

Erschienene Publikationen Published Papers

- (1) **Chemical Vapor Deposition and Characterization of High-k $\text{BaHf}_{1-x}\text{Ti}_x\text{O}_3$ Dielectric Layers for Microelectronic Applications**
A. Abrutis, T. Dapkus, S. Stanionyte, V. Kubilius, G. Lupina, Ch. Wenger, M. Lukosius
Journal of Vacuum Science and Technology B **29**(1), 01A303 (2011)
- (2) **PVD Deposited High-Purity SiC/Si Layers for e-Beam Crystallized Thin Film Solar Cells on Glass**
D. Amkreutz, W. Seifert, S. Schönau, A. Schubert, S. Common
Proc. 26th European Photovoltaic Solar Energy Conference and Exhibition (EU PVSEC), 2813 (2011)
- (3) **Room Temperature Direct Band-Gap Emission from an Unstrained Ge p-i-n LED on Si**
T. Arguirov, M. Kittler, M. Oehme, N.V. Abrosimov, E. Kasper, J. Schulze
Solid State Phenomena **178-179**, 25 (2011)
- (4) **Room Temperature Luminescence from Ge**
T. Arguirov, M. Kittler, N.V. Abrosimov
Journal of Physics: Conference Series **281**, 012021 (2011)
- (5) **Silicon Based Light Emitter Utilizing Tunnel Injection of Excess Carriers Via MIS Structure**
T. Arguirov, Ch. Wenger, M. Lukosius, T. Mchedlidze, M. Reiche, M. Kittler
Physica Status Solidi C **8**, 1302 (2011)
- (6) **Effiziente Synthese von Schaltungen mit spezifischer Fehlertoleranz**
M. Augustin, M. Gössel, R. Kraemer
Proc. 23. GI/GMM/ITG Workshop Testmethoden und Zuverlässigkeit von Schaltungen und Systemen (TuZ), 93 (2011)
- (7) **Implementation of Selective Fault Tolerance with Conventional Synthesis Tools**
M. Augustin, M. Gössel, R. Kraemer
Proc. 14th IEEE International Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2011), 213 (2011)
- (8) **Selective Fault Tolerance for Finite State Machines**
M. Augustin, M. Gössel, R. Kraemer
Proc. 17th IEEE International On-Line Testing Symposium (IOLTS 2011), 49 (2011)
- (9) **Broadband 31-65 GHz Inductorless Active BALUN with 12.4 dB Gain in 0.13 μm SiGe:C BiCMOS Technology**
A. Awny, A. Thiede, Ch. Wipf, J.C. Scheytt
Proc. European Microwave Week, 652 (2011)
- (10) **Design and Test of Decision Feedback Equalizers for 80 Gbit/s Bit Rate and Beyond**
A. Awny, A. Thiede, J.C. Scheytt
Proc. International Microwave Symposium (IMS 2011), (2011)
- (11) **Enhanced Leakage Current Behavior of SrTaO/SrTiO Bilayer Dielectrics for Metal-Insulator-Metal Capacitors**
C. Baristiran Kaynak, M. Lukosius, I. Costina, B. Tillack, Ch. Wenger, G. Ruhl, T. Blomberg,
Thin Solid Films **519**, 5734 (2011)
- (12) **Single SrTiO₃ and Al₂O₃/SrTiO₃/Al₂O₃ based MIM Capacitors: Impact of the Bottom Electrode Material**
C. Baristiran Kaynak, M. Lukosius, B. Tillack, Ch. Wenger, T. Blomberg, G. Ruhl
Microelectronic Engineering **88**, 1521 (2011)
- (13) **Implementation Analysis of the IEEE 802.15.4 MAC for Wireless Sensor Networks**
T. Basmer, H. Schomann, St. Peter
Proc. International Conference on Selected Topics in Mobile & Wireless Networking (ICOST), (2011)

- (14) **Alignment Technology for Backside Integration Technique**
