

Literaturverzeichnis

- [1] R. Majidi-Ahy, C. Nishimoto, M. Riazat, M. Glenn, S. Silverman, S. Weng, Y. Pao, G. Zdasiuk, S. Bandy, and Z. Tan, *100 GHz high-gain InP MMIC cascade amplifier*, 1990 GaAs IC Symp., New Orleans, USA, Oct. 7-10, 1990
- [2] H. Wang, R. Lai, D.C.W. Lo, D.C. Steit, P.H. Liu, R.M. Dia, M.W. Pospieszalski, and J. Berenz, *A 140-GHz monolithic low noise amplifier*, IEEE Microwave and Guided Wave Lett., vol. 5 (5), 1995, pp. 150-152
- [3] S.E. Rosenbaum, B.K. Kormanyos, L.M. Jelloian, M. Matloubian, A.S. Brown, L.E. Larson, L.D. Nguyen, M.A. Thompson, L.P.B. Katehi, and G.M. Rebeiz, *155- to 213-GHz AllnAs/GalnAs/InP HEMT MMIC oscillator*, IEEE Trans. Microwave Theory Techn., vol. 43 (4), 1995, pp. 927-932
- [4] U.K. Mishra, A.S. Brown, and S.E. Rosenbaum, *DC and RF performance of 0.1 μm gate length AllnAs-GalnAs pseudo-morphic HEMTs*, Techn. Digest, 1988 Int. Electron Device Meeting, San Francisco, USA, Dec. 4-11, 1988
- [5] P. Ho, M.Y. Kao, P.C. Chao, K.H.G. Duh, J.M. Ballingall, S.T. Allen, A.J. Tessmer, and P.M. Smith, *Extremely high gain 0.15 μm gate-length InAlAs/InGaAs/InP HEMTs*, Electron. Lett., vol. 27 (4), 1991, pp. 325-326
- [6] K. de Kort, *The role of internal waveform measurements in IC development*, Microelec. Eng., vol. 24, 1994, pp. 365-376
- [7] H. Takahashi, S. Aoshima, and Y. Tsuchiya, *How the electro-optic probing system can contribute to LSI testing*, Proc. of IMTC '94, Hamamatsu, May 10-12, 1994, pp. 1484-1491
- [8] I. Bardi and Z. Cendes, *New Directions in HFSS for Designing Microwave Devices*, Microwave Journal, August 1998, pp. 22-36
- [9] Th. Sporkmann, *The Current State of the Art in Coplanar MMICs*, Microwave Journal, August 1998, pp. 60-72
- [10] *Picoprobe Model 120*, G.G.B. Industries Inc., Naples, FL, USA, Produkt-Broschüre
- [11] Hewlett-Packard Application Note *HP 54124T*

-
- [12] Hewlett-Packard Application Note *HP 8510*
- [13] E.M. Godshalk, *A W-band Wafer Probe*, IEEE MTT-S Digest, 1993, pp. 171-174
- [14] R. Majidi-Ahy and D.M. Bloom, *120-GHz Active Wafer Probes for Picosecond Device Measurement*, OSA Proc. Picosecond Electronics and Optoelectronics, OSA Proc. Series, vol. 4, 1989
- [15] S.M.J. Liu and G.G. Ball, *A new probe for W-band on-wafer measurements*, IEEE MTT-S Digest, 1993, pp. 1335-1338
- [16] G. David, *Höchstfrequenz-Charakterisierung von monolithisch integrierten Mikrowellenbauelementen und -schaltungen durch zweidimensionale elektrooptische Feldverteilungsmessungen*, Dissertation, Fachgebiet Optoelektronik, Gerhard-Mercator-Universität Gesamthochschule Duisburg, 1996
- [17] K.S. Giboney, S.T. Allen, M.J. Rodwell, and J.E. Bowers, *Picosecond Measurements by Free-Running Electro-Optic Sampling*, IEEE Phot. Techn. Lett., vol. 6 (11), 1994, pp. 1353-1355
- [18] N. Sahri, T. Nagatsuma, M. Yaita, and N. Shimizu, *Picosecond Synchronous Electro-Optic Sampling with a Jitter-Reduced Gain-Switched Laser Diode*, Jpn. J. Appl. Phys., vol. 37, 1998, pp. L39-L41
- [19] S. Loualiche and F. Clerot, *Electro-optic microwave measurements in the frequency domain*, Appl. Phys. Lett. **61** (18), 1992, pp. 2153-2155
- [20] Ph. Müller, *Sondage Electro-Optique de Circuits Intégrés Hyperfréquences*, Dissertation, Ecole Nationale Supérieure des Télécommunications, Paris, Frankreich, 1997
- [21] M. Batinic, B. Weisbrodt, W. Mertin, and E. Kubalek, *Comparison of measurement results obtained by electron beam testing and indirect electro-optic sampling*, Microelec. Eng., vol. 32, 1996, pp. 33-40
- [22] W. Mertin, *New Aspects in Electro-Optic Sampling*, Microelec. Eng., vol. 31, 1996, pp. 365-376
- [23] A. Cutolo, *Selected contactless optoelectronic measurements for electronic applications*, Rev. of Scientific Instr., vol. 69 (2), 1998, pp. 337-360 (invited)
- [24] A. Leyk and E. Kubalek, *Two-dimensional measurements of microwave voltage-amplitude and phase distributions within a*

