Jinwen Lin

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EDUCATION

Zhejiang University   Hangzhou, China
Bachelor's degree in Optoelectronic Information Science and Engineering   *Aug. 2022 – Expected May. 2026*
- **GPA**: 4.08/4.3 or 3.96/4
- **Core Modules**: Laser Technology and Application(96), Physical Optics(90), Optical Inertial Technology(97), Fundamentals and Applications of Quantum Optics(95), Integrated Optoelectronic Devices and Designs(92)

PUBLICATION

[1] K. Y. Lau*, **J. W. Lin***, S. Firstov, et al, A Low-Threshold Nonlinear-Amplifying-Loop-Mirror Mode-Locked Bismuth-Doped Fiber Laser Using A 3x3 Coupler[J]. Journal of Lightwave Technology, 2025, 43(1):328-333. (Co-first Author)

[2] **J. W. Lin**, K. Y. Lau, and J. R. Qiu, Research Status and Prospects of Bismuth-Doped Glass Fibers[J]. Chinese Journal of Lasers, 2025, 52(16): 1603016.

[3] K. Y. Lau, Z. C. Luo, **J. W. Lin**, et al, Development of Figure-of-Nine Laser Cavity for Mode-Locked Fiber Lasers: A Review[J]. Laser & Photonics Reviews, 2025, 19:2301239.

EXPERIENCE

Low-threshold Mode-locked Bismuth-doped Ultrafast Fiber Laser   Jan. 2023 - May. 2025
*Undergraduate Researcher | **Supervisor:** Prof. Jianrong Qiu and Assoc.Prof. Kuen Yao Lau | Zhejiang University*
- Utilized bismuth-doped phosposilicate glass fiber fabricated by the modified chemical vapour deposition(MCVD) method to generate high-quality emission for the optical communication O-band($\sim$1260 nm to $\sim$1360 nm)
- Constructed a nonlinear-amplifying-loop-mirror(NALM) mode-locked bismuth-doped fiber laser with a 3x3 optical coupler, which induced a phase shift of $\frac{2\pi}{3}$
- Demonstrated that the initiation threshold of mode-locking in this novel structured laser cavity reduced by at least 45% and the output power increased at least 2 times than a conventional 2x2 NALM laser cavity

A Photonic Integrated Erbium-Doped Waveguide Amplifier   Jun. 2025 - Aug. 2025
*Undergraduate Researcher | **Supervisor:** Prof. Chao Xiang | Hong Kong University*
- Simulated the coupling loss of the edge coupler between Si_3N_4 spiral waveguide and UHNA3 fiber using Lumerical
- Utilized ion-implantation technology to fabricate erbium-doped Si_3N_4 sprial waveguides
- Built up the setup of waveguide amplifier to characterize the properties for the Er: Si_3N_4 spiral waveguides, demonstrating an on-chip net gain of near 10 dB

The Multi-Scan Femtosecond Laser Direct-Writing Technology   Jul. 2024 - Jan. 2025
*Undergraduate Researcher | **Supervisor:** Prof. Jianrong Qiu | Zhejiang University*
- Coded for direct-written optical waveguides served as connectors between optical fibers and silicon-based chips in order to enable flexible control of mode field diameter and reduce losses
- Utilized the multi-scanning method to acheive fine control of waveguide cross-sectional geometry, mode field and refractive index distribution

MCM - ICM: Quantifying Wear and Human Traffic on Ancient Staircases   Jan. 2025 - Feb. 2025
*Core Team Member | **H-Honor:** The American Mathematical/Interdisciplinary Contest in Modeling*
- Constructed three quantitive models for analysising wear dynamics and traffic patterns on ancient staircases
- Predicted the age from the extent of wearing utilizing machine vision and COMSOL simulation

HONORS & AWARDS

- National Scholarship **(Top 1%)**   Oct. 2025
- Undergraduate Natural Science Cultivation Foundation of Zhejiang University **(Top 1%)**   Jul. 2024
- Zhejiang Provincial Government Scholarship **(Top 3%)**   Oct. 2023
- Zhejiang University First Prize Scholarship **(Top 3%)**   Oct. 2025, 2024, 2023
- First Prize in Zhejiang University Optoelectronic Design Competition   Jul. 2025
- Third Prize in Zhejiang Province College Student Physics Theoretical Competition   Dec. 2024
- Third Prize in National College Mathematics Competition   Dec. 2023

TECHNICAL SKILLS

Languages: Chinese Mandarin (native), TOFEL 100 (R23 L27 S24 W26)
Software & Tools: Zemax, MATLAB, Origin, Solidworks, Bambu Studio, LATEX, COMSOL, Lumerical MODE & FDTD, Wireshark, Multisim, Blender, Keil uVision, AutoCAD
Programming Languages: C, Python