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## 简 历

### 工作经历

2009.12- 南农大教授 (3级, 钟山学者学术骨干 B 岗)

2006.10-12 澳大利亚墨尔本大学 访问学者

2008.2 - 8 美国加州大学圣地亚哥分校 访问学者

2013.1-2 参加农业部组织的赴美培训班

2017.4 -2018.4 美国加州学圣地亚哥分校 访问学者

2019.8-9 荷兰瓦格宁根大学、德国基尔大学 合作研究

### 研究方向

- 1、植物氮磷高效的分子生理机制
- 2、养分调控水稻株型的调控网络

### 科研项目(2010 年以来)

1. 国家自然科学基金 (主持, 31972501, 2020-2023)
2. 国家重点研发计划试点专项(参与, 2018YFD0200503, 2018-2021)
3. 国家重点研发计划试点专项(参与, 2017YFD0200100, 2017-2021)
4. 国家自然科学基金 (主持, 31672225, 2017-2020)
5. 国家自然科学基金 (主持, 31471936, 2015-2018)
6. 国家自然科学基金 (主持, 31172022, 2012-2015)
7. 国家自然科学基金 (主持, 31071846, 2011-2013)
8. 中国博士后科学基金 (主持, 20100471348, 2010-2012)
9. 土壤与农业可持续发展国家重点实验室开放基金 (Y052010013, 2010-2012)
10. 国家自然科学基金 (主持, 30771290, 2008-2010)

## 授权及申请专利

植物生长素运输蛋白基因 OsPIN2 的基因工程应用 范晓荣 徐国华 陈赢男 张亚丽 (ZL2010110018297.6, 2010)

植物通气组织形成关键基因 OsLSD2 的应用 范晓荣 徐国华 朱静雯 张亚丽 (专利号 ZL 20111 0 200437.6, 2011)

植物生长素运输蛋白基因 OsPIN9 的基因工程应用 张亚丽 侯蒙蒙 (专利号 201711326274.X, 2020)

## 发表的文章 (2010 年以来)

1. Sun H#, Guo X, Qi X, Feng F, Xie X, **Zhang Y#**, Zhao Q#. SPL14/17 act downstream of strigolactone signalling to modulate rice root elongation in response to nitrate supply. *Plant J*, 2021
2. Hou M, Wu D, Li Y, Tao W, Chao L, **Zhang Y#**. The role of auxin in nitrogen-modulated shoot branching. *Plant Signal Behav.* 2021:1885888. doi: 10.1080/15592324.2021.1885888.
3. Hou M, Luo F, Wu D, Zhang X, Lou M, Shen D, Yan M, Mao C, Fan X, Xu G, **Zhang Y#**. OsPIN9, an auxin efflux carrier, is required for the regulation of rice tiller bud outgrowth by ammonium. 2021, *New Phytologist*, 229: 935-949
4. Luo L, **Zhang Y**, Xu Guohua. How does nitrogen shape plant architecture? *J Exp Bot.* 2020,71(15):4415-4427.
5. Sun H#, Guo X, Xu F, Wu D, Zhang X, Lou M, Luo F, Xu G, **Zhang Y#**. Overexpression of OsPIN2 regulates root growth and formation in response to phosphate deficiency in rice. *International Journal of Molecular Sciences*, 20(20):5144
6. Sun H#, Xu F, Guo X, Wu D, Zhang X, Lou M, Luo F, Zhao Q, Xu G, **Zhang Y#**. A strigolactone signal inhibits secondary lateral root development in rice. *Frontiers in Plant Science*, 2019,10:1527
7. Huang S, Liang Z, Chen S, Sun H, Fan X, Wang C, Xu G, **Zhang Y#**. A transcription factor OsMADS57 regulates long distance nitrate transport and root elongation. 2019, *Plant physiology*, 180:882-895
8. Sun H, Tao J, Bi Y, Hou M, Lou J, Chen X, Zhang X, Luo L, Xie X, Yoneyama K, Zhao Q, Xu G, **Zhang Y#**. OsPIN1b is involved in rice seminal root elongation by regulating root apical meristem activity in response to low-nitrogen and -phosphate. *Scientific reports*. 2018,8:13014
9. Wang C, Zhao Y, Gu P, Zou F, Meng L, Song W, Yang Y, Wang S#, **Zhang Y#**. Auxin is involved in lateral root formation induced by drought stress in tobacco seedlings. *J Plant Growth Regulation*, 2018, 37:539-549.
10. Song W, Xue R, Bi Y, Liang Z, Meng L, Dong C, Wang C, Liu G, Dong J #, **Zhang Y#**. Differential response of first-order lateral root elongation to low potassium involves nitric oxide in two tobacco cultivars. *J Plant growth regulation*. 2018, 37:114-127.
11. Tao J, Sun H, Gu P, Liang Z, Chen X, Lou J, Xu G, **Zhang Y#**. A sensitive synthetic reporter for visualizing cytokinin signaling output in rice. *Plant Methods*. 2017, 27:13:89.
12. Sun H, Tao J, Zhao Q, Xu G, **Zhang Y#**. Multiple roles of nitric oxide in root development and nitrogen uptake. *Plant signaling behavior*. 2017,12(1): e1274480