J. Bauer, P. Kulse, U. Haak, G. Old, G. Scheuring, St. Döbereiner, F. Hillmann, H.-J. Brück, M. Kaynak, K.-E. Ehwald, St. Marschmeyer, M. Birkholz, K. Schulz
Proc. 27th European Mask and Lithography Conference EMLC 2011, EML11-EML101 (2011)
- (15) **Ultra Wide Band Frequency Characterization of Integrated TiTaO_x-Based Metal-Insulator-Metal Devices**
T. Bertaud, C. Bermond, F. Challali, A. Goullet, Ch. Vallée, B. Fléchet
Journal of Applied Physics **110**, 044110 (2011)
- (16) **Halbleitertechnologie für die Biosensorik – und das Beispiel eines monolithisch integrierten Glucosesensorchips**
M. Birkholz, K.-E. Ehwald, P. Kulse, M. Fröhlich, T. Basmer, T. Guschauski, R. Ehwald, J. Drews, U. Haak, St. Marschmeyer, E. Matthus, K. Schulz, W. Winkler, D. Wolansky, S. Schmaderer, J. Szeponik, D. Zahn, U. Stoll, H. Siegel
Proc. 7. Deutsches Biosensor Symposium, abstr., 28 (2011)
- (17) **Ultrathin TiN Membranes as Technology Platform for CMOS-Integrated MEMS and BioMEMS Devices**
M. Birkholz, K.-E. Ehwald, P. Kulse, J. Drews, M. Fröhlich, U. Haak, M. Kaynak, E. Matthus, K. Schulz, D. Wolansky
Advanced Functional Materials **21**, 1652 (2011)
- (18) **ALD Grown NbTaO_x Based MIM Capacitors**
T. Blomberg, Ch. Wenger, C. Baristiran Kaynak, G. Ruhl, P. Baumann
Microelectronic Engineering **88**, 2447 (2011)
- (19) **10 GS/s 8-bit Bipolar THA in SiGe Technology**
Y. Borokhovych, J.C. Scheytt
Proc. NORCHIP 2011, (2011)
- (20) **Towards THz SiGe HBTs**
P. Chevalier, T.F. Meister, B. Heinemann, S. Van Huylbroeck, W. Liebl, A. Fox, A. Sibaja-Hernandez, A. Chantre
Proc. 25th IEEE Bipolar/BiCMOS Circuits and Technology Meeting (BCTM 2011), 4.1. (2011)
- (21) **Charge Transfer and Partial Pinning at the Contacts as the Origin of the Double Dip in the Transfer Characteristics of Graphene based Field Effect Transistors**
A. Di Bartolomeo, F. Giubileo, S. Santandrea, F. Romeo, R. Cirto, T. Schroeder, G. Lupina
Nanotechnology **22**, 275702 (2011)
- (22) **A 6 Bit and a 7 Bit 80MS/s SAR ADC for an IR-UWB Receiver**
J. Digel, M. Masini, M. Grötzing, M. Berroth, G. Fischer, S. Olonbayar, J.C. Scheytt
Proc. IEEE Conference on Microwaves, Communications, Antennas and Electronic Systems (COMCAS 2011), (2011)
- (23) **Atomic Scale Engineering of Future High-k DRAM Dielectrics: The Example of Partial Hf Substitution by Ti in BaHfO₃**
P. Dudek, G. Lupina, G. Kozłowski, P. Zaumseil, J. Bauer, O. Fursenko, J. Dabrowski, R. Schmidt, G. Lippert, H.-J. Müssig, D. Schmeißer, E. Zschech, T. Schroeder
Journal of Vacuum Science and Technology B **29**(1), 01AC03 (2011)
- (24) **Basic Investigation of HfO₂ based Metal-Insulator-Metal Diodes**
P. Dudek, R. Schmidt, M. Lukosius, G. Lupina, Ch. Wenger, A. Abrutis, M. Albert, K. Xu, A. Devi
Thin Solid Films **519**, 5796 (2011)
- (25) **Algorithmically Determining the Optimum Polynomial Multiplier in GF (2^k)**
Z. Dyka, P. Langendörfer
