CURRICULUM VITAE

Professor Renfang Shen

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Education

December, 1993	Ph.D. (Soil Science) Chinese Academy of Sciences, China
August, 1989	M.Sc. (Soil Science) Chinese Academy of Sciences, China
July, 1986	B.Sc. (Soil Science and Plant Nutrition) Zhejiang Agricultural University, China

Administrative and Faculty Appointments

2021 to date	Director National Engineering Research Center of Soil Nutrition and Remediation, National Development and Reform Commission, China
2011 to 2022	Director The Key Laboratory of Cultivated Land Conservation, Ministry of Agriculture and Rural Affairs of the People's Republic of China, China
2010 to date	Director General Institute of Soil Science, Chinese Academy of Sciences (ISSCAS), Nanjing, China
2007 to 2009	Executive deputy Director General ISSCAS, Nanjing, China

2005 to 2007	Director Assistant
	ISSCAS, Nanjing, China
2002 to date	Professor
	ISSCAS, Nanjing, China
2000 to 2002	Visiting Scientist
	JSPS Fellowship, Kagawa University, Japan
1998 to 2000	Visiting Scientist
	STA Fellowship, National Institute for Agricultural Environmental Sciences, Japan
1995 to 1998	Associate Professor
	ISSCAS, Nanjing, China
1994 to 1995	Postdoc
	Rothamsted International Fellow, Rothamsted Research, UK
1989 to 1993	Research Associate
	ISSCAS, Nanjing, China

Professional Appointments

- Chair, Division 3, International Union of Soil Science (IUSS) (2023-Present)
- Vice Chair, Division 3, IUSS (2022-2023)
- Honorary President, Soil Science Society of China (2020-Present)
- Vice President, China Association of Agricultural Science Societies (2017-Present)
- President, ESAFS (East and Southeast Asian Federation of Soil Science Societies) (2013-2015)
- President, Soil Science Society of China (2012-2020)
- Executive director, the 8th Council of Plant Nutrition and Fertilizer Society of China (2012-2016)
- Executive Vice President, Soil Science Society of China (2008-2012)

Areas of Research interests and Teaching

- Aluminum tolerance in plants, Efficient utilization of plant nutrients, Improvement the fertility of cultivated land, Remediation of polluted soil, Soil improvement, Sustainable use of acidic soils
- Advanced Soil-Plant Nutrition - Postgraduate level

Professional Honors and Awards

- Second Prize, Science and Technology Award of Soil Science Society of China - 2022
- Fellow - Fellow of Soil Science Society of China - 2021
- Outstanding Achievement Award of Soil Science Society of China - 2020
- Second Prize, Standardization Project Award of Nanjing, China - 2018
- Zhuliyuehua Excellent Teacher Award of Chinese Academy of Sciences - 2017
- First Prize, Science and Technology Award of Soil Science Society of China- 2015
- Second Prize, Science and Technology for Development Award of Chinese Academy of Sciences - 2015
- Special Government Allowance of the State Council of China - 2011
- Awardee, National Natural Science Foundation of China for Distinguished Young Scholars - 2011
- National Level Candidate for the New Century Millions Talent Project of China - 2009
- 100 Talent Program, Chinese Academy of Sciences - 2002
- JSPS Fellowship, Kagawa University, Japan - 2000
- STA Fellowship, National Institute for Agricultural Environmental Sciences, Japan -1998
- Rothamsted International Fellowship, Rothamsted Research, UK- 1994

Research Grant Awards

- National Natural Science Foundation of China, Key Program, 42230711, The underlying mechanism of the rice in response to aluminum stress in acid soil, 2023/01−2027/12 (2.74 million RMB)
- National Natural Science Foundation of China, Major International (Regional) Joint Research Project, 42020104004, Sustainable remediation of toxic metal-contaminated paddy fields for safe production of rice, 2021/01−2025/12 (2.54 million RMB)
- Chinese Academy of Sciences, Strategic Priority Research Program, XDB15030000, Regulating the interactions between above- and below-ground biological processes for efficient nitrogen and phosphorus use by plants, 2014/07−2019/06 (59.39 million RMB)
- Ministry of Science and Technology, the National Key Basic Research Program of China, 2014CB441000, Processes and controlling principles of red soil acidification

in hilly areas of south-eastern China, 2014/01−2018/12 (18 million RMB)

- National Natural Science Foundation of China, General Program, 41271257, The mechanisms for high aluminum tolerance of red yeast isolated from acidic soils, 2013/01−2016/12 (0.75 million RMB)
- National Natural Science Foundation of China, NSFC for Distinguished Young Scholars, 41025005, The interaction of aluminum toxicity and nutrient stress in acidic soils and the coordinated adaptation mechanism of plants, 2011/01−2014/12 (2 million RMB)
- National Natural Science Foundation of China, General Program, 40871144, Effects of different forms of nitrogen (ammonium/nitrate) on aluminum toxicity of plants in acidic soils and its mechanism, 2009/01−2011/12 (0.45 million RMB)
- National Natural Science Foundation of China, NSFC-JST Joint Research Program, 30821140538, Research on soil acidification mechanism and acid soil bioremediation, 2009/01−2011/12 (1 million RMB)
- Chinese Academy of Sciences, Knowledge Innovation Program, KSCX2-YW-N-002, Rhizosphere processes of crops and mechanisms underlying efficient uptake and utilization of nutrient, 2007/01−2009/12 (1.4 million RMB)
- Ministry of Science and Technology, National Key Technology R&D Program, 2006BAD05B08, Research and demonstration on technical model of nutrient balance regulation in southeast intensive farmland, 2006/01−2010/12 (2.8 million RMB)
- National Natural Science Foundation of China, General Program, 30571114, Physiological response of root system of Lespedeza japonica under aluminum stress and its possible aluminum tolerance mechanism, 2006/01−2008/12 (0.28 million RMB)
- National Natural Science Foundation of China, General Program, 40371072, Analysis of the relationship between the transformation of aluminum form in rhizosphere soil and the mechanism of aluminum tolerance in plants, 2004/01−2006/12 (0.30 million RMB)

Professional Activities

2008 to date	Pedosphere (Editor-in-Chief)
2009 to date	Member of International Steering Committee of the 8th (2009-2012), 9th (2012-2015), 10th (2015-2018), 11th (2018-2023) and 12th (2023-present) International Symposium on Plant-Soil Interactions at Low pH (PSILPH)

2018 to date	Expert of Decision-Making Consulting Expert Database of the Standing Committee of the 13th People's Congress of Jiangsu Province, China
2015 to date	Member of the 6th and 7th Discipline Evaluation Group of Academic Degrees Committee of the State Council of China
2013-2016	Member of Expert Guidance Group on Cultivated Land Quality Construction and Management of the Ministry of Agriculture and Rural Affairs of the People's Republic of China
2011-2016	Member of the 4th and 5th Coordination Committee of the International Federation of Science and Technology, China Association for Science and Technology
2010-2015	Member of Decision Consulting Expert Database of China Association for Science and Technology
2010-2013	Member of the Virtual Fertilizer Research Center (VFRC) board of advisors, International Fertilizer Development Center
2009-2010	Member of the International Scientific Advisory Council (ISAC) for International Soil Reference and Information Centre (ISRIC) World Soil Information

Publications

Books

1. Shen RF, Chen RF, Ma JF. Accumulation of aluminum in leaves and seeds of Fagopyrum esculentum Moench. grown in a strong acid soil. In: Li CJ et al. (Eds.). Plant nutrition for food security, human health and environmental protection. Tsinghua University press, 2005, P732-733, Beijing.
2. Chen RF, Shen RF. Iron plaque on root surface depresses citrate secretion from rice roots when subjected to Al stress. In: Li CJ et al. (Eds.). Plant nutrition for food security, human health and environmental protection. Tsinghua University press, 2005, P734-735, Beijing.
3. Ae N, Shen RF, Otani T. The significance of the root cell wall in phosphorus uptake. In: Ae N, Arihara J, Okada K, and Srinivasan A. (Eds.). Plant Nutrient Acquisition: New Perspectives. Springer-Verlag, 2001, P251-275, Tokyo, Japan.
4. Ae N, Kato Y, Shen RF, Magno B. Identification of phosphorus solubilizing active components (PSAC) from root cell wall of groundnut having better growth on an infertile soil among several legume crops. In: Horst WJ et al. (Eds.). Plant nutrition-food security and sustainability of agro-ecosystems through basic and applied research, Kluwer Academic Publishers, 2001, P532-533.
5. Zhu YG, Shen RF. China Soil Microbiome Initiative. Zhejiang University Press, 2021, Hangzhou.

6. Zhou JM, Shen RF. Dictionary of Soil Science. The Science Press, 2013, Beijing.
7. Shen RF. The Behavior of Aluminum in Soil-Plant System and the Adaptation Mechanism of Plant to Aluminum Toxicity. The Science Press, 2008, Beijing.
8. Shen RF, Teng Y, Zhang GL, Yan XY, Peng XH, Li FB, Shen QR, Shi ZH, Cai ZC, Luo YM, Xu JM, Sun B, Chu HY. Environmental Soil Science, Basic Soil Science, Soil erosion and Soil fertility. IN: Wu FC, Liu Y, Zhao XL, Guo ZT and etc. Report on the Development Strategy of Environmental Earth Science. The Science Press, 2021, P169-192, Beijing.
9. Shen RF, Dong XY, Wu JS, Zhao FJ, Li ZP. Development Trend and Frontier of Soil Science. IN: He JZ, Lu YH, Fu BJ. Frontiers in Soil Biology. The Science Press, 2015, P3-25, Beijing.
10. Yin B, Shen RF, Zhu ZL. Effect of surface molecular membrane on improving the utilization of nitrogen fertilizer and rice yield. Research on Red Soil Ecosystem. The 5th Episode. China Agriculture Science and Technique Press, 1998, P192-195, Beijing.
11. Shen RF, Yin B, Zhu ZL. Ammonia Volatilization and its Control in Paddy Field. Research on Red Soil Ecosystem. The 4th Episode. Jiangxi Science and Technology Press, 1997, P123-126, Jiangxi.

