



TeraNova Publications

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Period 2: 1st September 2005 – 31st August 2006

- [1] *Frequency-dependent characterization of THz Sommerfeld wave propagation on single-wires*. M. Wächter, M. Nagel, and H. Kurz, *Opt. Expr.* **13** (26): 10815-10822 (2005).
- [2] *THz biosensing devices: fundamentals and technology*. M. Nagel, M. Först and H. Kurz, *J. Phys.: Condens. Matter* **18**, 601–618 (2006).
- [3] *Corrugated waveguide based genomic biochip for marker-free THz read-out*. M. Nagel and H. Kurz, *Int. J. Infrared Millimeter Waves*, **27**, 4, 517-529 (2006).
- [4] *Low index discontinuity THz waveguides*. M. Nagel, A. Marchewka and H. Kurz, *Opt. Express*, **14**, 21 (2006).
- [5] *Scattering in THz imaging*, J. R. Fletcher, G. P. Swift, De Chang Dai, D. Beggs, R. A. Abram, M. Kaliteevski, J. Levitt, A. Gallant, J. M. Chamberlain, *Proceedings of SPIE Volume: 5989*. Technologies for Optical Countermeasures II; Femtosecond Phenomena II; and Passive Millimetre-Wave and Terahertz Imaging II Editor(s): David H. Titterton, Sean M. Kirkpatrick, Razvan Stoian, Roger Appleby, J. Martyn Chamberlain, Keith A. Krapels/ Pages 320-325 [ISBN 0-8194-6011-7].
- [6] *Terahertz scattering: comparison of a novel theoretical approach with experiment*, G. Peter Swift, DeChang Dai, John R. Fletcher, Andrew J. Gallant, James A. Levitt, Richard A. Abram, Daryl M. Beggs, Mikhail A. Kaliteevski, J. Martyn Chamberlain. *Proc. SPIE Vol. 6120*, p. 186-194, Terahertz and Gigahertz Electronics and Photonics V; R. Jennifer Hwu, Kurt J. Linden; Eds. (ISBN 0-8194-6162-8).
- [7] *Propagation of terahertz radiation through random structures: a novel theoretical approach and experimental validation*, J.R. Fletcher, G.P. Swift, De Chang Dai, J.A. Levitt and J.M. Chamberlain. *Journal of Applied Physics*. Accepted for Publication.
- [8] *Doping in quantum cascade lasers. II. GaAs/Al_{0.15}Ga_{0.85}As terahertz devices*, L. Ajili, G. Scalari, M. Giovannini, N. Hoyler and J. Faist, *J. Appl. Phys.*, vol. **100**, pp. 043102–1–043102–3 (2006).
- [9] *Electrically switchable, two-color quantum cascade laser emitting at 1.39 and 2.3 THz*, G. Scalari, C. Walther, J. Faist, H. Beere and D. Ritchie, *Appl. Phys. Lett.*, vol. **88**, no. 14, pp. 141102–1–141102–3 (2006).
- [10] *Biomedical terahertz imaging with a quantum cascade laser*, S. Kim, F. Hatami, J. Harris, A. Kurian, J. Ford, D. King, G. Scalari, M. Giovannini, N. Hoyler, J. Faist and G. Harris, *Appl. Phys. Lett.*, vol. **88**, no. 15, pp. 153903–1–153903–2 (2006).
- [11] *Turn-key compact high temperature terahertz quantum cascade lasers: imaging and room temperature detection*, E. Brundermann, M. Havenith, G. Scalari, M. Giovannini, J. Faist, J. Kunsch, L. Me-chold and M. Abraham, *Optics Express*, vol. **14**, no. 05, pp. 1829–1841 (2006).
- [12] *Design, fabrication and optical characterization of quantum cascade lasers at terahertz frequencies using photonic crystal reflectors*, L.A. Dunbar, V. Moreau, R. Ferrini, R. Houdré, L. Sirigu, G. Scalari, M. Giovannini, N. Hoyler and J. Faist, *Optics Express*, vol. **13**, no. 22, pp. 8960–8968 (2005).
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- [22] *Contact-free determination of alcohol content with self-referenced terahertz time-domain spectroscopy*, H. Merbold and P. Uhd Jepsen, in preparation for *J. Opt. Soc. Am. B*, August 2006.
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