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Effect of xenon (Xe) 167 MeV Irradiation on Un-implanted 6H-SiC and Poly-SiC implanted with iodine (I), krypton (Kr) and xenon (Xe) at room temperature

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Abstract content
 (Max 300 words)
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Special chars

The effect of swift heavy ion (Xe+26 167 MeV) irradiation on unimplanted 6H-SiC and polycrystalline SiC, implanted with 360 keV I, Kr and Xe ions at room temperature was investigated using Raman spectroscopy, Rutherford backscattering spectrometry (RBS) and RBS in channelling mode (RBS-C). Unimplanted and implanted samples were irradiated with 167 MeV Xe+26 ions to fluences of 5x1012 cm-2, 1x1013 cm-2, 5x1013 cm-2, 2x1014 cm-2, 3x1014 cm-2, 6.3x1014 cm-2, 8.3x1014 cm-2 at room temperature. Irradiating the unimplanted sample at these fluences created point defects while slight annealing of the amorphised layer (due to the implanted of the 3660 keV ions) took place on the initially implanted sample. No diffusion of the implanted diffusion fission products was observed. Shifts of the implanted fission product profiles towards the surface were observed at higher fluences.

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Main supervisor (name and email)
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