Publication list Manfred Weihnacht

Journal papers

R. Weser, A. Winkler, M. Weihnacht, S. Menzel, H. Schmidt: The complexity of surface acoustic wave fields used for microfluidic applications, Ultrasonics 106 (2020) 106160.

R. Weser, A.N. Darinskii, M. Weihnacht, H. Schmidt: Experimental and numerical investigations of mechanical displacements in surface acoustic wave bounded beams, Ultrasonics 106 (2020) 106077.

M. Weihnacht: Multi-parameter sensing using thickness shear mode (TSM) resonators – a feasibility analysis, J. Sens. Sens. Syst., 8, 133-147 (2019).

A.N. Darinskii, M. Weihnacht, H. Schmidt: FE analysis of surface acoustic wave transmission in composite piezoelectric wedge structures, Ultrasonics 84, 366-372 (2018).

A.N. Darinskii, M. Weihnacht, and H. Schmidt: Surface acoustic wave electric field effect on acoustic streaming: Numerical analysis, Journal of Applied Physics 123, 014902 (2018).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Acoustomicrofluidic application of quasi-shear surface waves, Ultrasonics 78, 10-17 (2017).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Finite element analysis of the Rayleigh wave scattering in isotropic bi-material wedge structures, Ultrasonics 73, 67-76 (2017).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Computation of the pressure field generated by surface acoustic waves in microchannels, Lab on a Chip 16, 14, 2701-2709 (2016).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Surface acoustic wave reflection/transmission at vertical borders of piezoelectric substrates, Ultrasonics 56, 318-324 (2015).

E. Smirnova, A. Sotnikov, H. Schmidt, M. Weihnacht, S. Sakharov: Low-temperature dielectric behavior of disordered and ordered langasite family single crystals LGS, LGT, SNGS and STGS, Journal of Physics and Chemistry of Solids 85, 91-95 (2015).

E.P. Smirnova, A.V. Sotnikov, N.V. Zaitseva, H. Schmidt, M. Weihnacht: Dielectric properties of $SrTiO_3$-$DyScO_3$ solid solutions, Physics of the Solid State 57, 11, 2241-2245 (2015).

A.V. Sotnikov, E.P. Smirnova, H. Schmidt, M. Weihnacht: Low-temperature elastic properties of $Sr_3NbGa_3Si_2O_{14}$ single crystals, Physics of the Solid State 57, 6 1183-1187 (2015).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Rayleigh wave scattering from a vertical edge of isotropic substrates, Ultrasonics 54, 1999-2005 (2014).

E. Smirnova, A. Sotnikov, S. Ktitorov, N. Zaitseva, H. Schmidt, M. Weihnacht: Acoustic evidence of distinctive temperatures in relaxor-multiferroics, Journal of Applied Physics 115, 54101/1-7 (2014).

E. Smirnova, S. Smirnov, A. Sotnikov, M. Shevelko, H. Schmidt, M. Weihnacht: High temperature acoustic anomalies in PMN-PSN solid solution, Ferroelectrics 469, 1, 67-72 (2014).

E.P. Smirnova, A.V. Sotnikov, N.V. Zaitseva, H. Schmidt, M. Weihnacht: Evolution of phase transitions in SrTiO3-BiFeO3 solid solutions, Physics of the Solid State 56, 5, 996-1001 (2014).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Anisotropy effects in the reflection of surface acoustic waves from obstacles, IEEE Transaction on Ultrasonics, Ferroelectrics, and Frequency Control 60. 1, 235-242 (2013).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Mutual conversion of bulk and surface acoustic waves in gratings of finite length on half-infinite substrates. II. FE analysis of bulk wave generation, Ultrasonics 53, 1004-1011 (2013).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Mutual conversion of bulk and surface acoustic waves in gratings of finite length on half-infinite substrates. I. FE analysis of surface wave generation, Ultrasonics 53, 998-1003 (2013).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Resonant reflection of a surface acoustic wave from strip waveguides, Wave Motion 50, 1185-1196 (2013).

E.P. Smirnova, A.V. Sotnikov, H. Schmidt, M. Weihnacht: Temperature dependence of the elastic moduli of multiferroic PbFe2/3W1/3O3 ceramics, Technical Physics Letters 39, 3, 277-279 (2013).

E.P. Smirnova, A. Sotnikov, S. Ktitorov, N. Zaitseva, H. Schmidt, M. Weihnacht: Acoustic properties of multiferroic BiFeO3 over the temperature range 4.2 - 830 K, European Physical Journal B 83, 39-45 (2011).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Surface acoustic wave scattering from steps, grooves, and strips on piezoelectric substrates, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 57, 9, 2042-2050 (2010).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Usage of symmetry in the simulation of interdigital transducers, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 57, 10, 2356-2359 (2010).

E. Smirnova, A. Sotnikov, N. Zaitseva, H. Schmidt, M. Weihnacht: Acoustic properties of multiferroic PbFe1/2Ta1/2O3, Physics Letters A 374, 41, 4256-4259 (2010).

A.V. Sotnikov, H. Schmidt, M. Weihnacht, E.P. Smirnova, T.Y. Chemekova, Y.N. Makarov: Elastic and piezoelectric properties of AlN and LiAlO2 single crystals, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 57, 4, 808-811 (2010).

A.V. Sotnikov, E.P. Smirnova, H. Schmidt, M. Weihnacht, V.V. Lemanov: Polar state in Li-doped SrTiO3, Ferroelectrics 405, 1, 13-19 (2010).

S.V. Biryukov, H. Schmidt, A.V. Sotnikov, M. Weihnacht, T.Y. Chemekova, Y.N. Makarov: Ring waveguide resonator on surface acoustic waves: First experiments, Journal of Applied Physics 106, 12, 126103/1-2 (2009).

A.N. Darinskii, M. Weihnacht, H. Schmidt: Rayleigh wave reflection from single surface imperfections on isotropic substrates, Journal of Applied Physics 106, 3, 34914/1-8 (2009).

E.P. Smirnova, A.V. Sotnikov, H. Schmidt, N.V. Zaitseva, M. Weihnacht: Phase transitions and dielectric relaxation in (1 - x)SrTiO3-xBiFeO3 (0 = x = 0.04), Physics of the Solid State 51, 12, 2492-2496 (2009).

A.V. Sotnikov, R. Kunze, H. Schmidt, M. Weihnacht, M. Hengst, J. Goetze: Piezolectric and elastic properties of Sr3NbGa3Si2O14 (SNGS) single crystals, Physics of the Solid State 51, 2, 275-279 (2009).

A.N. Darinskii, M. Weihnacht: Acoustic waves guided by a fluid layer on a piezoelectric substrate, Journal of Applied Physics 104, 5, 54904/1-9 (2008).

T. Ostapchuk, J. Petzelt, P. Kuzel, S. Veljko, A. Tkach, P. Vilarinho, I. Ponomareva, L. Bellaiche, E. Smirnova, V. Lemanov, A. Sotnikov, M. Weihnacht: Infrared and THz soft-mode spectroscopy of (Ba,Sr)TiO3 ceramics, Ferroelectrics 367, 139-148 (2008).

E.P. Smirnova, A.V. Sotnikov, N.V. Zaitseva, M. Weihnacht, V.V. Lemanov: Relaxor behavior of SrTiO3-LiNbO3 solid solutions, Physics of the Solid State 50, 1, 122-125 (2008).