- monolithic interdigital capacitor with a high frequency scanning force microscope test system*, Microelec. Eng., vol. 31, 1996, pp. 187-194
- [25] A.S. Hou, F. Ho, and D.M. Bloom, *Picosecond Electrical Sampling using a Scanning Force Microscope*, Electron. Lett., vol. 28 (25), 1992, pp. 2302-2303
- [26] A. Leyk, C. Böhm, D.W. van der Weide, and E. Kubalek, *104 GHz signals measured by high frequency scanning force microscope test system*, Electron. Lett., vol. 31 (13), 1995, pp. 1046-1047
- [27] Th.P. Budka, S.D. Waclawik, and G.M. Rebeiz, *A Coaxial 0.5-18 GHz Near Field Measurement System for Planar Microwave Circuits Using Integrated Probes*, IEEE Trans. Microwave Theory Techn., vol. 44 (12), 1996, pp. 2174-2184
- [28] Th.P. Budka, E.M. Tentzeris, S.D. Waclawik, N.I. Dib, L.P.B. Katehi, and G.M. Rebeiz, *Near-Field Mapping Above A Coupled-Line Filter And A MMIC*, Microwave Journal, March 1998, pp. 94-106
- [29] S.-L.L. Huang, E.A. Chauchard, C.H. Lee, H.-L.A. Hung, T.T. Lee, and T. Joseph, *On-Wafer Photoconductive Sampling of MMICs*, IEEE Trans. Microwave Theory Techn., vol. 40 (12), 1992, pp. 2312-2320
- [30] H.-L.A. Hung, P. Polak-Dingels, K.J. Webb, T. Smith, H.-C. Huang, and C.H. Lee, *Millimeter-wave monolithic integrated circuit characterization by picosecond optoelectronic technique*, IEEE Trans. Microwave Theory Techn., vol. 37 (8), 1992, pp. 2312-2320
- [31] J. Kim, J. Son, S. Wakana, J. Nees, S. Williamson, J. Withaker, Y. Kwon, and D. Pavlidis, *Time-domain network analysis of mm-wave circuits based on a photoconductive probe sampling technique*, IEEE MTT-S Digest, 1993, pp. 1359-1362
- [32] T. Pfeifer, H.-M. Heiliger, E. Stein v. Kaminski, H.G. Roskos, and H. Kurz, *Fabrication and characterization of freely positionable silicon-on-sapphire photoconductive probes*, J. Opt. Soc. Am. B, vol. 11 (12), 1994, pp. 2547-2552
- [33] T. Pfeifer, H.-M. Heiliger, T. Löffler, H.G. Roskos, and H. Kurz, *Picosecond Optoelectronic On-Wafer Characterization of Coplanar Waveguides on High-Resistivity Si and Si/SiO₂ Substrates*, Microelec. Eng., vol. 31, 1996, pp. 385-395
- [34] G. David, J.F. Whitaker, T.R. Weatherford, K. Jobe, S. Meyer, M. Bustamante, W. Goyette, S. Thomas III, and K. Elliot, *DC-to-mm-*

