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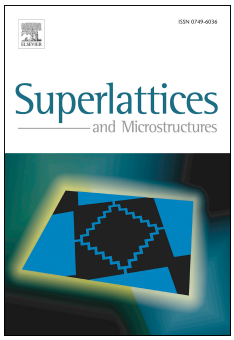

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Simulation of the dark current of quantum-well infrared photodetectors

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Abstract

We developed a method to calculate the dark current of quantum-well infrared photodetectors without the need to fit any experimental data or to perform extra transport measurements on other samples. The temperature range of the calculations was extended below 30 K by combining a thermionic model valid at high temperature a miniband-transport model valid at low temperature whenever any superlattice characteristics were relevant in the device.