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标 题 : Lateral distributed-feedback gratings for single-mode, high-power terahertz quantum-cascade lasers
作者: Wienold, M (Wienold, M.); Tahraoui, A (Tahraoui, A.); Schrottke, L (Schrottke, L.); Sharma, R (Sharma, R.); Lu, X (Lue, X.); Biermann, K (Biermann, K.); Hey, R (Hey, R.); Grahn, HT (Grahn, H. T.)
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摘要: We report on terahertz quantum-cascade lasers (THz QCLs) based on first-order lateral distributed-feedback (lDFB) gratings, which exhibit continuous-wave operation, high output powers (>8 mW), and single-mode emission at 3.3-3.4 THz. A general method is presented to determine the coupling coefficients of lateral gratings in terms of the coupled-mode theory, which demonstrates that large coupling strengths are obtained in the presence of corrugated metal layers. The experimental spectra are in agreement with simulations of the lDFB cavities, which take into account the reflective end facets. (C) 2012 Optical Society of America
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通讯作者地址: Wienold, M (通讯作者),Paul Drude Inst Festkorperelekt, Hausvogteipl 5-7, D-10117 Berlin, Germany
电子邮件地址: wienold@pdi-berlin.de
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