- Wave-Absolute Potential Measurements Inside Digital Microwave ICs Using a Micromachined Photoconductive Sampling Probe*, IEEE MTT-S Int. Symposium, Baltimore, USA, June 7-12, 1998
- [35] R.K. Lai, J.-R. Hwang, J. Nees, Th.B. Norris, and J.F. Whitaker, *A fiber-mounted, micromachined photoconductive probe with 15 nV/Hz^{1/2} sensitivity*, Appl. Phys. Lett. **69** (13), 1996, pp. 1843-1845
- [36] E. Ledbetter, T. Weatherford, G. David, J. Hayden, R.K. Lai, and J.F. Whitaker, *In-situ picosecond resolution measurements of SEU transients in GaAs Logic*, accepted for IEEE Trans. Nuclear Sci.
- [37] K.J. Weingarten, M.J.W. Rodwell, and D. Bloom, *Picosecond optical sampling of GaAs integrated circuits*, IEEE J. Quantum Electron., vol. 24 (2), 1988, pp. 198-220
- [38] J.A. Valdmanis, G. Mourou, and C.W. Gabel, *Picosecond Electro-Optic Sampling System*, Appl. Phys. Lett. **41** (3), 1982, pp. 211-212
- [39] B.H. Kolner, D.M. Bloom, and P.S. Cross, *Electro-Optic Sampling with Picosecond Resolution*, Electron. Lett, vol. 19 (15), 1983, pp. 574-575
- [40] F. Pockels, *Lehrbuch der Kristallographie*, Leipzig, Teubner, 1906
- [41] J.A. Valdmanis and G. Mourou, *Electro-optic Sampling. Testing Picosecond Electronics; Part 1: Principles and Embodiments*, Laser Focus / Electro-Optics, February 1986, pp. 84-96
- [42] J.A. Valdmanis, *Electro-optic measurement techniques for integrated picosecond materials, devices, and integrated circuits*, in: Semiconductors and Semimetals, vol. 28: Measurement of high speed signals in solid state devices, R.B. Marcus (ed.), Academic Press, Inc., 1990, pp. 135-219
- [43] K. Yang, G. David, S. Robertson, J.F. Whitaker, and L. Katehi, *High-Resolution Electro-Optic Mapping of Near-Field Distributions in Integrated Microwave Circuits*, IEEE MTT-S Int. Symposium, Baltimore, USA, June 7-12, 1998
- [44] Z.H. Zhu, J.P. Weber, S.Y. Wang, and S. Wang, *New measurement technique: cw electro-optic probing of electric fields*, Appl. Phys. Lett. **49** (8), 1986, pp. 432-434
- [45] M.J.W. Rodwell, M. Riazat, K.J. Weingarten, B.A. Auld, and D.M. Bloom, *Internal microwave propagation and distortion characteristics of a traveling-wave amplifier studied by electrooptic sampling*, IEEE Trans. Microwave Theory Techn., vol. 34, 1986, pp. 1356-1362

- [46] M.G. Li, E.A. Chauchard, C.H. Lee, and H.-L.A. Hung, *Two-dimensional field mapping of GaAs microstrip circuit by electrooptic sensing*, OSA Proc. Picosecond Electronics and Optoelectronics, Salt Lake City, USA, March 13-15, 1991, pp. 54-58
- [47] G. David, S. Redlich, W. Mertin, R.M. Bertenburg, S. Koßlowski, F.J. Tegude, and D. Jäger, *Two-dimensional direct electro-optic field mapping in a monolithic integrated GaAs amplifier*, Proc. 23rd EuMC 1993, Madrid, Spain, 1993, pp. 497-499
- [48] W. Mertin, A. Leyk, F. Taenzler, T. Novak, G. David, D. Jäger, and E. Kubalek, *Characterization of a MMIC by direct and indirect electro-optic sampling and by network analyzer measurements*, Microelec. Eng., vol. 24, 1994, pp. 377-384
- [49] R. Majidi-Ahy, M. Shakouri, and D.M. Bloom, *100 GHz Active Electronic Probe for On-Wafer S-Parameter measurements*, Electron. Lett., vol. 25 (13), 1989, pp. 828-830
- [50] G. David, R. Kremer, S. Redlich, and D. Jäger, *Analysis of wave propagation effects in MMICs using two-dimensional electro-optic field mapping*, Proc. MIOP '95, Sindelfingen, Germany, pp. 293-297
- [51] N. de B. Baynes, J. Allam, and J.R.A. Cleaver, *Mode-Discriminating Electrooptic Sampling for Separating Guided and Unguided Modes on Coplanar Waveguide*, IEEE Microwave and Guided Wave Lett., vol. 6 (3), 1996, pp. 126-128
- [52] M.Y. Frankel, *500-GHz Characterization of an Optoelectronic S-parameter Test Structure*, IEEE Microwave and Guided Wave Lett., vol. 4 (4), 1994, pp. 118-120
- [53] G. David, P. Schmitz, S. Redlich, J. Buschke, R. Kremer, and D. Jäger, *Mode analysis of wave propagation on coplanar transmission lines using electro-optic field mapping*, APMC '94, Tokyo, Japan, Dec. 6-9, 1994, pp. 149-152
- [54] G. David, R. Tempel, I. Wolff, and D. Jäger, *Analysis of microwave propagation effects using 2D electro-optic field mapping techniques*, Optical and Quantum Electronics, Special Issue on Optical Probing of Ultrafast Devices and Integrated Circuits, 1996, pp. 919-931
- [55] W. von Wendorff, M. Stopka, and D. Jäger, *Electro-optic sampling of nonlinear effects in Schottky coplanar lines*, Microwave Eng., vol. 16, 1992, pp. 305-312

