

# Ying Xia

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## EDUCATION

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

## RESEARCH EXPERIENCE

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- 1. Transcription factor manipulation for cellulase overexpression** *May 2017 - Present*
  - Achieved overexpression of *A. niger bgl* gene and disruption of *ace1* simultaneously in *T. reesei* via homologous integration
  - Implemented submerged fermentation to assay enzyme productivity of recombinant *T. reesei* in a 50 m<sup>3</sup> 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
- 2. Novel soluble inducer enabling higher cellulase production** *Jun 2017 - Present*
  - Constructed a sustained  $\beta$ -glucosidase-release microcapsules embedding *A. niger* spores
  - Prepared a potent and economical glucose-sophorose inducer mixture from glucose via  $\beta$ -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
- 3.  $\beta$ -glucosidase overproduction in recombinant *P. pastoris*** *Jun 2017 - May 2018*
  - Modified and cloned *A. niger*  $\beta$ -glucosidase gene for secreted expression in *P. pastoris*.
  - Employed an optimized mixed-feed strategy and boosted the  $\beta$ -glucosidase activity to 129 IU/mL in a 1 m<sup>3</sup> fermenter
  - Published the results on *Process Biochemistry* as first author
- 4. 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

## PUBLICATIONS

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- Ying Xia**, Lirong Yang, Liming Xia. Preparation of a novel soluble inducer by

cellobiase-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 5%)       | 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

- 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

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- **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, PCR, SDS-PAGE, fermentation (SSF and SmF), HPLC, GC-MC, GPC, etc.
- **Microsoft Office:** Daily use of Microsoft Word (thesis and publications), PowerPoint (conference presentations), Excel (data analysis)