E.P. Smirnova, A.V. Sotnikov, S.I. Smirnov, M. Weihnacht: Ferroelastic transition and the relaxor state in SrTiO3-PbMg1/3Nb2/3O3, Physics of the Solid State 50, 11, 2145-2149 (2008).

S.V. Biryukov, G. Martin, M. Weihnacht: Ring waveguide resonator on surface acoustic waves, Applied Physics Letters 90, 17, 173503/1-2 (2007).

S.V. Biryukov, M. Weihnacht: Analogs of Brewster's angles for surface acoustic waves: The dependence on the strip shape, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 54, 2, 453-457 (2007).

T. Ostapchuk, M. Savinov, J. Petzelt, A. Pashkin, M. Dressel, E. Smirnova, V. Lemanov, A. Sotnikov, M. Weihnacht: Far infrared spectroscopy of Sr1-xBaxTiO3 (0.01 x 0.2) ceramics, Ferroelectrics 353, 2, 70-77 (2007).

E.P. Smirnova, A.V. Sotnikov, O.E. Kvyatkovskii, M. Weihnacht, V.V. Lemanov: Phase evolution in SrTiO3-PbZrO3 solid solution, Journal of Applied Physics 101, 8, 84117/1-8 (2007).

A.N. Darinskii, M. Weihnacht: Gap acousto-electric waves in structures of arbitrary anisotropy, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 53, 2, 412-419 (2006).

A.N. Darinskii, M. Weihnacht: Interface acoustic waves in piezoelectric bi-crystalline structures of specific types, Proceedings of the Royal Society A 461, 895-91 (2005).

A.N. Darinskii, M. Weihnacht: Interface waves on the sliding contact between identical piezoelectric crystals of general anisotropy, Wave Motion 43, 1, 67-77 (2005).

A.N. Darinskii, M. Weihnacht: Acoustic waves in bounded anisotropic media: theorems, estimations and computations, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 52, 5, 792-801 (2005).

A.N. Darinskii, M. Weihnacht: Resonance reflection of acoustic waves in piezoelectric Bi-crystalline structures, IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 52, 5, 904-910 (2005).

K. Franke, M. Weihnacht: Polarization modification of PZT thin films by means of electric fields and stress in scanning force microscopy, Surface Science 585, 3, 144-154 (2005).

V.V. Lemanov, A.V. Sotnikov, E.P. Smirnova, M. Weihnacht: Dielectric relaxation in doped SrTiO3: Transition from classical thermal activation to quantum tunnelling, Journal of Applied Physics 98, 5, 56102/1-3 (2005).

E.P. Smirnova, A.V. Sotnikov, R. Kunze, M. Weihnacht, O.E. Kvyatkovskii, V.V. Lemanov: Interrelation of antiferrodistortive and ferroelectric phase transitions in Sr1-xAxTiO3 (A=Ba, Pb), Solid State Communications 133, 421-425 (2005).

S. Biryukov, M. Weihnacht: The impedance method in the theory of surface acoustic waves in periodic structures, Journal of Applied Physics 96, 6, 3117-3126 (2004).

A.N. Darinskii, M. Weihnacht: Super high-velocity leaky waves guided by a layer inserted into piezoelectric crystals, Wave Motion 39, 2, 181-190 (2004).

V.V. Lemanov, E.P. Smirnova, A.V. Sotnikov, M. Weihnacht: Dielectric relaxation in SrTiO3:Mn, Physics of the Solid State 46, 1402-1408 (2004).

A.N. Darinskii, M. Weihnacht: Quasi-bulk surface and leaky waves in piezoelectrics of unrestricted symmetry, Proceedings of the Royal Society London A 459, 2977-2996 (2003).

K. Franke, M. Ross-Messemer, A. Menck, F.S. Hoeller, H. Schmidt, M. Weihnacht: The highly sensitive optical measurement of absolute SAW amplitudes for power flow analysis, IEEE Transactions on Ultrasonics, Ferroelectrics and frequency control 50, 1, 77-80 (2003).

A.N. Darinskii, M. Weihnacht: Existence of the branch of fast surface acoustic waves on piezoelectric substrates, Wave Motion 36, 1, 87-102 (2002).

A.N. Darinskii, S.V. Biryukov, M. Weihnacht: Fundamental frequency degeneracy of standing surface acoustic waves under metallic gratings on piezoelectric substrates, Journal of the Acoustical Society of America 112, 5, 2003-2013 (2002).

V.V. Lemanov, A.V. Sotnikov, E.P. Smirnova, M. Weihnacht: Giant dielectric relaxation in SrTiO3-SrMg1/3Nb2/3O3 and SrTiO3-SrSc1/2Ta1/2O3 solid solutions, Physics of the Solid State 44, 11, 2039-2049 (2002).

V.V. Lemanov, A.V. Sotnikov, E.P. Smirnova, M. Weihnacht: From incipient ferroelectricity in CaTiO3 to real ferroelectricity in Ca1-xPbxTiO3 solid solutions, Applied Physics Letters 81, 5, 886-888 (2002).

V.G. Mozhaev, M. Weihnacht: Subsonic leaky Rayleigh waves at liquid-solid interfaces, Ultrasonics 40, 1-8, 927-933 (2002).

A.N. Darinskii, M. Weihnacht: Supersonic Love waves in strong piezoelectrics of symmetry mm2, Journal of Applied Physics 90, 1, 383-388 (2001).

K. Franke, G. Martin, M. Weihnacht, A.V. Sotnikov: SrBi2Ta2O9 has only two polar axes - a problem for high density ferroelectric memory devices, Solid State Communications 119, 3, 117-119 (2001).

F. Herrmann, M. Weihnacht, S. Buttgenbach: Properties of sensors based on shear horizontal surface acoustic waves in LiTaO3/SiO2 and quartz/SiO2 structures, IEEE Transactions on Ultrasonics, Ferroelectric and Frequency Control 48, 1, 268-273 (2001).

V.G. Mozhaev, F. Bosia, M. Weihnacht: Oblique acoustic axes in trigonal crystals, Journal of Computational Acoustics 9, 3, 1147-1161 (2001).

V.G. Mozhaev, F. Bosia, M. Weihnacht: Effects of piezoelectricity on acoustic axes in crystals, Annales de Chimie - Science des Materiaux 26, 1, 59-62 (2001).

H.P.D. Schenk, E. Feltin, M. Vaille, P. Gibart, R. Kunze, H. Schmidt, M. Weihnacht, E. Dogheche: Acoustical and optical gallium nitride waveguides grown on Si(111) by metalorganic vapor phase epitaxy, Physica Status Solidi A 188, 2, 537-541 (2001).

E.P. Smirnova, A.V. Sotnikov, M. Weihnacht, W. Haessler, V.V. Lemanov: Phase transition of SrTiO3-PbZrO3 solid solution, Journal of the European Ceramic Society 21, 10-11, 1341-1344 (2001).

A.N. Darinskii, M. Weihnacht: High-velocity waveguide acoustic modes in solids, Journal of Applied Physics 88, 1, 471-477 (2000).

V.V. Lemanov, E.P. Smirnova, A.V. Sotnikov, M. Weihnacht: Dielectric relaxation in SrTiO3-SrMg1/3Nb2/3O3 and SrTiO3-SrSc1/2Ta1/2O3 solid solutions, Applied Physics Letters 77, 25, 4205-4207 (2000).