Proc. Western European Workshop on Research in Cryptology (WEWORC 2011), ext. abstr. (2011)

- (26) **Physical Layer Amendments for MIMO Features in 802.11a**
R. Eickhoff, K. Tittelbach-Helmrich, M. Wickert, J. Wagner, U. Mayer, V. Elvira, J. Ibanez, Z. Stamenkovic, F. Ellinger
Proc. Future Network and Mobile Summit 2011, 1 (2011)
- (27) **60 GHz Four Channel Beamforming Transmitter in 0.25 μm**
M. Elkhoully, S. Glisic, J.C. Scheytt, F. Ellinger
Proc. 2011 European Microwave Integrated Circuit Conference (EuMIC), 25 (2011)
- (28) **GALS Design for On-Chip Ground Bounce Suppression**
X. Fan, M. Krstic, Ch. Wolf, E. Grass
Proc. IEEE International Symposium on Asynchronous Circuits and Systems – ASYNC 2011, 43 (2011)
- (29) **Impulse Radio UWB Chipsatz für hochgenaue Indoor-Lokalisierung**
G. Fischer
Proc. Electrical and Electronic Engineering for Communication (EEEfCOM 2011), (2011)
- (30) **Double-Polysilicon SiGe HBT Architecture with Lateral Base Link**
A. Fox, B. Heinemann, H. Rücker
Solid State Electronics **60**, 93 (2011)
- (31) **SiGe:C HBT Architecture with Epitaxial External Base**
A. Fox, B. Heinemann, R. Barth, St. Marschmeyer, Ch. Wipf, Y. Yamamoto
Proc. 25th IEEE Bipolar/BiCMOS Circuits and Technology Meeting (BCTM 2011), 70 (2011)
- (32) **Design Rules for p-i-n Diode Carriers Sweeping in Nano-Rib Waveguides on SOI**
A. Gajda, L. Zimmermann, J. Bruns, B. Tillack, K. Petermann
Optics Express **19**(10), 9915 (2011)
- (33) **Dual-Polarized Architecture for Channel Sounding at 60 GHz with Digital Phase Control based on 0.25 μm SiGe BiCMOS and LTCC Technology**
A.P. Garcia Ariza, R. Müller, F. Wollenschläger, L.Xia, M. Elkhoully, Y. Sun, U. Trautwein, R.S. Thomä
Proc. European Conference on Antennas and Propagation 2011, (2011)
- (34) **Investigations of Emitter Homogeneity on Laser Doped Emitters**
S. Germershausen, L. Bartholomäus, U. Seidel, N. Hanisch, A. Schieferdecker, K.-H. Küsters, M. Kittler, M. Ametowobla, F. Einsele, G. Dallmann
Energy Procedia **8**, 232 (2011)
- (35) **Post Deposition Annealing of Praseodymia Films on Si(111) in the Range of 100 °C – 300 °C**
S. Gevers, T. Weisemoeller, D. Bruns, J. Wollschläger, A. Giussani, T. Schroeder
Journal of Physics: Condensed Matter **23**, 115904 (2011)
- (36) **Integrated Dispersion Compensator Based on SOI Tapered Gratings**
I. Giuntoni, D. Stolarek, A. Gajda, J. Bruns, L. Zimmermann, B. Tillack, K. Petermann
Proc. 37th European Conference and Exhibition Optical Communication (ECOC 2011), (2011)
- (37) **A Fully Integrated 60 GHz Transmitter Front-End in SiGe BiCMOS Technology**
S. Glisic, K. Schmalz, F. Herzel, R. Wang, M. Elkhoully, J.C. Scheytt
Proc. 11th Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SiRF 2011), 149 (2011)

- (38) **Fully Integrated 60 GHz Transceiver in SiGe BiCMOS, RF Modules, and 3.6. GBit/s OFDM Data Transmission**
S. Glisic, J.C. Scheytt, Y. Sun, F. Herzel, R. Wang, K. Schmalz, M. Elkhoully, C.-S. Choi
