

Ying Xia

College of Chemical and Biological Engineering, Zhejiang University, Hangzhou, China

Telephone: (86) 182-6710-8770 | Email: 11728059@zju.edu.cn

EDUCATION

Ph.D.	Zhejiang University (ZJU) Chemical and Biological Engineering	Sep 2017 - Present Hangzhou, China
M.S.	Zhejiang University (ZJU) Chemical and Biological Engineering	Sep 2013 - Mar 2016 Hangzhou, China
B.S.	Jiangnan University (JNU) Bioengineering	Sep 2009 - Jun 2013 Wuxi, China

RESEARCH EXPERIENCE

- Transcription factor manipulation for cellulase overexpression** May 2017 - Present
 - Overexpressed *A. niger bgl* gene and disrupted *ace1* simultaneously in *T. reesei*
 - Implemented submerged fermentation of recombinant *T. reesei* in a 50 m³ fermenter
 - Improved *T. reesei* cellulase towards increased hydrolysis yield (90.6%) during the saccharification of corn stover
 - Published on *Journal of Industrial Microbiology & Biotechnology* as first author
- Novel soluble inducer enabling higher cellulase production** Jun 2017 - Present
 - Constructed a sustained β -glucosidase-release microcapsules embedding *A. niger* spores
 - Prepared a potent and economical glucose-sophorose inducer mixture from glucose via β -glucosidase-catalyzed transglycosylation.
 - Applied the novel inducer to cellulase production which presented higher yield induced by lactose.
 - Published on *Journal of Biotechnology* as first author
- β -glucosidase overproduction in recombinant *P. pastoris*** Jun 2017 - May 2018
 - Modified and cloned *A. niger* β -glucosidase gene for secreted expression in *P. pastoris*.
 - Employed an optimized mixed-feed strategy and boosted the β -glucosidase activity to 129 IU/mL in a 1 m³ fermenter
 - Published the results on *Process Biochemistry* as first author
- Organic pollutants degradation by laccase - mediator system** May 2017 - Present
 - Introduced a thermotolerant laccase gene from *Pycnoporus sanguineus* into *T. reesei* via optimized *Agrobacterium*-mediated transformation
 - Explored the effects of 6 mediators on laccase-catalyzed degradation of bisphenol A, nonylphenol and Brilliant Blue KN-R
 - Investigated the reaction mechanism of laccase-catalyzed nonylphenol degradation using mass spectrometry analysis
- Engineering *S. cerevisiae* for improved toxicity tolerance** Nov 2014 – Oct 2015
 - Over-expression *lsm6* gene in recombinant *S. cerevisiae* improved its resistance against acetic acid, furfural, and SO₄²⁻ and enabled better xylose utilization
 - Responsible for yeast transformation and fermentation performance study

PUBLICATIONS

1. **Ying Xia**, Lirong Yang, Liming Xia. Preparation of a novel soluble inducer by cellobiose-release microcapsules and its application in cellulase production. *Journal of Biotechnology*, 2018, 279: 22-26.
2. **Ying Xia**, Lirong Yang, Liming Xia. High-level production of a fungal beta-glucosidase with application potentials in the cost-effective production of *Trichoderma reesei* cellulase. *Process Biochemistry*, 2018, 70: 55-60.
3. **Ying Xia**, Lirong Yang, Liming Xia. Combined strategy of transcription factor manipulation and beta-glucosidase gene overexpression in *Trichoderma reesei* and its application in lignocellulose bioconversion. *Journal of Industrial Microbiology & Biotechnology*, 2018, 45:803–811.
4. Jie Zhao, Shengquan Zeng, **Ying Xia**, Liming Xia. Expression of a thermotolerant laccase from *Pycnoporus sanguineus* in *Trichoderma reesei* and its application in the degradation of bisphenol A. *Journal of Bioscience and Bioengineering*, 2018, 125: 371-376.
5. Jie Zhao, **Ying Xia**, Liming Xia. Laccase Production by recombinant *Trichoderma reesei* and its application in the decolorization of dye wastewater containing reactive Brilliant Blue KN-R (in Chinese). *Journal of Chemical Engineering of Chinese Universities*, 2018, 30: 586-592.
6. **Ying Xia**, Jie Zhao, Liming Xia. Recombination and expression of a novel endo-beta-glucanase gene from *Penicillium echinulatum* in *Trichoderma reesei* (in Chinese). *Journal of Chemical Engineering of Chinese Universities*, 2016, 30: 626-632.

SELECTED HONORS & AWARDS

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| • Academic Scholarship of ZJU (Top 3%) | 2014/2015/2018 |
| • Outstanding Graduate of ZJU (Top 4%) | 2016 |
| • Outstanding Student Leader of ZJU (Top 3%) | 2014/2015 |
| • Honor of Merit Student in JNU (Top 1%) | 2012 |

WORK EXPERIENCE

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| Amore Pacific (Shanghai) R&D center | Apr 2016 - Apr 2017 |
| Researcher | Shanghai, China |
| <ul style="list-style-type: none"> • Established detection protocols of 12 prohibited and limited ingredients in cosmetics, including antiseptics, functional additives, heavy metals, etc. • Responsible for training workers in terms of SOP, safety and maintenance for HPLC • Collaborated with Korea colleagues on 6 crisis management projects regarding product safety; responsible for evaluation and modification of internal analysis methods, investigation of FDA guidelines and generation of reports | |

PERSONAL SKILLS

- **Languages:** English (TOEFL iBT: 96/120), Chinese (Native)
- **Professional skills:** Skilled in molecular biology experiments and related analytical methods, such as gene cloning and characterization, gene transformation and expression, HPLC, GC-MC, etc.; Mastering professional softwares, such as DNAMAN, DS, Snapgene, etc.
- **Microsoft Office:** Daily use of Microsoft Word (thesis and publications), PowerPoint (conference presentations), Excel (data analysis)