V.G. Mozhaev, M. Weihnacht: Incredible negative values of effective electromechanical coupling coefficient for surface acoustic waves in piezoelectrics, Ultrasonics 37, 10, 687-691 (2000).

V.N. Parygin, A.V. Vershoubskiy, V.G. Mozhaev, M. Weihnacht: Prolonged acousto-optic interaction with Lamb waves in crystalline plates, Ultrasonics 38, 1-8, 594-597 (2000).

F. Herrmann, M. Weihnacht, S. Buettgenbach: Properties of shear-horizontal surface acoustic waves in different layered quartz-SiO2 structures, Ultrasonics 37, 5, 335-341 (1999).

D.G. Kipshidze, H.P. Schenk, A. Fissel, U. Kaiser, J. Schulze, W. Richter, M. Weihnacht, R. Kunze, J. Krausslich: Molecular beam epitaxy of a strongly lattice-mismatched heterosystem AlN/Si(111) for application in SAW devices, Semiconductors 33, 11, 1241-1246 (1999).

V.V. Lemanov, A.V. Sotnikov, E.P. Smirnova, M. Weihnacht, W. Haessler: Dielectric properties of solid solutions PbMg1/3Nb2/3O3-SrTiO3, Physics of the Solid State 41, 6, 994-998 (1999).

V.V. Lemanov, A.V. Sotnikov, E.P. Smirnova, M. Weihnacht, R. Kunze: Perovskite CaTiO3

as an incipient ferroelectric, Solid State Communications 110, 11, 611-614 (1999).

V.V. Lemanov, A.V. Sotnikov, E.P. Smirnova, M. Weihnacht, W. Haessler: Dielektricheskie svoistva tverdykh rastvorov PbMg1/3Nb2/3O3-SrTiO3, Fizika Tverdogo Tela 41, 6, 1091-1095 (1999).

V.V. Lemanov, A.V. Sotnikov, E.P. Smirnova, M. Weihnacht, W. Haessler: Dielectric properties of SrTiO3-PMN ceramics, Ferroelectrics 223, 1-4, 263-267 (1999).

J. Lindner, F. Weiss, J.-P. Senateur, V. Galindo, W. Haessler, M. Weihnacht, J. Santiso, A. Figueras: Growth of YBa2Cu3O7-x/BaxSr1-xTiO3/LaAlO3 heterostructures by injection MOCVD for microwave applications, Journal of the European Ceramic Society 19, 6-7, 1435-1437 (1999).

A.V. Sotnikov, V.V. Lemanov, E.P. Smirnova, M. Weihnacht, R. Kunze: Dielectric relaxation in Sr1-xBaxTiO3 (x= 0.005-0.1), Ferroelectrics 223, 1-4, 113-117 (1999).

S.V. Biryukov, M. Weihnacht: Real-space field of surface sources and the problem of fast leaky wave generation in a piezoelectric half-space, Journal of Applied Physics 83, 6, 3276-3287 (1998).

S.V. Biryukov, V.G. Polevoi, M. Weihnacht: Exact expression for the impedance of a rectangular strip and second order effects in Bleustein-Gulyaev wave scattering, Journal of Applied Physics 84, 12, 6698-6707 (1998).

K. Franke, H. Huelz, M. Weihnacht: How to extract spontaneous polarization information from experimental data in electric force microscopy, Surface Science 415, 1-2, 178-182 (1998).

K. Franke, H. Huelz, M. Weihnacht, S. Seifert: Poling behavior of the grain boundaries of PZT thin films investigated by means of electric force microscopy, Journal of the Korean Physical Society 32, Suppl. 3, S1143-S1145 (1998).

K. Franke, H. Huelz, M. Weihnacht: Stress-induced depolarization in PZT thin films, measured by means of electric force microscopy, Surface Science 416, 1-2, 59-67 (1998).

V.G. Mozhaev, S.P. Tokmakova, M. Weihnacht: Interface acoustic modes of twisted Si(001) wafers, Journal of Applied Physics 83, 6, 3057-3060 (1998).

V.G. Mozhaev, M. Weihnacht: Interface acoustic waves at a 180° domain boundary in tetragonal barium titanate, Journal of the Korean Physical Society 32, S747-S749 (1998).

G. Martin, M. Weihnacht: Tunneling current oscillations excited by DC voltage, Annalen der Physik 6, 364-380 (1997).

A. Schoenecker, M. Weihnacht: Piezoelektrische Werkstoffe und ihre Nutzung in mikrotechnisch hergestellten Strukturen, Wiss. Zeitschrift der TU Dresden 46, 3, 64-72 (1997).

E.V. Balashova, V.V. Lemanov, R. Kunze, G. Martin, M. Weihnacht: Ultrasonic study of the tetragonal and Mueller phase in SrTiO3, Ferroelectrics 183, 75-83 (1996).

G. Martin, M. Weihnacht, K. Franke: Properties of interdigital transducers in relation to the substrate crystal symmetry, IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control 43, 4, 646-653 (1996).

E. V. Balashova, V. V. Lemanov, R. Kunze, G. Martin, and M. Weihnacht, "Interdigital Transducer Application for Ultrasonic Study of SrTiO3 in the Quantum Paraelectric Region", Solid State Communications 94, 17-20 (1995).

K. Franke and M. Weihnacht, "Evaluation of electrically polar substances by electric scanning force microscopy. Part I: Measurement signals due to Maxwell stress", Ferroelectrics Letters 19, 25-33 (1995).

K. Franke, H. Hülz, M. Weihnacht, W. Hässler, and J. Besold, "Nanoscaled investigations of polarization in thin ferroelectric films by means of scanning force microscopy", Ferroelectrics 172, 397-404 (1995).

S. V. Biryukov, G. Martin, V. G. Polevoi, and M. Weihnacht, "Consistent Generalization of COM Equations to Three-Dimensional Structures and The Theory of the SAW Transversely Coupled Waveguide Resonator Filter", IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control, 612-618 (1995).

S. V. Biryukov, G. Martin, V. G. Polevoi, and M. Weihnacht, "Derivation of COM Equations Using the Surface Impedance Method", IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control 42, 602-611 (1995).

G. Martin, B. Wall, and M. Weihnacht, "An Alternative Method for Suppressing Undesired Transverse Modes in Longitudinally Coupled SAW Resonator Filters", IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control 42, 1099-1101 (1995).

G. Martin, R. Kunze, M. Weihnacht, B. Wall, "Discrete One Component Wave Model and its Application to SAW Resonator Filters", IEEE Transactions Model and its Application to SAW Resonator Filters", IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 41, 503-511 (1994).

M. Weihnacht, G. Martin, E. A. Tarakanov, and N. K. Yushin, "Segnetoelektriceskije aktuatory s prezisionnym kontrolem peremesceniya", Pisma ZETF 20 (1994) 72-77, Translation in Techn.Phys.Lett. 20, 23-25 (1994).

G. Martin, E. A. Tarakanov, M. Weihnacht, N. K. Yushin, "SAW Filter Resonant Frequency Adjustment by Electrostrictive and Piezoelectric Actuators", Ferroelectrics Letters 17, 21-25 (1994).

K. Franke, G. Martin, M. Weihnacht, "Akustische Sondenmikroskopie - ein neuer Weg zur Messung von Eigenschaftsverteilungen an Festkörperoberflächen", Fortschritte der Akustik, 849-852 (1994).