International Journal of Microwave and Wireless Technologies **3**(2), 139 (2011)
- (39) **Communication Systems Operating in the 60 GHz ISM Band: Overview**
E. Grass, K. Tittelbach-Helmrich, Ch.-S. Choi, F. Winkler, T. Ohlemüller, R. Kraemer
EuMA International Journal of Microwave and Wireless Technologies **3**, 89 (2011)
- (40) **A New Generation of High Frequency SiGe HBTs**
B. Heinemann, A. Fox
Microwave Journal **54**(9), 122 (2011)
- (41) **Oxygen Vacancy Induced Insulator-Metal Transition in HfO_{2-x} Thin Films**
E. Hildebrandt, J. Kurian, M.M. Müller, T. Schroeder, H.-J. Kleebe, L. Alff
Applied Physics Letters **99**, 112902 (2011)
- (42) **Design und Test einer Reaktionskammer zur Abscheidung von Kohlenstofffunktions-schichten auf Nickel- und Iridiumsubstraten**
M. Hofmann, D. Biniok, O. Seifarth, H. Beyer, S. Schrader, W. Mehr
Proc. Nachwuchswissenschaftlerkonferenz Mitteldeutscher Hochschulen (NWK 12), 321 (2011)
- (43) **An Integrated 10 GHz Phase-Locked Loop with Improved PVT Tolerance**
K. Hu, S.A. Osmany, J.C. Scheytt, F. Herzel
Analog Integrated Circuits and Signal Processing **67**, 319 (2011)
- (44) **Extension of IEEE 802.15.4a Improve Resilience for Wireless Automation Using Soft-Bit Combination**
J. Hund, C. Schwingenschlögl, R. Kraemer
Proc. IEEE International Conference on Ultra-Wideband (ICUWB 2011), (2011)
- (45) **Dielectric BD in Polycrystalline HfO_2 Gate Dielectrics Investigated with CAFM**
V. Iglesias, M. Porti, M. Nafria, X. Aymerich, P. Dudek, G. Bersuker
Journal of Vacuum Science and Technology B **29**(1), 01AB02 (2011)
- (46) **Influence of Defects and Interface on Radiative Transition of Ge**
S.R. Jan, C.-Y. Chen, C.-H. Lee, S.-T. Chan, K.-L. Peng, C.W. Liu, Y. Yamamoto, B. Tillack
Applied Physics Letters **98**, 141105 (2011)
- (47) **Fully Integrated 50 Gbit/s Half-Rate Linear Phase Detector in SiGe BiCMOS**
N. Joram, A. Barghouthi, Ch. Knochenhauer, F. Ellinger, J.C. Scheytt
Proc. International Microwave Symposium (IMS 2011), (2011)
- (48) **Logic Framework for High-Speed Serial Links in SiGe BiCMOS**
N. Joram, A. Barghouthi, Ch. Knochenhauer, F. Ellinger, J.C. Scheytt
Proc. Semiconductor Conference Dresden (SCD 2011),
- (49) **A CMOS Voltage Controlled Ring Oscillator with Improved Frequency Stability**
G. Jovanovic, M. Stojcev, Z. Stamenkovic
Journal of State University of Novi Pazar: Applied Mathematics, Informatics and Mechanics **2**, 1 (2011)
- (50) **Behavior of N Atoms after Thermal Nitridation of $\text{Si}_{1-x}\text{Ge}_x$ Surface**
T. Kawashima, M. Sakuraba, B. Tillack, J. Murota
Proc. 7th Conference on Si Epitaxy and Heterostructures, (ICSI-7), (2011)

- (51) **Capacitance Tuning Behavior of a BiCMOS Embedded RF-MEMS Switch**
 M. Kaynak, M. Wietstruck, W. Zhang, R. Scholz, B. Tillack
 Proc. 12th International Symposium on RF MEMS and RF Microsystems (MEMSWAVE 2011), (2011)
- (52) **Fully Integrated Low-Power SiGe Power Amplifier for Biomedical Applications**
