

## Selected Silicon Photonics Publications

Operation of High-Speed Silicon Photonics Micro-Disk Modulators at Cryogenic Temperatures, *Optica* 4 (3), 374-382, Mar. 2017 DOI: [10.1364/OPTICA.4.000374](https://doi.org/10.1364/OPTICA.4.000374) (Journal Cover)

Active phase correction of high resolution silicon photonic arrayed waveguide gratings, *Optics Express* 25 (6), 6320-6334, Mar. 2017 DOI: [10.1364/OE.25.006320](https://doi.org/10.1364/OE.25.006320)

Compact Silicon Photonic Resonance-assisted Variable Optical Attenuator, *Optics Express* 24 (24), 27600-27613, Nov. 2016 DOI: [10.1364/OE.24.027600](https://doi.org/10.1364/OE.24.027600)

Radio Frequency Silicon Photonics at Sandia National Laboratories, TuA2.1, *AVFOP Conference* Nov. 2016 (Invited) DOI: [10.1109/AVFOP.2016.7789912](https://doi.org/10.1109/AVFOP.2016.7789912)

Challenges for Optical Interconnect for Beyond Moore's Law Computing, *IEEE Int. Conf. on Rebooting Computing (ICRC)* Oct. 2016 DOI: [10.1109/ICRC.2016.7738696](https://doi.org/10.1109/ICRC.2016.7738696)

Wide-range and fast thermally-tunable silicon photonic microring resonators using the junction field effect, *Optics Express* 24 (20), 23081-23093, Sep. 2016 DOI: [10.1364/OE.24.023081](https://doi.org/10.1364/OE.24.023081)

High performance waveguide-coupled Ge-on-Si linear mode avalanche photodiodes, *Optics Express* 24 (17), 19072-19081, Aug. 2016 DOI: [10.1364/OE.24.019072](https://doi.org/10.1364/OE.24.019072)

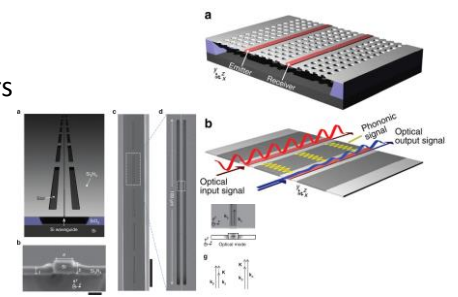
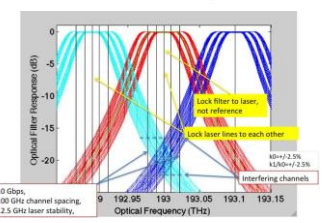
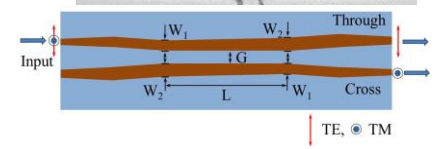
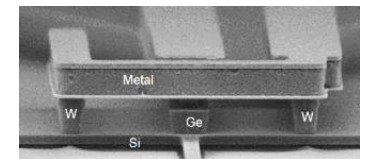
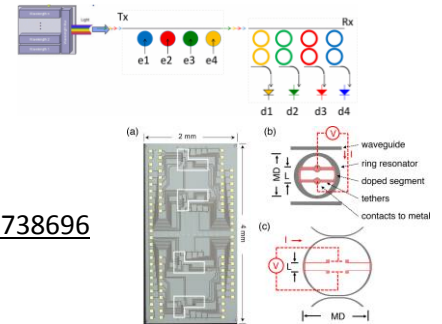
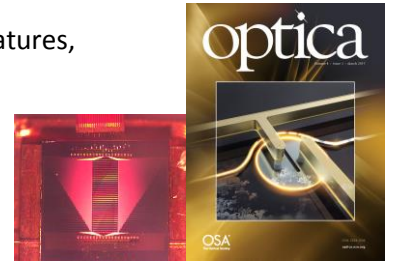
An Adiabatic/ Diabatic Polarization Beam Splitter, *IEEE Optical Interconnects Conference (OI)* San Diego, CA, May 2016 DOI: [10.1109/OIC.2016.7483013](https://doi.org/10.1109/OIC.2016.7483013)

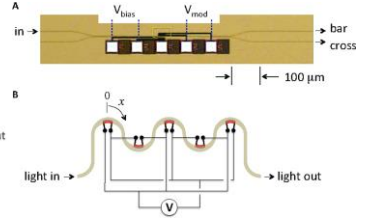
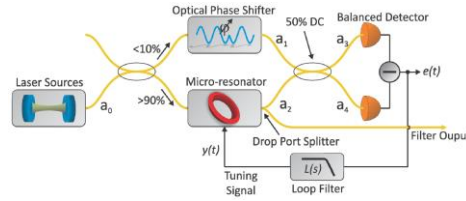
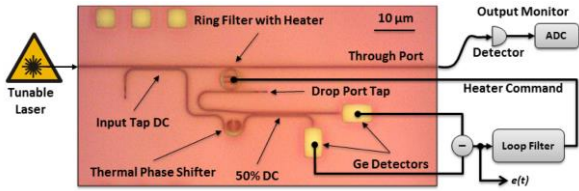
Challenges in the implementation of dense wavelength division multiplexed (DWDM) optical interconnects using resonant silicon photonics, *Proc. SPIE 9772 Broadband Access Communication Technologies X, 977207*, Feb. 2016 DOI: [10.1117/12.2217429](https://doi.org/10.1117/12.2217429)