D. Schneider, T. Schwarz, M. Weihnacht, R. Wobst, "Mehrparametrige Schicht-charakterisierung von Oberflächenschichten durch laserinduzierten Ultraschall", Fortschritte der Akustik, 869-872 (1994).

H. Schmidt, M. Weihnacht, R. Wobst, "Wechselwirkungen von akustischen Oberflächenwellen und geführten Lichtwellen in Schichtstrukturen", Fortschritte der Akustik, 873-876 (1994).

M.Weihnacht, "A Green's Function Approach to the Reflection Behavior of SAW in Layered Structures", IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control 40, 72-74 (1993).

M.Weihnacht, "Coupling of surface bounded acoustic modes to plate modes in piezoelectric media", Journal of Electron Spectroscopy and Related Phenomena 64/65, 763-768 (1993).

M.Weihnacht, "Ausbreitungsverhalten akustischer Oberflächenwellen in realen Material- und Oberflächenstrukturen", Dissertation B (1990)

H.-J.Gesemann, A.Schönecker, M.Weihnacht, "Modelling and preparation of multiphase ceramics", Material Science Forum 62-64, 339-342 (1990).

A.Schönecker, H.-J.Gesemann, M.Weihnacht, "Modelling of dielectric properties of ceramic multiphase material for MLCs", Material Science Forum 62-64, 401-402 (1990).

M. Weihnacht, G. Albrecht, "A new memory effect in Nb/Al/Al_xO_y/Pb tunneling structures", physica status solidi (a) 07 (1975)

M. Weihnacht, "Influence of Film Thickness on D. C. Josephson Current", physica status solidi (b) 32(2) (1969)

Contributions to collected editions/proceedings

M. Weihnacht, A. Sotnikov, Yu. Suhak, H. Fritze, H. Schmidt: Accuracy analysis and deduced strategy of measurements applied to Ca3TaGa3Si2O14 (CTGS) material characterization, Proc. IEEE International Ultrasonics Symposium 2017, Washington DC, USA, 978-1-5386-3383-0/17/$31.00 ©2017 IEEE

S. V. Biryukov, M. Weihnacht, A. Sotnikov, H. Schmidt: SAW based rotation force of a cylindrical solid, Proc. IEEE International Ultrasonics Symposium 2017, Washington DC, USA, 978-1-5386-3383-0/17/$31.00 ©2017 IEEE

K. Franke, L. Eng, M. Weihnacht, W. Haessler, J. Besold: The creation of the piezoresponse microscopy twenty-three years ago, 2016 Joint IEEE International Symposium on the Applications of Ferroelectrics, European Conference on Applications of Polar Dielectrics & Workshop on Piezoresponse Force Microscopy (ISAF/ECAPD/PFM), Darmstadt, Germany, 1-3 (2016).

A.N. Darinskii, M. Weihnacht, H. Schmidt: SAW transmission across wedge-like contacts in composite substrates, 2016 IEEE International Ultrasonics Symposium, 18.-21.9.16, Tours/ France, in: 2016 IEEE International Ultrasonics Symposium, September 18.-21.9.16, Tours/ France; ISBN: 978-1-4673-9897-8; 978-1-4673-9898-5, 1-4 (2016).

A. Sotnikov, E. Smirnova, H. Schmidt, M. Weihnacht, J. Gotze, S. Sakharov: Langasite family crystals as promising materials for microacoustic devices at cryogenic temperatures, 2015 Joint Conference of the IEEE International Frequency Control Symposium & the European Frequency and Time Forum (FCS) 2015, Denver/ USA, 106-110 (2015).

S.V. Biryukov, H. Schmidt, A. Sotnikov, M. Weihnacht, S. Sakharov, O. Buzanov: CTGS material parameters obtained by versatile SAW measurements, IEEE International Ultrasonics Symposium, in: Proceedings, 882-885 (2014).

A. Darinskii, M. Weihnacht, H. Schmidt: Surface acoustic wave scattering by substrate edges, IEEE International Ultrasonics Symposium, in: Proceedings, 2055-2058 (2014).

S.V. Biryukov, H. Schmidt, M. Weihnacht: Resonance properties of APTUDT on SAW vs. Electrode track apertures, 2013 Joint UFFC, EFTF and PFM Symposium; IEEE International Ultrasonics Symposium, in: Proceedings, 1073-1076 (2013).

A.N. Darinskii, M. Weihnacht, H. Schmidt: SAW resonance excitation of acoustic strip waveguide modes, 2013 Joint UFFC, EFTF and PFM Symposium; IEEE International Ultrasonics Symposium, in: Proceedings, 1065-1068 (2013).

A. Sotnikov, H. Schmidt, M. Weihnacht, O. Buzanov, S. Sakharov: Material parameters of Ca3TaGa3Si2O14 single crystal revisited, 2013 Joint UFFC, EFTF and PFM Symposium; IEEE International Ultrasonics Symposium, in: Proceedings, 1488-1491 (2013).

S.V. Biryukov, G. Martin, H. Schmidt, M. Weihnacht: Non-reflective electrode cell for SAW with quarter-wavelength electrodes, 2012 IEEE International Ultrasonics Symposium, Dresden/ Germany, in: Proceedings, 1786-1789 (2012).

A.N. Darinskii, M. Weihnacht, H. Schmidt: FEM simulation of SAW reflection in crystals, in: AIP Conference Proceedings, 1433, 251-254 (2012).

A.N. Darinskii, M. Weihnacht, H. Schmidt: FEM simulation of BAW/SAW and SAW/BAW conversions in gratings on the surface of half-infinite substrates, 2012 IEEE International Ultrasonics Symposium, Dresden/ Germany, in: Proceedings, 811-814 (2012).

E. Smirnova, A. Sotnikov, S. Ktitorov, H. Schmidt, M. Weihnacht: High temperature acoustic effects in relaxors PbMg1/3Nb2/3O3 and PbFe1/2Nb1/2O3, 21st IEEE International Symposium on Applications of Ferroelectrics held jointly with 11th IEEE European Conference on the Applications of Polar Dielectrics and IEEE PFM, ISAF/ECAPD/PFM 2012, in: Proceedings, 6297789/1-4 (2012).

E. Smirnova, A. Sotnikov, S. Ktitorov, N. Zaitseva, H. Schmidt, M. Weihnacht: Elastic properties of relaxors with magnetic ordering, 2012 IEEE International Ultrasonics Symposium, Dresden/ Germany, in: Proceedings, 1493-1496 (2012).

A. Sotnikov, H. Schmidt, M. Weihnacht, M. Hengst, R. Mockel, J. Gotze, G. Heide: High temperature piezoelectric single crystals: Sr3NbGa3Si2O14, Sr3TaGa3Si2O14 and GdCa4O(BO3)3, 21st IEEE International Symposium on Applications of Ferroelectrics held jointly with 11th IEEE European Conference on the Applications of Polar Dielectrics and IEEE PFM, ISAF/ECAPD/PFM 2012, in: Proceedings, 6297781/1-3 (2012).

A. Sotnikov, H. Schmidt, M. Weihnacht, S.J. Zhang, T.R. Shrout, F.P. Yu: Elastic constants of YCa4O(BO3)3 and NdCa4O(BO3)3 single crystals by the pulse-echo ultrasonic method, 2012 IEEE International Ultrasonics Symposium, Dresden/ Germany, in: Proceedings, 2489-2492 (2012).

