



TeraNova Publications

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Period 4: 1st September 2007 – February 28th 2009

- [1] *Numerical sampling rules for paraxial regime pulse diffraction calculations*, D. P. Kelly, B. M. Hennelly, A. Grün, and K. Unterrainer, *J. Opt. Soc. Am. A* **25**, 2299-2308 (2008).
- [2] *Ultrafast probing of light-matter interaction in a mid-infrared quantum cascade laser*, W. Parz, T. Müller, J. Darmo, K. Unterrainer, M. Austerer, G. Strasser, L. R. Wilson, J. W. Cockburn, A. B. Krysa, J. S. Roberts, *Applied Physics Letters*, **93**, 091105 (2008).
- [3] *Doping dependence of LO-phonon depletion scheme THz quantum-cascade lasers*, A.M. Andrews, A. Benz, C. Deutsch, G. Fasching, K. Unterrainer, P. Klang, W. Schrenk, G. Strasser, *Materials Science and Engineering B*, **147**, S. 152 – 155 (2008).
- [4] *Terahertz quantum cascade devices: from intersubband transition to microcavity laser*, K. Unterrainer, A. Benz, J. Darmo, Ch. Deutsch, G. Fasching, J. Kröll, D.P. Kelly, M. Martl, T. Müller, W. Parz, S.S. Dhillon, C. Sirtori, A.M. Andrews, W. Schrenk, G. Strasser, X. Marcadet, M. Calligaro, H.E. Beere, and D.A. Ritchie, *IEEE Journal of Selected Topics in Quantum, Electronics*, Vol. **14**, No. 2, 307 (2008).
- [5] *Phase-resolved measurement of stimulated emission in a laser*, J. Kröll, J. Darmo, S.S. Dhillon, X. Marcadet, M. Calligaro, C. Sirtori and K. Unterrainer; *Nature*, **449**(7163), 698-701 (2007).
- [6] *Subwavelength Microdisk and Microring Terahertz Quantum-Cascade Lasers*, G. Fasching, V. Tamosiunas, A. Benz, A. M. Andrews, K. Unterrainer, R. Zobl, T. Roch, W. Schrenk, G. Strasser, *IEEE Journal of Quantum Electronics*, Vol. **43**, No. 8, 687 (2007).
- [7] *Longitudinal spatial hole burning in terahertz quantum cascade lasers*, J. Kröll, J. Darmo, K. Unterrainer, S.S. Dhillon, C. Sirtori, X. Marcadet and M. Calligaro, *Appl. Phys. Lett.*, **91**, 161108 (2007).
- [8] *Influence of doping on the performance of terahertz quantum-cascade lasers*, A. Benz, G. Fasching, A.M. Andrews, M. Martl, K. Unterrainer, T. Roch, W. Schrenk, S. Golka, G. Strasser, *Applied Physics Letters*, **90**, 101107 (2007).
- [9] *Laser local oscillators for heterodyne receivers beyond 2 terahertz*, H.-W. Huebers, H. Richter, S. Pavlov, A. Semenov, A. Tredicucci, L. Mahler, H. E. Beere, D. A. Ritchie, *Frequenz* **62**, 111 (2008).
- [10] *Terahertz quantum cascade lasers with quasi-periodic resonators*, Lukas Mahler, Alessandro Tredicucci, Richard P. Green, Fabio Beltram, Christoph Walther, Jérôme Faist, Harvey E. Beere, and David A. Ritchie, *Physica E* **40**, 2176 (2008).
- [11] *THz quantum cascade designs for optimized injection*, T. Losco, J.H. Xu, R.P. Green, A. Tredicucci, H.E. Beere, and D.A. Ritchie, *Physica E* **40**, 2207 (2008).
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- [17] *Advanced optoelectronics in III-V semiconductor compounds*. M. Först, M. Nagel, M. Awad, M. Wächter, T. Dekorsy, and H. Kurz, *phys. stat. sol. (b)* **244**, 2971-2987 (2007).
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