 2016. Complex Regulation of Plant Phosphate Transporters and the Gap Between Molecular Mechanisms and Practical Application: What Are Missing? **Molecular Plant** 9(3):396-416.
24. Sun HW, Tao JY, Gu PY, **Xu GH**, Zhang YL. 2015. The role of strigolactones in root development. **Plant Signaling & Behavior** DOI:10.1080/15592324.2015.1110662.
25. Zhu J, Liang J, Xu Z, Fan X, Zhou Q, Shen Q, **Xu G**. 2015. Root aeration improves growth and N accumulation in rice seedlings under low nitrogen. **AoB Plants**. pii: plv131. doi: 10.1093/aobpla/plv131.
26. Huang SJ, Chen S, Liang Z, Zhang CM, Yan M, Chen JG, **XU GH**, Fan X, Zhang YL. 2015. Knockdown of the partner protein OsNAR2.1 for high-affinity nitrate transport represses lateral root formation in a nitrate-dependent manner. **Scientific Reports**. 5:18192. doi: 10.1038/srep18192.
27. Lei Ding, Limin Gao, Wei Liu, Min Wang, Mian Gu, Binbin Ren, **Guohua Xu**, Qirong Shen, Shiwei Guo. 2015. Aquaporin plays an important role in mediating chloroplastic CO₂ concentration under high-N supply in rice (*Oryza sativa*) plants. **Physiologia Plantarum** 156: 215-226.

28. Lixuan Ren, Ning Zhang, Ping Wu, Hongwei Huo, **Guohua Xu**, Guoping Wu. 2015. Arbuscular mycorrhizal colonization alleviates Fusarium wilt in watermelon and modulates the composition of root exudates. **Plant Growth Regulation**. 77: 77-85.
29. Xiaorong Fan, Huimin Feng, Yawen Tan, Yanling Xu, Qisong Miao, **Guohua Xu**. 2015. A putative 6 trans-membrane nitrate transporter OsNRT1.1b plays a key role in rice under low nitrogen. **Journal of Integrative Plant Biology**. 58(6): 590-599.
30. Guang Chen, Qingdi Hu, Le Luo, Tianyuan Yang, Song Zhang, Yibing Hu, Ling Yu, **Guohua Xu***. 2015. Rice potassium transporter OsHAK1 is essential for maintaining potassium mediated growth and functions in salt tolerance over low and high potassium concentration ranges. **Plant Cell and Environment**. 38(12):2747-65.
31. Xiaoqin Liu, Huimin Feng, Daimin Huang, Miaoquan Song, Xiaorong Fan, **Guohua Xu***. 2015. Two short sequences in OsNAR2.1 promoter are necessary for fully activating the nitrate induced gene expression in rice roots. **Scientific Reports**. 5:11950 | DOI: 10.1038/srep11950.
32. Xinhua Zhan, Xiu Yi, Le Yue, Xiaorong Fan, **Guohua Xu**, and Baoshan Xing. 2015. Cytoplasmic pH-Stat during Phenanthrene Uptake by Wheat Roots: A Mechanistic Consideration. **Environmental Science & Technology**. 49(10):6037-44.
33. Huawei Sun, Jinyuan Tao, Mengmeng Hou, Shuangjie Huang, Si Chen, Zhihao Liang, Tianning Xie, Yunqi Wei, Xiaonan Xie, Koichi Yoneyama, **Guohua Xu** and Yali Zhang. 2015. A strigolactone signal is required for adventitious root formation in rice. **Annals of Botany**. 115(7): 1155-1162.
34. Huawei Sun, Jiao Li, Wenjing Song, Jinyuan Tao, Shuangjie Huang, Si Chen, Mengmeng Hou, **Guohua Xu** and Yali Zhang. 2015. Nitric oxide generated by nitrate reductase increases nitrogen uptake capacity by inducing lateral root formation and inorganic nitrogen uptake under partial nitrate nutrition in rice. **Journal of Experimental Botany** 66(9): 2449-2459.
35. Guang Chen, Huimin Feng, Qingdi Hu, Hongye Qu, Aiqun Chen, Ling Yu, **Guohua Xu***. (2015) Improving rice tolerance to potassium deficiency by enhancing OsHAK16p:WOX11 controlled root development. **Plant Biotechnology Journal**. 13(6): 833-848.
36. Zhang F, Sun Y, Pei W, Jain A, Sun R, Cao Y, Wu X, Jiang T, Zhang L, Fan X, Chen A, Sun S, **Xu G**. (2015) Involvement of OsPht1;4 in phosphate acquisition, and mobilization facilitates embryo development in rice. **Plant Journal**. 82(4), 556-569.
37. Ding L., Gao C., Li Y., Li Y., Zhu Y., **Xu G.**, Shen Q., Kaldenhoff R., Kai L. & Guo S. (2015) The enhanced drought tolerance of rice plants under ammonium is related to aquaporin (AQP). **Plant Science** 234, 14-21.
38. Y Li, J Zhang, X Zhang, H Fan, M Gu, H Qu, **G Xu*** (2015) Phosphate transporter OsPht1;8 in rice plays an important role in phosphorus redistribution from source to sink organs and allocation between embryo and endosperm of seeds. **Plant Science** 230, 23-32.
39. Xiaoming Yin, Xiao Liang, Rong Zhang, Ling Yu, **Guohua Xu**, Quansuo Zhou, Xinhua Zhan. (2015) Impact of phenanthrene exposure on activities of nitrate reductase, phosphoenolpyruvate carboxylase, vacuolar H⁺-pyrophosphatase and plasma membrane H⁺-ATPase in roots of soybean, wheat and carrot. **Environmental and Experimental Botany** 113: 59-66.