M. Weihnacht, A. Sotnikov, H. Schmidt, B. Wall, R. Gruenwald: Langasite: high temperature properties and SAW simulations, 2012 IEEE International Ultrasonics Symposium, Dresden/ Germany, in: Proceedings, 1549-1552 (2012).

A. Darinskii, M. Weihnacht, H. Schmidt: Effect of anisotropy on the reflection of SAW from grooves and strips, IEEE International Ultrasonics Symposium (IUS), 2011, in: Proceedings, 551-554 (2011).

G. Guhr, S. Gehrisch, R. Bruenig, H. Schmidt, G. Siegert, M. Weihnacht: Novel sensor combining impedance spectroscopy and surface acoustic waves to detect blood coagulation time and hematocrit value, IEEE Sensors 2011, Limerick/ Ireland, 28.-31.10.11, in: Proceedings, 1413-1416 (2011).

M. Weihnacht, A. Sotnikov, H. Schmidt, E. Smirnova, S. Ktitorov: Acoustic properties of multiferroics PbFe1/2Ta1/2O3 and BiFeO3 at Neel temperature, 2011 International Symposium On Applications of Ferroelectrics and 2011 International Symposium on Piezoresponse Force Microscopy and Nanoscale Phenomena in Polar Materials (ISAF/PFM) 2011, Vancouver/ Canada, 24.-27.7.11, in: Proceedings, 6014160 (2011).

S.V. Biryukov, H. Schmidt, M. Weihnacht: Single-mode ring waveguide resonator on SAW, 2010 IEEE International Ultrasonics Symposium, in: Proceedings, 2099-2102 (2010).

R. Bruenig, H. Schmidt, G. Guhr, M. Weihnacht: Complex loadings on thickness shear mode resonators, 2010 IEEE International Ultrasonics Symposium, in: Proceedings, 1886-1889 (2010).

R. Bruenig, M. Weihnacht, G. Guhr, H. Schmidt: Complex loading and simulation of acoustic thickness shear mode resonator, Eurosensors XXIV, Linz/ Austria, 5.-8.9.10, in: Procedia Engineering, 5, 476-479 (2010).

A. Darinskii, M. Weihnacht, H. Schmidt: Symmetry properties of acoustic fields in piezoelectrics and their implementation in FEM simulations of the SAW propagation, 2010 IEEE International Ultrasonics Symposium, in: Proceedings, 1894-1897 (2010).

G. Guhr, R. Bruenig, H. Schmidt, M. Weihnacht, S. Gehrisch, G. Siegert: Surface acoustic wave resonators as novel tools for multiparametric blood analysis, IEEE EMBC2010 (32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society), Buenos Aires/ Argentinien, 31.8.-4.9.10, in: Proceedings, 3499-3502 (2010).

S.V. Biryukov, H. Schmidt, M. Weihnacht: Gyroscopic effect for SAW in common piezoelectric crystals, 2009 IEEE International Ultrasonics Symposium, Rom/ Italy, 20.-23.9.09, in: Proceedings, CD-ROM, P2-O-10/1-4 (2009).

V. Biryukov, H. Schmidt, M. Weihnacht: Performance of SAW ring waveguide resonator: 3D FEM and experiments, 2009 IEEE International Ultrasonics Symposium, Rom/ Italy, 20.-23.9.09, in: Proceedings, CD-ROM, 5B-3/1-4 (2009).

A. Darinskii, M. Weihnacht, H. Schmidt: SAW reflection from surface inhomogeneities of isotropic and anisotropic substrates, 2009 IEEE International Ultrasonics Symposium, Rom/ Italy, 20.-23.9.09, in: Proceedings, CD-ROM, P1-R-01/1-4 (2009).

G. Guhr, R. Bruenig, H. Schmidt, M. Jaeger, R. Poll, M. Weihnacht: Combination of surface acoustic wave measurement and impedance spectroscopy for detection of cell adhesion process, European Frequency and Time Forum - International Frequency Control Symposium, EFTF-IFCS 2009, Besancon/ France, 20.-24.5.09, in: Proceedings, CD-ROM (2009).

G. Guhr, R. Bruenig, H. Schmidt, M. Weihnacht: Acoustoelectronic method for the detection of electrical and mechanical properties of adhering cell cultures, 2009 IEEE International Ultrasonics Symposium, Rom/ Italy, 20.-23.9.09, in: Proceedings, CD ROM, 4D-6/1-4 (2009).

G. Guhr, H. Schmidt, M. Weihnacht: A new tool to assess mechanical and dielectric properties of tissues, Engineering in Medicine and Biology Conference - EMBC 2009, Minneapolis/ USA, 2.-6.9.09, in: Proceedings, CD-ROM, 1-4 (2009).

A. Sotnikov, H. Schmidt, M. Weihnacht: Characterization of new promising piezoelectric crystals, International Mini-Conference on Information Electronics Systems, Sendai/ Japan, 27.-28.10.09, in: Proceedings, 11-14 (2009).

A.V. Sotnikov, H. Schmidt, M. Weihnacht, E.P. Smirnova, T.Y. Chemekova, Y.N. Makarov: Material parameters of AlN and LiAlO2 single crystals, 2009 IEEE Frequency Control Symposium, Besancon/ France, in: Proceedings, 935-938 (2009).

S.V. Biryukov, M. Weihnacht: Zero LSAW propagation loss in a SiO2/periodic grating/LiTaO3 structure, 2008 IEEE International Ultrasonics Symposium, Beijing/ China, 2.-5.11.08, in: Proceedings, P3K100-01 (2008).

S.V. Biryukov, H. Schmidt, M. Weihnacht: Ring waveguide resonator on SAW - quality

factor vs electrode structure properties, 2008 IEEE International Ultrasonics Symposium, Beijing/ China, 2.-5.11.08, in: Proceedings, 6C-1 (2008).

R. Bruenig, M. Weihnacht, H. Schmidt, G. Guhr: More general model of quartz crystal microbalance response to viscoelastic loading, Eurosensor XXII, in: Proceedings, Elsevier, 101-104 (2008).

R. Bruenig, M. Weihnacht, H. Schmidt, G. Guhr: More comprehensive model of quartz crystal microbalance response to viscoelastic loading, 2008 IEEE International Ultrasonics Symposium, Beijing/ China, 2.-5.11.08, in: Proceedings, 5C-5 (2008).

T.Y. Chemekova, A.V. Sotnikov, R. Kunze, H. Schmidt, M. Weihnacht, E.N. Mokhov, Y.N. Makarov: Investigation of SAW in sublimation aluminum nitride monocrystals, 6th All-Russian Conference "Gallium, aluminum and indium nitrides", St. Petersburg/ Russland, Juni 2008, in: Proceedings, 163-165 (2008).

A. Darinskii, M. Weihnacht, H. Schmidt: Acoustic waves in LiNbO3/SiO2/water/silicon rubber structures, 2008 IEEE International Ultrasonics Symposium, Beijing/ China, 2.-5.11.08, in: Proceedings, P1E070-02 (2008).

G. Guhr, R. Bruenig, M. Jaeger, R. Poll, H. Schmidt, M. Weihnacht: Untersuchung zellulaerer Adhaesionsvorgaenge mittels akustischer Oberflaechenwellen, Dresdner Medizintechniksymposium 1.-3.12.08, in: Dresdner Beitraege zur Medizintechnik, 74-77 (2008).

