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Overview and perspectives of HR/HV CMOS

CMOS pixel sensors with a notable depletion layer have seen a large R&D focus in recent years. These devices promise competitive performance to hybrid pixel detectors without the need of hybridization, thus offering cost savings especially for large area coverage, e.g. in outer detector layers at the HL-LHC experiments. Many prototypes in various CMOS and SOI technologies have been fabricated with different starting substrate materials. Good performance even after large irradiation levels (ionizing as well as non-ionizing) has been demonstrated.

This overview talk presents the main ideas and approaches as well as the latest results from prototyping R&D, including the difficulties and drawbacks that such devices can have.

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