

Anneal induced transforms of radiation defects in hadron and electron irradiated Si

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The anneal induced transforms of radiation defects have been studied in n-type and p-type CZ and FZ Si. The samples were irradiated with high energy electrons (6.6 MeV), protons (26 GeV/c) and pions (300 MeV/c) by fluences up to $5 \times 10^{16} \text{ cm}^{-2}$. In order to identify the prevailing radiation defects and to trace their evolution during thermal treatments, measurements of temperature dependent carrier trapping lifetime (TDTL) spectroscopy was combined with deep level transient spectroscopy (DLTS). The dominant radiation defects and their transform paths under isothermal and isochronal anneals have been revealed.

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