-
- [56] V. Thomas, *High Accuracy Evaluation Method for GaAs Microwave Integrated Circuit Characterization by Frontside Electro-Optic Probing*, *Microelec. Eng.*, vol. 12, 1990, pp. 135-142
- [57] M. Rottenkolber, W. Thomann, and P. Russer, *Characterization and Optimization of Electrooptic Sampling by Volume-Integral-Method and Application of Space-Harmonic Potential*, *IEEE MTT-S Digest*, 1993, pp. 265-268
- [58] J.L. Freeman, S.R. Jefferies, and B.A. Auld, *Full-field modeling of the longitudinal electro-optic probe*, *Optics Lett.*, vol. 12 (10), 1987, pp. 795-797
- [59] J.L. Freeman, D.M. Bloom, S.R. Jefferies, and B.A. Auld, *Accuracy of electro-optic measurements of coplanar waveguide transmission lines*, *Appl. Phys. Lett.* **53** (1), 1988, pp. 7-9
- [60] L. Duvillaret, J.-M. Lourtioz, and L. Chusseau, *Absolute voltage measurements on III-V integrated circuits by internal electro-optic sampling*, *Electron. Lett.*, vol. 31 (1), 1995, pp. 23-24
- [61] D. Bhattacharya, H. Erlig, M.E. Ali, S. Wang, H.R. Fetterman, R. Lai, and D.C. Streit, *The Optical Response of Epitaxial Lift-Off HEMTs to 140 GHz*, *IEEE J. Quantum Electron.*, vol. 33 (9), 1997, pp. 1507-1515
- [62] M.Y. Frankel, J.F. Whitaker, and G.A. Mourou, *Optoelectronic Transient Characterisation of Ultrafast Devices*, *IEEE J. Quantum Electron.*, vol. 28 (10), 1992, pp. 2313-2324
- [63] J.A. Valdmanis, *1 THz-Bandwidth prober for high-speed devices and integrated circuits*, *Electron. Lett.*, vol. 23 (24), 1987, pp. 1308-1310
- [64] G. David, P. Bussek, U. Auer, F.J. Tegude, and D. Jäger, *Electro-optic probing of RF signals in submicrometre MMIC devices*, *Electron. Lett.*, vol. 31 (25), 1995, pp. 2188-2189
- [65] A. Nahata, D.H. Austin, C. Wu, and T.F. Heinz, *Coherent detection of freely propagating terahertz radiation by electro-optic sampling*, *Appl. Phys. Lett.* **68** (2), 1996, pp. 150-152
- [66] A. Nahata, A.S. Weling, and T.F. Heinz, *A wideband coherent terahertz spectroscopy system using optical rectification and electro-optic sampling*, *Appl. Phys. Lett.* **69** (16), 1996, pp. 2321-2323
- [67] Q. Wu and X.-C. Zhang, *Free-space electro-optic sampling of terahertz beams*, *Appl. Phys. Lett.* **67** (24), 1995, pp. 3523-3525

