

# Bachelorthesis: Polarisation independent 2D grating couplers

Integrated photonics enables the miniaturisation 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. Due to the nature of those couplers, the coupling efficiency is highly polarisation dependent, which therefore requires a polarisation controller for each input fiber. For most applications, however, it is desirable to have a polarisation independent coupling structure.

## Tasks:

- Design and build-up of a coupling setup
- Design und fabrication of test chips
- Optimization/Simulation of coupling structures
- Characterisation of newly designed structures

## What we offer:

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

## Curious?

For further information contact either

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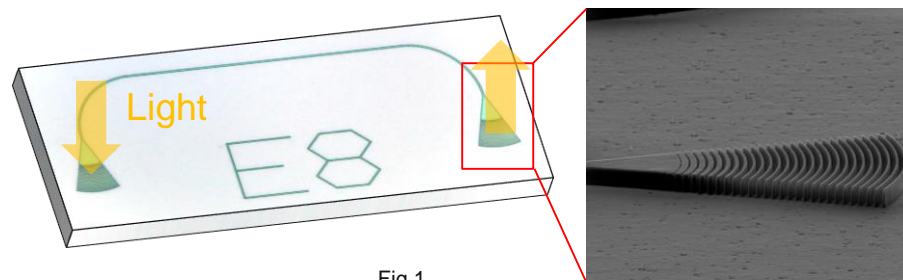


Fig.1

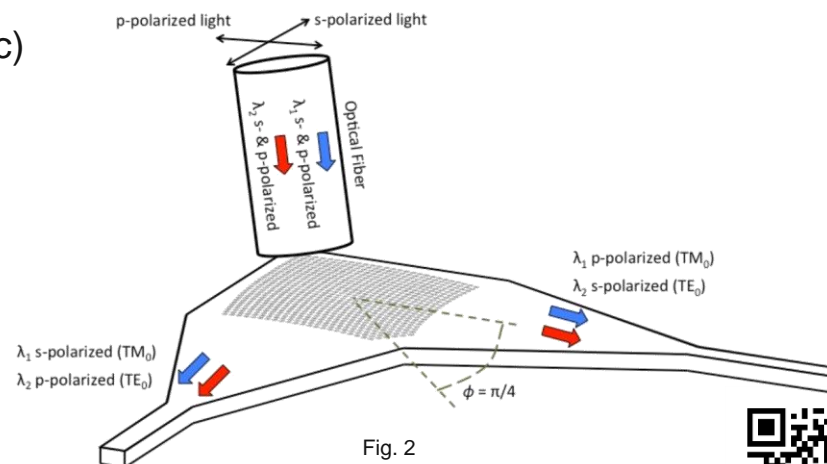


Fig. 2

