

Room E (Sydney), 2F

Chair: Kyoungsik Yu (KAIST)

Mo1E

June 29 (Mon), 2026

Silicon Photonics Platforms

13:00-14:30

Mo1E-1 Invited 13:00-13:30

300-mm Silicon Photonics Platform at Samsung Foundry

Hyundai Park

Samsung Electronics Co., Ltd.

The architectural transition toward extending optical interconnects into the package level is positioning silicon photonics as a key enabling technology for next-generation AI infrastructure, supported by its strong compatibility with existing semiconductor manufacturing ecosystems. In this invited presentation, we provide an overview of Samsung Foundry's 300-mm silicon photonics platform and review the current status of its development.

Mo1E-2 13:30-13:45

AWG Wavelength Routers on Silicon Nitride Platform for O-band CW-WDM Applications

Avijit Koley San-Liang Lee

National Taiwan University of Science and Technology

We demonstrate a scalable O-band 8x8 cyclic AWG for wavelength routing using tunable lasers. With 2.85-dB insertion loss and 1.4-dB non-uniformity, it enables low-loss, high-capacity photonic switching for next-generation optical interconnects and data center applications.

Mo1E-3 13:45-14:00

Taper-based Low-Loss Stitching in Silicon Nitride Waveguide on Glass for Wafer-Level Optical Interconnect

Seokhyeon Yoon, Taewon Jin, Seokyoung Shin, Younghyun Kim

Hanyang University

We demonstrate a tapered SiN stitching waveguide on a glass substrate that reduces stitching loss in wafer-scale optical interconnects. A stitching loss of 0.042 dB/interface at 1310 nm enables low-loss, scalable optical routing for copackaged optics.

Mo1E-4 14:00-14:15

Star Coupler as the Enabler Toward Multi-wavelength ELSFP Module for CPO Applications

Chia-Hsuan Chien, Wen-Hsin Chuang, Chih-Hsien Chen, Yung-Jr Hung

National Sun Yat-sen University

A low-loss SiN star coupler enabling multi-wavelength external laser small form pluggable (MW-ELSFP) modules for DWDM co-packaged optics (CPO) is proposed and experimentally demonstrated. The 4x4 prototype shows uniform wavelength distribution with <1 dB excess loss.

Mo1E-5 14:15-14:30

Mass-producible Optical Isolator Chips based on Silicon Photonics

Seung Hwan Kim^{1,3}, Beomsu Park¹, Ji Woon Park¹, Hyo-Seung Park¹, Juyeong Moon¹, Sung Hyeon Jang¹,

Nam Soo Park², Han-Youl Ryu³, Kyong Hon Kim¹

¹PhotoniSol Inc., ²National Nanofab Center, ³Inha University

Mass-producible integrated optical isolator chips have been demonstrated using CMOS-based silicon (Si) waveguide fabrication and sputter-coated magneto-optic (MO) film coating.