Publications in Refereed International Journals

1. Wang C, Guo L, Cai ZJ, Chen J, Shen RF*. Different contributions of rare microbes to driving soil nitrogen cycles in acidic soils under manure fertilization. *Applied Soil Ecology*, 196(2024):105281.
2. Wang C, Li JY, Shi RY, Xu RK, Shen RF*. Contribution of soil diazotrophs to Crop nitrogen utilization in an acidic soil as affected by organic and inorganic amendments. *Plant and Soil*, 2024, https://doi.org/10.1007/s11104-024-06516-x.
3. Sun JY, Guo R, Jiang Q, Chen CZ, Gao YQ, Jiang MM, Shen RF, Zhu XF, Huang J*. Brassinosteroid decreases cadmium accumulation via regulating gibberellic acid accumulation and Cd fixation capacity of root cell wall in rice (*Oryza sativa*). *Journal of Hazardous Materials*, 469(2024): 133862.
4. Li S, Yang JB, Li JQ, Huang J, Shen RF, Zeng DL*, Zhu XF*. A NAC transcription factor represses a module associated with xyloglucan content and regulates aluminum tolerance. *Plant Physiology*, 2024, https://doi.org/10.1093/plphys/kiae281.
5. Tao Y, Li S, Liu Y, Guo R, Chen C, Huang J, Zhang Q*, Shen RF, Zhu XF*. ANAC050 confers aluminum resistance by cooperating with the secretion of organic acids and the accumulation of cell wall hemicelluloses. *Pedosphere*, 2024, https://doi.org/10.1016/j.pedsph.2024.02.00.
6. Tu CY, Guo R, Chen CZ, Gao YQ, Zheng L, Zhang Q*, Shen RF, Zhu XF*. Disruption of a glycosyl transferase family 17 protein alters cadmium accumulation and resistance in rice (*Oryza sativa*). *Plant and Soil*, 2024, https://doi.org/10.1007/s11104-024-06539-4.
7. Li S, Sun JY, Wang HY, Jing HK, Shen RF, Zhu XF*. Auxin acts upstream of nitric oxide to regulate cell wall xyloglucan and its aluminum-binding capacity in *Arabidopsis thaliana*. *Planta*, 259(3)(2024):52.

8. Wang HY, Li S, Yang JB, Huang J, Zhu XF, Shen RF, Zeng DL*. Putrescine modulates cadmium fixation ability of cell wall to decrease cadmium accumulation in rice, a process might depend on nitric oxide. *Rice Science*, 31(3)(2024): 237-240.
9. Zhu XF, Zhao L, Huang J, He JT, Song JY, Teng Y, Shen RF*. Cell wall fixation, translocation, and vacuolar detoxification of cadmium contribute to differential grain cadmium accumulation in two rice cultivars. *Rice Science*, 31(3)(2024): 241-244.
10. Guo R, Zhang Q, Chen CZ, Sun JY, Tu CY, He M, Shen RF, Huang J, Zhu XF*. A novel aldo-keto reductase gene, OsAKR1, from rice confers higher tolerance to cadmium stress in rice by an in vivo reactive aldehyde detoxification. *Journal of Hazardous Materials*, 470(2024):134212.
11. Liu C, Jiang M, Yuan MM, Wang E, Bai Y, Crowther TW, Zhou J, Ma Z, Zhang L, Wang Y, Ding J, Liu W, Sun B, Shen RF, Zhang J, Liang Y*. Root microbiota confers rice resistance to aluminum toxicity and phosphorus deficiency in acidic soils. *Nature Food*, 4 (2023): 912-924.
12. Wang C, Guo L, Shen RF*. Rare microbial communities drive ecosystem multifunctionality in acidic soils of southern China. *Applied Soil Ecology*, 189 (2023): 104895.
13. Guo L, Wang C*, Zheng MM, Li WX, Cai ZJ, Wang BR, Chen J, Shen RF*. Fertilization practices affect biological nitrogen fixation by modulating diazotrophic communities in an acidic soil in southern China. *Pedosphere*, 33(2)(2023): 301-311.
14. Shen RF*, Teng Y. The frontier of soil science: soil health. *Pedosphere*, 33(1)(2023): 6-7.
15. Wu Q+, Meng YT+, Feng ZH, Shen RF, Zhu XF*. The endo-beta mannase MAN7 contributes to cadmium tolerance by modulating root cell wall binding capacity in Arabidopsis thaliana. *Journal of Integrative Plant Biology*, 65(7)(2023): 1670-1686.
16. Zhu XF, Shen RF*. Towards sustainable use of acidic soils: Deciphering aluminum-resistant mechanisms in plants. *Fundamental Research*, (2023), https://doi.org/10.1016/j.fmre.2023.03.004.
17. Xue CW, Li WF, Shen RF, Lan P*. Impacts of iron on phosphate starvation-induced root hair growth in Arabidopsis. *Plant Cell & Environment*, 46(1)(2023): 215-238.
18. Zheng L, Wang RN, Zhou PJ, Pan YL, Shen RF, Lan P*. Comparative physiological and proteomic response to phosphate deficiency between two wheat genotypes differing in phosphorus utilization efficiency. *Journal of Proteomics*, 280(2023): 104894.
19. Xiao X, Hu AY, Dong XY, Shen RF, Zhao XQ*. Involvement of the 4-coumarate: coenzyme A ligase 4CL4 in rice phosphorus acquisition and rhizosphere microbe recruitment via root growth enlargement. *Planta*, 258(1)(2023): 7.
20. Sun QB, Yin CQ, Zheng H, Dong XY, Shen RF, Zhao XQ*. Higher aluminum tolerance of Lespedeza bicolor relative to Lespedeza cuneata is associated with saccharide components of root tips. *Agronomy*, 13(3)(2023): 629.
21. Xiao X, Liu ZT, Shen RF, Zhao XQ*. Nitrate has a stronger rhizobacterial-based effect on rice growth and nitrogen use than ammonium in acidic paddy soil. *Plant and Soil*, 487(2023): 605-621.
22. Dai XJ, Wang JL, Xiao X, Dong XY, Shen RF, Zhao XQ*. Aluminum-tolerant wheat genotype changes root microbial taxa and nitrogen uptake according to soil

pH levels and nitrogen rates. *Journal of Soil Science and Plant Nutrition*, 23(1)(2023): 1360-1373.
23. Wang JL, Xiao X, Hu AY, Shen RF, Zhao XQ*. Yield gap of rice genotypes under N and P deficiencies: evidence from differential recruitment of bacterial keystone taxa in the rhizosphere. *Applied Soil Ecology*, 184(2023): 104791.
24. Huang J, Jing HK, Zhang Y, Chen SY, Wang HY, Cao Y, Zhang Z, Lu YH, Zheng QS, Shen RF, Zhu XF*. Melatonin reduces cadmium accumulation via mediating the nitric oxide accumulation and increasing the cell wall fixation capacity of cadmium in rice. *Journal of Hazardous Materials*, 445(2023): 130529.
25. Li S, Zhang Y, Wu Q, Huang J, Shen RF, Zhu XF*. Decrease in hemicellulose content and its retention of iron contributes to phosphorus deficiency alleviated iron deficiency in *Arabidopsis thaliana*. *Plant Science*, 329(2023): 111605.
26. Yang XZ, Liu YS, Huang J, Tao Y, Wang YF*, Shen RF, Zhu XF*. NaCl facilitates cell wall phosphorus reutilization in abscisic acid dependent manner in phosphorus deficient rice root. *Rice Science*, 30(2)(2023): 138-147.
27. Tao Y, Wu Q, Huang J, Shen RF, Zhu XF*. The upstream regulation of the root cell wall when Arabidopsis thaliana in response to toxic metal ions focusing on Al. *Plant Signaling and Behavior*, 18(1)(2023): 2178085.
28. Che J, Zhao XQ, Shen RF*. Molecular mechanisms of plant adaptation to acid soils: a review. *Pedosphere*, 33(1)(2023): 14-22.
29. Guo L, Wang C*, Feng TY, Shen RF. Short-term application of organic fertilization impacts phosphatase activity and phosphorus-mineralizing bacterial communities of bulk and rhizosphere soils of maize in acidic soil. *Plant and Soil*, 484(1-2)(2023): 95-113.
30. Masood S*, Zhao XQ, Shen RF. The effect of pH on boron toxicity and nutrient uptake by wheat and rapeseed. *Journal of Plant Nutrition*, 46(9)(2022): 2167-2181.
31. Xiao X, Wang JL, Li JJ, Li XL, Dai XJ, Shen RF, Zhao XQ*. Distinct patterns of rhizosphere microbiota associated with rice genotypes differing in aluminum tolerance in an acid sulfate soil. *Frontiers in Microbiology*, 13(2022): 933722.
32. Wang JL, Liu KL, Zhao XQ*, Gao GF, Wu YH, Shen RF. Microbial keystone taxa drive crop productivity through shifting aboveground-belowground mineral element flows. *Science of the Total Environment*, 811(2022): 152342.
33. Zhang HQ, Shen RF, Zhao XQ*. Nitrogen source preference in maize at seedling stage is mainly dependent on growth medium pH. *Agronomy*, 12(9)(2022): 2149.
34. Guo L, Wang C*, Shen RF. Stronger effects of maize rhizosphere than phosphorus fertilization on phosphatase activity and phosphorus-mineralizing-related bacteria in acidic soils. *Rhizosphere*, 23(2022): 100555.
35. Huang J, Wu Q, Jing HK, Shen RF, Zhu XF*. Auxin facilitates cell wall phosphorus reutilization in a nitric oxide-ethylene dependent manner in phosphorus deficient rice (*Oryza sativa L.*). *Plant Science*, 322(2022): 111371.
36. Tao Y, Huang J, Jing HK, Shen RF, Zhu XF*. Jasmonic acid is involved in root cell wall phosphorus remobilization through the nitric oxide dependent pathway in rice. *Journal of Experimental Botany*, 73(8)(2022): 2618-2630.
37. Tao Y^{+}, Wan JX^{+}, Liu YS, Yang XZ, Shen RF, Zhu XF*. The NAC transcription factor ANAC017 regulates aluminum tolerance by regulating the cell wall-modifying genes. *Plant Physiology*, 189(4)(2022): 2517-2534.
38. Wu Q^{+}, Tao Y^{+}, Zhang XL, Dong XY, Xia JX, Shen RF, Zhu XF*. Pectin methylesterases enhance root cell wall phosphorus remobilization in rice. *Rice Science*, 29(2)(2022): 179-188.

