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Title:Ultra-broadband heterogeneous quantum cascade laser emitting from 2.2 to 3.2 THz
Authors: Turcinkova, Dana (1); Scalari, Giacomo (1); Castellano, Fabrizio (1); Amanti, Maria I. (1); Beck, Mattias (1); Faist, Jerome (1)
Author affiliation:(1) ETH Zurich, Institute of Quantum Electronics, Wolfgang Pauli Strasse 16, Zurich 8093, Switzerland
Corresponding author:Turcinková, D.(turcinko@phys.ethz.ch)
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Abstract:We present a heterogeneous terahertz quantum cascade laser that emits continuously between 2.2 and 3.2 THz, covering an emission range of over 40% around the central frequency. Devices were realized by stacking different active region designs into a double-metal waveguide. They operate up to 125 K with 15 mW peak power at 10 K in pulsed mode. Smaller devices show broadband emission also in continuous wave. Time-resolved measurements of the emission spectra were realized, confirming the broadband emission within a 5 ns time window.
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