40. Liao D, Chen X, Chen A, Wang H, Liu J, Liu J, Gu M, Sun S, **Xu G.** (2014) The Characterization of Six Auxin-Induced Tomato GH3 Genes Uncovers a Member, SIGH3.4, Strongly Responsive to Arbuscular Mycorrhizal Symbiosis. **Plant Cell Physiology** 56, 674-687.
41. Xiudong Xia, Xiaorong Fan, Jia Wei, Huimin Feng, Hongye Qu, Dan Xie, Anthony J Miller, **Guohua Xu*** (2014) Rice Nitrate Transporter OsNPF2.4 Functions in Low Affinity Acquisition and Long Distance Transport. **Journal of Experimental Botany** 66 (1), 317-331.
42. Yang TY, Zhang S, Hu YB, Wu FC, Hu QD, Chen G, Cai J, Wu T, Moran N, Yu L, **Xu GH***. (2014) The role of OsHAK5 in potassium acquisition and transport from roots to shoots in rice at low potassium supply levels. **Plant Physiology** 166 (2), 945–959.
43. Liu X, Huang D, Tao J, Miller AJ, Fan X, **Xu G.** (2014) Identification and functional assay of the interaction motifs in the partner protein OsNAR2.1 of the two-component system for high-affinity nitrate transport. **New Phytologist** 204(1):74-80.
44. Mian Gu, Wei Liu, Qi Meng, Wenqi Zhang, Aiqun Chen, Shubin Sun, **Guohua Xu**. (2014) Identification of microRNAs in six solanaceous plants and their potential link with phosphate and mycorrhizal signalings. **Journal of Integrative Plant Biology** 56 (12), 1164-1178.
45. Xie YJ, Mao Y, Xu S, Zhou H, Duan XL, Cui W, Zhang J, **Xu GH***. (2014) Heme-heme oxygenase1 system is involved in ammonium tolerance by regulating antioxidant defense in *Oryza sativa*. **Plant Cell and Environment** 38 (1), 129-143.
46. Xiaorong Fan, Dan Xie, Jingguang Chen, Haiyan Lu, Yanling Xu, Cui Ma, **Guohua Xu**. (2014) Over-expression of OsPTR6 in rice increased plant growth at different nitrogen supplies but decreased nitrogen use efficiency at high ammonium supply. **Plant Science** 384 (1-2), 259-270.
47. Fang Zhang, Xue-Neng Wu, Hong-Min Zhou, Dan-Feng Wang, Ting-Ting Jiang, Ya-Fei Sun, Yue Cao, Wen-Xia Pei, Shu-Bin Sun, **Guo-Hua Xu** (2014) Overexpression of rice phosphate transporter gene OsPT6 enhances phosphate uptake and accumulation in transgenic rice plants. **Plant and Soil** 384: 259-270.
48. Li Q, Tang Z, Hu Y, Yu L, Liu Z, **Xu G.*** (2014) Functional analyses of a putative plasma membrane Na⁺/H⁺ antiporter gene isolated from salt tolerant *Helianthus tuberosus*. **Molecular Biology Reports**. 41 (8), 5097-5108.
49. Yang HB, Zhang X, Gaxiola RA, **Xu GH**, Peer WA, Murphy AS. (2014) Over-expression of the *Arabidopsis* proton-pyrophosphatase AVP1 enhances transplant survival, root mass, and fruit development under limiting phosphorus conditions. **Journal of Experimental Botany**. 65(12):3045-53.
50. Chen AQ, Chen X, Wang HM, Liao DH, Gu M, Qu HY, Sun SB and **Xu GH**. (2014) Genome-wide investigation and expression analysis suggest diverse roles and genetic redundancy of Pht1 family genes in response to Pi deficiency in tomato. **BMC Plant Biology** 14(1):61 doi:10.1186/1471-2229-14-61.
51. Li YT, Gu M, Zhang X, Zhang J, Fan HM, Li PP, Li ZF, **Xu GH*** (2014) Engineering a sensitive visual tracking reporter system for real-time monitoring phosphorus deficiency in tobacco. **Plant Biotechnology Journal** 12 (6), 674-684.
52. Deinlein U, Stephan AB, Horie T, Luo W, **Xu GH**, Schroeder JI. (2014) Plant Salt-tolerance Mechanisms. **Trends in Plant Science** 19(6): 371-379.

