

In order to realize room temperature electrically pumped InGaN-based microdisk laser on Si, it is indispensable to fabricate a well defined microdisk with a high quality. The quality of microdisk is ...

In this study, we demonstrate successfully a microdisk laser and a sub-micrometre-sized single nanopillar LED, which are electrically pumped through the transparent and flexible few-layer ...

Fig. 2. 200-mm SOI-wafer with bonded InP dies (a), top view of two InP islands with microdisk lasers before metallization and visible SOI waveguides (b), focused-ion-beam cross-section of the microdisk ...

However, these microdisk lasers still face issues with high thresholds and multimode lasing, which lead to increased power consumption and limit their practical use for data transmission in optical ...

Here, we propose and experimentally demonstrate a compact high-speed microdisk modulator to realize multiple NAFs. The fabricated microdisk modulator has an add-drop configuration in which a lateral ...

By critically evaluating current electrical injection techniques for microdisk lasing, our objective is to formulate design principles for high-performance, electrically driven InGaN microdisk ...

Having characterized and comprehended the benefits of the metallic undercut design, we proceeded to design and fabricate an InGaN-based thin-film microdisk, incorporating a metallic ...

In this paper, a comparison between microring and microdisk modulators is well analyzed in terms of dimensions, static and dynamic power consumption, and fabrication tolerance.

Abstract-- An electrically driven microlaser based on a thin InP based microdisk transferred onto silicon is proposed. The technological procedure is described and first experimental results, showing a laser ...

In this work, we demonstrate an electrically injected GaN-based microdisk of such structure. The device is featured with a copper substrate and copper supporting pedestal, through ...

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