G. Guhr, R. Bruenig, M. Jaeger, R. Poll, H. Schmidt, M. Weihnacht: Akustische Thrombelastografie an Blut, 14. GMA/ ITG-Fachtagung, Ludwigsburg, 11.-12.3.08, in: Sensoren und Messsysteme 2008, VDI-Berichte 2011, 859-862 (2008).

G. Guhr, R. Bruenig, M. Jaeger, R. Poll, H. Schmidt, M. Weihnacht: A surface acoustic wave sensor for detection of cell adhesion, 2008 IEEE International Ultrasonics Symposium, Beijing/ China, 2.-5.11.08, in: Proceedings, P2P138-04 (2008).

E.P. Smirnova, A.V. Sotnikov, N.V. Zaitseva, M. Weihnacht, V.V. Lemanov: Phase transitions evolution in solid solutions on the base of strontium titanate (SrTiO3-PMN, SrTiO3-BiFeO3), 18th All-Russian Conference on Ferroelectricity, St. Petersburg/ Russland, Juni 2008, in: Proceedings (2008).

A.V. Sotnikov, E.P. Smirnova, M. Weihnacht, V.V. Lemanov: Dielectric and acoustic properties of SrTiO3-PMN solid solutions, 17th International Symposium on the Applications of Ferroelectrics, Santa Fe/ USA, February 2008, in: Proceedings, 145-147 (2008).

A. Sotnikov, H. Schmidt, K. Suschke, M. Weihnacht, M. Hengst, J. Goetze: Piezoelectric and elastic properties of SNGS and STGS single crystals at elevated temperatures, 2008 IEEE International Ultrasonics Symposium, Beijing/ China, 2.-5.11.08, in: Proceedings, P3K102-02 (2008).

A.V. Sotnikov, V.V. Lemanov, B.T. Melekh, M. Weihnacht: Dielectric properties of barium zirconate (BaZrO3): single crystals and ceramics, 18th All-Russian Conference on Ferroelectricity, St. Petersburg/ Russland, Juni 2008, in: Proceedings (2008).

S.V. Biryukov, G. Martin, M. Weihnacht: Closed regular electrode structure for SAW resonators, 2007 IEEE International Frequency Control Symposium Jointly with the 21st European Frequency and Time Forum, (TimeNav'07), Genf/ Schweiz, 29.5.-1.6.07, in: Proceedings, 168-171 (2007).

A. Sotnikov, R. Kunze, H. Schmidt, M. Weihnacht, M. Hengst, J. Goetze, K. Jaenicke-Roessler: Temperature dependent material parameters of Sr3NbGa3Si2O14 (SNGS) single crystal, 2007 IEEE International Frequency Control Symposium Jointly with the 21st European Frequency and Time Forum, (TimeNav'07), Genf/ Schweiz, 29.5.-1.6.07, in: Proceedings, 719-723 (2007).

M. Weihnacht, R. Bruenig, H. Schmidt: More accurate simulation of quartz crystal microbalance (QCM) response to viscoelastic loading, 2007 IEEE International Ultrasonics Symposium, New York/ USA, 28.-31.10.07, in: Proceedings, 377-380 (2007).

G. Guhr, R. Kunze, G. Martin, H. Schmidt, M. Weihnacht, S. Gerisch, G. Siegert: Thromelastography using acoustic sensors, IEEE International Ultrasonics Symposium, Vancouver/ Kanada, 2006, in: Proceedings, 544-547 (2006).

M. Weihnacht: Metallization structures in acousticelectronics, in: Metal Based Thin Films for Electronics, 2nd rev. and englarg. ed.; K.Wetzig ; C.M.Schneider (eds.), 28-47 (2006).

M. Weihnacht: SAW high frequency filters, resonators and delay lines, in: Metal Based Thin Films for Electronics, 2nd rev. and englarg. ed.; K.Wetzig ; C.M.Schneider (eds.), 353-361 (2006).

S.V. Biryukov, M. Weihnacht: SAW analogs of brewster~s angles: the dependence on the strip shape, IEEE International Ultrasonics Symposium, 2005, in: Proceedings, 1892-1895 (2005).

A.N. Darinskii, M. Weihnacht: Electro-acoustic slip and gap waves in piezoelectric structures of general anisotropy, IEEE International Ultrasonics Symposium, 2005, in: Proceedings, 1852-1855 (2005).

G. Guhr, R. Kunze, G. Martin, H. Schmidt, M. Weihnacht, S. Gehrisch, G. Siegert: Monitoring blood coagulation with QCM and SH-SAW sensors, IEEE International Ultrasonics Symposium, Rotterdam, 2005, in: Proceedings, 58-61 (2005).

G. Martin, R. Kunze, B. Wall, M. Weihnacht: SAW resonators for temperature stable oscillators, IEEE International Ultrasonics Symposium, Rotterdam, 2005, in: Proceedings, 450-453 (2005).

S.B. Menzel, M. Albert, D. Reitz, H. Schmidt, H. Wendrock, M. Weihnacht, K. Wetzig, J.W. Bartha: A novel copper damascene technique for power loaded SAW structures, in: MRS Proceedings, 833, G3.13.1 (2005).

M. Weihnacht: Links between temperature stable BAW and SAW crystal orientations, IEEE International Ultrasonics Symposium, 2005, in: Proceedings, 914-917 (2005).

S.V. Biryukov, M. Weihnacht: FEUDT periodic cell with different width electrodes, IEEE International Ultrasonics, Ferroelectrics, and Frequency Control Joint 50th Anniversary Conference, Montreal/Kanada, 23.-27.8.04, in: Proceedings, P3U-D-4 (2004).

E. Chilla, R. Kunze, M. Weihnacht, J. Bohm, R.B. Heimann, M. Hengst, U. Straube: Acoustic wave measurements on SNGS crystals and determination of material constants, in: CFA/ DAGA 2004 (7. Congres Francais d' Acoustique CFA / 30. Deutsche Jahrestagung fuer Akustik DAGA) Strasbourg/Frankreich, 22.-25.3.04, Proceedings, 1013-1014 (2004).

A.N. Darinskii, M. Weihnacht: Acoustic waves on plane interfaces in piezoelectric Bi-crystalline structures of specific types, IEEE International Ultrasonics, Ferroelectrics, and Frequency Control Joint 50th Anniversary Conference, Montreal/Kanada, 23.-27.8.04, in: Proceedings, 1231- (2004).

A.N. Darinskii, M. Weihnacht: Properties of acoustic waves guided by internal interfaces in piezoelectric crystals, in: CFA/ DAGA 2004 (7. Congres Francais d' Acoustique CFA / 30. Deutsche Jahrestagung fuer Akustik DAGA) Strasbourg/Frankreich, 22.-25.3.04, Proceedings, 1011-1012 (2004).

U. Prechtel, V. Ziegler, S. Kolodzik, B. Plehn, H. Downar, J. Haering, R. Kunze, G. Martin, H. Schmidt, M. Weihnacht: Diamond-based SAW Oscillator at 1 GHz, IEEE International Ultrasonics, Ferroelectrics, and Frequency Control Joint 50th Anniversary Conference, Montreal/Kanada, 23.-27.8.04, in: Proceedings, 199- (2004).