53. Wang M, Shen Q, **Xu GH**, Guo S. 2014. New insight into the strategy for nitrogen metabolism in plant cells. **International Review of Cell and Molecular Biology**. 310:1-37.
54. Sun HW, Tao JY, Liu SJ, Huang SJ, Chen S, Xie XN, Yoneyama K, Zhang YL, **XU GH** (2014) Strigolactones are involved in phosphate and nitrate deficiency-induced root development and auxin transport in rice. **Journal of Experimental Botany** 65 (22), 6735-6746.
55. X Zhan, J Yuan, L Yue, **G Xu**, B Hu, R Xu. (2014) Response of uptake and translocation of phenanthrene to nitrogen form in lettuce and wheat seedlings. **Environ Sci Pollut Res**. 22:6280–6287.
56. Yin XM, Liang X, **Xu GH**, Zhan XH. (2014) Effect of phenanthrene uptake on membrane potential in roots of soybean, wheat and carrot. **Environmental and Experimental Botany**. 99: 53-58.
57. Cao Y, Yan Y, Zhang F, Wang HD, Gu M, Wu XN, Sun SB, **Xu GH**. (2013) Fine characterization of OsPHO2 knockout mutants reveals its key role in Pi utilization in rice. **Journal of Plant Physiology**. 170: 340-348.
58. Feng HM, Xia XD, Fan XR, **Xu GH**, Miller AJ. (2013) Optimizing plant transporter expression in *Xenopus* oocytes. **Plant Methods** 9:48.
59. Song WJ, Li J, Sun HW, Huang SJ, GOng XP, Ma QY, Zhang YL, **Xu GH**. 2013. Increased photosynthetic capacity in response to nitrate is correlated with enhanced cytokinin levels in rice cultivar with high responsiveness to nitrogen nutrients. **Plant and Soil** 373: 981-993.
60. Song W, Sun H, Li J, Gong X, Huang S, Zhu X, Zhang Y, **Xu G**. (2013) Auxin distribution is differentially affected by nitrate in roots of two rice cultivars differing in responsiveness to nitrogen. **Annals of Botany**. 112(7): 1383-93.
61. Zhan XH, Liang X, **Xu GH**, Zhou LX. (2013) Influence of plant root morphology and tissue composition on phenanthrene uptake: Stepwise multiple linear regression analysis. **Environmental Pollution** 179: 294-300.
62. Zeng HQ, Feng XM, Wang BL, Zhu YY, Shen QR, **Xu GH**. (2013) Citrate exudation induced by aluminum is independent of plasma membrane H+-ATPase activity and coupled with potassium efflux from cluster roots of phosphorus-deficient white lupin. **Plant and Soil** 366: 389-400.
63. Yong Li, Binbin Ren, Xiuxia Yang, **Guohua Xu**, Qirong Shen and Shiwei Guo. (2012) Chloroplast Downsizing Under Nitrate Nutrition Restrained Mesophyll Conductance and Photosynthesis in Rice (*Oryza sativa* L.) Under Drought Conditions. **Plant Cell Physiol** 53: 892-900.
64. Ping Wu, Huixia Shou, **Guohua Xu**, Ximeng Lian (2013) Improvement of phosphorus efficiency in rice on the basis of understanding phosphate signaling and homeostasis. **Current Opinion in Plant Biology**. 16: 205-212.
65. Zhong Tang, Xiaorong Fan, Qing Li, Huimin Feng, Anthony J. Miller, Qirong Shen, **Guohua Xu*** (2012) Knock Down of a Rice Stelar Nitrate Transporter Alters Long Distance Translocation but not Root Influx. **Plant Physiology** 160:2052-2063.
66. Sun S, Wang J, Zhu L, Liao D, Gu M, Ren L, Kapulnik Y, **Xu GH*** (2012) An Active Factor from Tomato Root Exudates Plays an Important Role in Efficient Establishment of Mycorrhizal Symbiosis. **PLoS ONE** 7(8): e43385.

