

56

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Title:Long intersubband relaxation times in n-type germanium quantum wells

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Abstract:We measured the non-radiative intersubband relaxation time in n-type modulation-doped Ge/SiGe multi-quantum wells of different thickness by means of degenerate pump-probe experiments. The photon energy was tuned to be resonant with the lowest conduction band intersubband transition energy (14-29 meV), as measured by terahertz absorption spectroscopy and in agreement with band structure calculations. Temperature-independent lifetimes in excess of 30 ps were observed.

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