- [68] M. Vossebürger, M. Brucherseifer, G.Ch. Cho, H.G. Roskos, and H. Kurz, *Propagation effects in electro-optic sampling of terahertz pulses in GaAs*, Appl. Optics, vol. 37 (15), 1998, pp. 3368-3371
- [69] D. Le Quang, D. Erasme, and B. Huyart, *Fabry-Perot Enhanced Real-Time Electro-Optic Probing of MMICs*, Electron. Lett., vol. 29 (5), 1993, pp. 498-499
- [70] H.K. Heinrich, D.M. Bloom, and B.R. Hemenway, *Noninvasive sheet charge density probe for integrated silicon devices*, Appl. Phys. Lett. **48** (16), 1986, pp. 1066-1068
- [71] G. Breglio, Dissertation, Neapel, Italien, 1993
- [72] A. Nahata, T.F. Heinz, and J.A. Misewich, *High-speed electrical sampling using optical second-harmonic generation*, Appl. Phys. Lett. **69** (6), 1996, pp. 746-748
- [73] W.H. Knox, J.E. Henry, B. Tell, K.D. Li, D.A.B. Miller, and D.S. Chemla, *Femtosecond Excitonic Electroabsorptive Sampling*, OSA Proc. Picosecond Electronics and Optoelectronics, vol. 4, at 1989 OSA Topical Meeting, Salt Lake City, USA, March 8-10, 1989, pp. 264-265
- [74] G. David, S. Redlich, W. von Wendorff, and D. Jäger, *Electro-optic probing of coplanar transmission lines and optoelectronic microwave devices up to 40 GHz*, Proc. MIOP '93, Sindelfingen, Germany, May 25-27, 1993, pp. 271-275
- [75] D.S. Chemla, I. Bar-Joseph, C. Klingshirn, D.A.B. Miller, and J.M. Kuo, *Optical reading of field-effect transistors by phase-space absorption quenching in a single InGaAs quantum well conducting channel*, Appl. Phys. Lett. **50** (10), 1987, pp. 585-587
- [76] W. Martin, *Kontaktloses Testen monolithisch integrierter Mikrowellenschaltungen mit der direkten elektrooptischen Testtechnik*, Dissertation, Fachgebiet Werkstoffe der Elektrotechnik, Gerhard-Mercator-Universität Gesamthochschule Duisburg, 1994
- [77] K.J. Ebeling, *Integrierte Optoelektronik*, Springer, Berlin, Heidelberg, 1989
- [78] INSPEC, The Institution of Electrical Engineers, *Properties of GaAs*, 2nd Edition, London und New York, 1990
- [79] Ch. Kittel, *Einführung in die Festkörperphysik*, 8., erweiterte Auflage, R. Oldenbourg, München, Wien, 1989

-
- [80] H. Fouckhardt, *Photonik*, Teubner Studienbücher Angewandte Physik, Stuttgart, 1994
- [81] H. Morkoç, B. Sverdlov, and G.-B. Gao, *Strained Layer Heterostructures and their Application to MODFETs, HBTs and Lasers*, Proc. IEEE, vol. 81 (4), 1993, pp. 492-556
- [82] A. Stöhr, Entwicklung und Realisierung elektrooptischer Wellenleiter-Schalter für photonische Systeme im Wellenlängenbereich um 1 μm , Dissertation, Fachgebiet Optoelektronik, Gerhard-Mercator-Universität Gesamthochschule Duisburg, 1997
- [83] St. Zumkley, Vertikale elektrooptische Modulatoren für die optische Verbindungstechnik im Gbit/s-Bereich, Dissertation, Fachgebiet Optoelektronik, Gerhard-Mercator-Universität Gesamthochschule Duisburg, 1997
- [84] L. Bergmann, C. Schaefer, *Lehrbuch der Experimentalphysik, Band III, Optik*, H. Gobrecht (Herausg.), 8. Auflage, Walter de Gruyter, Berlin, New York, 1987
- [85] F. Taenzler, W. Mertin, G. David, D. Jäger, and E. Kubalek, *Experimental Characterization of the Perturbations of Microwave Devices by the Electro-Optic Probe Tip*, Microelec. Eng., vol. 24, 1994, pp. 123-130
- [86] M.Y. Frankel, J.F. Whitaker, G.A. Mourou, and J.A. Valdmanis, *Experimental Characterization of External Electrooptic Probes*, IEEE Microwave and Guided Wave Lett., vol. 1 (3), 1991, pp. 60-62
- [87] Produktbeschreibung zu *Mira*[®] 900-F, Coherent, Inc., 1997
- [88] Produktbeschreibung zu *Synchro-Lock*[™] zu *Mira*, Coherent, Inc., 1997
- [89] T. Shibata, T. Nagatsuma, and E. Sano, Effective optical transit time effect in direct electro-optic sampling of GaAs coplanar integrated circuits, Electron. Lett., vol. 25 (12), 1989, pp. 771-773
- [90] M.K. Ravel, St.H. Pepper, and M.D. Jones, *A compact noninvasive probing system for ultra-high speed testing of MMICs and MCMs*, IEEE MTT-S Int. Symposium, Atlanta, USA, June 14-18, 1993
- [91] J.-M. Shien, S.-C. Liu, and C.-L. Pan, *Characterization and reduction of phase noise in passively mode-locked Ti:sapphire lasers with intracavity saturable absorbers*, J. Opt. Soc. Am., vol. 15 (6), 1998, pp. 1802-180