67. Zeng HQ, Liu G, Kinoshita T, Zhang RP, Zhu YY, Shen QR, **Xu GH**. 2012. Stimulation of phosphorus uptake by ammonium nutrition involves plasma membrane H⁺ ATPase in rice roots. **Plant and Soil** 357: 205-214.
68. L Qin, Y Guo, L Chen, R Liang, M Gu, **G Xu**, J Zhao, T Walk, H Liao (2012) Functional Characterization of 14 Pht1 Family Genes in Yeast and Their Expressions in Response to Nutrient Starvation in Soybean. **PLoS ONE** 7(10): e47726. doi:10.1371/journal.pone.0047726.
69. Lu Q, Zhao J, Tian J, Chen L, Sun Z, Guo Y, Lu X, Gu M, **Xu G**, Liao H. 2012. The high-affinity phosphate transporter GmPT5 regulates phosphate transport to nodules and nodulation in soybean. **Plant Physiology** 159: 1634-1643.
70. Shubin Sun, Mian Gu, Yue Cao, Xinpeng Huang, Xiao Zhang, Penghui Ai, Jianning Zhao, Xiaorong Fan, **Guohua Xu***. 2012. A constitutive expressed phosphate transporter, OsPht1;1, modulates phosphate uptake and translocation in Pi-replete rice. **Plant Physiology** 159: 1571-1581.
71. **Xu GH***, Fan XR, Miller AJ. 2012. Plant Nitrogen Assimilation and Use Efficiency. **Annual Review of Plant Biology** 63: 153-182.
72. Wu P, **Xu GH**, Lian X. 2012. Nitrogen and phosphorus uptake and utilization. Genetics and Genomics of Rice. **Plant Genetics and Genomics: Crops and Models**. 5: 217-226.
73. Lixuan Ren, Yunsheng Lou, Ning Zhang, Xudong Zhu, Wenya Hao, Shubin Sun, Qirong Shen, **Guohua Xu***. 2012. Role of arbuscular mycorrhizal network in carbon and phosphorus transfer between plants. **Biol Fertil Soils**. 49: 3-11.
74. Cai J, Chen L, Qu H, Lian J, Liu W, Hu YB, **Xu G***. 2012. Alteration of nutrient allocation and transporter genes expression in rice under N, P, K, and Mg deficiencies. **Acta Physiol Plant**. 34:939-946.
75. Zhan XH, Zhang XB, Yin XM, MaHL, Liang JR, Zhou LX, Jiang TH, **Xu GH**. (2012) H⁺/phenanthrene Symporter and Aquaglyceroporin Are Implicated in Phenanthrene Uptake by Wheat (*Triticum aestivum* L.) Roots. **Journal of Environmental Quality** 41: 188-196.
76. Yingnan Chen, Xiaorong Fan, Wenjing Song, Yali Zhang, **Guohua Xu***. 2012. Over-expression of OsPIN2 leads to increased tiller numbers, angle and shorter plant height through suppression of OsLAZY1. **Plant Biotechnology Journal** 10(2):139-49.
77. Zhang GY, Ren W, Zhang LP, Huang QW, Wei MF, Fan QL, Liu Z, Shen QR, **Xu GH*** (2012) Effect of *Glomus mosseae* on maize growth at different organic fertilizer application rates. **J Plant Nutr** 35:165-175.
78. Wu Z, Zhao J, Gao R, Hu G, Gai J, **Xu G**, Xing H. 2011. Molecular Cloning, Characterization and Expression Analysis of Two Members of the Pht1 Family of Phosphate Transporters in Glycine max. **PLoS ONE** 6(6): e19752.
79. Mian Gu, Aiqun Chen, Xiaoli Dai, Wei Liu and **Guohua Xu***. 2011. How does phosphate status influence the development of the arbuscular mycorrhizal symbiosis? **Plant Signaling & Behavior** 6(9):1300-1304.
80. Huiming Feng, Xiaorong Fan, Ming Yan, Xiaoqin Liu, Anthony J. Miller and **Guohua Xu***. 2011. Multiple roles of nitrate transport accessory protein NAR2 in plants. **Plant Signaling & Behavior** 6(9):1-4.

