

Ongoing R&D Activities at CiS Forschungsinstitut fuer Mikrosensorik: Bump Bonding

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Smaller dimensions for CMS and ATLAS pixel sensors require smaller dimensions for the under bump metallisation (UBM) and for the solder bumps which are connecting the radiation sensors to the FE-I chips. Whereas 40 to 50 μm large solder bumps are state of the art, future bumps have to be smaller than 30 μm . Another future task is to increase the number of solder bumps per area. CiS is working at overcoming these challenges by applying maskless, less expensive technologies as (single) solder ball placement and light induced plating.

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