Development and characterisation of an efficient concept for laser welding of new materials

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Arbeitsinhalt

Laser welding is a precise joining process that typically requires no filler material. The thermal energy required for the joint is applied selectively by a laser. In this way, various material systems (metal-glass, ceramic-glass, ...) can be joined. These materials are widely used in microsystems technology and their combination is of particular interest for the encapsulation of (micro)systems in quantum technology or vacuum technology. As part of the tendered work, a concept for the development of laser welding of new material combinations is to be worked out, tested and optimised for use in various demonstrator setups. The aim is a standardised, efficient programme with a central database for the simple development of further material combinations.

Art der Arbeit

Master thesis

Voraussetzungen

- Independent and committed work
- Knowledge in the field of microsystems technology
- Previous knowledge of lasers and programming (Excel, Python, ...) advantageous

Starttermin

As of now