- [92] M.J.W. Rodwell, D.M. Bloom, and K.J. Weingarten, Subpicosecond Laser Timing Stabilization, *IEEE J. Quantum Electron.*, vol. 25 (4), 1989, pp. 817-827
- [93] W.H. Knox and F.A. Beisser, *Two-wavelength synchronous generation of femtosecond pulses with < 100-fs jitter*, *Optics Lett.*, vol. 17 (14), 1992, pp. 1012-1014
- [94] New Focus, *Model 1002/1006*, New Focus Katalog 1998/99, New Focus Inc., Sunnyvale, CA, USA
- [95] D. Le Quang, D. Erasme, and B. Huyart, *MMIC-Calibrated Probing by CW Electrooptic Modulation*, *IEEE Trans. Microwave Theory Techn.*, vol. 43 (5), 1995, pp. 1031-1036
- [96] R.Th. Hawkins II, M.D. Jones, St.H. Pepper, and J.F. Goll, *Comparison of Fast Photodetector Response Measurements by Optical Heterodyne and Pulse Response Techniques*, *J. Lightwave Techn.*, vol. 9 (10), 1991, pp. 1289-1294
- [97] G.D. Goodno, D. Dadusc, and R.J.D. Miller, *Ultrafast heterodyne-detected transient-grating spectroscopy using diffractive optics*, *J. Opt. Soc. Am.*, vol. 15 (6), 1998, pp. 1791-1794
- [98] J.K.A. Everard, *Novel Coplanar Three-Wave Mixer for Coherent and Heterodyne Detection of Optical Signals*, *Electron. Lett.*, vol. 24 (14), 1988, pp. 883-885
- [99] P. Paulus, *Pikosekunden-Optoelektronik – Physikalische Grundlagen und Anwendungen des optoelektronischen Schalters*, Dissertation, Institut für Angewandte Physik, Westfälische Wilhelms-Universität Münster, 1988
- [100] J. Satoh, H. Namba, T. Kikuchi, K. Yamada, H. Yoshioka, M. Tanaka, and K. Shono, *Optical beam induced current techniques as a failure analysis tool of EPROMs*, *IEICI Trans. Electronics*, vol. E77-C (4), 1994, pp. 574-578
- [101] X. Tang, P.J.M. Boots, and L.J. Giling, *OBIC studies: Classification of structural defects and their influence on the performance of MOCVD grown GaAs solar cells*, *Proc. of the 21st IEEE Photovoltaic Specialists Conf.*, Kissimmee, USA, may 21-25, 1990, pp. 348-352
- [102] C. Bombach, V. Großer, W. Faust, and B. Michel, *Laseroptische Analysen an Miniaturbauelementen*, *Proc. Micro Materials '95*, Berlin, Germany, Nov. 28-29, 1995, pp 599-605

