

Kontakt



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Arbeitsinhalt

A key trend in modern microelectronics is the heterogeneous 3D integration of integrated circuits (ICs) and passive components. This development is of fundamental importance for research in the fields of hardware for artificial intelligence, autonomous driving, data centres and biomedical systems. With the aim of realising highly complex electronic systems in the smallest possible installation space, the overarching objectives of research in the field of advanced assembly and packaging include optimised thermal management, high packing density and maximum energy efficiency. In order to achieve these goals, access to highly developed technology in the field of assembly and connection technology (AVT) is essential.

A key component of this technology is hybrid bonding, which enables a new generation of systems with high bandwidth, high performance and low power consumption. In hybrid bonding, individual chips are electrically and mechanically bonded together after plasma activation in combination with wafer cleaning using fusion bonding, enabling 3D packaging solutions. The aim of this work is to establish and further develop this technology at the Institute of Micro production Technology.

Art der Arbeit

Master Thesis

Voraussetzungen

- Independent, structured and autonomous way of working
- Interest in the field of microtechnology and packaging technology

Starttermin

As of now