

New Materials for Multifunctional Photonic ICs

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Abstract (Arial 10)

In this presentation we will report on our recent work on new materials that can be monolithically integrated on high-index contrast silicon or silicon nitride photonic ICs to enhance their functionality. This includes InP and InGaAs epitaxially grown on silicon for realizing efficient lasers [1-5], graphene and other 2D-materials for realizing compact electro-absorption modulators and non-linear devices [6-7] and ferroelectric materials for realizing phase modulators [8].

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