Curriculum Vitae

Shangxian Xie

EDUCATION

8/2016	**Ph.D.**	**Plant Pathology**	Texas A&M University
9/2011	**M.S.**	**Microbiology**	Huazhong University of Science & Technology
7/2009	**B.S.**	**Biotechnology**	Huazhong University of Science & Technology
	B.S.	**English**	Huazhong University of Science & Technology

Professional Experience

8/2016-Present **Postdoctoral Research Associate**, Texas A&M University, Texas, USA
10/2010-8/2016 **Research Assistant,** Texas A&M University, Texas, USA

RESEARCH EXPERIENCE

Texas A&M University, Texas, USA
Department of Plant Pathology & Microbiology

8/2011-Present **Research associate, Graduate research assistant and Group leader**

- Upgrading Lignin-containing Biorefinery Residues for Bioplastics
- Synthetic Design of Microorganisms for Lignin Fuel
- Combination of 'omics' Technologies to Reveal the Mystery of Cattle Rumen for Reverse Design Biorefinery
- Metaproteomics Analysis Revealed the New Insights into the Mechanisms of Biomass Degradation in Termite Gut
- Systems Biology Exploration of Biomass Degradation Mechanisms in White Rot Fungus for Biorefinery Improvement
- Optimize the Photosynthetic Pathways of Microalgae to Improve the Hydrocarbon Production

10/2010-8/2011 **Visiting Student**

- Develop the High-efficient Microalgae Harvest and High Lipid Yield Technology by Co-cultivation of Microalgae with Oleaginous fungi
- Comparative Analysis of Herbivore Insect Symbionts Revealed Features for Eco-environmental Adaptations and Biotechnology Applications

Huazhong University of Science & Technology, Wuhan, P.R.China
Institute of Microbiotechnology of Environment and Resource

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7/2009-10/2010 Graduate research assistant

- Study the Relationship between the Oleaginous Fungi *Cunninghamella echinulata* and its Endobacteria
- Optimize the bioprocess for lipid accumulation in Oleaginous fungi *Cunninghamella echinulata*

7/2006-7/2009 Research assistant

- Selection and Evaluation of the Endophytic Fungi from Oleaginous Plants
- Bio-pretreatment of Water Hyacinth by White-rot Fungi
- Influence of Biological Pretreatment on Saccharification of Bamboo with Cellulase

Editorial Positions

2016-Present Editorial Board Trends in Renewable Energy

Publications

1. Cheng Zhao, **Shangxian Xie (Co-frist Author and Corresponding author)**, *et al*. "Synergistic Enzymatic and Microbial Conversion of Lignin for Lipid." **Green Chemistry**. 2016. 18, 1306-1312 **(IF: 8.506)**
2. **Shangxian Xie**, Arthur J Ragauskas and Joshua S Yuan. "Lignin Conversion: Opportunities and Challenges for Integrated Biorefinery." **Industrial Biotechnology.** 2016. 12(3): 161-167.
3. Su Sun, **Shangxian Xie (Co-frist Author)**, *et al.* "Genomic and Molecular Mechanisms for Efficient Biodegradation of Aromatic Dye." **Journal of Hazardous Materials**. 2016. 302, 286-295. **(IF:4.836)**
4. **Shangxian Xie**, Xing Qin, Yanbing Cheng, *et al.* "Simultaneous Conversion of All Cell Wall Components by Oleaginous Fungus without Chemi-physical Pretreatment." **Green Chemistry.** 2015. 17:1657-1667. **(IF: 8.506)**
5. **Shangxian Xie,** Ryan. Syrenne, *et al.* "Exploration of Natural Biomass Utilization Systems (NBUS) for advanced biofuel — from systems biology to synthetic design." **Current Opinion in Biotechnology**. 2014. 27: 195-203. **(IF:8.314)**
6. **Shangxian Xie**, Su Sun, Susie Y.Dai, *et al.* "Efficient coagulation of microalgae in cultures with filamentous fungi." **Algal Research**. 2013. 2(1): 28-33. **(IF:4.694)**
7. **Shangxian Xie**, Qining Sun, *et al.* "Advanced Chemical Design to Promote Efficient Lignin Bioconversion." **ACS Sustainable Chemistry & Engineering.** 2016. (Accepted). **(IF: 5.276)**
8. Weibing Shi, **Shangxian Xie**, Su Sun, *et al*. "Comparative genomic analysis of the endosymbionts of herbivorous insects reveals eco-environmental adaptations: biotechnology applications." **PLoS Genetics**. 2013. 9(1): e1003131. **(IF:6.661)**
9. Su Sun, **Shangxian Xie (Co-frist Author)**, et al. (2016) "Application of Shot-gun Proteomics Platform toward White-rot Fungus Degradation of Environmental Hazard and Synergetic Lignin Substrate". **Journal of Proteome Research**. (Under Revision) **(IF:4.173)**
10. **Shangxian Xie,** Qiang li, et al. "Lignin as Renewable and Superior Asphalt Binder Modifier". 2016 (**Under submission**)
11. **Shangxian Xie**, Furong Lin, et al. "BioSyntheic Rhodococcus opacus for Efficient Lignin Conversion into Lipid". 2016 (**Under submission**)

