FEI WANG

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Dr. Fei Wang has been the dean of College of Chemical Engineering at Nanjing Forestry University since 2011. He studied at Kyushu University in Japan from 1996 to 1999 in major of chemistry of forest products and received his Ph.D degree in September of 1999, then he worked as postdoctoral research associate at North Carolina State University from February of 2000 to February of 2001 and thereafter worked as a JSPS fellow of Japan at Kyushu University from March of 2001 to March of 2003. Dr. Fei Wang has been a professor in chemical processing of forest products as well as biomass energy and chemicals at Nanjing Forestry University since 2003. He has currently served as a convener of Discipline Appraisal Group of Forest Engineering in Academic Degree Commission of the State Council of China, and he has also severed as director of Jiangsu Key Laboratory of Biomass-based Green Fuels and Chemicals.

Dr. Fei Wang has focused on the researches of biodiesel production from woody plant oils and waste oils using immobilized whole-cell and immobilized lipase as biocatalyst, catalytic hydrolysis of hemicellulose with thermostable enzymes, and high-valued bioactive substances from forests. As principal investigator he has been funded by 10 scientific research projects from the State Key Development Program of China, the National Natural Science Foundation of China, and Public Welfare Industry Research Special of State Forestry Administration of China. He has published more than 100 research papers and was authorized with 10 patents.

Research Area:

1. Biodiesel production from woody plant oils and wasted oils
2. Thermostable enzymes and their application in hydrolysis of lignocellulosic materials
3. Bioconversion of agro-forest biomass to fuels and chemicals
4. Bioactive substances from forests and their application in medicine and health care products

Current Projects:

Collection and pretreatment of non-woody forest resources and their high-efficiency extraction technology

2016—2020, as Principal Investigator

Molecular modification of the key enzyme for xylan hydrolysis at high temperature and its thermostable mechanism

2014—2017, as Principal Investigator

Construction of whole-cell biocatalyst with surface displaying of dual lipases and its catalytic function on transesterification of woody plant oils

2013—2016, as Principal Investigator

Recent Publications:

1. Qiyang He, Cristiano E. Rodrigues Reis, Fei Wang and Bo Hu. Phytate extraction from coproducts of the dry-grind corn ethanol process. ***RSC Adv.***, 2017, 7:5466–5472
2. Dengfeng Chen, Qingyuan Feng, Yunqin Yang, Xu-Min Cai, Fei Wang and Shenlin Huang. Metal-free O–H/C–H difunctionalization of phenols by o-hydroxyaryl sulfonium salts in water. ***Chemical Science***, 2017, 8:1601-1606
3. Weizhi Chen, Shilu Ji, Xiaoping Qian, Yajun Zhang, Cheng Li, Wei Wu, Fei Wang and Xiqun Jiang. Phenylboronic acid-incorporated elastin-like polypeptide nanoparticle drug delivery systems. ***Polymer Chemistry***, 2017, 8:2105-2114
4. Dawei Hua, Zhongche Liu, Fang Wang, Buhong Gao, Fei Chen, Qilu Zhang,Ranhua Xiong, Jingquan Han, Sangram Keshari Samal, Stefaan C. De Smedt,Chaobo Huang. pH responsive polyurethane (core) and cellulose acetate phthalate(shell) electrospun fibers for intravaginal drug delivery. ***Carbohydrate Polymers***, 2016, 151:1240-1244
5. Fubao Fuelbiol Sun, Renhui Bai, Huimin Yang, Fei Wang, Jing He,Chundi Wang, Maobing Tu. Heterologous expression of codon optimized Trichoderma reesei Cel6A in Pichia pastoris. ***Enzyme and Microbial Technology***, 2016, 92:107–116
6. Yuting Tang, Yue Zhang, Julian N. Rosenberg, Nadia Sharif, Michael J. Betenbaugh and Fei Wang. Efficient lipid extraction and quantification of fatty acids from algal biomass using accelerated solvent extraction (ASE). ***RSC Adv.***, 2016, 6, 29127–29134
7. Jia Xiong, Mary H. Grace, Debora Esposito, Fei Wang and Mary Ann Lila. Phytochemical Characterization and Anti-inflammatory Properties of Acacia mearnsii Leaves. ***Natural Product Communications***, 2016, 11 (5):649-653
8. Liangliang Wang, Jiajun Wang, Hao Shi, Huaxiang Gu, Yu Zhang, Xun Li, and Fei Wang. Characterization of Glycerol Dehydrogenase from Thermoanaerobacterium thermosaccharolyticum DSM 571 and GGG Motif Identification. ***J. Microbiol. Biotechnol.*** 2016, 26(6), 1077–1086
9. Qiyang He, Qianjun Xia, Yuejiao Wang, Xun Li, Yu Zhang, Bo Hu, and Fei Wang. Biodiesel Production: Utilization of Loofah Sponge to Immobilize Rhizopus chinensis CGMCC #3.0232 Cells as a Whole-Cell Biocatalyst. ***J. Microbiol. Biotechnol.***, 2016, 26(7), 1278–1284
10. Yuting Tang, Yue Zhang, Julian N. Rosenberg, Michael J. Betenbaugh and Fei Wang. Optimization of One-Step In Situ Transesterification Method for Accurate

