

High speed electroabsorption modulator in the generic photonic integration platform

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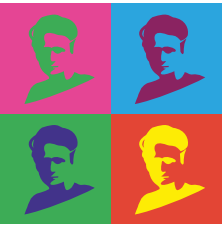
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“Photonic integrated circuits have a key position in the advancement of high speed communication devices, offering high capacity links on a small footprint. In order to make the most out of the integration process we focus on optimizing different components in the COBRA generic integration platform. The scope of this research is to develop a high speed electroabsorption modulator (EAM), which will allow for more complex integrated circuits, with higher modulation bandwidth.

In this work we present the development and the first measurements of an EAM in the COBRA platform. Two slightly different cross sections of the device have been tested for optical performance. Together with the characterization of the metal tracks on top of the device, which guide a microwave field for modulation, the modulator has fully been characterized. High static extinction ratio, fairly low bias voltage, high Q-factor and clear eye opening at 20 Gb/s have been achieved.”



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