13. Sun H, Bi Y, Tao J, Huang S, Hou M, Xue R, Liang Z, Gu P, Yoneyama ,Xie X, Shen Q, Xu G, **Zhang Y#**. Strigolactones are required for nitric oxide to induce root elongation in response to nitrogen- and phosphate-deficiency in rice. *Plant Cell Environment*, 2016. 39:1473-1484
14. Sun H, Tao J, Gu P, Xu G, **Zhang Y#**. The role of strigolactones in root development. *Plant Signaling Behavior*, 2016,11(1):e1110662
15. Huang S, Chen S, Zhang C, Yan Ming, Chen J, Xu G, Fan X, **Zhang Y#**. Knockdown of the partner protein OsNAR2.1 for high-affinity nitrate transport represses lateral root formation in a nitrate-dependent manner. *Scientific Reports*, 2015, 5:18192.
16. Song W, Liu S, Meng L, Xue R, Wang C, Liu G, Wang S, Dong J, **Zhang Y#**. Potassium deficiency inhibits lateral root development in tobacco seedlings by changing auxin distribution. *Plant Soil*, 2015, 396:163-173
17. Meng L, Song W, Liu S, Dong J, **Zhang Y**, Xu Y, Wang S. Light quality regulates lateral root development in tobacco seedlings by shifting auxin distributions. *J plant growth regulation*, 2015, 34:574-583
18. Sun H, Tao J, Hou M, Huang S, Chen S, Liang Z, T Xie, Y Wei, Xie X, Yoneyama K,G Xu, **Zhang Y#**. A strigolactone signal is required for adventitious root formation in rice. *Annals botany*, 2015, 115:1155-1162.
19. Sun H, J Li, Song W, Tao J, Huang S, Chen S, Hou M, Xu G, **Zhang Y#**. 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. *J Exp Bot*, 2015, 66: 2449-2259.
20. Sun H, Tao J, Liu S, Huang S, Chen S, Xie X, Yoneyama K, **Zhang Y#**, Xu G. Strigolactones are involved in phosphate and nitrate deficiency-induced root development and auxin transport in rice. *J Exp Bot*, 2014, 65:6735-6746.
21. Song W, Sun H, Li J, Gong X, Huang S, Zhu X, **Zhang Y#**, Xu G. Auxin distribution is differentially affected by nitrate in roots of two rice cultivars differing in responsiveness to nitrogen nutrients. *Annals botany*, 2013,112:1383-1393
22. Song W, Li J, Sun H, Huang S, Gong X, Ma Q, **Zhang Y#**, Xu G. Increased photosynthetic capacity in response to nitrate is correlated with enhanced cytokinin levels in rice cultivar with high responsiveness to nitrogen. *Plant Soil*, 2013, 373 :981-993.
23. Chen Y, Fan X, Song W, **Zhang Y**, Xu G. Over-expression of OsPIN2 leads to increased tiller numbers, angle and shorter plant height through suppression of OsLAZY1. *Plant Biotechnology J*, 2011, 10:139-149
24. Song W, Makeen K, Wang D, Zhang C, Xu Y, Zhao H, Tu E, **Zhang Y#**, Shen Q, Xu G. Nitrate supply affects root growth differentially in two rice cultivars differing in nitrogen use efficiency. *Plant and soil*, 2011, 343:357-368
25. **Zhang Y#**, Lv H, Wang D, Deng J, Song W, Shen Q,Xu G. Partial nitrate nutrition amends photosynthetic characteristics in rice (*Oryza sativa* L. var. japonica) differing in nitrogen-use efficiency. *Plant growth regulation*, 2011, 63:235-242
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27. Fan J, **Zhang Y**, Turner D, Duan Y, Wang D, Shen Q. 2010. Difference in root physiological characteristics and morphology between two rice cultivars with different nitrogen-use efficiency. *Pedosphere*,20(4):446-455
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29. 黄荣, 孙虎威, 刘尚俊, 宋文静, 刘言勋, 余超, 毛颖, **张亚丽#**, 徐国华. 磷胁迫下水稻根系的发生及

生长素的响应.中国水稻科学,2012,26(5):563-568

30. 宋文静,金晶晶,哈丽哈什,图尔迪,沈其荣,张亚丽#.不同硝响应型水稻品种苗期根系生长对增硝营养的响应.土壤学报,2011,48(3):1006-1012
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32. 叶利庭,吕华军,宋文静,图尔迪,沈其荣,张亚丽#.不同氮效率水稻生育后期氮代谢酶活性的变化特征,土壤学报,2011,48(1):105-113
33. 王东升,樊剑波,叶利庭,宋文静,图尔迪,张亚丽#,沈其荣.不同氮效率水稻品种的群体发育特征.南京农业大学学报,2010,33(5):101-106
34. 叶利庭,樊剑波,沈其荣,张亚丽#.不同氮效率水稻的生长特性研究.南京农业大学学报,2010,33(3):77-81
35. 叶利庭,宋文静,吕华军,栗艳霞,沈其荣,张亚丽#.不同氮效率水稻生育后期氮素积累转运特征.土壤学报,2010,47(2):303-310

## 奖励

1. 获得资源与环境科学学院2010-2011学年“优秀教师教学奖励”。
2. 南京农业大学教学综合评价优秀(2009-2010学年、2010—2011学年、2011-2012学年2015-2016学年的第二学期)
3. 指导的毕业论文设计获得“2011年江苏省普通高等学校本专科优秀论文设计三等奖”。
4. “土壤学报”2011年度优秀论文奖(第一作者)
5. 中国百篇最具影响国内学术论文;2012;张亚丽(第一作者)
6. 2012年度“领跑者5000”中国精品科技期刊顶尖学术论文;2013
7. 2016年本人指导的博士生孙虎威获得“江苏省优秀博士学位论文”。
8. 2015年度江苏省科学技术奖 一等奖(10/11)

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