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Title:Photo-luminescence study of heterogeneous terahertz quantum cascade lasers
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Abstract:We present a study of heterogeneous terahertz quantum cascade lasers using micro-probe photoluminescence. Simulations and experiments are first presented on a homogeneous terahertz quantum cascade laser; these indicate that the population of the upper laser level and the energy of laser transition can be tracked by this technique. We then focus on heterogeneous terahertz quantum cascade lasers and demonstrate the utility of micro-photoluminescence for these devices by measuring the state populations and energy separations for each sub-stack independently.
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