81. Hongfang Jia, Hongyan Ren, Mian Gu, Jianning Zhao, Shubin Sun, Xiao Zhang, Jieyu Chen, Ping Wu, **Guohua Xu***. 2011. Phosphate transporter gene, OsPht1;8, is involved in phosphate homeostasis in rice. **Plant Physiology** 156: 1164-1175.
82. Yan M, Fan XR, Feng HM, Miller AJ, Shen QR, **Xu GH***. 2011. Rice OsNAR2.1 interacts with OsNRT2.1, OsNRT2.2 and OsNRT2.3a nitrate transporters to provide uptake over high and low concentration ranges. **Plant Cell and Environment**. 34:1360-1372.
83. Huimin Feng, Ming Yan, Xiaorong Fan, Baozhen Li, Qirong Shen, Anthony J Miller, **Guohua Xu***. 2011. Spatial expression and regulation of rice high-affinity nitrate transporters by nitrogen and carbon status. **Journal of Experimental Botany** 62 (7):2319-2332.
84. Ruiping Zhang, Gan Liu, Na Wu, Mian Gu, Houqing Zeng, Yiyong Zhu & **Guohua Xu***. 2011. Adaptation of plasma membrane H⁺-ATPase and H⁺-pump to P deficiency in rice roots. **Plant and Soil** 349:3-11.
85. Aiqun Chen, Mian Gu, Shubin Sun, Lingling Zhu, Shuai Hong, **Guohua Xu***. 2011. Identification of two conserved cis-acting elements, MYCS and P1BS, involved in the regulation of mycorrhiza-activated phosphate transporters in eudicot species. **New Phytologist**.189:1157-1169.
86. Song WJ, Makeen K, Wang DS, Zhang CM, Xu YH, Zhao H, Tu E, Zhang YL, Shen QR, **Xu GH**. 2011. Nitrate supply affects root growth differentially in two rice cultivars differing in nitrogen use efficiency. **Plant and Soil** 343(1&2):357-368.
87. Yibing Hu, Chunrong Chang, **Guohua Xu***, Tai Wang. 2010. Light restored root growth of Arabidopsis with constitutive ethylene response. **Acta Physiol Plant**. 33(3): 667-674.
88. Mian Gu, Ke Xu, Aiqun Chen, Yiyong Zhu, Guiliang Tang, **Guohua Xu***. 2010. Expression analysis suggests potential roles of microRNAs for phosphate and arbuscular mycorrhizal signaling in Solanum lycopersicum. **Physiologia Plantarum** 138: 226-237.
89. Wang H, Makeen K, Yan Y, Cao Y, Sun S, **Xu G**. 2010. OsSIZ1 regulates the vegetative growth and reproductive development in rice. **Plant Molecular Biology Reporter**. 29: 411-417.
90. Zhan X, Ma H, Zhou L, Liang J, Jiang T, **Xu G**. 2010. Accumulation of phenanthrene by roots of intact wheat (*Triticum acstivnm L.*) seedlings: passive or active uptake? **BMC Plant Biology** 10: Article No.: 52.
91. Miller AJ, Shen QR, **Xu GH**. 2009. Freeways in the plant: transporters for N, P and S and their regulation. **Current Opinion in Plant Biology** 12: 284-290.
92. Penghui Ai, Shubin Sun, Jianning Zhao, Xiaorong Fan, Weijie Xin, Qiang Guo, Ling Yu, Qirong Shen, Ping Wu, A.J. Miller, **Guohua Xu***. 2009. Two rice phosphate transporters, ORYsa;Pht1;2 and ORYsa;Pht1;6, have different functions and kinetic properties in uptake and translocation. **The Plant Journal** 57: 798-809.
93. Zhu Y, DI T, **Xu G**, Chen X, Zeng H, Yan F, Shen Q. 2009. Adaptation of plasma membrane H⁺-ATPase of rice roots to low pH as related to ammonium nutrition. **Plant Cell and Environment**. 32(10): 1428-1440.
94. Chang CR, Hu YB, Sun SB, Zhu YY, Ma GJ, **Xu GH***. 2009. Proton pump OsA8 is linked to phosphorus uptake and translocation in rice. **Journal of Experimental Botany** 60: 557-565.

