

# 个人简历



## 缪有志

安徽滁州人，中共党员，植物营养与肥科学系副研究员。

## 联系方式：

地 址：江苏省南京市南京农业大学卫岗校区，资源与环境科学学院，210095

邮 箱：[yzmiao@njau.edu.cn](mailto:yzmiao@njau.edu.cn)

办公室：行政北楼 D208

## 研究领域：

农业废弃物资源化利用

## 教育工作经历：

2021.01-至今，南京农业大学，资源与环境科学学院，副研究员

2017.01-2020.10，南京农业大学，资源与环境科学学院，师资博后，导师：沈其荣教授

2015.07-2016.06，奥地利维也纳科技大学，生物化学与技术系，联合培养，导师：Irina S. Druzhinina

2011.09-2016.10，南京农业大学，资源与环境科学学院，直博，导师：张瑞福教授

2007.09-2011.06，南京农业大学，生命科学学院，学士

## 科研项目：

1. 国家自然科学基金青年项目《哈茨木霉真菌分泌木聚糖酶的增效机制及其调控》，31801935，主持，2019.01-2021.12，25 万元；
2. 国家重点研究计划项目《畜禽养殖废弃物生物降解与资源转化调控机制》，2018YFD0500200，课题研究骨干，2018.09-2021.12，38 万元；
3. 江苏省自然科学基金青年项目《哈茨木霉木聚糖酶分泌调控新机制研究》，BK20180538，主持，2018.07-2021.06，20 万元；
4. 中国博士后科学基金面上项目《木霉 NJAU4742 木质纤维降解酶激活因子

- Xyr1 的功能研究》，2017M610331，主持，2017.08-2020.07，8 万元；
5. 中央高校基本科研业务费《哈茨木霉真菌分泌木聚糖酶的增效机制及其调控》，KJQN201919，主持，2019.01-2021.12，10 万元。

代表性研究论文：

1. **Miao, Y.**, Xia, Y., Kong, Y., Zhu, H., Mei, H., Li, P., et al. (2021) Overcoming diverse homologous recombinations and single chimeric guide RNA competitive inhibition enhances Cas9-based cyclical multiple genes coediting in filamentous fungi. *Environ Microbiol* 23: 2937–2954.
2. Shao, J.<sup>#</sup>, **Miao, Y.<sup>#</sup>**, Liu, K., Ren, Y., Xu, Z., Zhang, N., et al. (2021) Rhizosphere microbiome assembly involves seed-borne bacteria in compensatory phosphate solubilization. *Soil Biol Biochem* 159: 108273
3. **Miao, Y.**, Chen, X., Li, T., Zhu, H., Tang, S., Liu, D., and Shen, Q. (2020) Proteomic analysis reflects an environmental alkalization-coupled pH-dependent mechanism of regulating lignocellulases in *Trichoderma guizhouense* NJAU4742. *Biotechnol Biofuels* 13: 6.
4. **Miao, Y.**, Kong, Y., Li, P., Li, G., Liu, D., Shen, Q., and Zhang, R. (2018) Effect of CBM1 and linker region on enzymatic properties of a novel thermostable dimeric GH10 xylanase (Xyn10A) from filamentous fungus *Aspergillus fumigatus* Z5. *AMB Express* 8: 44.
5. **Miao, Y.<sup>#</sup>**, Li, P.<sup>#</sup>, Li, G., Liu, D., Druzhinina, I.S., Kubicek, C.P., et al. (2017) Two degradation strategies for overcoming the recalcitrance of natural lignocellulosic xylan by polysaccharides-binding GH10 and GH11 xylanases of filamentous fungi. *Environ Microbiol* 19: 1054–1064.
6. **Miao, Y.**, Liu, D., Li, G., Li, P., Xu, Y., Shen, Q., and Zhang, R. (2015) Genome-wide transcriptomic analysis of a superior biomass-degrading strain of *A. fumigatus* revealed active lignocellulose-degrading genes. *BMC Genomics* 16: 459.
7. **Miao, Y.**, Li, J., Xiao, Z., Shen, Q., and Zhang, R. (2015) Characterization and identification of the xylanolytic enzymes from *Aspergillus fumigatus* Z5. *BMC Microbiol* 15: 126.
8. Druzhinina, I.S., Chenthamara, K., Zhang, J., Atanasova, L., Yang, D., **Miao, Y.**, et al. (2018) Massive lateral transfer of genes encoding plant cell wall-degrading enzymes to the mycoparasitic fungus *Trichoderma* from its plant-associated hosts. *PLoS Genet* 14: e1007322.
9. Zhang, J., **Miao, Y.**, Rahimi, M.J., Zhu, H., Steindorff, A., Schiessler, S., et al. (2019)

