Laser Diode Microdisk

In fact, it is remarkable that, while very small laser diodes have been fabricated, our understanding of how such devices work is manifestly inadequate. Much of what is interesting about microlasers ...

The fabrication process for the microdisk lasers is implemented on a thin film platform, established by conducting a laser lift-off process on an InGaN LED wafer that emits at a wavelength ...

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

The two-state lasing phenomenon, which manifests itself in simultaneous laser emission through several optical transitions of quantum dots, ...

In this study, GaN-based microdisk laser monolithically integrated on Si (100) is carefully designed and fabricated thorough wafer bonding and substrate removal.

The two-state lasing phenomenon, which manifests itself in simultaneous laser emission through several optical transitions of quantum dots, is studied in microdisk diode lasers with different ...

Here we report fabrication and optical measurements of GaN-based microdisk lasers with a very low threshold of 300 W cm-2--orders of magnitude lower than any previous GaN microdisk ...

Abstract: Silicon photonics has been calling for an electrically pumped on-chip light source at room temperature for decades. A GaN-based microdisk laser diode with whispering gallery modes grown ...

Micro-disk/micro-ring laser structures use whispering gallery modes (WGMs) to achieve the gain needed for stimulated emission. WGMs are modeled on the acoustic properties of circular ...

This work reports a demonstration of electrically injected GaN-based near-ultraviolet microdisk laser diodes with a lasing wavelength of 386.3?nm at room temperature.

Here, we propose and experimentally demonstrate a Microdisk laser as a programmable all-optical activation function (AF) unit for photonic neural networks (PNNs).

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