

	基本信息	
	姓名	廖祥儒
	职称	教授
	学历/学位	研究生毕业/博士
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个人简介

长期从事生物催化与转化生物学的研究，主要承担基础生物学、生物化学课程的讲授工作。近年来共发表高水平研究论文200余篇，累计影响因子达100以上，他引超过700次；申请发明专利60余项，授权发明专利20余项；主持包括863计划重点项目“生物制造高效特异性脂酶的创制”、乳糖废水发酵制备枯萎病多功能生物防护剂的研究等在内的省部级科研项目1项；教育部科技进步二等奖和中石化科技进步一等奖（2012），指导学生获得江苏省优秀硕士论文和优秀专业硕士奖。现为中国生物化学与分子生物技术委员会理事，江苏省生物化学与分子生物学学会理事。

学习工作经历（自本科填起）

1981-1985 兰州大学，植物生理学专业，理学学士
 1988-1991 北京大学，植物生理生化专业，理学硕士
 1994-1997 西北农业大学，果树学专业，农学博士
 1985-1997 西北农业大学 植物生理生化助教讲师
 1998-2004 河北大学 生物化学与分子生物学，副教授、教授
 2004年至今 江南大学 生物化学与分子生物学，教授

主要代表性成果：

一、论文（论著）发表情况

1. Liao X R, Zhu X C, He P C. 1997. Application of seed protein components in cluster analysis of Chinese Vitis plants. J Hort Sci Biotech, 72: 109-115
2. Liao X R, Zhu X C, He P C. 1999. A cationic peroxidase from leaves of Vitis pseudoreticulata. Phytochemistry, 51: 143-145
3. Wang JL, Liao XR, Zhang HM, Du JF, Chen PL. 2003. Accumulation of chlorogenic acid in cell suspension cultures of Eucommia ulmoides. Plant Cell, Tissue and Organ Culture, 74 (2): 193-195
4. Cai YJ, Sun J, Wang J, Ding YR, Tian N, Liao XR, Xu WB. 2008. Optimizing the codon usage of synthetic gene with QPSO algorithm. J Thero Biotech, 18: 123-127
5. Liang XH, Cai YJ, Liao XR, Wu K, Wang L, Zhang DB, Meng Q. 2009. Isolation and identification of a new hypocrellin a producing strain Shiraia sp. SUPER-H168. Microbiological Research, 164: 9-17
6. Cai YJ, Wang L, Liao XR, Ding YR, Sun J. 2009. Purification and partial characterization of two new cold-adapted lipases from mesophilic Geotrichum sp. SYBC WU-3. Process Biochemistry, 44: 786—790
7. Wang ZX, Cai YJ, Liao XR, Tao GJ, Li YY, Zhang F, Zhang DB. 2010. Purification and characterization of two thermostable laccases with high cold adapted characteristics from Pycnoporus sp. SYBC-L1. Process Biochemistry, 45 : 1720–1729