-
- [103] D.R. Sandison, D.W. Piston, R.M. Williams, and R.M. Webb, *Quantitative comparison of background rejection, signal-to-noise ratio, and resolution in confocal and full-filed laser scanning microscopes*, Appl. Optics, vol. 34 (9), 1995, pp. 3576-3588
- [104] Operator`s Manual, *Model EFL-R98-TS*, MPB Technologies Inc., Dorval, Québec, Kanada
- [105] J. Zhang, C.-Y. Yue, G.W. Schinn, W.R.L. Clements, and J.W.Y. Lit, *Stable Single-Mode Compound-Ring Erbium-Doped Fiber Laser*, J. Lightwave Technol., vol. 14 (1), 1996, pp. 104-109
- [106] Instruction Manual, *TL-Series™*, Burleigh Instruments Inc., Fishers, N.Y., USA
- [107] B.G. Koehler and J.E. Bowers, *In-line single-mode fiber polarization controllers at 1.55, 1.3 and 0.63 μm* , Appl. Optics, vol. 24 (3), 1985, pp. 349-353
- [108] G. Bendelli and S. Donati, *Optical Isolators for Telecommunications: Review and Current Trends*, Optical Communications, vol. 3 (4), 1992, p. 379
- [109] Produktkatalog Laser 2000, Wessling b. München
- [110] Instruction Manual, *GRIN-Rod Lens Starter Kit F-GRK1*, Newport Corp., Irvine, CA, USA
- [111] Katalog *Optics 1997/98*, Newport Corp., Irvine, CA, USA
- [112] J.M. Chwalek and D.R. Dykaar, *A mixer based electro-optic sampling system for submillivolt signal detection*, Rev. Sci. Instrum., vol. 61 (4), 1990, pp. 1273-1276
- [113] R.A. Marsland, *Balanced photoreceivers challenge shot-noise limit*, Laser Focus World, March 1994, pp. S41-S43
- [114] New Focus, *Model 1617-AC*, New Focus Katalog 1998/99, New Focus Inc., Sunnyvale, CA, USA
- [115] D. Jäger, *Slow-Wave Propagation Along Variable Schottky-Contact Microstrip Line*, IEEE Trans. Microwave Theory Technol., vol. MTT-24 (9), 1976, pp. 566-573
- [116] M. Alles, R. Heinzelmann, R. Hülsewede, R. Kremer, S. Redlich, A. Stöhr, and D. Jäger, *Wave propagation in planar structures for travelling-wave semiconductor devices*, PIERS `96, Innsbruck, Austria, (invited paper)

- [117] M. Alles, U. Auer, F.-J. Tegude, and D. Jäger, *Millimeterwave photodetectors*, MIO P'97, Sindelfingen, Germany, April 22-24, 1997 (invited paper)
- [118] M. Alles, U. Auer, F.-J. Tegude, and D. Jäger, *High-Speed Travelling-Wave Photodetectors for Optical Millimeterwave Transmission Operating at 1.55 μm* , Workshop MMMCOM, Dresden, Germany, May 12-13, 1997
- [119] M. Alles, U. Auer, F.-J. Tegude, and D. Jäger, *High-Speed Travelling-Wave Photodetectors for Wireless Optical Millimeter Wave Transmission*, MWP'97 Int. Conf., Duisburg/Essen, Germany, Sep. 3-5, 1997
- [120] M. Alles, U. Auer, F.-J. Tegude, and D. Jäger, *High-Speed Travelling-Wave Photodetectors for Optical Generation of Millimeterwaves*, APMC'97, Hongkong, China, Dec. 2-5, 1997
- [121] I.V. Ryjenkova, M. Alles, and D. Jäger, Nonlinear Travelling Wave Photodetector for Millimeter-Wave Harmonic Frequency Generation, *J. Microwave Optoelectron.*, vol. XLVIII, August 1997, pp. 14-17
- [122] Katalog *NanoPositionierung*, Physik Instrumente (PI) GmbH & Co., Waldbronn, Deutschland, 1998
- [123] M. Heinsdorf, *Herstellung und Charakterisierung von Wanderwellen-Photodetektoren auf InP-Substrat*, Studienarbeit, Fachgebiet Optoelektronik, Gerhard-Mercator-Universität Gesamthochschule Duisburg, 1996
- [124] H.-G. Unger, *Elektromagnetische Wellen in Leitungen*, Hüthig, Heidelberg, 3. korrigierte und erweiterte Auflage, 1991
- [125] M. Alles, Dissertation, Fachgebiet Optoelektronik, Gerhard-Mercator-Universität Gesamthochschule Duisburg (in Vorbereitung)
- [126] Katalog *Photonics 1997/98*, Newport Corp., Irvine, CA, USA
- [127] R.T. Ramos and A.J. Seeds, *Fast heterodyne optical phase-lock loop using double quantum well laser diodes*, *Electron. Lett.*, vol. 28 (1), 1992, pp. 82-83
- [128] M. Jiang, W. Sha, L. Rahman, B.C. Barnett, J.K. Anderson, M.N. Islam, and K.V. Reddy, *Synchronization of two passively mode-locked erbium-doped fiber lasers by an acousto-optic modulator and grating scheme*, *Optics Lett.*, vol 21 (11), 1996, pp. 809-811