39. Wu Q[+], Tao Y[+], Huang J, Liu YS, Yang XZ, Jing HK, Shen RF, Zhu XF*. The MYB transcription factor MYB103 acts upstream of TRICHOME BIREFRINGENCE-LIKE27 in regulating aluminum sensitivity by modulating the O-acetylation level of cell wall xyloglucan in Arabidopsis thaliana. *The Plant Journal*, 111(2)(2022): 529-545.
40. Wu Q, Jing HK, Feng ZH, Huang J, Shen RF, Zhu XF*. Salicylic acid acts upstream of auxin and nitric oxide (NO) in cell wall phosphorus remobilization in phosphorus deficient rice. *Rice*, 15(1)(2022): 42.
41. Liu YS, Tao Y, Yang XZ, Liu YN, Shen RF, Zhu XF*. Gibberellic acid alleviates cadmium toxicity in rice by regulating NO accumulation and cell wall fixation capacity of cadmium. *Journal of Hazardous Materials*, 439(2022): 129597.
42. Meng YT, Zhang XL, Wu Q, Shen RF, Zhu XF*. Transcription factor ANAC004 enhances Cd tolerance in Arabidopsis thaliana by regulating cell wall fixation, translocation and vacuolar detoxification of Cd, ABA accumulation and antioxidant capacity. *Journal of Hazardous Materials*, 436(2022): 129121.
43. Meng YT, Jing HK, Huang J, Shen RF, Zhu XF*. The role of nitric oxide signaling in plant responses to cadmium stress. *International Journal of Molecular Sciences*, 23(13)(2022): 6901.
44. Jing HK, Wu Q, Huang J, Yang XZ, Tao Y, Shen RF, Zhu XF*. Putrescine is involved in root cell wall phosphorus remobilization in a nitric oxide dependent manner. *Plant Science*, 316(2022): 111169.
45. Meng XX, Li WF*, Shen RF, Lan P*. Ectopic expression of IMA small peptide genes confers tolerance to cadmium stress in Arabidopsis through activating the iron deficiency response. *Journal of Hazardous Materials*, 422(2022): 126913.
46. Xiong Y[+], Zheng L[+], Meng XX, Shen RF, Lan P*. Protein sequence databases generated from metagenomics and public databases produced similar soil metaproteomic results of microbial taxonomic and functional changes. *Pedosphere*, 32(4)(2022): 507-520.
47. Wang RN, Chen YL, Kaur G, Wu XB, Nguyen HT, Shen RF, Pandey AK, Lan P*. Differentially reset transcriptomes and genome bias response orchestrate wheat response to phosphate deficiency. *Physiologia Plantarum*, 174(5)(2022): 13767.
48. Zhang X, Xue CW, Wang RN, Shen RF, Lan P*. Physiological and proteomic dissection of the rice roots in response to iron deficiency and excess. *Journal of Proteomics*, 267(2022): 104689.
49. Li BJ[+], Zheng L[+], Wang RN, Xue CW, Shen RF, Lan P*. A proteomic analysis of Arabidopsis ribosomal phosphoprotein P1A mutant. *Journal of Proteomics*, 262(2022): 104594.
50. Zhang GL*, Wu HY, Shi Z, Yan XY, Shen RF. Priorities of soil research and soil management in China in the coming decade. *Geoderma Regional*, 29(2022): 00537.
51. Yu E[+], Wang WG[+], Yamaji N, Fukuoka S, Che J, Ueno D, Ando T, Deng FL, Hori K, Yano M, Shen RF, Ma JF*. Duplication of a manganese/cadmium transporter gene reduces cadmium accumulation in rice grain. *Nature Food*, 3(8)(2022): 597-607.
52. Zhang HQ, Zhao XQ*, Shi Y, Liang YT, Shen RF. Changes in soil bacterial communities with increasing distance from maize roots affected by ammonium and nitrate additions. *Geoderma*, 398(2021): 115102.
53. Wang JL, Zhao XQ*, Zhang HQ, Shen RF. The preference of maize plants for nitrate improves fertilizer N recovery efficiency in an acid soil partially because of alleviated Al toxicity. *Journal of Soils and Sediments*, 21(9)(2021): 3019-3033.

54. Li JJ, Zhao XQ*, Wang JL, Shen RF. Strategies of cadmium and copper uptake and translocation in different plant species growing near an E-waste dismantling site at Wenling, China. *Environmental Science and Pollution Research*, 28(44)(2021): 62562- 62571.
55. Wang JL, Liu KL, Zhao XQ*, Zhang HQ, Li D, Li JJ, Shen RF. Balanced fertilization over four decades has sustained soil microbial communities and improved soil fertility and rice productivity in red paddy soil. *Science of the Total Environment*, 793(2021): 148664.
56. Zheng MM, Wang C*, Li WX, Guo L, Cai ZJ, Wang BR, Chen J, Shen RF. Changes of acid and alkaline phosphatase activities in long-term chemical fertilization are driven by the similar soil properties and associated microbial community composition in acidic soil. *European Journal of Soil Biology*, 104(2021): 103312.
57. Zhang XL^{+}, Wu Q^{+}, Tao Y, Zhu XF*, Takahashi N, Umeda M, Shen RF, Ma JF. ANAC044 is associated with P reutilization in P deficient Arabidopsis thaliana root cell wall in an ethylene dependent manner. *Environmental and Experimental Botany*, 185(2021): 104386.
58. Sun LM, Che J, Ma JF, Shen RF*. Expression level of transcription factor ART1 is responsible for differential aluminum tolerance in indica rice. *Plants*, 10(4)(2021): 634.
59. Wang C, Zheng MM, Chen J, Shen RF*. Land-use change has a greater effect on soil diazotrophic community structure than the plant rhizosphere in acidic ferralsols in southern China. *Plant and Soil*, 462(1-2)(2021): 445-458.
60. Wang C, Zheng MM, Song WF, Chen RF, Zhao XQ, Wen SL, Zheng ZS, Shen RF*. Biogeographic patterns and co-occurrence networks of diazotrophic and arbuscular mycorrhizal fungal communities in the acidic soil ecosystem of southern China. *Applied Soil Ecology*, 158(2021): 103798.
61. Li XL, Zhao XQ*, Dong XY, Ma JF, Shen RF. Secretion of gluconic acid from nguyenibacter sp. L1 is responsible for solubilization of aluminum phosphate. *Frontiers in Microbiology*, 12(2021): 784025.
62. Ma JF*, Shen RF, Shao JF*. Transport of cadmium from soil to grain in cereal crops: a review. *Pedosphere*, 31(1)(2021): 3-10.
63. Yan MK, Zheng L, Li BJ, Shen RF, Lan P*. Comparative proteomics reveals new insights into the endosperm responses to drought, salinity and submergence in germinating wheat seeds. *Plant Molecular Biology*, 105(3)(2021): 287-302.
64. Zheng L, Karim MR, Hu YG, Shen RF, Lan P*. Greater morphological and primary metabolic adaptations in roots contribute to phosphate-deficiency tolerance in the bread wheat cultivar Kenong199. *BMC Plant Biology*, 21(1)(2021): 381.
65. Xue CW, Li WF*, Shen RF, Lan P*. PERK13 modulates phosphate deficiency-induced root hair elongation in Arabidopsis. *Plant Science*, 312(2021): 111060.
66. Wang C, Zheng MM, Shen RF*. Diazotrophic communities are more responsive to maize cultivation than phosphorus fertilization in an acidic soil. *Plant and Soil*, 452(1-2)(2020): 499-512.
67. Li WX, Wang C*, Zheng MM, Cai ZJ, Wang BR, Shen RF. Fertilization strategies affect soil properties and abundance of N-cycling functional genes in an acidic agricultural soil. *Applied Soil Ecology*, 156(2020): 103704.
68. Masood S, Zhao XQ*, Shen RF. Bacillus pumilus promotes the growth and nitrogen uptake of tomato plants under nitrogen fertilization. *Scientia Horticulturae*, 272(2020): 109581.

69. Wu Q, Zhu XF*, Zhao XS, Shen RF. Potassium affects cadmium resistance in Arabidopsis through facilitating root cell wall Cd retention in a nitric oxide dependent manner. *Environmental and Experimental Botany*, 178(2020): 104175.
70. Che J, Yamaji N, Miyaji T, Mitani-Ueno N, Kato Y, Shen RF, Ma JF*. Node-localized transporters of phosphorus essential for seed development in rice. *Plant and Cell Physiology*, 61(8)(2020): 1387-1398.
71. Zhu XF, Wu Q, Meng YT, Tao Y, Shen RF*. AtHAP5A regulates iron translocation in iron-deficient Arabidopsis thaliana. *Journal of Integrative Plant Biology*, 62(12)(2020): 1910-1924.
72. Zhang HQ, Zhao XQ*, Chen YL, Wang JL, Shen RF. Improved root growth by liming aluminum-sensitive rice cultivar or cultivating an aluminum-tolerant one does not enhance fertilizer nitrogen recovery efficiency in an acid paddy soil. *Plants*, 9(6)(2020): 765.
73. Yan MK, Xue CW, Xiong Y, Meng XX, Li BJ, Shen RF, Lan P*. Proteomic dissection of the similar and different responses of wheat to drought, salinity and submergence during seed germination. *Journal of Proteomics*, 220(2020): 103756.
74. Karim MR^+, Wang RN^+, Zheng L, Dong XY, Shen RF, Lan P*. Physiological and proteomic dissection of the responses of two contrasting wheat genotypes to nitrogen deficiency. *International Journal of Molecular Sciences*, 21(6)(2020): 2119.
75. Zhang HQ, Zhao XQ*, Chen YL, Zhang LY, Shen RF. Case of a stronger capability of maize seedlings to use ammonium being responsible for the higher ^{15}N recovery efficiency of ammonium compared with nitrate. *Plant and Soil*, 440(1-2)(2019): 293-309.
76. Hu AY, Zheng MM, Sun LM, Zhao XQ*, Shen RF. Ammonium alleviates manganese toxicity and accumulation in rice by down-regulating the transporter gene OsNramp5 through rhizosphere acidification. *Frontiers in Plant Science*, 10(2019): 1194.
77. Zhu XF, Dong XY, Wu Q, Shen RF*. Ammonium regulates Fe deficiency responses by enhancing nitric oxide signaling in Arabidopsis thaliana. *Planta*, 250(4)(2019): 1089-1102.
78. Masood S, Zhao XQ*, Shen RF. Bacillus pumilus increases boron uptake and inhibits rapeseed growth under boron supply irrespective of phosphorus fertilization. *AoB Plants*, 11(4)(2019): plz036.
79. Zheng MM, Wang C*, Li WX, Song WF, Shen RF. Soil nutrients drive function and composition of phoC-harboring bacterial community in acidic soils of southern China. *Frontiers in Microbiology*, 10(2019): 2654.
80. Zhu XF, Zhang XL, Dong XY, Shen RF*. Carbon dioxide improves phosphorus nutrition by facilitating the remobilization of phosphorus from the shoot cell wall in rice (*Oryza sativa*). *Frontiers in Plant Science*, 10(2019): 665.
81. Pan XY, Li JY, Deng KY, Xu RK*, Shen RF. Four-year effects of soil acidity amelioration on the yields of canola seeds and sweet potato and N fertilizer efficiency in an ultisol. *Field Crops Research*, 237(2019): 1-11.
82. Che J, Yamaji N, Yokosho K, Shen RF, Ma JF*. Two genes encoding a bacterial-type ATP-binding cassette transporter are implicated in aluminum tolerance in Buckwheat. *Plant and Cell Physiology*, 59(12)(2018): 2502-2511.
83. Zheng CL, Zhang L, Chen MJ, Zhao XQ, Duan YZ, Meng Y, Zhang XF, Shen RF*. Effects of cadmium exposure on expression of glutathione synthetase system genes in Acidithiobacillus ferrooxidans. *Extremophiles*, 22(6)(2018): 895-902.

