Integration of a microheater into a photonic integrated circuit

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Work content

In addition to the already well-known and highly developed electrical integration, optical integration at chip level is becoming increasingly important. Against this backdrop, the PhoenixD Cluster of Excellence is manufacturing and investigating novel functions within such a photonic integrated circuit (PIC). A microheater is a fundamental component of such a circuit. This makes it possible to locally change the refractive index of the waveguide material and thus, for example, manipulate light in an interferometer or adjust the resonance frequencies of ring resonators.

In the course of this work, such a heater is to be designed and integrated at a suitable location. The basic waveguide design will be created with partners within the cluster, then manufactured and evaluated.

Type of work

Master Thesis

Requirements

Enjoyment of practical work

Structured approach to work

Prior knowledge of COMSOL is an advantage

Starting date

Immediately