E.P. Smirnova, A.V. Sotnikov, R. Kunze, M. Weihnacht, V.V. Lemanov: Improper ferroelastic phase transition and its interrelation with ferroelectric transition in (1-x) SrTiO3 - x ATiO3 (A=Ba,Pb), in: Electroceramics VIII - 2002, 25. - 28.8.02, Cherbourg/Frankreich, Proceedings, 247- (2004).

A. Sotnikov, E. Smirnova, V. Lemanov, M. Weihnacht: Lead induced ferroelectric state in incipient ferroelectrics SrTiO3 and CaTiO3, in: Electroceramics VIII - 2002, 25. - 28.8.02, Cherbourg/Frankreich, Proceedings, 227- (2004).

S.V. Biryukov, M. Weihnacht: The electrical admittance of a complex periodic electrode cell, International IEEE Ultrasonics Symposium 2003, Honolulu/Hawaii, 5.-8.10.03, in: Proceedings, 1676-1679 (2003).

E. Chilla, R. Kunze, M. Weihnacht, J. Bohm, R.B. Heimann, M. Hengst, U. Straube: Acoustic wave measurements on SNGS crystals and determination of material constants, International IEEE Ultrasonics Symposium 2003, Honolulu/Hawaii, 5.-8.10.03, in: Proceedings, 92-95 (2003).

S.V. Biryukov, M. Weihnacht: The equation for the surface impedance of an inhomogeneous elastic medium in the case of periodic strips, IEEE Ultrasonics Symposium 2002, Muenchen, 8.-11.10.02, in: Proceedings, 1, 343-346 (2002).

A.N. Darinskii, S.V. Biryukov, M. Weihnacht: The relation between crystallographic symmetry and the bidirectionality of SAW generation by IDT`s, IEEE Ultrasonics Symposium 2002, Muenchen, 8.-11.10.02, in: Proceedings, 1, 223-226 (2002).

A.N. Darinskii, M. Weihnacht: Fast generalized gulyaev - bleustein waves on piezoelectrics of arbitrary anisotropy, IEEE Ultrasonics Symposium 2002, Muenchen, 8.-11.10.02, in: Proceedings, 1, 401-404 (2002).

S. Menzel, H. Schmidt, M. Weihnacht, K. Wetzig: Damaging of metallization layers by high

power surface acoustic wave fields, International Workshop on Stress-Induced Phenomena in Metallization, Ithaca/USA, 25.-27.7.01, in: "Stress-Induced Phenomena in Metallization" ed. S.P. Baker et al., AIP Conference Proceedings, 612, 133-141 (2002).

S. Menzel, H. Schmidt, M. Pekarcikova, M. Weihnacht: Acoustomigration in SAW Devices, in: Forschungsbericht "Industrielle Gemeinschaftsforschung 1999-2001" der Europaeischen Forschungsgesellschaft Duenne Schichten e.V., 39-41 (2002).

V.G. Mozhaev, M. Weihnacht: Sectors of nonexistence of surface acoustic waves in potassium niobate, IEEE Ultrasonics Symposium 2002, Muenchen, 8.-11.10.02, in: Proceedings, 1, 391-395 (2002).

H. Schmidt, R. Kunze, M. Weihnacht, S. Menzel: Investigation of acoustomigration effects in al-based metallizations, IEEE Ultrasonics Symposium 2002, Muenchen, 8.-11.10.02, in: Proceedings, **1**, 415-418 (2002).

S.V. Biryukov, M. Weihnacht: Elastic electrode polarization in a spatial harmonic field and the natural boundary element method, 2001 IEEE Ultrasonics Symposium, Atlanta/USA, 7.-10.10.01, in: Proceedings, 1, 111-114 (2001).

H. Schmidt, S. Menzel, M. Weihnacht, R. Kunze: Investigation of SAW-induced acoustomigration effects in Cu- and Al-based metallizations, 2001 IEEE Ultrasonics Symposium, Atlanta/USA, 7.-10.10.01, in: Proceedings, **1**, 97-100 (2001).

A.N. Darinskii, M. Weihnacht: Fast acoustic modes guided by multilayered solid structures, 2000 IEEE Ultrasonics Symposium, San Juan/Puerto Rico, 22.-25.10.00, in: Proceedings Ultrasonics Symposium, vol. 1, 195-198 (2000).

S. Menzel, H. Schmidt, K. Wetzig, M. Weihnacht: In situ SEM investigation of stress induced migration in SAW structures, 12th European Congress on Electron Microscopy, Brno/Czech Republic, 9.-14.7.00, in: Proceedings Volume II "Physical Sciences", 541-542 (2000).

V.G. Mozhaev, F. Bosia, M. Weihnacht: Leaky SAW branches coupled with oblique acoustic axes in trigonal crystals, Joint Meeting of the 13th European Frequency and Time Forum and the 1999 IEEE International Frequency Control Symposium, Besancon/Frankreich, 13.-16.4.99, in: Proceedings, 2, 958-961 (2000).

H. Schmidt, K. Franke, F. Hoeller, G. Martin, M. Ross-Messemer, M. Weihnacht: UV reflective modulation using SAWs with high amplitude, 2000 IEEE Ultrasonics Symposium, San Juan/Puerto Rico, 22.-25.10.00, in: Proceedings Ultrasonics Symposium , **vol. 1**, 655-658 (2000).

S.V. Biryukov, V.G. Polevoi, M. Weihnacht: The equation for the rectangular strip impedance and the structure of its solution, IEEE Ultrasonics Symposium, Caesars Tahoe/USA, 17.-20.10.99, in: Proceedings, 1, 199-202 (1999).

F. Herrmann, M. Weihnacht: Sensors based on shear-horizontal surface acoustic waves in layered quartz/SiO2 and LiTaO3/SiO2 structures, IEEE Ultrasonics Symposium, Caesars Tahoe/USA, 17.-20.10.99, in: Proceedings, 1, 413-416 (1999).

V.G. Mozhaev, M. Weihnacht: Extraordinary case of acoustic wave acceleration due to

electrical shorting of piezoelectrics, IEEE Ultrasonics Symposium, Caesars Tahoe/USA, 17.-20.10.99, in: Proceedings, 1, 73-76 (1999).

M. Weihnacht, F. Bosia, V.G. Mozhaev: Acoustic axes and leaky surface acoustic waves, DAGA'98, Zuerich/Schweiz, 23.-27.3.98, in: Fortschritte der Akustik, 612-613 (1998).

Mozhaev V.G., Bosia F., Weihnacht M. Types of leaky SAW degeneracy in crystals, in: IEEE Ultrasonics Symposium Proceedings, 143-148 (1998).

S.V. Biryukov, M. Weihnacht: Real-space field of surface electric charges and mechanical forces and the problem of fast leaky wave generation, IEEE Ultrasonics Symposium, Toronto/Canada, 5.-8.10.97, in: IEEE Ultrasonics Symposium Proceedings, Piscataway , 275-278 (1997).

V.G. Mozhaev, M. Weihnacht: Search for leaky SAWs in crystals with the aid of acoustic axes for bulk waves, IEEE Ultrasonics Symposium, Toronto/Canada, 5.-8.10.97, in: IEEE Ultrasonics Symposium Proceedings, Piscataway, 267-273 (1997).

V.G. Mozhaev, M. Weihnacht: What are the interface acoustic waves of twins in quartz?, IEEE Ultrasonics Symposium, Toronto/Canada, 5.-8.10.97, in: IEEE Ultrasonics Symposium Proceedings, Piscataway, 581-584 (1997).