84. Karim MR, Dong XY, Zheng L, Shen RF, Lan P*. Can aluminum tolerant wheat cultivar perform better under phosphate deficient conditions? *International Journal of Molecular Sciences*, 19(10)(2018): 2964.
85. Li XW, Li YL, Mai JW, Tao L, Qu M, Liu JY, Shen RF, Xu GL, Feng YM, Xiao HD , Wu LS, Shi L, Guo SX, Liang J, Zhu YY, He YM, Baluška F, Shabala S*, Yu M*. Boron alleviates aluminum toxicity by promoting root alkalization in transition zone via polar auxin transport. *Plant Physiology*, 177(3)(2018): 1254-1266.
86. Zhu CQ, Zhu XF, Wang C, Dong XY, Shen RF*. Nitrate inhibits the remobilization of cell wall phosphorus under phosphorus-starvation conditions in rice. *Planta*, 248(1)(2018): 185-196.
87. Zhao XQ, Shen RF*. Aluminum-nitrogen interactions in the soil-plant system. *Frontiers in Plant Science*, 9(2018): 807.
88. Zhu XF, Zhao XS, Wu Q, Shen RF*. Abscisic acid is involved in root cell wall phosphorus remobilization independent of nitric oxide and ethylene in rice (*Oryza sativa*). *Annals of Botany*, 121(7)(2018): 1361-1368.
89. Shao JF^+, Xia JX^+, Yamaji N, Shen RF, Ma JF*. Effective reduction of cadmium accumulation in rice grain by expressing OsHMA3 under the control of the OsHMA2 promoter. *Journal of Experimental Botany*, 69(10)(2018): 2743-2752.
90. Wang C, Zheng MM, Hu AY, Zhu CQ, Shen RF*. Diazotroph abundance and community composition in an acidic soil in response to aluminum-tolerant and aluminum-sensitive maize (*Zea mays L.*) cultivars under two nitrogen fertilizer forms. *Plant and Soil*, 424(1-2)(2018): 463-478.
91. Hu AY, Che J, Shao JF, Yokosho K, Zhao XQ, Shen RF, Ma JF*. Silicon accumulated in the shoots results in down-regulation of phosphorus transporter gene expression and decrease of phosphorus uptake in rice. *Plant and Soil*, 423(1-2)(2018): 317-325.
92. Shao JF, Yamaji N, Liu XW, Yokosho K, Shen RF, Ma JF*. Preferential distribution of boron to developing tissues is mediated by the intrinsic protein OsNIP3. *Plant Physiology*, 176(2)(2018): 1739-1750.
93. Shao JF, Che J, Yamaji N, Shen RF, Ma JF*. Silicon reduces cadmium accumulation by suppressing expression of transporter genes involved in cadmium uptake and translocation in rice. *Journal of Experimental Botany*, 68(20)(2017): 5641-5651.
94. Zhu XF, Wu Q, Zheng L, Shen RF*. NaCl alleviates iron deficiency through facilitating root cell wall iron reutilization and its translocation to the shoot in Arabidopsis thaliana. *Plant and Soil*, 417(1-2)(2017): 155-167.
95. Zhao XQ, Bao XM, Wang C, Xiao ZY, Hu ZM, Zheng CL*, Shen RF*. Hydroxy-Al and cell-surface negativity are responsible for the enhanced sensitivity of Rhodotorula taiwanensis to aluminum by increased medium pH. *Archives of Microbiology*, 199(8)(2017): 1185-1194.
96. Wu YH, Liu JZ, Shen RF, Fu BJ*. Mitigation of nonpoint source pollution in rural areas: from control to synergies of multi ecosystem services. *Science of the Total Environment*, 607(2017): 1376-1380.
97. Wang C, Zheng MM, Song WF, Wen SL, Wang BR, Zhu CQ, Shen RF*. Impact of 25 years of inorganic fertilization on diazotrophic abundance and community structure in an acidic soil in southern China. *Soil Biology and Biochemistry*, 113(2017): 240-249.

98. Zhu XF, Wan JX, Wu Q, Zhao XS, Zheng SJ, Shen RF*. PARVUS affects aluminum sensitivity by modulating the structure of glucuronoxylan in Arabidopsis thaliana. *Plant Cell and Environment*, 40(9)(2017): 1916-1925.
99. Zhu XF, Zhao XS, Wang B, Wu Q, Shen RF*. Elevated carbon dioxide alleviates aluminum toxicity by decreasing cell wall hemicellulose in rice (*Oryza sativa*). *Frontiers in Physiology*, 8(2017): 512.
100. Huang JX, Xue CW, Wang H, Wang LS, Schmidt W, Shen RF, Lan P*. Genes of ACYL carrier protein family show different expression profiles and overexpression of ACYL carrier protein 5 modulates fatty acid composition and enhances salt stress tolerance in Arabidopsis. *Frontiers in Plant Science*, 8(2017): 987.
101. Li XW^{+}, Liu JY^{+}, Fang J, Tao L, Shen RF, Li YL, Xiao HD, Feng YM, Wen HX, Guan JH, Wu LS, He YM, Goldbach HE, Yu M*. Boron supply enhances aluminum tolerance in root border cells of pea by interacting with cell wall pectins. *Frontiers in Plant Science*, 8(2017): 742.
102. Shao JF, Yamaji N, Shen RF, Ma JF*. The key to Mn homeostasis in plants: regulation of Mn transporters. *Trends in Plant Science*, 22(3)(2017): 215-224.
103. Zhu XF, Zhu CQ, Wang C, Dong XY, Shen RF*. Nitric oxide acts upstream of ethylene in cell wall phosphorus reutilization in phosphorus-deficient rice. *Journal of Experimental Botany*, 68(3)(2017): 753-760.
104. Shao JF, Fujii-Kashino M, Yamaji N, Fukuoka S, Shen RF, Ma JF*. Isolation and characterization of a rice line with high Cd accumulation for potential use in phytoremediation. *Plant and Soil*, 410(1-2)(2017): 357-368.
105. Che J, Yamaji N, Shen RF*, Ma JF*. An Al-inducible expansin gene, OsEXPA10 is involved in root cell elongation of rice. *The Plant Journal*, 88(1)(2016): 132-142.
106. Hu ZM, Zhao XQ, Bao XM, Wang C, Wang W, Zheng L, Lan P, Shen RF*. A potential contribution of the less negatively charged cell wall to the high aluminum tolerance of Rhodotorula taiwanensis RS1. *Yeast*, 33(11)(2016): 575-586.
107. Zhu CQ^{+}, Zhu XF^{+}, Hu AY, Wang C, Wang B, Dong XY, Shen RF*. Differential effects of nitrogen forms on cell wall phosphorus remobilization are mediated by nitric oxide, pectin content, and phosphate transporter expression. *Plant Physiology*, 171(2)(2016): 1407-1417.
108. Zhu XF^{+}, Zhu CQ^{+}, Zhao XS, Zheng SJ, Shen RF*. Ethylene is involved in root phosphorus remobilization in rice (*Oryza sativa*) by regulating cell-wall pectin and enhancing phosphate translocation to shoots. *Annals of Botany*, 118(4)(2016): 645-653.
109. Che J, Yamaji N, Shao JF, Ma JF*, Shen RF*. Silicon decreases both uptake and root-to-shoot translocation of manganese in rice. *Journal of Experimental Botany*, 67(5)(2016): 1535-1544.
110. Yokosho K, Yamaji N, Mitani-Ueno N, Shen RF, Ma JF*. An aluminum- inducible IREG gene is required for internal detoxification of aluminum in buckwheat. *Plant and Cell Physiology*, 57(6)(2016): 1169-1178.
111. Li GD, Pan LN, Jiang K, Takahashi I, Nakamura H, Xu YW, Asami T*, Shen RF*. Strigolactones are involved in sugar signaling to modulate early seedling development in Arabidopsis. *Plant Biotechnology*, 33(2)(2016): 87-97.11
112. Li L, Yang XD*, Shen RF*, Pan ZR. Effects of aluminum species on the activity of NAD(P)H-dependent dehydrogenases–a review. *International Journal of Electrochemical Science*, 11(5)(2016): 4186-4197.

113. Wang H, Lan P*, Shen RF. Integration of transcriptomic and proteomic analysis towards understanding the systems biology of root hairs. *Proteomics*, 16(5)(2016): 877-893.
114. Khan A, Sirajuddin, Zhao XQ, Javed MT, Khan KS, Bano A, Shen RF, Masood S*. Bacillus pumilus enhances tolerance in rice (*Oryza sativa L.*) to combined stresses of NaCl and high boron due to limited uptake of Na^+. *Environmental and Experimental Botany*, 124(2016): 120-129.
115. Zhu XF, Wang B, Song WF, Zheng SJ, Shen RF*. Putrescine alleviates iron deficiency via NO-dependent reutilization of root cell-wall Fe in Arabidopsis. *Plant Physiology*, 170(1)(2016): 558-567.
116. Yang J^+, Qu M^+, Fang J, Shen RF, Feng YM, Liu JY, Bian JF, Wu LS, He YM, Yu M*. Alkali-soluble pectin is the primary target of aluminum immobilization in root border cells of pea (*Pisum sativum*). *Frontiers in Plant Science*, 7(2016): 1297.
117. Shao JF, Che J, Chen RF, Ma JF, Shen RF*. Effect of in planta phosphorus on aluminum-induced inhibition of root elongation in wheat. *Plant and Soil*, 395(1-2)(2015): 307-315.
118. Wang W, Zhao XQ, Hu ZM, Shao JF, Che J, Chen RF, Dong XY, Shen RF*. Aluminum alleviates manganese toxicity to rice by decreasing root symplastic Mn uptake and reducing availability to shoots of Mn stored in roots. *Annals of Botany*, 116(2)(2015): 237-246.
119. Liang LZ, Qi HJ, Xu P, Zhao XQ, Dong XY, Shen RF*. High phosphorus at seedling stage decreases the post-transplanting fertilizer requirement of cucumber (*Cucumis sativus L.*). *Scientia Horticulture*, 190(2015): 98-103.
120. Xu QF*, Jiang PK, Wu JS, Zhou GM, Shen RF, Fuhrmann JJ. Bamboo invasion of native broadleaf forest modified soil microbial communities and diversity. *Biological Invasions*, 17(1)(2015): 433-444.
121. Wang W, Zhao XQ, Chen RF, Dong XY, Lan P, Ma JF, Shen RF*. Altered cell wall properties are responsible for ammonium-reduced aluminum accumulation in rice roots. *Plant Cell and Environment*, 38(7)(2015): 1382-1390.
122. Xu P, Liang LZ, Dong XY, Shen RF*. Effect of arbuscular mycorrhizal fungi on aggregate stability of a clay soil inoculating with two different host plants. Acta Agriculturae Scandinavica, *Section B-Soil and Plant Science*, 65(1)(2015): 23-29.
123. Che J, Zhao XQ*, Zhou X, Jia ZJ, Shen RF*. High pH-enhanced soil nitrification was associated with ammonia-oxidizing bacteria rather than archaea in acidic soils. *Applied Soil Ecology*, 85(2015): 21-29.
124. Wang H, Chen RF, Iwashita T, Shen RF, Ma JF*. Physiological characterization of aluminum tolerance and accumulation in tartary and wild buckwheat. *New Phytologist*, 205(1)(2015): 273-279.
125. Ma F*, Ma Y, Du CW, Yang XD*, Shen RF*. Comparison on the interaction of Al3+/nano-Al13 with calf thymus DNA/salmon sperm DNA. *Journal of Molecular Structure*, 1100(2015): 154-161.
126. Zhu XF, Wang ZW, Wan JX, Sun Y, Wu YR, Li GX, Shen RF, Zheng SJ*. Pectin enhances rice (Oryza sativa) root phosphorus remobilization. *Journal of Experimental Botany*, 66(3)(2015): 1017-1024.
127. Xu P, Liang LZ, Dong XY, Xu J, Jiang PK, Shen RF*. Response of soil phosphorus required for maximum growth of Asparagus officinalis L. to inoculation of Arbuscular mycorrhizal fungi. *Pedosphere*, 24(6)(2014): 776-782.
128. Xia JX, Yamaji N, Che J, Shen RF, Ma JF*. Differential expression of Nrat1 is responsible for Al-tolerance QTL on chromosome 2 in rice. *Journal of Experimental Botany*, 65(15)(2014): 4297-4304.

