

# Yi-nan Xue

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## EDUCATION

### Zhejiang University of Technology

Microbiology, Master of Science, Sep 2022 - Jun 2025

- Average Score: 91.56, Ranking: 2/227 (top 0.88%).

### Zhejiang Normal University

Biological Science, Bachelor of Science, Sep 2018 - Jun 2022

- Average Score: 88.00, Ranking: 35/100.
- Core Modules: Molecular Biology (95/100), Genetics (93/100), Cell Biology(A) (92/100), Advanced Mathematics(C) (95/100).

## RESEARCH EXPERIENCES

### Constructing a highly efficient *Escherichia coli* cell factory producing L-2-aminobutyric acid (L-2-ABA)

Nov 2023 - Present

Part of master's thesis

- Designed an efficient multi-enzymatic module for L-2-ABA production and integrated it into an L-threonine-producing strain.
- Redirected and rebalanced the metabolic flux of the chassis strain to maximize the production of L-2-ABA.

### Expanding metabolism for biosynthesis of non-canonical amino acids derived from L-threonine (TncAAs)

Apr 2023 - Nov 2023

Part of master's thesis

- Integrated a carbon chain elongation module into an L-2-ABA-producing strain.
- Achieved production of 1.6 g/L L-norleucine (one of the TncAAs) after a 48 h shake flask.

### Semi-rational modification of leucine dehydrogenase (leuDh) from *Thermoactinomyces. intermedius*

Apr 2023 - Nov 2023

Part of master's thesis and part of a lab member's thesis in which i participated

- Attained two leuDh mutants with enhanced catalytic activity by accelerating the dissociation rate of the NAD(H).

## PUBLICATION

### Cell factories for biosynthesis of D-glucaric acid (GA): a fusion of static and dynamic strategies [\[Link\]](#)[\[PDF\]](#)

(IF: 4.00)

Junping Zhou (supervisor), **Yinan Xue**, et al, [Zhiqiang Liu](#)<sup>\*</sup>, [Yuguo Zheng](#).

**World Journal of Microbiology & Biotechnology. 2024**

- Content: Summarized the shift from static strategies to dynamic regulations in reprogramming pathways for GA cell factories.
- Role: Structured, generated, and revised the whole manuscript.

### Synthetic biology for *Monascus*: From strain breeding to industrial production [\[Link\]](#)[\[PDF\]](#)

(IF: 3.20)

Junping Zhou (supervisor), Qilu Pan, **Yinan Xue**, et al, [Zhiqiang Liu](#)<sup>\*</sup>, [Yuguo Zheng](#).

**Biotechnology Journal. 2024**

- Content: Reviewed the application of synthetic biology and fermentation control techniques in the production of *Monascus*.
- Role: Generated some of the illustrations.

### A Novel Signature of 23 Immunity-Related Gene Pairs Is Prognostic of Cutaneous Melanoma [\[Link\]](#)[\[PDF\]](#)

(IF: 5.70)

Yanan Xue, **Yinan Xue**, et al, [Weiqiang Tan](#)<sup>\*</sup>.

**Frontiers in Immunology. 2020**

- Content: Developed a cutaneous melanoma prognostic model via a combination of bioinformatics techniques.
- Role: Revised the draft, and generated some of the illustrations.

### Other publications

- Robotic and microrobotic tools for dental, **Journal of Healthcare Engineering, 2022 (co-first author, wrote the original draft, and generated some of the illustrations).** [\[Link\]](#)[\[PDF\]](#)
- Artificial intelligence-assisted bioinformatics, microneedle, and diabetic wound healing: a “new deal” of an old drug, **ACS Applied Materials & Interfaces, 2022 (IF: 8.30, cover paper, 9th author, participated in cell experiments).** [\[Link\]](#)[\[PDF\]](#)

## INTERSHIP EXPERIENCE

### Zhejiang university

Jan 2022 - Mar 2022

Internship student, Micro/Nano Manipulation and Biomedical Robotics Laboratory

- Participated in laboratory project about diabetic wound healing, surveyed the thesis about dental robotics.

## HONORS AND AWARDS

National Scholarship

2024

Zhejiang University of Technology Academic Innovation Scholarship

2024

Zhejiang University of Technology Scholarship, First Prize

2023, 2024

Outstanding Postgraduate of Zhejiang University of Technology

2023

Outstanding Graduate of the College of Life Sciences at Zhejiang Normal University

2022

## SKILLS

**Wet lab skills:** Molecular cloning, CRISPR-Cas9 editing, Enzyme purification & modification, Fermentation, HPLC maintenance, etc.

**Software Skills:** Snapgene, AutoDock, Pymol, Illustrator, Origin, Latex, etc.

**English Proficiency:** IELTS (6.5), CET-6 (548).