

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: 1/36 (top 2.78%).

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*](#), [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*](#), [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*](#).

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).**[\[Link\]](#)[\[PDF\]](#)

INTERNSHIP 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

Zhejiang University of Technology Scholarship, First Prize (7/227, top 3.08%)

2023

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, Protein purification, Enzyme modification, Fermentation, etc.

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

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