129. Ma JF*, Chen ZC, Shen RF. Molecular mechanisms of Al tolerance in gramineous plants. *Plant and Soil*, 381(1-2)(2014): 1-12.
130. Xia JX, Yamaji N, Che J, Shen RF, Ma JF*. Normal root elongation requires arginine produced by argininosuccinate lyase in rice. *The Plant Journal*, 78(2)(2014): 215-226.
131. Zheng L, Lan P*, Shen RF*, Li WF*. Proteomics of aluminum tolerance in plants. *Proteomics*, 14(4-5)(2014): 566-578.
132. Zhao XQ, Chen RF, Shen RF*. Coadaptation of plants to multiple stresses in acidic soils. *Soil Science*, 179(10-11)(2014): 503-513.
133. Zhao XQ, Shen RF*. Interactive regulation of nitrogen and aluminum in rice. *Plant Signaling and Behavior*, 8(6)(2013): 24355.
134. Liang LZ, Zhao XQ, Yi XY, Chen ZC, Dong XY, Chen RF, Shen RF*. Excessive application of nitrogen and phosphorus fertilizers induces soil acidification and phosphorus enrichment during vegetable production in Yangtze River Delta, China. *Soil Use and Management*, 29(2)(2013): 161-168.
135. Wang C, Wang CY, Zhao XQ, Chen RF, Lan P, Shen RF*. Proteomic analysis of a high aluminum tolerant yeast Rhodotorula taiwanensis RS1 in response to aluminum stress. *Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics*, 1834(10)(2013): 1969-1975.
136. Wang C, Zhao XQ, Chen RF, Chu HY, Shen RF*. Aluminum tolerance of wheat does not induce changes in dominant bacterial community composition or abundance in an acidic soil. *Plant and Soil*, 367(1-2)(2013): 275-284.
137. Zeng QL^{+}, Chen RF^{+}, Zhao XQ, Shen RF*, Noguchi A, Shinmachi F, Hasegawa I. Aluminum could be transported via phloem in Camellia oleifera Abel. *Tree Physiology*, 33(1)(2013): 96-105.
138. Wang CY, Shen RF*, Wang C, Wang W. Root protein profile changes induced by Al exposure in two rice cultivars differing in Al tolerance. *Journal of Proteomics*, 78(2013): 281-293.
139. Wang C, Zhao XQ, Aizawa T, Sunairi M, Shen RF*. High aluminum tolerance of Rhodotorula sp. RS1 is associated with thickening of the cell wall rather than chelation of aluminum ions. *Pedosphere*, 23(1)(2013): 29-38.
140. Zhao XQ, Guo SW, Shinmachi F, Sunairi M, Noguchi A, Hasegawa I, Shen RF*. Aluminum tolerance in rice is antagonistic with nitrate preference and synergistic with ammonium preference. *Annals of Botany*, 111(1)(2013): 69-77.
141. Li L, Xie YF, Wang YP, Yang XD*, Chen RF, Shen RF*. Study on nicotinamide adenine dinucleotide adsorbed at nano-boehmite/water and nano-corundum/water interfaces. *Colloids and Surfaces B: Biointerfaces*, 102(2013): 398-404.
142. Zhao XQ, Aizawa T, Schneider J, Wang C, Shen RF, Sunairi M*. Complete mitochondrial genome of the aluminum-tolerant fungus Rhodotorula taiwanensis RS1 and comparative analysis of Basidiomycota mitochondrial genomes. *Microbiologyopen*, 2(2)(2013): 308-317.
143. Tang YZ*, Chen X, Yang XJ, Shen RF, Yang XD, Xu CZ. The novel carbon nanomaterials electrochemical sensor for determination of trace aluminum in human body fluids with 8-hydroxyquinoline. *IEEE Sensors Journal*, 13(9)(2013): 3270-3275.
144. Tang YZ, Sun C, Yang XJ, Yang XD*, Shen RF*. Graphene modified glassy carbon electrode for determination of trace aluminium (III) in biological samples. *International Journal of Electrochemical Science*, 8(3)(2013): 4194-4205.
145. Chen RF, Zhang FL, Zhang QM, Sun QB, Dong XY, Shen RF*. Aluminium-phosphorus interactions in plants growing on acid soils: does phosphorus always

alleviate aluminium toxicity? *Journal of the Science of Food and Agriculture*, 92(5)(2012): 995-1000.
146. Zeng QL, Chen RF, Zhao XQ, Wang HY, Shen RF*. Aluminium uptake and accumulation in the hyperaccumulator Camellia Oleifera Abel. *Pedosphere*, 21(3)(2011): 358-364.
147. Yang XD, Cai L, Peng Y, Li HH, Chen RF, Shen RF*. Effects of Al(III) and nano-Al13 species on malate dehydrogenase activity. *Sensors*, 11(6)(2011): 5740- 5753.
148. Zhao XQ, Mitani N, Yamaji N, Shen RF*, Ma JF. Involvement of silicon influx transporter OsNIP2;1 in selenite uptake in rice. *Plant Physiology*, 153(4)(2010): 1871-1877.
149. Chen RF, Shen RF*, Yang XD, Wang XL. Effects of buckwheat growth on variation of aluminum and major metals in root-zone soil solutions. *Journal of Plant Nutrition and Soil Science*, 173(5)(2010): 788-794.
150. Chen ZC, Zhao XQ, Shen RF*. The alleviating effect of ammonium on aluminum toxicity in Lespedeza bicolor results in decreased aluminum-induced malate secretion from roots compared with nitrate. *Plant and Soil*, 337(1-2)(2010): 389-398.
151. Yu M*, Shen RF, Liu JY, Chen RF, Xu MM, Yang Y, Xiao HD, Wang HZ, Wang HY, Wang CQ. The role of root border cells in aluminum resistance of pea (Pisum sativum) grown in mist culture. *Journal of Plant Nutrition and Soil Science*, 172(4)(2009): 528-534.
152. Liang LZ, Shen RF*, Yi XY, Zhao XQ, Chen ZC, Chen RF, Dong XY. The phosphorus requirement of Amaranthus mangostanus L. exceeds the 'change point' of P loss. *Soil Use and Management*, 25(2)(2009): 152-158.
153. Wang XL, Li K, Yang XD*, Wang LL, Shen RF*. Complexation of Al(III) with reduced glutathione in acidic aqueous solutions. *Journal of Inorganic Biochemistry*, 103(5)(2009): 657-665.
154. Zhao XQ, Shen RF*, Sun QB. Ammonium under solution culture alleviates aluminum toxicity in rice and reduces aluminum accumulation in roots compared with nitrate. *Plant and Soil*, 315(1-2)(2009): 107-121.
155. Yu M*, Shen RF, Xiao HD, Xu MM, Wang HZ, Wang HY, Zeng QL, Bian JF. Boron alleviates aluminum toxicity in pea (Pisum sativum). *Plant and Soil*, 314(1-2)(2009): 87-98.
156. Chen RF, Shen RF*. Root phosphate exudation and pH shift in the rhizosphere are not responsible for aluminum resistance in rice. *Acta Physiologiae Plantarum*, 30(6)(2008): 817-824.
157. Sun QB, Shen RF*, Zhao XQ, Chen RF, Dong XY. Phosphorus enhances Al resistance in Al-resistant Lespedeza bicolor but not in Al-sensitive L. cuneata under relatively high Al stress. *Annals of Botany*, 102(5)(2008): 795-804.
158. Dong XY, Shen RF*, Chen RF, Zhu ZL, Ma JF. Secretion of malate and citrate from roots is related to high Al-resistance in Lespedeza bicolor. *Plant and Soil*, 306(1-2)(2008): 139-147.
159. Yang XD, Zhang QQ, Chen RF, Shen RF*. Speciation of Aluminum (III) complexes with oxidized glutathione in acidic aqueous solutions. *Analytical Sciences*, 24(8)(2008): 1005-1012.
160. Chen RF, Shen RF*, Gu P, Wang HY, Xu XH. Investigation of aluminum-tolerant species in acid soils of South China. *Communications in Soil Science and Plant Analysis*, 39(9-10)(2008): 1493-1506.

161. Gu P, Shen RF*, Chen YD. Diffusion pollution from livestock and poultry rearing in the Yangtze Delta, China. *Environmental Science and Pollution Research*, 15(3)(2008): 273-277.
162. Yang XD*, Zhang QQ, Li LF, Shen RF*. Structural features of aluminium (III) complexes with bioligands in glutamate dehydrogenase reaction system-a review. *Journal of Inorganic Biochemistry*, 101(9)(2007): 1242-1250.
163. Xu Y, Yamaji N, Shen RF, Ma JF*. Sorghum roots are inefficient in uptake of EDTA-chelated lead. *Annals of Botany*, 99(5)(2007): 869-875.
164. Shibata M, Konno T, Akaike R, Xu Y, Shen RF, Ma JF*. Phytoremediation of Pb contaminated soil with polymer-coated EDTA. *Plant and Soil*, 290(1-2)(2007): 201-208.
165. Chen RF, Shen RF*, Gu P, Dong XY, Du CW, Ma JF. Response of rice (Oryza sativa) with root surface iron plaque under aluminium stress. *Annals of Botany*, 98(2)(2006): 389-395.
166. Shen RF*, Chen RF, and Ma JF. Buckwheat accumulates aluminum in leaves but not in seeds. *Plant and Soil*, 284(1-2)(2006): 265-271.
167. Shen RF*, Cai H, Gong WH. Transgenic Bt cotton has no apparent effect on enzymatic activities or functional diversity of microbial communities in rhizosphere soil. *Plant and Soil*, 285(1-2)(2006): 149-159.
168. Zheng SJ*, Yang JL, He YF, Yu XH, Zhang L, You JF, Shen RF, Matsumoto H. Immobilization of aluminum with phosphorus in roots is associated with high aluminum resistance in buckwheat. *Plant Physiology*, 138(1)(2005): 297-303.
169. Shen RF, Iwashita T, Ma JF*. Form of Al changes with Al concentration in leaves of buckwheat. *Journal of Experimental Botany*, 55(394)(2004): 131-136.
170. Ma JF*, Shen RF, Nagao S, Tanimoto E. Aluminum targets elongating cells by reducing cell wall extensibility in wheat roots. *Plant and Cell Physiology*, 45(5)(2004): 583-589.
171. Ueno D, Zhao FJ, Shen RF, Ma JF*. Cadmium and zinc accumulation by the hyperaccumulator Thlaspi caerulescens from soils enriched with insoluble metal compounds. *Soil Science and Plant Nutrition*, 50(4)(2004): 511-515.
172. Ae N*, Shen RF. Root cell-wall properties are proposed to contribute to phosphorus (P) mobilization by groundnut and pigeonpea. *Plant and Soil*, 245(1)(2002): 95-103.
173. Shen RF, Ma JF*, Kyo M, Iwashita T. Compartmentation of aluminium in leaves of an Al-accumulator, Fagopyrum esculentum Moench. *Planta*, 215(3)(2002): 394-398.
174. Ma JF*, Shen RF, Zhao ZQ, Wissuwa M, Takeuchi Y, Ebitani T, Yano M. Response of rice to Al stress and identification of quantitative trait loci for Al tolerance. *Plant and Cell Physiology*, 43(6)(2002): 652-659.
175. Shen RF, Ma JF*. Distribution and mobility of aluminium in an Al-accumulating plant, Fagopyrum esculentum Moench. *Journal of Experimental Botany*, 52(361)(2001): 1683-1687.
176. Shen RF, Ae N*. Extraction of P solubilizing active substances from the cell wall of groundnut roots. *Plant and Soil*, 228(2)(2001): 243-252.
177. Shen RF, Zhao QG. Leaching of nutrient elements in a red soil derived from quaternary red clay. *Pedosphere*, 8(1)(1998): 15-20.
178. Shen RF, Brookes PC, Powlson DS. Effect of long-term straw incorporation on soil microbial biomass and C and N dynamics. *Pedosphere*, 7(4)(1997): 297-302.
179. Yin B, Shen RF, Zhu ZL. Use of new water soluble surface film-forming material to reduce ammonia loss from water solution. *Pedosphere*, 6(4)(1996): 329-334.