Quantification of EPA in Nannochloropsis gaditana. ***Applied Sciences-Basel***, 2016, 6, 343

11. Wenqian Li, Hao Shi, Huaihai Ding, Liangliang Wang, Yu Zhang, Xun Li, Fei Wang. Cell Surface Display and Characterization of Rhizopus oryzae Lipase in Pichia pastoris Using Sed1p as an Anchor Protein. ***Current Microbiology***, 2015, 71:150-155
12. Xun Li, Hao Shi, Huaihai Ding, Yu Zhang, Fei Wang. Production, Purification, and Characterization of a Cellulase-Free Thermostable Endo-xylanase from Thermoanaerobacterium thermosaccharolyticum DSM 571. ***Applied Biochemistry and Biotechnology***, 2014, 174:2392–2402
13. Hao Shi, Huaihai Ding, Yingjuan Huang, Liangliang Wang, Yu Zhang, Xun Li, and Fei Wang. Expression and characterization of a GH43 endo-arabinanase from *Thermotoga thermarum*. ***BMC Biotechnology***, 2014, 14:35
14. Hao Shi, Yu Zhang, Liangliang Wang, Xun Li, Wenqian Li, and Fei Wang. Molecular analysis of hyperthermophilic endoglucanase Cel12B from Thermotoga maritime. ***BMC Structural Biology***, 2014, 14:8
15. Hao Shi, Yu Zhang, Hui Zhong, Yingjuan Huang, Xun Li, Fei Wang. Cloning, over-expression and characterization of a thermotolerant xylanase from *Thermotoga thermarum*. ***Biotechnology Letter***, 2014, 36:587–593
16. Hao Shi, Lili Wang, Xun Li, Liangliang Wang, Yu Zhang, Xiangqian Li, and Fei Wang. Directed Evolution of a Hyperthermophilic Endoglucanase Cel12B from *Thermotoga maritime*. ***BioResources***, 2014, 9(2):3526-3535
17. Hao Shi, Ying Zhang, Baiyun Xu, Maobin Tu, and Fei Wang. Characterization of a novel GH2 family a-Larabinofuranosidase from hyperthermophilic bacterium Thermotoga thermarum. ***Biotechnology Letter***, 2014, 36:1321–1328
18. Hao Shi1, Yingjuan Huang, Yu Zhang, Wenqian Li, Xun Li and Fei Wang. High-level expression of a novel thermostable and mannose-tolerant β-mannosidase from Thermotoga thermarum DSM 5069 in Escherichia coli. ***BMC Biotechnology***, 2013, 13:83-93
19. Hao Shi, Yu Zhang, Xun Li, Yingjuan Huang, Liangliang Wang, Ye Wang, Huaihai Ding, Fei Wang. A novel highly thermostable xylanase stimulated by Ca^{2+} from *Thermotoga thermarum*: cloning, expression and characterization. ***Biotechnology for Biofuels***, 2013, 6: 26
20. Hao Shi, Xun Li, Huaxiang Gu, Yu Zhang, Yingjuan Huang, Liangliang Wang, Fei Wang. Biochemical properties of a novel thermostable and highly xylose-tolerant beta-xylosidase/alpha-arabinosidase from *Thermotoga thermarum*. ***Biotechnology for Biofuels***, 2013, 6: 27
21. Xun Li, Xiaoyun He, Zhilin Li, Fei Wang. Combined Strategies for Improving the Production of Recombinant *Rhizopus Oryzae* Lipase in *Pichia pastoris*. ***BioResources***, 8(2):2867-2880, 2013
22. Xun Li, Xiao-Yun He, Zhi-Lin Li, You-Dong Wang, Chun-Yu Wang, Hao Shi, Fei Wang. Enzymatic production of biodiesel from Pistacia chinensis bge seed oil using immobilized lipase. ***Fuel***, 2012, 92:89-93
23. Zhi-lin Li, Xun Li, Ye Wang, Youdong Wang, and Fei Wang, Jianchun Jiang. Expression and characterization of recombinant Rhizopus oryzae lipase for

enzymatic biodiesel production. ***Bioresource Technology***, 2011, 102:9810–9813

24. You-dong Wang, Xiao-yong Shen, Zhi-lin Li, Xun Li, Fei Wang, Xiao-an Nie, Jian-chun Jiang. Immobilized recombinant Rhizopus oryzae lipase for the production of biodiesel in solvent free system. ***Journal of Molecular Catalysis B: Enzymatic***, 2010, 67:45-51
25. Xiao-yong Shen, You-dong Wang and Fei Wang. Characterisation and biological acitities of proanthocyanidins from the barks of *Pimus massonian* and *Acacia mearnsii*. ***Natural Product Research***, 2010, 24(6):590-598