Westfälische Wilhelms-Universität Münster

CeNTech Center for NanoTechnology

Masterthesis: Efficient fiber-coupling of an integrated light source

Integrated optics enables the miniaturization of (quantum) optical experiments on-chip. This requires in- /out coupling of light from the chip to an optical fiber. Typically, grating couplers (Fig. 1) are used for that purpose. Unfortunately, these couplers provide insufficient efficiency to out-couple light which was generated on chip. The aim of this thesis is to implement the approach of adiabatic coupling (Fig. 2) which could provide a better coupling efficiency.

Tasks:

- Design and build-up of a coupling setup
- Design und fabrication of test chips
- Optimization/Simulation of coupling structures
- Fiber coupling of on-chip generated light

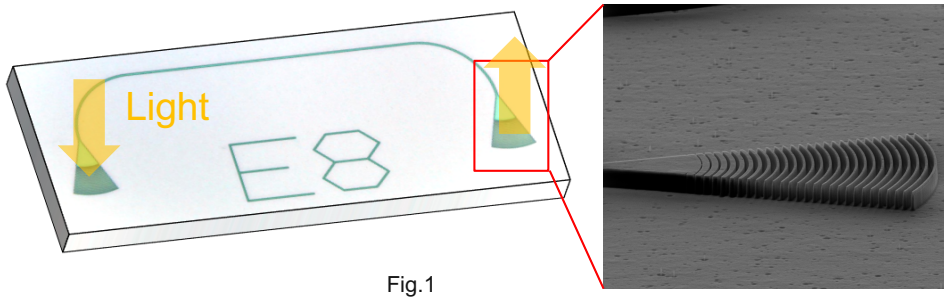

Fig.1

What we offer:

- Introduction to (quantum) optics (integrated + fiber-optic)
- Nanofabrication (Electron beam Lithography, etc.)
- International work group
- State-of-the-art Equipment

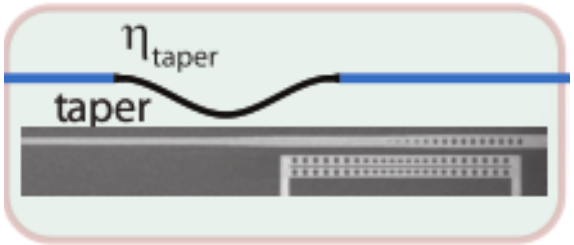

Fig. 2 [1]

[1] http://arxiv.org/abs/1309.1181

WE WANT YOU!

Curious?

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