Patent

1. PCT Int'l Patent Application No. PCT/US12/20665: System and Method of Co-Cultivating Microalgae with Fungus. Inventors: Joshua Yuan & **Shangxian Xie**. Ref.: 205972-0001-00-WO.601252. Publication number: US20120282651 A1
2. United States Patent Provisional Application No.5 62/138,916:"Conversion of Lignin into Bioplastics and Lipid Fuels" Inventors: Joshua Yuan & **Shangxian Xie**.

Abstracts and Posters

1. Shangxian Xie & Joshua Yuan. Biodesign of Lignin Conversion for Multi-Stream Biorefinery. 2016 AIChE Annual Meeting (Nov 13-18, 2016, San Francisco, CA). **Oral Presentation**

2. **Shangxian Xie**, Xing Qin, Dhrubojyoti D. Laskar, et al. Simultaneous Conversion of All Cell Wall Components By Oleaginous Fungus without Chemi-Physical Pretreatment. 2015 AIChE Annual Meeting (Nov 8-13, 2015, Salt Lake City, UT). **Oral Presentation**

3. **Shangxian Xie**, Cheng Zhao, Yunqiao Pu, et al. Advanced Biological and Chemical Design for Lignin Bioconversion. 2015 AIChE Annual Meeting (Nov 8-13, 2015, Salt Lake City, UT). **Oral Presentation**

4. **Shangxian Xie,** Yue Xing, Hu Chen, *et al.* Biodesign of Rhodococci for Lignin Fuel: A Path from Systems to Synthetic Biology. 35th Symposium on Biotechnology for Fuels and Chemicals (April 29 – May 2, 2013, Portland, OR). **Oral Presentation**

5. **Shangxian Xie,** Xin Qin, Su Sun, *et al*. Feedstock Lignin Modification Enhances Oleaginous Fungus Conversion of Sorghum Biomass. 35th Symposium on Biotechnology for Fuels and Chemicals (April 29 – May 2, 2013, Portland, OR). **Oral Presentation**

6. **Shangxian Xie**, Weibing Shi, Yixiang Zhang, *et al*. System biology analysis of cattle rumen as a model natural Biomass utilization system. 34th Symposium on Biotechnology for Fuels and Chemicals (April 30 – May 3, 2012, New Orleans, LA). **Poster Presentation**

7. Su Sun, **Shangxian Xie**, Yixiang Zhang *et al*. Metaproteomics Analysis Revealed the New Insights into the Mechanisms of Biomass Degradation in Termite Gut. 34th Symposium on Biotechnology for Fuels and Chemicals (April 30 – May 3, 2012, New Orleans, LA). **Poster Presentation**

8. **Shangxian Xie**, Weibing Shi, Peng Gao, *et al*. Proteomics Analysis Revealed Co-regulatory Network for Biomass Degradation in Cattle Rumen. Plant & Animal Genome XX Conference (Jan 14-18, 2012, San Diego, CA). **Oral Presentation**

CAMPUS STUDENT AFFAIRS

2/2010-7/2010 Vice President, Graduate Student Union of HUST

Core Work: General management of the graduate student affairs involving study; organization of academic communication among the scholars and students

9/2009-12/2009 Chairman, Organization Committee for the 5th Annual Academic Conference of Life Science and Technology in Wuhan Area.

Core work: Invited speakers for the conference; organized the Academic Committee to edit the conference abstract.

9/2009-7/2010 President, Graduate Student Union of College of Life Science and Technology, HUST

Core Work: General management of the graduate student affairs

9/2008-6/2009 Head teacher of Class 0801, Tech., College of Life Science and Technology, HUST

Core Work: General management of the student affairs in the class, including their study, daily life, etc

10/2008-12/2008 President, Preparatory Committee for the Public Welfare Activity-Saving the Children with Leukemia

Core Work: Promoted the knowledge of the hematopoietic stem cells and leukemia; Organized over 5000 peoples attending this event; **recruited over 3000 volunteers** to China Marrow Donor Program (CMDP).

AWARDS

·"Excellent undergraduate thesis in Hubei Province" for my undergraduate thesis, *Selection and Evaluation of the Endophytic Fungi from Oleaginous Plants* (2009)

·"Outstanding graduate" of HUST (2009)

·"Service Star" of HUST, the highest award for the graduate student cadres in HUST, twice (2009, 2010)

·"Outstanding student cadre" of HUST, three times (2006, 2007, 2008)

·National Scholarship (2008)

·People's Scholarship (2006)

·Freshmen Scholarship (2005)

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