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## Deveopment of 3D SiC radiation detector

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A prototype of 360  $\mu\text{m}$  thick single crystal SiC has been fabricated with holes of 100 $\mu\text{m}$  using laser drilling method. Form scanning electron microscope (SEM) images, there is no crack extending to the single crystal, and no residue on the side wall. It is found that the SiC sidewall is carbon-riched after laser and chemical treatment. The electrodes of 3D 4H-SiC device are formed by extruding the molten indium metal. The ohmic contact characteristic is formed. When 100 V voltage is applied, the current value are 6 pA and 10 nA under dark and 405 nm illumination conditions.

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