M. Weihnacht, K. Franke, R. Kunze, H. Schmidt: SAW materials and devices characterization of high resolution and accuracy, Micro-Mat, Berlin, 16.-18.4.97, in: Proceedings, 148-151 (1997).

M. Weihnacht, K. Franke, R. Kunze, H. Schmidt: SAW materials and devices characterization of high resolution and accuracy, Fifth Conference of the European Ceramic Society, Versailles/Frankreich, 22.-26.6.97, in: Proceedings, Key Engineering Materials, Trans Tech Publications, 132-136, 1147-1150 (1997).

M. Weihnacht, K. Franke, K. Kaemmer, R. Kunze, H. Schmidt: High precision SAW materials and devices characterization, IEEE Ultrasonics Symposium, Toronto/Canada, 5.-8.10.97, in: IEEE Ultrasonics Symposium Proceedings, Piscataway, 217-220 (1997).

S.V. Biryukov, M. Weihnacht: The effective permittivity in the complex plane and a simple estimation method for leaky wave slowness, IEEE Ultrasoncs Symposium, in: Proceedings, 221-224 (1996).

K. Kaemmer, K. Franke, B. Holzapfel, D. Stephan, M. Weihnacht: Preparation of textured LiNbO3 thin films by off-axis laser deposition and their characterization, IEEE Ultrasonics Symposium, in: Proceedings, 243-246 (1996).

V.G. Mozhaev, M. Weihnacht: Sagittally polarized, mixed polarized, and leaky interface acoustic waves at a 180° ferroelectric domain boundary in tetragonal barium titanate, IEEE Ultrasonics Symposium, in: Proceedings, 589-597 (1996).

V.G. Mozhaev, M. Weihnacht: Paradoxical excitation of a non-piezoelectric acoustic bulk wave by electrical fields at the surface, IEEE Ultrasonics Symposium, in: Proceedings, 213-216 (1996).

E. V. Balashova, V. V. Lemanov, R. Kunze, G. Martin, and M. Weihnacht, "Some new results on the ultrasonic behavior of SrTiO3 in the quantum paraelectric region", IEEE Ultrasonics Symposium Proceedings, 653-656 (1995).

H. Schmidt, M. Weihnacht, and R. Wobst, "A thin-film-on-silicon acoustooptical modulator with multi-mode behavior", IEEE Ultrasonics Symposium Proceedings, 847-850 (1995).

V. G. Mozhaev and M. Weihnacht, "On the possibility of existence of a new type of interface acoustic waves at 180° ferroelectric domain boundary", IEEE Ultrasonics Symposium Proceedings, 649-652 (1995).

G. Martin, M. Weihnacht, and K. Franke, "Properties of Interdigital Transducers in Relation to the Substrate Crystal Symmetry", IEEE Ultrasonics Symposium Proceedings, 291-296 (1995).

H. Schmidt, M. Weihnacht, and R. Wobst, "A multi-mode acousto-optical Bragg modulator using a sandwich structure on silicon", Proc. 1995 World Congress on Ultrasonics, Berlin, September 3 to 7, 205-208 (1995).

G. Martin and M. Weihnacht, "Self-excited and acoustically stimulatable oscillations of the tunneling current in scanning tunneling microscopes", Proc. 1995 World Congress on Ultrasonics, Berlin, September 3 to 7, 195-198 (1995).

V. G. Mozhaev, S. P. Tokmakova, and M. Weihnacht, "Interface acoustic modes of twisted Si and GaAs wafers", Proc. 1995 World Congress on Ultrasonics, Berlin, September 3 to 7, 131-136 (1995).

Schönecker, H.-J. Gesemann, M. Weihnacht, "Elektromechanische Kopplung in Mikrosystemen - Nutzeffekt und Versagensursache", Micromat '95, Berlin, 28.-29. Nov. 1995, (1995).

E. V. Balashova, V. V. Lemanov, R. Kunze, G. Martin, and M. Weihnacht, "Ultrasonic Study of Tetragonal Phase and Mueller State in SrTiO3", Dynamical Properties of Solids, Haro, Spain, 23-27 September 1995, (1995).

M. Weihnacht, H. Schmidt und R. Wobst, "Wellenausbreitung in geschichteten Strukturen - ein Softwarepaket und dessen Anwendung", DEGA Workshop Bad Honnef, 3.-6.Oktober 1994, Acta Acustica 3, 2, 225 (1995).

D. Schneider, T. Schwarz, H. Ollendorf, and M. Weihnacht, "Nondestructive evaluation of coated materials by laser induced surface waves", ASNT Fall Conference Paper Summaries Book (1994).

G. Martin, B. Wall, and M. Weihnacht,"Single Mode Waveguide Resonator Filters with Weak Coupling", IEEE Ultrasonics Symposium Proceedings, 125-128 (1994).

S. V. Biryukov, G. Martin, V. G. Polevoi, and M. Weihnacht, "The Theory of the SAW Transversely Coupled Waveguide Resonator Filter", IEEE Ultrasonics Symposium Proceedings, 89-92 (1994).

S. V. Biryukov, G. Martin, V. G. Polevoi, and M. Weihnacht, "Derivation of COM Equations for the SAW IDT", IEEE Ultrasonics Symposium Proceedings, 223-226 (1994).

H. Schmidt, M. Weihnacht, R. Wobst, "Wechselwirkung von akustischen Oberflächenwellen und geführten Lichtwellen in Schichtstrukturen", Frühjahrstagung der DPG, Münster 1994, DF 3.6 (1994).

K. Franke, J. Besold, W. Häßler, M. Weihnacht, G. Martin, H. Hülz, "Untersuchung des lokalen Polungsverhaltens und der Ladungsdissipation von ferroelektrischen Materialien mittels Rasterkraftmikroskopie", Frühjahrstagung der DPG, Münster 1994, DF 3.36 (1994).

K. Franke, G. Martin, M. Weihnacht, "Neue Möglichkeiten der Charakterisierung von Festkörperoberflächen mittels akustischer Sondenmikroskopie", Frühjahrstagung der DPG, Münster 1994, O 20.4 (1994).

A. Schönecker, H.-J. Gesemann, S. Merklein, W. Grond, K. Franke, and M. Weihnacht, "PZT-film compositional development and physical properties", Proceedings of the 9th IEEE International Symposium on Applications of Ferroelectrics, Aug. 7-10, 1994, Penn State Scanticon Conference Center, 412-415 (1994).

G. Martin, B. Wall, R. Kunze, M. Weihnacht, "Four Modes Waveguide Resonator Filters", IEEE Ultrasonics Symposium Proceedings, 35-39 (1993).

M. Weihnacht, G. Martin, "A Study of Fast Surface Bounded Plate Modes with High Coupling Efficiency in ZnO/Si Structures", IEEE Ultrasonics Symposium Proceedings, 391-394 (1992).

M. Weihnacht, R. Wobst, "A Unified Analysis of SAW Reflection and Mode Conversion in Layered Systems Using Green's Functions", 1991 IEEE Ultrasonics Symposium Proceedings, 407-410 (1991).

G. Martin, M. Weihnacht, "A New NSPUDT Configuration Using Coupled Piezoelectrics", IEEE Ultrasonics Symposium Proceedings, 435-438 (1991).