Yue Yu

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RESEARCH INTEREST

Integrated photonic circuits, optomechanics, micro- and nanoelectromechanics, surface acoustic waves, bound states in the continuum, nonlinear photonics, metasurfaces

EDUCATION

01/2025–Present	Postdoc, EECS, University of California, Berkeley
09/2023–12/2024	Postdoc, Viterbi School of Engineering, University of Southern California
08/2017–07/2023	Ph.D., Electronic Engineering, The Chinese University of Hong Kong
09/2013–06/2017	B.S., Optical and Electronic Information, Huazhong University of Science and Technology, China

HONORS AND AWARDS

2021	Best Paper Award-First Runner Up, 21st IEEE Photonics Society (HK) Postgraduate Conference
2015	National Encouragement scholarship
2014	National Scholarship

PROFESSIONAL ACTIVITIES

Journal reviewer

- Optics Express
- Journal of Lightwave Technology
- Journal of the Optical Society of America B
- Communications Engineering

PUBLICATIONS

Journal Papers († denotes co-first authors)

1. Shaoyuan Ou, Kaiwen Xue, Lian Zhou, Chun-ho Lee, Alexander Sludds, Ryan Hamerly, Ke Zhang, Hanke Feng, **Yue Yu**, Reshma Kopparapu, Eric Zhong, Cheng Wang, Dirk Englund, Mengjie Yu, and Zaijun Chen, "Hypermultiplexed Integrated-Photonics-based Tensor Optical Processor", *Science Advances*, Apr. 2025. (accepted)
2. Xinyi Ren, Chun-Ho Lee, Kaiwen Xue, Shaoyuan Ou, **Yue Yu**, Zaijun Chen, and Mengjie Yu, "Photorefractive and pyroelectric photonic memory and long-term stability in thin-film lithium niobate microresonators", *npj nanohotonics* 2, 1, Jan. 2025.
3. **Yue Yu** and Xiankai Sun, "Surface acoustic microwave photonic filters on etchless lithium niobate integrated platform," ***Laser & Photonics Reviews*** 2300385, 2024.
4. **Yue Yu** and Xiankai Sun, "Etchless photonic integrated circuits enabled by bound states in the continuum: tutorial," ***Journal of the Optical Society of America B*** 40 (11): 2801–2808, Nov. 2023.
5. Zejie Yu, He Gao, Yi Wang, **Yue Yu**, Hon Ki Tsang, Xiankai Sun, and Daoxin Dai, "Fundamentals and applications of photonic waveguides with bound states in the continuum," ***Journal of Semiconductors*** 44 (10): 101301, Oct. 2023.
6. Xiao-Jing Liu†, **Yue Yu**†, Di Liu, Qi-Long Cui, Xiao-Zhuo Qi, Yang Chen, Guang-Yuan Qu, Li Song, Guo-Ping Guo, Guang-Can Guo, Xiankai Sun, and Xi-Feng Ren, "Coupling of photon emitters in monolayer WS_2 with a photonic waveguide based on bound states in the continuum," ***Nano Letters*** 23 (8): 3209–3216, Apr. 2023.
7. Yuan Li, Zunyue Zhang, Yi Wang, **Yue Yu**, Xuetong Zhou, Hon Ki Tsang, and Xiankai Sun, "Inverse-designed linear coherent photonic networks for high-resolution spectral reconstruction," ***ACS Photonics***, Jan. 2023. DOI: 10.1021 **[featured as cover article]**
8. **Yue Yu**, Xiang Xi, and Xiankai Sun, "Observation of mechanical bound states in the continuum in an

optomechanical microresonator," ***Light: Science & Applications*** 11, 328, Nov. 2022.

9. **Yue Yu**†, Zejie Yu†, Zunyue Zhang†, Hon Ki Tsang, and Xiankai Sun, "Wavelength-division multiplexing on etchless lithium niobate integrated platform," ***ACS Photonics*** 9 (10): 3253–3259, Oct. 2022.
10. Huade Mao†, **Yue Yu**†, Yu-Xuan Ren, Ka Yan Chan, Jiqiang Kang, Xiankai Sun, Edmund Y. Lam, and Kenneth K. Y. Wong, "Neural optimizer for inverse design of complex-modulated hologram implemented by plasmonic metasurfaces," ***Advanced Photonics Research*** 4 (1): 2200085, Jan. 2023.
11. Fan Ye, **Yue Yu**, Xiang Xi, and Xiankai Sun, "Second-harmonic generation in etchless lithium niobate nanophotonic waveguides with bound states in the continuum," ***Laser & Photonics Reviews*** 16: 2100429, Mar. 2022.
12. **Yue Yu**, Lai Wang, and Xiankai Sun, "Demonstration of on-chip gigahertz acousto-optic modulation at near-visible wavelengths," ***Nanophotonics*** 10 (17): 4323–4329, Dec. 2021.
13. **Yue Yu**, Zejie Yu, Lai Wang, and Xiankai Sun, "Ultralow-loss etchless lithium niobate integrated photonics at near-visible wavelengths," ***Advanced Optical Materials*** 9 (19): 2100060, Oct. 2021.
14. Huade Mao†, Yu-Xuan Ren†, **Yue Yu**†, Zejie Yu, Xiankai Sun, Shuang Zhang, and Kenneth K. Y. Wong, "Broadband meta-converters for multiple Laguerre-Gaussian modes," ***Photonics Research*** 9 (9):1689–1698, Sep. 2021.
15. **Yue Yu**, Zejie Yu, and Xiankai Sun, "Nonmetallic broadband visible-light absorbers with polarization and incident angle insensitivity," ***IEEE Photonics Journal*** 12 (6): 2200807, Dec. 2020.