180. Shen RF, Zhao QG. Distribution of exchangeable calcium, magnesium, and potassium as affected by fertilizer application to red soil. *Pedosphere*, 5(4)(1995): 343-348.

Publications in Refereed Chinese Journals

1. Li XL, Zhao XQ*, Dong XY, Shen RF. Isolation of phosphate-solubilizing bacteria from acidic soil and its growth promoting effect. *Soil and Fertilizer Sciences in China*, (2023), doi: 10.11838/sfsc.1673-6257.2166.
2. Zhang X, Wang RN, Shen RF, Lan P. Proteomic dissection of the rice shoots in response to iron deficiency and excess. *Acta Pedologica Sinica*, (2023), doi: 10.11766/trxb202203150109.
3. Sun LM, Ma JF, Shen RF*. Low pH stress induces the accumulation of ROS by increasing production of nitrate reductase-dependent NO in rice root tips. *Acta Pedologica Sinica*, 60(1)(2023): 201-211.
4. Shen RF, Wu YH, Xu Y, Zhou L. Comparative study on agricultural non-point source pollution control in China, the United States and Japan. *China Development*, 22(5)(2022): 69-73.
5. Guo L, Feng TY, Xue ZZ, Wang C*, Shen RF. Effects of nitrogen form and phosphorus fertilizer on phosphorus-solubilizing bacteria and phosphatase of maize rhizosphere in acidic red soil. *Acta Pedologica Sinica*, 2022, doi: 10.11766/trxb202108250454.
6. Xue ZZ, Feng TY, Wang C*, Shen RF. Effects of land-use patterns on arbuscular mycorrhizal fungi community in acidic red soil. *Soils*, 54(4)(2022): 733-739.
7. Li JJ, Zhao XQ, Wang JL, Li XL, Shen RF*. Accumulation and ecological risk of heavy metals in soil-plant system of the contaminated area around an E-waste dismantling site. *Chinese Journal of Ecology*, 41(12)(2022): 2432- 2439.
8. Li XL, Hu AY, Wang JL, Xiao Xun, Shen RF, Zhao XQ*. Study on difference of low phosphorus tolerance of rice varieties in acid soil. *Acta Agriculturae Jiangxi*, 34(05)(2022): 102-106.
9. Xiong Y, Zheng L, Shen RF, Lan P. Effects of nitrogen deficiency on microbial community structure in rhizosphere soil of wheat. *Acta Pedologica Sinica*, 59(1)(2022): 218-230.
10. Li BJ^{+}, Zheng L^{+}, Shen RF, Lan P*. Proteomic analysis of RPP1A involved in the seedling growth of *Arabidopsis thaliana*. *Biotechnology Bulletin*, 38(2)(2022): 10-20.
11. Chen X, Liang LZ*, Li JG, Li X, Li WM, Shen RF. Analysis on development trend of continuous cropping obstacle control based on patent information. *Soils*, 2021, 53(5)(2021): 969-976.
12. Liang LZ , Chen X , Hu WY , Li XP , Ma F , Shen RF*. Analysis of patents on soil environmental monitoring equipment in China. *Acta Pedologica Sinica*, 58(2)(2021): 433-444.
13. Zhang HQ, Zhao XQ*, Zhang LY, Shen RF. Effects of liming and dicyandiamide (DCD) application on soil pH and nitrification of acidic red soil. *Acta Pedologica Sinica*, 58(1)(2021): 169-179.
14. Zhang XL, Tao Y, Zhu XF*, Ma JF, Shen RF. Differential analysis of endogenous phosphorus reuse in wheat with different aluminum tolerance. *Jiangsu Agricultural Sciences*, 49(17)(2021): 80-87.

15. Wang C, Chen J, Shen RF*. Diazotroph abundance and community composition in different parts of maize (*Zea mays* L.) cultivated in acid red soil. *Journal of Plant Nutrition and Fertilizers*, 27(5)(2021): 741-750.
16. Liu ZT, Zhao XQ*, Wang JL, Shen RF. Effects of aluminum treatments on uptake of ammonium and nitrate and expression of related genes in different aluminum-tolerant rice varieties. *Acta Agriculturae Jiangxi*, 33(05)(2021): 1-7.
17. Li WX, Zheng MM, Wang C*, Shen RF. Nitrososphaera may be a major driver of nitrification in acidic soils. *Soils*, 53(1)(2021): 13-20.
18. Xiao ZY, Ma F, Liu KL, Zhao XQ*, Zheng CL, Zhang HQ, Wang JL, Shen RF. Current phosphorus status of red soil in drylands and paddy fields and its loss risks. *Soil and Fertilizer Sciences*, 1(2021): 282-288.
19. Chen HP, Han ZT, Shen RF, Li J, GU MY, Chen MF*. Generation processes and ecological restoration techniques of acid mine drainage from abandoned mines. *Environmental Protection Science*, 47(6)(2021): 73-80.
20. Zheng L, Shen RF, Lan P*. Research progress of plant lysine acetylproteome modified in non-histone protein. *Biotechnology Bulletin*, 37(1)(2021): 77-89.
21. Meng XX, Li WF, Shen RF, Lan P*. Time-course response of phenotype and the expression of Pi-starvation responsive genes in high and low Pi-efficient wheat genotypes to Pi starvation. *Journal of Plant Nutrition and Fertilizers*, 27(11)(2021): 1883-1893.
22. Cheng S, Wang C, Shen RF*. Infrared spectroscopy and raman spectroscopy study on high resistant aluminum *rhodotorula Taiwanensis* RS1. *Soils*, 52(6)(2020): 1158-1163.
23. Zhang HQ, Zhao XQ*, Yu M, Shen RF. Effect of soil irradiation sterilization on the behavior of ammonium and nitrate nitrogen in soil. *Soil and Fertilizer Sciences in China*, 2020, 52(6)(2020): 1158-1163.
24. Zheng MM, Wang C*, Shen RF. Effects of calcium carbonate and rhizosphere on abundance of phosphate-solubilizing microorganisms in acidic red soil. *Soils*, 52(4)(2020): 704-709.
25. Shen RF, Yan XY, Zhang GL, Teng Y. Status quo of and strategic thinking for the development of soil science in China in the new Era. *Acta Pedologica Sinica*, 57(5)(2020): 1051-1059.
26. Teng Y, Luo YM, Shen RF, Zhao QG. Research progress and perspective of the multi-medium interface process and regulation principle of pollutants in site soil-groundwater. *Acta Pedologica Sinica*, 57(6)(2020): 1333-1340.
27. Liang LZ, Chen X, Dong XY, Shen RF*. Analysis of patents on arbuscular mycorrhizal fung. *Journal of Plant Nutrition and Fertilizers*, 26(12)(2020): 2127-2136.
28. Hu AY, Zhao XQ, Shen RF, Ma JF*. Correlation between phosphorus-use efficiency and aluminum tolerance in different Rice varieties. *Soils*, 52(1)(2020): 47-53.
29. Wang XJ, Hu AY, Che J, Shen RF, Ma JF*. Effects of silicon on phosphorus accumulation in different rice varieties. *Soils*, 52(1)(2020): 54-60.
30. Zhang LY, Zhao XQ*, Li JM, Shen RF. Comparison of rice plants with two wild plants in tolerance to acid sulfate soil and absorption of mineral elements. *Acta Pedologica Sinica*, 57(2)(2020): 403-413.
31. Chen YL, Zhao XQ*, Zhang LY, Shen RF. Effects of NH_4^+ and NO_3^- on nitrogen efficiency and mineral nutrient contents of rice. *Soils*, 51(2)(2019): 243-250.

32. Shen RF, Zhao XQ. The sustainable use of acid soils. *Journal of Agriculture*, 9(3)(2019): 16-20.
33. Zhang LY, Zhao XQ*, Shen RF. Soil acidification and its ecological effects. *Chinese Journal of Ecology*, 38(6) (2019): 1900-1908
34. Wu Q, Zhu XF, Shen RF*. Mechanism of boron facilitate root cell wall iron reutilization in iron deficient. *Journal of Plant Nutrition and Fertilizers*, 25(2) (2019): 264-273.
35. Shen RF*, Wang C, Sun B. Soil related scientific and technological problems in implementing strategy of "storing grain in land and technology". *Bulletin of Chinese Academy of Sciences*, 33(2)(2018): 135-144.
36. Zhao QG, Shen RF, Teng Y, Li XH. Pilot progress and countermeasures on farmland rotation and fallow system in the groundwater funnel area of China. *Soils*, 50(1)(2018): 1-6.
37. Zhu CQ, Zhu XF, Shen RF*. Hydrogen sulfide promote rice (*oryza sativa*) cell wall P remobilization under P starvation condition. *Soils*, 50(1)(2018): 51-58.
38. Shen RF. Development, status and prospect of soil science. *Journal of Agriculture*, 8(1)(2018): 44-49.
39. Huang JX, Yan MK, Xue CW, Shen RF, Lan P*. Phosphate deficiency induced down-regulation of iron acquisition genes is dependent on ambient iron concentrations. *Soils*, 50(5)(2018): 866-873.
40. Wang LS, Yan KM, Wang H, Shen RF, Lan P*. Screening and characterization of an Arabidopsis mutant in response to iron deficiency. *Soils*, 50(3)(2018): 476-484.
41. Zhu YG, Shen RF, He JZ, Wang YF, Han XG, Jia ZJ. Soil microbiome in China: progress and prospects. *Agricultural Science and Engineering in China*. 30(3)(2018): 6-12.
42. Zhao XS, Zhu XF, Wu Q, Shen RF*. Study on mechanism of demethylation of pectin promoting reutilization of cell wall phosphorus in rice (*Oryza sativa*) root. *Acta Pedologica Sinica*, 55(5)(2018): 1190-1198.
43. Xu RK*, Li JY, Zhou SW, Xu MG, Shen RF. Scientific issues and controlling strategies of soil acidification of croplands in China. *Bulletin of Chinese Academy of Sciences*, 33(2)(2018): 160-167.
44. Zhao QG*, Shen RF, Teng Y, Li XH. Pilot progress, problems and countermeasures on farmland rotation and fallow system in the heavy metal polluted region of China. *Ecology and Environmental Sciences*, 26(12)(2017): 2003-2007.
45. Wang D, Zhao XQ*, Zheng CL*, Shen RF. Effects of two rgprs on growth and nutrient uptake of rape under different nitrogen and phosphorus conditions. *Soils*, 49(6)(2017): 1078-1083.
46. Zhu YG, Shen RF, He JZ, Wang YF, Han XG, Jia ZJ. China soil microbiome initiative: progress and perspective. *Bulletin of Chinese Academy of Sciences*, 32(6)(2017): 554-565.
47. Shen RF, Sun B, Shi WM, Zhao XQ. Interactions between above- and below-ground organisms for nutrient-efficient utilization. *Bulletin of Chinese Academy of Sciences*, 32(6)(2017): 566-574.
48. Hu ZM, Zhao XQ, Wang C, Shen RF*. Role of cell wall components in high aluminum tolerance of *Rhodotorula taiwanensis* RS1. *Soils*, 49(2)(2017): 256-260.
49. Wang B, Zhang HL, Zhu XF, Shen RF*. Differences in aluminium tolerance between rice varieties. *Acta Pedologica Sinica*, 54(4)(2017): 958-966.