Racetrack resonator as a loss measurement platform for photonic components, *Optics Express* 23 (22), 28883-28895, Oct. 2015 DOI: [10.1364/OE.23.028883](https://doi.org/10.1364/OE.23.028883)

Control of Coherent Information via On-Chip Photonic-Phononic Emitter-Receiver *Nature Communications* 6 (6427), Mar. 2015 DOI: [10.1038/ncomms7427](https://doi.org/10.1038/ncomms7427)

Tailorable Stimulated Brillouin Scattering in Nanoscale Silicon Waveguides *Nature Communications* 4 (1944), Jun. 2013 DOI: [10.1038/ncomms2943](https://doi.org/10.1038/ncomms2943)



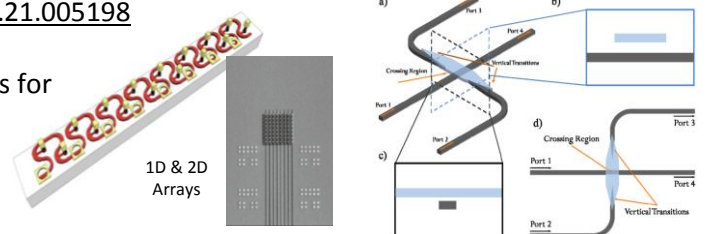


Control of Integrated Micro-Resonator Wavelength via Balanced Homodyne Locking  
*Optics Express* 22 (9), 11279-11289 May 2014 DOI: [10.1364/OE.22.011279](https://doi.org/10.1364/OE.22.011279)

Wideband Silicon-photonic Thermo-optic Switch in a Wavelength-division Multiplexed Ring Network  
*Optics Express* 22(7), 8205-8218 Apr. 2014 DOI: [10.1364/OE.22.008205](https://doi.org/10.1364/OE.22.008205)

Electronically Controlled Optical Beam-Steering by an Active Phased Array of Metallic Nanoantennas  
*Optics Express* 21(4) 5198-5208 Feb. 2013 DOI: [10.1364/OE.21.005198](https://doi.org/10.1364/OE.21.005198)

Ultra-Low Crosstalk, CMOS Compatible Waveguide Crossings for Densely Integrated Photonic Interconnection Networks  
*Optics Express* 21 (10), 12002-12013 May 2013  
 DOI: [10.1364/OE.21.012002](https://doi.org/10.1364/OE.21.012002)

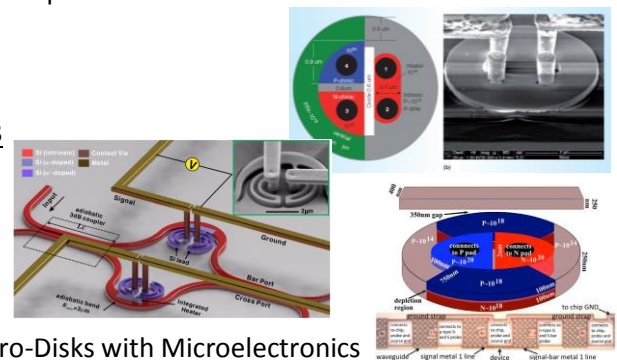


The Suitability of SiGe Multiple Quantum Well Modulators for Short Reach DWDM Optical Interconnects  
*Optics Express* 21 (5), 5318-5331 Feb. 2013 DOI: [10.1364/OE.21.005318](https://doi.org/10.1364/OE.21.005318)

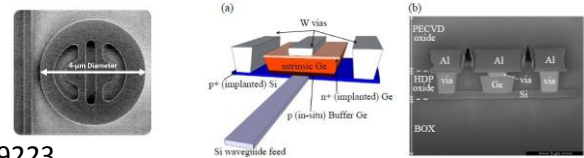
Bit Error Rate Monitoring for Active Wavelength Control of Silicon Microphotonic Resonant Modulators  
*IEEE Micro* 33 (1), 42-52 Jan. 2013 DOI: [10.1109/MM.2012.73](https://doi.org/10.1109/MM.2012.73)

Adiabatic Thermo-Optic Mach-Zehnder Switch  
*Optics Letters* 38 (5), 733-735 Feb. 2013 DOI: [10.1364/OL.38.000733](https://doi.org/10.1364/OL.38.000733)

Low-Voltage Differentially-Signaled Modulators  
*Optics Express* 19 (27), 26017-26026 Dec. 2011  
 DOI: [10.1364/OE.19.026017](https://doi.org/10.1364/OE.19.026017)

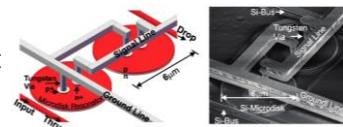


Monolithic and Two-Dimensional Integration of Silicon Photonic Micro-Disks with Microelectronics  
*IEEE Photonics Journal* 4 (1), 242-249 Feb. 2012  
 DOI: [10.1109/JPHOT.2011.2180372](https://doi.org/10.1109/JPHOT.2011.2180372)



Adiabatic Microring Modulators  
*Optics Express* 20 (28), 29223-29236 Dec. 2012 DOI: [10.1364/OE.20.029223](https://doi.org/10.1364/OE.20.029223)

Ultra Compact 45 GHz CMOS Compatible Ge Waveguide Photodiode with Low Dark Current  
*Optics Express* 19 (25), pp. 24897-24904 Nov. 2011 DOI: [10.1364/OE.19.024897](https://doi.org/10.1364/OE.19.024897)



Vertical Junction Silicon Microdisk Modulators and Switches  
*Optics Express* 19 (2), 21989-22003 Oct. 2011 DOI: [10.1364/OE.19.021989](https://doi.org/10.1364/OE.19.021989)

