



TeraNova Publications

IST-511415

Period 1: 1st September 2004 – 31st August 2005

- [1] *Advances in THz quantum cascade lasers: fulfilling the application potential*, A. Tredicucci, L. Mahler, T. Losco, J. Xu, C. Mauro, R. Köhler, H. E. Beere, D. A. Ritchie, and E. H. Linfield, *Proceedings of SPIE -- Volume 5738 Novel In-Plane Semiconductor Lasers IV*, Carmen Mermelstein, David P. Bour, Editors, 146 (2005).
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- [3] *Terahertz bound-to-continuum quantum-cascade lasers based on optical-phonon scattering extraction* G. Scalari, N. Hoyler, M. Giovannini and J. Faist, *Appl. Phys. Lett.* 86, 181101 (2005).
- [4] *Buried waveguides in terahertz quantum cascade lasers based on two-dimensional surface plasmon modes*, J. Alton, S. S. Dhillon, C. Sirtori, S. Barbieri, A. de Rossi, M. Calligaro, H. E. Beere, and D. A. Ritchie, *Appl. Phys. Lett.*, 86, 071109 (2005).
- [5] *Buried heterostructure 2.9-THz quantum cascade lasers operating up to 77K in continuous wave*, J. Alton, S. S. Dhillon, C. Sirtori, S. Barbieri, A. de Rossi, M. Calligaro, H. E. Beere, and D. A. Ritchie, *Proc. SPIE Int. Soc. Opt. Eng.* 5738, 159 (2005).
- [6] *Ultra-low threshold current quantum cascade lasers based on double-metal buried strip waveguides*, S. S. Dhillon, J. Alton, S. Barbieri, C. Sirtori, A. de Rossi, M. Calligaro, H. E. Beere, and D. A. Ritchie, *Appl. Phys. Lett.*, 87, 071107 (2005).
- [7] *Time and frequency resolved THz spectroscopy of micro- and nano-systems*, J. Kröll, J. Darmo, K. Unterrainer, *Acta Physica Polonica* 107, 92-98 (2005).
- [8] *Passive Millimetre-Wave & Terahertz Imaging and Technology*, J M Chamberlain, Proceedings of SPIE Volume 5619 (SPIE, Bellingham, WA, 2004), pp1-5 [ISBN: 0277-786X]
- [9] *Generation of Terahertz Radiation in Nonlinear Waveguides*, AS Nikoghosyan, EM Laziev, RM Martirosyan, Hakhoumian, JM Chamberlain, RA Dudley and NN Zinov'ev, Conference Digest Of The 2004 Joint 29th International Conference On Infrared And Millimeter Waves And 12th International Conference On Terahertz Electronics (IEEE, New York) Editors: Thumm M, Wiesbeck W, pp 313-314, 2004 ISBN: 0-7803-8490-3
- [10] *Terahertz Transition Radiation*, A S Nikoghosyan, EM Laziev, RM Martirosyan, AA Hakhoumian, J M Chamberlain, RA Dudley & NN Zinov'ev, Conference Digest Of The 2004 Joint 29th International Conference On Infrared and Millimeter Waves And 12th International Conference On Terahertz Electronics (IEEE, New York) Editors: Thumm M, Wiesbeck W, pp 159-160, 2004 ISBN: 0-7803-8490-3
- [11] *THz sideband generation at telecom wavelengths in a GaAs-based quantum cascade laser*, S. S. Dhillon, C. Sirtori, A. de Rossi, M. Calligaro, H. E. Beere, S. Barbieri, E. H. Linfield, D. A. Ritchie, *Appl. Phys. Lett.*, 87, 071101 (2005).
- [12] *Continuous-wave THz generation through photomixing using a dual-frequency Yb³⁺:KGd(WO₄)₂ laser*, R. Czarny, M. Alouini, C. Larat, S. Dhillon, M. Krakowsky, S. Bansropun, V. Ortiz, C. Sirtori, B. Gerard and D. Dolfi, Proceedings of SPIE, Passive Millimeter-Wave and Terahertz Imaging and Technology, 5619, 198-207 (2004).
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- [15] *Modular parallel-plate THz components for cost-efficient biosensing systems*. M. Nagel, P. Haring Bolivar and H. Kurz, *Sem. Sc. and Techn.* 20, 281-85 (2005).
- [16] *Asynchronous optical sampling for high-speed characterization of integrated resonant THz-sensors*. C. Janke, M. Först, M. Nagel, and H. Kurz, *Opt. Lett.* 30, 11, 1405-1408 (2005)
- [17] *Cost-efficient THz-resonators for label-free detection of DNA hybridization*. M. Nagel and H. Kurz, *Proc. SPIE Vol. 5864*, p. 152-160 (2005).



- [18] *Terahertz Quantum Cascade Lasers - first demonstration and novel concepts* Alessandro Tredicucci, Rüdiger Köhler, Lukas Mahler, Harvey E Beere, Edmund H Linfield, and David A Ritchie *Semicond. Sci. Technol.* 20, S222 (2005)
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- [31] High-performance operation of single-mode terahertz quantum cascade lasers with metallic gratings. Lukas Mahler, Alessandro Tredicucci, Rüdiger Köhler, Fabio Beltram, Harvey E. Beere, Edmund H. Linfield, and David A. Ritchie. *Appl. Phys. Lett.* 87, October 24 (2005).
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- [34] *Chemical recognition in terahertz time-domain spectroscopy and imaging*, B. Fischer, M. Hoffmann, H. Helm, G. Modjesch, and P. Uhd Jepsen, *Semicond. Sci. Technol.* 20, S246-S253 (2005).