

Room E (Sydney), 2F

Chair: Chaoran Huang
(Chinese University of Hong Kong)

Th2E

Lithium Niobate Integrated Photonics

July 2 (Thu), 2026

10:15-11:30

Th2E-1

10:15-10:30

Low-Loss and Compact Lithium Niobate Waveguide Crossing using Inverted Tapers

Xiaoyan Liu Tao Chu
Zhejiang University

A compact low-loss lithium niobate waveguide crossing based on Gaussian beam synthesis is demonstrated, achieving insertion loss below 0.048 dB across the O-band (minimum 0.041 dB) and crosstalk below -40 dB.

Th2E-2

Invited

10:30-11:00

High-Speed Optical Phased Array based on Heterogeneously Integrated Lithium Niobate-on-Silicon Nitride Platform

Chenxi Wang Yan Cai
Chinese Academy of Sciences

In this work, we propose and experimentally demonstrate an ultrafast and low-power-consumption optical phased array system based on a heterogeneously integrated thin-film lithium niobate-silicon nitride platform, which employs 8-inch wafer-level bonding technology.

Th2E-3

11:00-11:15

Acousto-optic Frequency Shifting and Modulation on a Hybrid Thin-film Lithium Niobate-Chalcogenide Integrated Platform

Jun Yue, Zhiqiang Yang, Zhaohui Li
Sun Yat-sen University

We demonstrate a TFLN-ChG acousto-optic frequency shifter. Using a focusing IDT, the device achieves 7.7%/W efficiency and 37 dB carrier suppression, with sub-100 ns switching speeds for high-speed amplitude modulation.

Th2E-4

11:15-11:30

Microwave Photonic Beamforming System based on Soliton Microcombs and Integrated Waveguide Bragg Grating

Zhichang Che¹, Rongan Wu¹, Zhenzhou Tang¹, Jijun He¹, Siyu Su¹, Zhenmin Du², Hongwei Chen², Shilong Pan¹
¹Nanjing University of Aeronautics and Astronautics, ²Tsinghua University

A microwave photonic beamforming system based on soliton microcombs and integrated waveguide Bragg grating is proposed, which achieves multiple beamforming within $\pm 23^\circ$ without significant beam squint.