

Future sensor-chip packaging technologies at CiS

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In the past, the CiS research institute has made a mark as a vendor of reliable radiation hard planar silicon sensors for various important HEP detectors.

In addition to the sensor production, it is aiming for an extension of the possibilities of in-house sensor-chip packaging. Initial tests of a combination of electroless nickel UBM and solder ball bumping have been started. This batch-wise process presents a cost-efficient method for large-area silicon applications.

Further approaches include light induced or MoSi-based electroplating. The investigations of radiation hardness and minimization of the bump pad dimensions as requested for future pixel designs are as well an important objective which is pursued.

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