50. Li GD, Tian MQ, Shen RF*. Analysis of chlorophyll fluorescence parameters in leaves of strigolactone mutants of *Arabidopsis thaliana*. *Journal of Zhejiang A & F University*, 34(1)(2017): 36-41.
51. Song WF, Wang C, Chen RF, Wen SL, Wang BR, Shen RF*. Comparison of contribution of wheat ionic uptake to soil acidification under long-term different fertilization. *Soils*, 49(1)(2017): 7-12.
52. Zhao QG, Shen RF, Ting Y. Pilot progress, problems and countermeasures on farmland rotation and fallow system in the heavy metal polluted region of China. *Ecology and Environmental Sciences*, 25(3)(2016): 365-371.
53. Shao JF, Chen RF, Dong XY, Shen RF*. Aluminum-phosphorus interaction in wheat grown in a split-root device. *Jiangsu Journal of Agricultural Sciences*, 32(1)(2016): 78-83.
54. Shao JF, Chen RF, Dong XY, Shen RF*. Effects of different phosphorus rates on variations of mn, al, mg and ca concentrations in soil solution and wheat growth in acid red soil. *Soils*, 48(1)(2016): 36-41.
55. Liang G, Liang LZ, Dong XY, Shen RF*. Effects of controlled-release fertilizer on wheat-maize rotation system in fluvo-aquic soil in north China. *Soils*, 48(1)(2016): 53-58.
56. Sun QB, Shen RF*, Yin CQ, Zhao XQ. Analysis of variations in and factors affecting callose formation in response to Al stress in lespedeza root tips. *Acta Ecologica Sinica*, 36(4)(2016): 1073-1082.
57. Shen RF, Liu WX. Attention should be paid to the prevention and control of persistent organic pollutants in soil. *China Development*, 16(3)(2016): 85-86.
58. Bao XM, Zhao XQ*, Xiao ZY, Zheng CL, Shen RF. Effects of aluminum on the root growth and nutrient uptake of two rice varieties with different aluminum tolerances. *Plant Physiology Journal*, 51(12)(2015): 2157-2162.
59. Wang W, Song WF, Zhao XQ, Shen RF*. Responses of zeta potential of protoplast membrane isolated from rice root tips to ammonium, nitrate, aluminum and pH. *Soils*, 47(5)(2015): 853-857.
60. Zhao XQ, Shen RF*. Strategies for increasing the utilization of nitrogen and phosphorus by plants under aluminum stress. *Plant Physiology Journal*, 51(10)(2015): 1583-1589.
61. Shen RF*, Zhao XQ. Role of soil microbes in the acquisition of nutrients by plants. *Acta Ecologica Sinica*, 35(20)(2015): 6584-6591.
62. Zhang SX, Zhang WJ, Shen RF, Xu MG*. Variation of soil quality in typical farmlands in China under long-term fertilization and research expedition. *Journal of Plant Nutrition and Fertilizer*, 21(6)(2015): 1389-1393.
63. Shao JF, Che J, Dong XY, Shen RF*. Comparison of aluminum tolerance characteristics among different genotypes of maize. *Jiangsu Agricultural Sciences*, 43(1)(2015): 61-64.
64. Chen JJ, Liang LZ, Dong XY, Li Y, Shen RF*. Effects of sugar on colonization and sporulation of arbuscular mycorrhizal fungi in soil condition. *Mycosystema*, 34(3)(2015): 394-401.
65. Shen RF*, Teng Y. Concept of soil safety and its application in China. *Bulletin of Chinese Academy of Sciences*, 30(4)(2015): 468-476.
66. Chen RF, Dong XY, Zhao XQ, Shen RF*. Advances in adaptive mechanisms to acid soils in woody plants -with an emphasis on lespedeza (*lespedeza bicolor*) and oil tea (*camellia oleifera*). *Soils*, 47(2)(2015): 252-258.

67. Shen RF, Wu YH, Han QZ, Xia LZ, Ma L. Problems of agricultural land resource in the area of the three gorges reservoir and its countermeasures of sustainable utilization. *China Development*, 14(6)(2014): 50-55.
68. Xu P, Liang LZ, Dong XY, Shen RF*. Effects of crop straw extracts on arbuscular mycorrhizal fungi colonization of tomato seedling. *Soils*, 46(6)(2014): 1103-1108.
69. Zhang XM, Dong XY, Shen RF*. Improvement of conventional paraffin section preparation technique for young rice root tips. *Jiangsu Agricultural Sciences*, 41(12)(2013): 71-73
70. Xu J, Liang LZ, Dong XY, Shen RF*. Biochemical properties of compost tea from organic fertilizer source and its effect on seedling growth of tomato. *Jiangsu Agricultural Sciences*, 41(10)(2013): 289-292.
71. Zhang XM, Dong XY, Shen RF*. Comparative observation of aerenchyma formation during different crop primary root developmental stage by paraffin section and freehand section. *Soils*, 45(5)(2013): 946-951.
72. Xu L, Liang LZ, Dong XY, Shen RF. Effects of high phosphorus stress on growth and absorption and distribution of mineral nutrients in cucumber seedlings. *Hubei Agricultural Sciences*, 52(1)(2013): 52-55.
73. Wang C, Zhao XQ, Shen RF*. A study on high aluminum-tolerant characteristic of *rhodotorula sp*. RS1. *Soils*, 45(3)(2013): 501-505.
74. Zhang XM, Dong XY, Chen RF, Zhao XQ, Shen RF*. Influencing factors in determination of trace ethylene evolution of rice roots by gas chromatography. *Jiangsu Journal of Agricultural Sciences*, 29(4)(2013): 722-726.
75. Shen RF, Chen MJ, Kong XB, Li YT, Tong YA, Wang JK, Li T, Lu MX. Conception and evaluation of quality of arable land and strategies for its management. *Acta Pedologica Sinica*, 49(6)(2012): 1210-1217.
76. Zeng QL, Chen RF, Zhao XQ, Dong XY, Shen RF*. Acidification of growth medium under Al absorption by roots of oil Tea. *Soils*, 44(5)(2012): 834-837.
77. Shen RF, Liang LZ, Zhao XQ. Fertilizer relevant legislation in Japan, South Korea, and Taiwan district and their enlightenment to China's fertilizer management. *Soils*, 44(4)(2012): 529-534.
78. Qi HJ, Liang LZ, Zhao XQ, Dong XY, Shen RF*. Effects of soil P content on growth and P uptake of cucumber seedlings. *Jiangsu Agricultural Sciences*, 40(1)(2012): 152-154.
79. Xu L, Shen RF*, Liang LZ, Dong XY. Screening of cucumber cultivars with high P accumulation. *Jiangsu Agricultural Sciences*, 40(10)(2012): 137-139.
80. Xu L, Liang LZ, Dong XY, Shen RF*. Effects of magnesium deficiency on the growth and assimilation of mineral nutrition of cucumber seedlings. *Acta Agriculturae Universitatis Jiangxiensis*, 34(5)(2012): 899-903.
81. Zhang QM, Chen RF, Zhao XQ, Dong XY, Shen RF*. Effects of P on growth of rice seedling under Al stress and relationship between Al tolerance and P efficiency of the rice. *Acta Pedologica Sinica*, 48(1)(2011): 103-111.
82. Zhang QM, Zhao XQ, Chen RF, Dong XY, Shen RF*. Effects and Mechanisms of NH_4^+/NO_3^- on Al uptake by Rice. *Soils*, 43(1)(2011): 26-31.
83. Yuan JJ, Chen RF, Tong YA, Shen RF*. Studies on effects of exogenous low-molecular-weight organic acids on activity of aluminum, calcium and magnesium in acid soils pretreated by $CaCO_3$. *Soils*, 43(4)(2011): 611-616.
84. Chen ZC, Zhao XQ, Shen RF*. Extraction of total RNA and cloning and expression of *ALMT* gene fragment in *lespedeza bicolor*. *Soils*, 43(3)(2011): 433-438.