Guttation capsules containing hydrogen peroxide: an evolutionarily conserved NADPH oxidase gains a role in wars between related fungi. *Environ Microbiol* 21: 2644–2658.

10. Xun, W., Liu, Y., Li, W., Ren, Y., Xiong, W., Xu, Z., Zhang, N., **Miao, Y.**, et al. (2021) Specialized metabolic functions of keystone taxa sustain soil microbiome stability. *Microbiome* 9: 35.
11. Xun, W., Li, W., Xiong, W., Ren, Y., Liu, Y., **Miao, Y.**, et al. (2019) Diversity-triggered deterministic bacterial assembly constrains community functions. *Nat Commun* 10: 1–10.
12. Meng, X., **Miao, Y.**, Liu, Q., Ma, L., Guo, K., Liu, D., et al. (2019) TgSWO from *Trichoderma guizhouense* NJAU4742 promotes growth in cucumber plants by modifying the root morphology and the cell wall architecture. *Microb Cell Factories* 18: 148.
13. Feng, H., Fu, R., Hou, X., Lv, Y., Zhang, N., Liu, Y., Xu, Z., **Miao, Y.**, et al. (2021) Chemotaxis of Beneficial Rhizobacteria to Root Exudates: The First Step towards Root–Microbe Rhizosphere Interactions. *Int J Mol Sci* 22: 6655.
14. Li, G., Zhou, X., Li, Z., Liu, Y., Liu, D., **Miao, Y.**, et al. (2021) Significantly improving the thermostability of a hyperthermophilic GH10 family xylanase XynAF1 by semi-rational design. *Appl Microbiol Biotechnol* 105: 4561–4576.
15. Li, G., Chen, X., Zhou, X., Huang, R., Li, L., **Miao, Y.**, et al. (2019) Improvement of GH10 family xylanase thermostability by introducing of an extra  $\alpha$ -helix at the C-terminal. *Biochem Biophys Res Commun* 515: 417–422.
16. Xun, W., Li, W., Huang, T., Ren, Y., Xiong, W., **Miao, Y.**, et al. (2018) Long-term agronomic practices alter the composition of asymbiotic diazotrophic bacterial community and their nitrogen fixation genes in an acidic red soil. *Biol Fertil Soils* 54: 329–339.
17. Liu, D., Li, J., Zhao, S., Zhang, R., Wang, M., **Miao, Y.**, et al. (2013) Secretome diversity and quantitative analysis of cellulolytic *Aspergillus fumigatus* Z5 in the presence of different carbon sources. *Biotechnol Biofuels* 6: 149.
18. Liu, D., Zhang, R., Yang, X., Zhang, Z., Song, S., **Miao, Y.**, and Shen, Q. (2012) Characterization of a thermostable  $\beta$ -glucosidase from *Aspergillus fumigatus* Z5, and its functional expression in *Pichia pastoris* X33. *Microb Cell Factories* 11: 25.

#### 专利成果:

1. 一种无痕迹木霉真菌基因过表达方法; 沈其荣, 缪有志, 黄启为, 梅慧玲, 夏燕维, ZL201910045672.7;

2. 一种耐低 pH 值的内切木聚糖酶及其编码基因和应用；沈其荣，缪有志，黄启为，ZL201810128686.0。

**获奖情况：**

1. 大北农业科技奖植物营养奖《利用秸秆和废弃动物蛋白制造木霉固体菌种及木霉全元生物有机肥》，排名 7/15，北京大北农业科技集团股份有限公司，技术发明，其他，2017.12。