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The influence of isochronous annealing upon the near-band-edge photoluminescence spectra of the electron-irradiated n-InP

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Abstract

The near-band-edge photoluminescence (PL) bands observed at 1.305 and 1.392 eV (T = 4.2 K) in electron-irradiated InP single crystals and epilayers have different behaviour with increasing temperature of isochronous annealing. Moreover, the band at 1.392 eV shows a complex structure, at least in n-InP epilayers. On the ground of these new results, an earlier proposed connection between these PL bands and the Inp-antisite defect may require a revision.