85. Zhang FL, Zhang QM, Zhao XQ, Shen RF*. Comparison between two P-Al treatment methods in studying effect of phosphorus on aluminium toxicity to plants. *Acta Pedologica Sinica*, 47(2)(2010): 311-318.
86. Liang LZ, Shen RF*, Yi XY, Chen ZC, Zhao XQ. Effects of phosphate fertilizer application in high phosphorus soil on yield and phosphorus fertilizer uptake efficiency of pakchoi and amaranth. *Jiangsu Agricultural Sciences*, 26(1)(2010): 70-74.
87. Zhang QM, Zhao XQ, Chen RF, Dong XY, Shen RF*. Effect of ammonium nitrogen/nitrogen on Al toxicity in rice. *Jiangsu Journal of Agricultural Sciences*, 26(5)(2010): 976-981.
88. Mao J, Xu RK*, Wan Q, Chen RF, Li XH, Shen RF. Effect of nitrate concentration on proton release by faba-bean roots. *Chinese Journal of Eco-Agriculture*, 18(5)(2010): 950-953.
89. Sun QB, Dong XY, Shen RF*. Effects of phosphorus or lime applications on growth and mineral compositions of two lespedeza species. *Soils*, 41(2)(2009): 206-211.
90. Sun QB, ZhaoXQ, Shen RF*. Application of three microscopic techniques to research on Al toxicity in plants. *Acta Pedologica Sinica*, 46(6)(2009): 1026-1032.
91. Yi XY, Chen ZC, Liang LZ, Zhao XQ, Shen RF*. On utilization of different forms of inorganic phosphate by lettuce, spinach and tomato seedlings. *Soils*, 41(2)(2009): 218-223.
92. Zhang FL. Dong XY, Zeng QL, Shen RF*. Response of wheat to phosphate fertilizer on red soil and its mechanism. *Jiangsu Agricultural Sciences*, 25(1)(2009): 112-116.
93. Zhang FL, Dong XY, Shen RF*. Screening of stylosanthes guianensis genotypes tolerant to low phosphorus stress on acid soil of South China. *Jiangsu Agricultural Sciences*, 25(3)(2009): 556-559.
94. Dong XY, Shen RF*. Mineral nutrition and growth of lespedeza bicolor under high Al and low phosphorus stress. *Soils*, 41(4)(2009): 562-565.
95. Sun QB, Yin CQ, Shen RF, Yang JT, Wang WL*. Effects of addition of manganese in fertilization and its interactions with nitrogen and potassium on N and K absorption by winter wheat. *Soils*, 40(1)(2008): 83-87.
96. Liu ZH, Yi XY, Zeng QL, Wang HY, Shen RF*. Study on growth and accumulation of nutrient elements in chinese cabbage at seedling stage under low Cd stress. *Soils*, 40(4)(2008): 630-634.
97. Liu ZH, Yi XY, Wang HY, Shen RF*. Cd accumulation in different Chinese cabbage seedlings under Cd stress. *Soils*, 45(5)(2008): 987-993.
98. Sun QB, Shen RF*, Zhao XQ. Study of different parameters for evaluating Al tolerance in plants. *Plant Nutrition and Fertilizer Science*, 14(5)(2008): 1017-1022.
99. Sun QB, Shen RF*, Yin CQ, Zhao XQ. Response mechanisms of plants against Al stresses. *Soils*, 40(5)(2008): 691-697.
100. Gong WH, Gu P, Shen RF*. Estimation of nitrogen and phosphorus losses from bamboo forest in Yangtze River delta. *Soils*, 39(6)(2007): 874-878.
101. Liu ZH, Yi XY, Wang HY, Gao YR, Shen RF*. Relative root elongation cannot represent the Cd tolerance of Chinese cabbage. *Soils*, 39(6)(2007): 924-927.
102. Chen YD, Shan YJ, Gu P, Shen RF*. Productivity of high quality prime farmland and its evaluation in Zhejiang province. *Soils*, 39(6)(2007): 987-991.
103. Qiao J, Bi LD, Zhang WJ, Shen RF, Zhang B*, Hu F, Liu YL. Effects of long-term chemical fertilization on soil microbial biomass, activity and community in paddy soil in red Soil region of China. *Soils*, 39(5)(2007): 772-776.

104. Chen RF, Yang XD, Shen RF*. Methods for determining inorganic monomeric aluminum in acid soil solution by morin. *Acta Pedologica Sinica*, 44(4)(2007): 663-668.
105. Gu P, Gong WH, Chen RF, Wang HY, Shen RF*, Xu XH. Comparison of wet and microwave digestion in analyzing the concentrations of 6 elements in plants. *Chinese Journal of Soil Science*, 38(3)(2007): 616-618.
106. Gu P, Shen RF*. Status quo, cause and countermeasures of non-point pollution in Yangtze delta. *Journal of Agro-Environment Science*, 24(5)(2005): 1032-1036.
107. Cai H, Shen RF*. Determination of soil protease activity with modified ninhydrin colorimetry. *Acta Pedologica Sinica*, 42(2)(2005): 306-313.
108. Cai H, Shen RF*. Effects of transgenic cottons on soil ecosystem. *Soils*, 37(5)(2005): 487-491.
109. Chen RF, Shen RF*. Mechanisms of aluminum toxicity to and tolerance of rice (*Oryza Sativa* L.) and catabolism of Al stress in acid soils. *Soils*, 36(5)(2004): 481-491.
110. Dong XY, Li SJ, Shen RF. The nitrate uptake and accumulation of pak-choi. *Acta Horticulturae Sinica*, 30(4)(2003): 470-472.
111. Ni WZ, Peng GH, Shen RF, Yin B, Zhu ZL. Studies on the feasibility of direct measurement of N losses as N_2 and N_2O produced by denitrification with ^{15}N tracer technique and mass spectrometer. *Acta Agriculturae Nucleatae Sinica*, 14(6)(2000): 359-366.
112. Ni WZ, Shen RF, Zhu ZL. Denitrification of ^{15}N labeled nitrate-N in rice field soil under different redox conditions. *China Environmental Science*, 20(6)(2000): 519-523.
113. Shen RF, Zhao QG. Study on the leaching of red soil elements in the original soil column collected by drainage. *Acta Pedologica Sinica*, 32(2)(1995): 111-116.
114. Shen RF, Zhao QG. Effects of crop growth on water status of red soil profiles from different parent materials. *Acta Pedologica Sinica*, 32(2)(1995): 70-77.
115. Shen RF, Zhao QG. Leaching of nutrient elements from red loam columns II. leaching of NH_4-N and NO_3-N. *Soils*, 27(4)(1995): 178-181.
116. Shen RF, Jiang BF. Relationship between Mehlich3 leaching and available P in calcareous soils. *Chinese Journal of Soil Science*, 25(3)(1994): 140-141.
117. Shen RF, Jiang BF. Adsorption and desorption characteristics of P by tidal soils in Huang-Huai-Hai Basin. *Soils*, 25(2)(1993): 68-70.
118. Shen RF. Morphology and distribution characteristics of inorganic phosphorus in tidal soil. *Journal of Henan Agricultural Sciences*, 12(1992): 24-25.
119. Shen RF, Jiang BF. Speciation and availability of inorganic P in calcareous soils. *Acta Pedologica Sinica*, 29(1)(1992): 80-86.
120. Jiang BF, Shen RF. Studies on the classification of soil inorganic phosphorus. *Progress in Soil Science*, 18(1)(1990): 1-8.

Graduate Student Advisees

M.S.

Name	Year	Awards they received
Yang XZ	2023	-
Jing HK	2022	Royal Society of Western Australia's 3rd John Glover

		Symposium Award (2023)
Liu ZT	2021	-
Li WX	2020	Outstanding graduate of Shanghai Jiao Tong University (2024); 2023-2024 Outstanding Graduate Student of Pollution Ecology of Ecological Society of China; 23rd Cross Straits Symposium on Energy and Environmental Science and Technology "The Best Paper Presentation Award" (2021); 4. 2021-2022 Zhao Zhuman Doctoral Scholarship of Shanghai Jiao Tong University
Cheng S	2019	-
Zhao XS	2018	-
Wu Q	2018	Chinese Scholarship Council (CSC) Scholarship (2018); The Kishimoto Memorial Scholarship of Public Interest Incorporated Foundation (2018)
Wang B	2017	-
Song WF	2016	-
Liang G	2015	-
Xu J	2013	-
Qi HJ	2011	-
Chen ZC	2010	JSPS Special Postdoctoral Researchers (2013); Fujian Minjiang Scholar (2016); Fujian Youth May Fourth Medal (2019); National Natural Science Foundation of China-Outstanding Youth Foundation (2020)
Yi XY	2008	-
Gong WH	2007	-
Zhang X	2006	-
Cai H	2005	First prize of Xiongan New Area Innovation and Entrepreneurship Competition (2022)

Ph.D.

Name	**Year**	**Awards they received**
Tao Y	2023	-
Wang JL	2022	-
Guo L	2022	-
Zhang HQ	2021	-
Zheng MM	2020	-
Hu ZM	2017	-
Zhu CQ	2017	-
Shao JF	2016	-
Li GD	2016	-
Che J	2016	Young Elite Scientists Sponsorship Program of the Chinese Ministry of Science and Technology (2020); Innovation and Entrepreneurship Talent Program of Jiangsu Province (2021); "Hundred Talents Program" of the Chinese Academy of

		Sciences (2022); Plant and Cell Physiology Best Paper Award (2022); Outstanding Young Scholar Award of the Soil Science Society of China (2022)
Wang W	2015	-
Xu P	2014	-
Zhang XM	2013	-
Wang C	2012	Outstanding Young Scholar Award of Soil Science Society of China (2018)
Xu L	2012	-
Zeng QL	2011	-
Zhang QM	2010	-
Liang LZ	2009	First Prize in Science and Technology Progress of the National Federation of Industry and Commerce (2011); Second Prize of Science and Technology Contribution Award of Chinese Academy of Sciences (2014)
Sun QB	2008	Third Prize of Hubei Provincial Science and Technology Progress Award (2023); First Prize of the 10th Science and Technology Award of the Soil Science Society of China (2015); Frontrunner 5000 Top Articles in Outstanding S&T Journals of China (2019)
Gu P	2008	-
Zhang FL	2008	Second Prize of National Science and Technology Progress (2017); First Prize of Science and Technology Progress in Hubei Province (2023); Second Prize of Science and Technology Progress in Hubei Province (2018); Outstanding Youth in Agricultural Research of the Hunan, Hubei, and Jiangxi Agricultural Science and Technology Innovation Alliance (2021); Top Talents of Hubei Academy of Agricultural Sciences (2022)
Liu ZH	2008	-
Chen RF	2007	-

Selected International Conferences/Seminars/Trainings Attended

- 11th International Symposium on Plant-Soil Interactions at Low pH. Keynote presentation. Nanjing, China, October, 2023
- 14th International Conference of East and Southeast Asia Federation of Soil Science Societies (14 ESAFS), SSSC leader and reporter, Taipei, China, 2019
- 10th International Symposium on Plant-Soil Interactions at Low pH. Keynote presentation. Putrajaya, Malaysia, June, 2018
- 21st World Congress of Soil Science (21 WCSS), SSSC leader, Rio, Brazil, 2018
- 13th International Conference of East and Southeast Asia Federation of Soil Science

Societies (13 ESAFS), SSSC leader and reporter, Thailand, 2017

- 12th International Conference of East and Southeast Asia Federation of Soil Science Societies (12 ESAFS), President, Nanjing, China, 2015
- 9th International Symposium on Plant-Soil Interactions at Low pH. Keynote presentation. Dubrovnik, Croatia, October, 2015
- 11th International Conference of East and Southeast Asia Federation of Soil Science Societies (11 ESAFS), SSSC leader and reporter, Indonesia, 2013
- 20th World Congress of Soil Science (20 WCSS), SSSC leader, Jeju, Korea, 2014
- 8th International Symposium on Plant-Soil Interactions at Low pH. Keynote presentation. Bangalore, India, October, 2012
- 10th International Conference of East and Southeast Asia Federation of Soil Science Societies (10 ESAFS), SSSC leader and reporter, Sri Lanka, 2011
- 19th World Congress of Soil Science (19 WCSS), SSSC leader, Australia, 2010
- The high-level International Workshop on Science and Capacity-building for a New and Expanded UNCCD Mandate. Wageningen, the Netherland, April, 2009
- 7th International Symposium on Plant-Soil Interactions at Low pH. Keynote presentation. Guangzhou, China, September, 2008
- UNEP-WHRC Nitrogen Policy Workshop, Paris, France, March, 2006
- Al tolerance mechanisms in buckwheat. Rothamsted Research, UK, July, 2005
- Sino-German Workshop on Effect of land use and management system on soil and environment. Kiel, Germany, May, 2004