



Integrated photonic systems on silicon

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Monolithic CMOS silicon photonics technology enables functional system on chip integration of complete electro-optic subsystems and single-chip transceivers. A complete set of building block components has been designed and integrated within a single manufacturing process that targets O-band data communication standards including direct-detect and 4x25 Gb/s WDM transceivers [1]; however, the nanophotonic building blocks and diverse process features can be utilized for a wide variety of applications, including environmental trace gas sensing [2], medical diagnostics, and quantum interconnects. Automation, simulation and verification support for the optoelectronic elements in industry standard CAD tools enables small teams to reliably design complex systems.

References

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