**Recent enhancements of integrated silicon photonics exploiting electro-optic materials**

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Integrated photonics is the backbone for high-speed internet across the world. The increasing need for bandwidth in servers has driven the development towards a tighter integration of electro-optical systems. Silicon photonics has become the leading technology for integrated optics, as CMOS was for integrated microelectronics. The key advantages of silicon photonics are low fabrication costs and reduced circuit footprint which are enabled by the large refractive index contrast between silicon oxide (as the cladding) and silicon (as the waveguide core). Similar to CMOS technology, new materials perform as critical add-ons to enhance the performance of silicon photonics. As an example, electro optic materials such as Lithium Niobate, Barium Tantalate, and organic polymers are able to either enhance device performances or enable functionalities that do not exist in silicon. State of the art heterogenous implementation of different electro optic material on integrated silicon platform are discussed.