95. Xiao T, Yang Q, Ran W, **Xu G**, Shen Q. 2010. Effect of Inoculation with Arbuscular Mycorrhizal Fungus on Nitrogen and Phosphorus Utilization in Upland Rice-Mungbean Intercropping System. **Agricultural Sciences in China** 9: 528-535.
96. Ren L, Lou Y, Sakamoto K, Inubushi K, Amemiya Y, Shen Q, **Xu G**. 2010. Effects of Arbuscular Mycorrhizal Colonization on Microbial Community in Rhizosphere Soil and Fusarium Wilt Disease in Tomato. **Commun Soil Sci Plant Analy.** 41:1399-1410.
97. Yanshou Wu, Yibing Hu, **Guohua Xu***. 2009. Interactive effects of potassium and sodium on root growth and expression of K/Na transporter genes in rice. **Plant Growth Regulation** 57: 271-280.
98. Shubin Sun, **Guohua Xu***. 2008. Sugar transport in arbuscular mycorrhizal symbiosis. **Canadian Journal of Plant Science** 89: 257-263.
99. Yuefeng Li, Wei Ran, Ruiping Zhang, **Guohua Xu***. 2009. Facilitated mycorrhizal colonization, legume nodulation, phosphate uptake and nitrogen transfer in a mycorrhizal upland rice and mungbean by intercrop. **Plant and Soil** 315: 285-296.
100. Cao, Y., Fan, X. R., Sun, S. B., Xu, G. H., Hu, J. and Shen, Q. R. 2008. Effect of nitrate on activities and transcript levels of nitrate reductase and glutamine synthetase in rice. **Pedosphere**. 18(5): 664--673.
101. Lei Ge, Shubin Sun, Aiqun Chen, Yoram Kapulni, **Guohua Xu**. 2008. Tomato sugar transporter genes associated with mycorrhiza and phosphate. **Plant Growth Regulation** 55(2): 115-123.
102. Yu-Chuan Ding, Chun-Rong Chang, Xiao-Li Ren, Ping Wang, **Guo-Hua Xu***. 2008. High potassium aggravates the oxidative stress induced by magnesium deficiency in rice leaves. **Pedosphere** 18: 316-327.
103. **Guo-hua Xu**, Veronique Chague, Cathy Melamed-Bessudo, Yoram Kapulnik, Ajay Jain, Kashchandra.G. Raghothama, Avraham A. Levy, Avner Silbere. 2007. Functional characterization of LePT4: a phosphate transporter in tomato with mycorrhiza-enhanced expression. **Journal of Experimental Botany** 58(10): 2491-501.
104. Y. Duan, Y. Zhang, L. Ye, X. Fan, **G. Xu**, Q. Shen 2007. Responses of Rice Cultivars with Different Nitrogen Use Efficiency to Partial Nitrate Nutrition. **Annals of Botany** 99(6): 1153-1160.
105. Aiqun Chen, Jiang Hu, Shubin Sun, **Guohua Xu***. 2007. Conservation and divergence of both phosphate- and mycorrhiza- regulated physiological responses and expression patterns of phosphate transporters in Solanaceous species. **New Phytologist** 173: 817-831.