-
- [129] Operation Manual, *Lock-In Amplifier Model SR510*, Stanford Research Systems, Inc., Palo Alto, CA, USA
 - [130] Produktbeschreibung *T2000 Series*, Laser Power®, San Diego, CA, USA
 - [131] Produktbeschreibung *DL 100*, TUI Laser GmbH, Gräfelfing
 - [132] W. Kaenders, *Littrow Diode Lasers Catch the Attention of Industry*, EuroPhotonics, December/ January 1998, pp. 30-31
 - [133] L. Ricci, M. Weidemüller, T. Esslinger, A. Hemmerich, C. Zimmermann, V. Vuletic, W. König, and T.W. Hänsch, *A compact grating-stabilized diode laser system for atomic physics*, Optics Communications, vol. 117, 1995, pp. 541-549
 - [134] Katalog *Fiber-Optic Products*, OFR Inc., 1995, Caldwell, N.J., USA
 - [135] St. Redlich, A. Kreuder, and D. Jäger, *Dynamics of nonlinear electro-optical GaAs/AlAs multilayer-heterostructures*, Int. Conf. on Low Dimensional Structures (LSDS) '97, Lisboa, Portugal, May 19-21, 1997
 - [136] St. Redlich, Dissertation, Fachgebiet Optoelektronik, Gerhard-Mercator-Universität Gesamthochschule Duisburg (in Vorbereitung)
 - [137] Th. Alder, R. Heinzemann, S. Leonhard, A. Stöhr, and D. Jäger, *Fiber-Chip-Coupling based on InP-V-Groove-Technology*, Proc. of LEOS'98, Orlando, USA, Dec. 1-2, 1998, vol. 1, pp. 40-41
 - [138] D. Kalinowski, Dissertation, Fachgebiet Optoelektronik, Gerhard-Mercator-Universität Gesamthochschule Duisburg (in Vorbereitung)
 - [139] M.S. Mazzola, K.H. Schönbach, and F.E. Peterkin, *Gallium-Arsenide optically isolated electric field sensor for utility and pulsed power applications*, 10th IEEE Int. PULS Conf., Dig. of techn. papers, 1995, vol 1, pp. 372-377

eigene Veröffentlichungen:

- [140] Th. Braasch, G. David, R. Hülsewede, U. Auer, F.J. Tegude, and D. Jäger, *Propagation of Microwaves in MMICs Studied by Time- and Frequency-Domain Electro-Optic Field Mapping*, Trends in Optics and Photonics Series (TOPS), vol. 13, at 1997 OSA Spring Topical Meeting, Ultrafast Electronics and Optoelectronics, Lake Tahoe, USA, March 17-19, 1997
- [141] Th. Braasch, G. David, R. Hülsewede, and D. Jäger, *Frequency and Time Domain Characterization of Nonlinear Transmission Lines Using Electro-Optic Probing Techniques*, MIOP '97, Sindelfingen, Germany, April 22-24, 1997
- [142] Th. Braasch, G. David, R. Hülsewede, and D. Jäger, *1D- and 2D-Electro-Optic Field Mapping to Study Nonlinear Effects in NLTLs*, MWP '97 Int. Conf., Duisburg/Essen, Germany, September 3-5, 1997
- [143] M. Alles, Th. Braasch, and D. Jäger, *Travelling-Wave Photodetector for Optical Generation of Microwave Signals*, IPRM '96, Schwäbisch Gmünd, Germany, April 21-25, 1996
- [144] M. Alles, Th. Braasch, and D. Jäger, *High-speed coplanar Schottky travelling-wave photodetectors*, Topical Meeting on Integrated Photonics Research, Boston, USA, April 29 - May 2, 1996
- [145] M. Alles, Th. Braasch, R. Heinzelmann, A. Stöhr, and D. Jäger, *Optoelectronic devices for microwave and millimeterwave optical links*, MIKON '96, Workshop "Optoelectronics in Microwave Technology", Warsaw, Poland, May 27-30, 1996 (invited paper)
- [146] D. Jäger, M. Alles, Th. Braasch, R. Heinzelmann, and A. Stöhr, *Integration Technology for Microwave Photonic Devices*, XXVth General Assembly of URSI, Lille, France, August 28 - September 5, 1996 (invited paper)