

PZT-based Pockels Modulators on Silicon and Silicon Nitride Waveguides

(Invited paper)

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ABSTRACT

In this paper, we will present our recent progress on PZT-based Pockels modulators integrated on Silicon and Silicon Nitride waveguide platforms. The PZT layers are deposited using chemical solution processing methods, using a dedicated buffer layer. Large Pockels coefficients, low losses (<1dB/cm) and $V_{\pi L} \approx 3.2$ V.cm were measured. A bandwidth above 30GHz was obtained.

Keywords: Integrated optics, silicon photonics, optical modulators, ferroelectric materials.