四、目前在研项目：

1. 转基因生物新品种培育科技重大专项任务课题(主持)

任务名称：水稻氮、磷高效吸收转基因新品种培育

所属课题编号：2008ZX08001-005

起止时间：2008年—2015年

2. 国家重点基础研究发展计划（973 计划）项目课题（主持）

课题名称：氮信号转导与吸收利用协同调控机制

课题编号：2011CB100302

起止时间：2011 年— 2015 年

课题名称：氮、磷高效吸收关键基因功能与调控机理

课题编号：2005CB120903

起止时间：2005 年— 2010 年

3. 国家自然科学基金（主持）

项目名称：编码二磷酸腺苷葡萄糖焦磷酸酶的 OsAGPase3 基因在水稻缺氮和缺磷胁迫响应中的功能研究

项目批准号：C150701

起止时间：2015 年 1 月 1 日 --- 2018 年 12 月 31 日

4. 国家自然科学基金（主持）

项目批准号：31272225

项目名称：烟草中菌根和缺磷信号相关转录因子 MYCF1 和 PHR 的生理功能及其调控途径解析

起止时间：2013 年— 2016 年

5. 国家重点研发计划（主持）

项目名称：主要农作物养分高效利用性状形成的遗传与分子基础

项目编号：2016YFD0100700

起止时间：2016 年 -2020 年

五、教学：

（一）课程教学（主讲）

1、植物营养学（中英文双语教学，本科课程）

2、高级植物营养学（全英文教学，研究生课程）

（二）教学获奖或荣誉

1、“产学研结合分类培养农业资源与环境本科专业人才的模式与实践”获得国家级教学成果奖二等奖（2009年，第三完成人）

2、“产学研结合分类培养农业资源与环境本科专业人才的模式与实践”获得江苏省教学成果特等奖（2009年，第三完成人）

3、“作物高效吸收利用氮磷养分的生理过程和分子调控途径”获得2015年度江苏省科技奖（基础类）一等奖（第一完成人）。

4、国家级教学精品课程建设：

项目名称：植物营养学课程建设

时间：2005年始

5、国家级双语教学示范课程：

项目名称：植物营养学课程建设

时间：2008年始

6、教育部“2013年度来华留学英语授课品牌课程”（主持）

名称：《高级植物营养学》课程