

Joint CQSE and CASTS Seminar

2020
Jun. 12, Friday

TIME Jun. 12, 2020, 2:30~3:30pm
TITLE Integrated Si Photonics Platform Potentially Applied for Quantum Photonics Chips
SPEAKER Prof. Ming-Chang (Mark) Lee
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PLACE Rm716, CCMS & New Physics Building, NTU

Abstract

Integrated Si optoelectronics and photonics are the key technology platform for developing large-scale integrated optics for various applications. For example, multi-channel integrated Si/Ge transceivers are recently demonstrated for over 200Gbps data transmission aiming at data centers, high-performance cluster computers, and cloud servers. Meanwhile, these technologies are also exploited for implementing compact sensor chips for biological and chemical detection. In this talk, I will introduce several key Si photonic components developed in my group and fabricated in a CMOS research lab in Taiwan, including MEMS tunable resonators, high-speed Si modulators, Si/Ge heterojunction waveguide photodetectors and ultra-low voltage Si/Ge SAM avalanche photodiodes. Also, I will introduce our recent developed SiN based photonics for implement low-loss quantum photonic chips with device footprint less than 1 cm².

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