Encapsulation and evaluation of UHV packages

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Work content

Within the QGyro+ research project, miniaturized ultra-high vacuum chambers (UHV packages) are being developed and analyzed, which are used to enclose quantum systems at chip level. The UHV packages provide the interference-free habitat for sensors based on quantum effects and enable long-term use in a handy pocket format. In addition to the initial vacuum environment, its lifetime is also important, which can be extended by hermetically sealed bond seams.

The aim of this work is to test and to evaluate different bonding processes for the packages. For this purpose, bonding process with thin-film layers as well as foils will be used. The encapsulation of the system takes place in a specially developed ultra-high vacuum bonder.

Type of work

Bachelor thesis

Requirements

- Independent, creative and structured work
- Interest in the semiconductor industry
- Enjoy practical work

Starting date

Anytime

16.05.2024

Field of work: Mechanische Bearbeitung

Leibniz Universität Hannover

Produktionstechnisches Zentrum Hannover