Conference Paper

1. Silvia Guadagnini, Zarko Sakotic, **Yue Yu**, Mengjie Yu, Dan Wasserman and Michelle L. Povinelli, "Suspended Subwavelength-Perforated Metal Absorber for Mid-Infrared Bolometry", CLEO 2025.
2. Xinyi Ren, Chun-Ho Lee, Reshma Kopparapu, Clayton Cheung, Lian Zhou, **Yue Yu**, Ran Yin, Zaijun Chen, and Mengjie Yu, "Few-cycle Pulse Generation on the Thin-film Lithium Niobate Platform", CLEO 2025.
3. Ran Yin†, **Yue Yu**†, Xinyi Ren, Chun-Ho Lee, Yuanhao Liang, Ian Anderson, Jack Kramer, Ruochen Lu, Mengjie Yu, "Intrinsic Frequency Noise of the Thin Film Lithium Niobate Platforms", CLEO 2025.
4. **Yue Yu**†, Ran Yin†, Ian Anderson, Jack Kramer, Chun-Ho Lee, Xinyi Ren, Clayton Cheung, Ruochen Lu, and Mengjie Yu, "Room-temperature optomechanical-resonator-based thermal sensor on thin-film lithium niobate", CLEO 2025.
5. Xinzhou Su, Chun-Ho Lee, Xinyi Ren, Zile Jiang, Huibin Zhou, Yue Zuo, Shaoyuan Ou, Reshma Kopparapu, **Yue Yu**, Adam T. Heiniger, Moshe Tur, Zaijun Chen, Mengjie Yu, and Alan E. Willner, "Demonstration of Mid-Wavelength Infrared IM/DD Communications Using Air-suspended Thin-Film Lithium Niobate Intensity Modulator", OFC 2025.
6. Clayton Cheung, Xinyi Ren, Chun-Ho Lee, Reshma Kopparapu, **Yue Yu**, Zaijun Chen, and Mengjie Yu, "Lithium Niobate Chip-Based Ultrafast Optical Signal Processor", CLEO 2024, SM4L.5.
7. Xinyi Ren, Chun-Ho Lee, Kaiwen Xue, Shaoyuan Ou, **Yue Yu**, Zaijun Chen, and Mengjie Yu, "Long-lived photorefractive and pyroelectric effects in thin film lithium niobate microresonantors", CLEO 2024, STu3E.1.
8. **Yue Yu** and Xiankai Sun, "Surface acoustic microwave photonic filters on etchless lithium niobate integrated platform," CLEO 2023, San Jose, CA, USA, May 2023.
9. Yuan Li, Zunyue Zhang, Yi Wang, **Yue Yu**, Xuetong Zhou, Hon Ki Tsang, and Xiankai Sun, "Inverse-designed linear coherent photonic networks for high-resolution spectral reconstruction," CLEO 2023, San Jose, CA, USA, May 2023.
10. **Yue Yu**, Xiang Xi, and Xiankai Sun, "Observation of mechanical bound states in the continuum in an optomechanical microresonator," **Frontiers in Optics 2022**, Rochester, NY, USA, Oct. 2022. **[postdeadline]**
11. **Yue Yu**†, Zejie Yu†, Zunyue Zhang†, Hon Ki Tsang, and Xiankai Sun, "Wavelength-division multiplexing on etchless lithium niobate integrated platform," **Frontiers in Optics 2022**, Rochester, NY, USA, Oct. 2022.
12. **Yue Yu**, Zejie Yu, Lai Wang, and Xiankai Sun, "Ultralow-loss etchless lithium niobate integrated photonics at near-visible wavelengths," ***CLEO 2022***, San Jose, CA, USA, May 2022.
13. Fan Ye, **Yue Yu**, Xiang Xi, and Xiankai Sun, "Second-harmonic generation in etchless lithium niobate

nanophotonic waveguides with bound states in the continuum," ***CLEO 2022***, San Jose, CA, USA, May 2022.

14. **Yue Yu**, Zejie Yu, and Xiankai Sun, "Etchless lithium niobate integrated photonics," ***International Symposium on Lithium Niobate Optoelectronics 2021***, Shanghai, China, Oct. 2021. **[invited]**
15. **Yue Yu**, Zejie Yu, and Xiankai Sun, "Nonmetallic broadband visible-light absorbers with polarization and incident angle insensitivity," ***CLEO 2021***, San Jose, CA, USA, May 2021.
16. **Yue Yu**, Lai Wang, and Xiankai Sun, "Demonstration of on-chip gigahertz acousto-optic modulation at near-visible wavelengths," ***CLEO 2021***, San Jose, CA, USA, May 2021.