8. Zeng XK, Cai YJ, Liao XR, Zeng XL, Li WX, Zhang DB. 2011. Decolorization of synthetic dyes by crude laccase from a newly isolated *Trametes trogii* strain cultivated on solid agro-industrial residue. *Journal of Hazardous Materials*, 187: 517-525
9. Hao ZK, Cai YJ, Liao XR, Zhang F, Tong C, Zhang DB. 2011. *Chitinolytic bacterium meiyuanensis* SYBC-H1T, gen. nov., sp. nov., chitin-degrading bacterium isolated from soil. *Current Microbiology*, 62: 1732-1738
10. Zeng XK, Cai YJ, Liao XR, Zeng XL, Luo SP, Zhang DB. 2012. Anthraquinone dye assisted the decolorization of azo dyes by a novel *Trametes trogii* laccase. *Process Biochemistry*, 47: 160-163
11. Liu JY, Cai YJ, Liao XR, Huang QG, Hao ZK, Hu MM, Zhang DB, Li ZL. 2013. Efficiency of laccase production in a 65-L air-lift reactor for potential green industrial and environmental application. *Journal of Cleaner Production*, 39: 154–160
12. Liu JY, Wang ML, Tonniss B, Habteselassie M, Liao XR, Huang QG. 2013. Fungal pretreatment of switchgrass for improved saccharification and simultaneous enzyme production. *Bioresource Technology*, 135: 39–45
13. Hu YD, Zhang H, Lu RQ, Liao XR, Zhang BB, Xu GR. 2014. Enabling the biosynthesis of Antraquinonol in submerged fermentation of *Antrodia camphorate*. *Biochemical Engineering Journal*, 91: 157–162
14. Guan ZB, Song CM, Zhang N, Zhou W, Xu CW, Zhou LX, Zhao H, Cai YJ, Liao XR. 2014. Overexpression, characterization, and dye-decolorizing ability of a thermostable, pH-stable, and organic solvent-tolerant laccase from *Bacillus pumilus* W3. *Journal of Molecular Catalysis B, Enzymatic*, 101: 1-6
15. Guan ZB, Cai YJ, Zhang YZ, Zhao H, Liao XR. 2015. Complete genome sequence of *Bacillus pumilus* W3: A strain exhibiting high laccase activity. *Journal of Biotechnology* 207: 8–9
16. Liu JY, Yu ZH, Liao XR, Liu JH, Mao FJ, Huang QG. 2016. Scalable production, fast purification, and spray drying of native *Pycnoporus* laccase and circular dichroism characterization. *Journal of Cleaner Production*, 127: 600-609
17. Zhang YZ, Luan HY, Wei ZW, Hao ZK, Xi RC, Liao XR. 2016. Exploiting of honey-associated *Bacillus* strains as plant-growth promoting bacteria for enhancing barley growth in rare earth tailings. *Ann Microbiol*, 66:559-568
18. Deng HX, Gao RJ, Liao XR, Cai YJ. 2016. Reference genes selection and relative expression analysis from *Shiraia* sp. SUPER-H168 productive of hypocrellin. *Gene*, 580(1): 68-72
19. Li XH, Zhang YZ, Wei ZW, Guan ZB, Cai YJ, Liao XR. 2016. Antifungal activity of isolated *Bacillus amyloliquefaciens* SYBC H47 for the biocontrol of Peach Gummosis. *PloS One*, 11(9): e0162125
20. Wei ZW, Hu XL, Li XH, Zhang YZ, Jiang LC, Li J, Guan ZB, Cai YJ, Liao XR. 2017. The rhizospheric microbial community structure and diversity of deciduous and evergreen forests in Taihu Lake area, China. *PloS One*, 12(4): e0174411
21. Zhou W, Guan ZB, Chen Y, Zhang F, Cai YJ, Xu CW, Chen XS, Liao XR. 2017. Production of spore laccase from *Bacillus pumilus* W3 and its application in dye decolorization after immobilization. *Water Sci Technol*, 76 (1): 147-154
22. Chen Y, Luo Q, Zhou W, Xie Z, Cai YJ, Liao XR, Guan ZB. 2017. Improving the catalytic efficiency of *Bacillus pumilus* CotA-laccase by site-directed mutagenesis. *Appl Microbiol Biotechnol*, 101: 1935–1944
23. Deng HX, Gao RJ, Liao XR, Cai YJ. 2017. CRISPR system in filamentous fungi: Current achievements and future directions. *Gene*, 627: 212–221
24. Deng HX, Gao RJ, Liao XR, Cai YJ. 2017. Genome editing in *Shiraia bambusicola* using CRISPR-Cas9 system. *Journal of Biotechnology* 259 (2017) 228–234
25. Luo Q, Chen Y, Xia J, Wang KQ, Cai YJ, Liao XR, Guan ZB. 2018. Functional expression enhancement of *Bacillus pumilus* CotA-laccase mutant WLF through site-directed mutagenesis. *Enzyme and Microbial Technology*, 109: 11–19

二、专利情况

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| 1、申请发明专利60余项
2、发明专利授权20余项 |
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三、承担教学科研项目情况

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|--------------------------------------|
| 1、本科：基础生物学，生物化学
2、硕士生：生物大分子的结构与功能 |
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四、获奖情况（含指导学生获奖）

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| 1、教育部科技进步二等奖一项，中石化科技进步一等奖一项
2、江苏省优秀硕士论文一个，江苏省优秀专业硕士一个 |
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以上资料更新时间截止：2018年10月