 M. Kaynak, I. Tekin, Y. Gurbuz
 IET Microwaves, Antennas & Propagation **5**, 214 (2011)
- (53) **MEMS Module Integration into SiGe BiCMOS Technology for Embedded Systems Applications**
 M. Kaynak, M. Wietstruck, W. Zhang, R. Scholz, J. Drews, S. Marschmeyer, D. Knoll, F. Korndörfer, K. Schulz, C. Wipf, D. Wolansky, K. Kaletta, M. Wegner
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- (54) **MEMS Module Integration into SiGe BiCMOS Technology for Embedded Systems Applications**
 M. Kaynak, M. Wietstruck, M. von Suchodoletz, K. Zoschke, K. Kaletta, O. Ehrmann, S. Leidich, S. Kurth, B. Tillack
 Proc. Semiconductor Conference Dresden 2011, (2011)
- (55) **Robustness and Reliability of BiCMOS Embedded RF-MEMS Switch**
 M. Kaynak, F. Korndörfer, M. Wietstruck, D. Knoll, R. Scholz, C. Wipf, C. Krause, B. Tillack
 Proc. Silicon Monolithic Integrated Circuits in RF Systems (SIRF 2011), 177 (2011)
- (56) **Modeling the Early Stages of Oxygen Agglomeration**
 G. Kissinger, J. Dabrowski, D. Kot, V.D. Akhmetov, A. Sattler, W. von Ammon
 Journal of the Electrochemical Society **158**(4), H343 (2011)
- (57) **Preface**
 G. Kissinger, S. Pizzini, H. Tu, H. Yamada-Kaneta
 Physica Status Solidi C **8**(3), A12 (2011)
- (58) **300 mm Czochralski Silicon Wafers Optimized with Respect to Voids with Laterally Homogeneous Internal Getter Capabilities**
 G. Kissinger, G. Raming, R. Wahlich, T. Müller
 Proc. 14th International Conference on Defects, Recognition, Imaging and Physics in Semiconductors (DRIP 14), abstr. book 330 (2011)
- (59) **Photoluminescence Study of Ge Containing Crystal Defects**
 M. Kittler, T. Arguirov, M. Oehme, Y. Yamamoto, B. Tillack, N.V. Abrosimov
 Physica Status Solidi A **208**(4), 754 (2011)
- (60) **Anomalous Temperature Behaviour of Electroluminescence at Solar Cells**
 A. Klossek, T. Arguirov, T. Mchedlidze, M. Kittler
 Physica Status Solidi C **8**, 911 (2011)
- (61) **A Compact, Low-Power 40 Gbit/s Modulator Driver with 6 V Differential Output Swing in 0.25 µm SiGe BiCMOS**
 C. Knochenhauer, J.C. Scheytt, F. Ellinger
 IEEE Journal of Solid State Circuits **46**, 1137 (2011)
- (62) **A 40 GBit/s Transimpedance Amplifier with High Linearity Range in 0.13 µm SiGe BiCMOS**
 Ch. Knochenhauer, B. Sedighi, F. Ellinger
 Electronics Letters **47**(10), 605 (2011)
- (63) **Fully Integrated Auto-Zero Feedback with Lower Cutoff Frequency below 50 kHz in a 40 GBit/s Transimpedance Amplifier**
 Ch. Knochenhauer, R. Wolf, B. Sedighi, F. Ellinger
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- (64) **Emitter CMP Process Optimization for Self-Aligned SiGe:C HBT Fabrication**
D. Knoll, H. Ma, R. Barth, J. Drews, A. Fox, B. Heinemann, A. Wolff
Proc. Silicon Monolithic Integrated Circuits in RF Systems (SiRF 2011), (2011)
- (65) **A Silicon Balanced Subharmonic Optoelectronic Mixer for 60 GHz Fiber-Wireless Downlink Application**
M. Ko, J.-Y. Kim, M.-J. Lee, H. Rucker, W.-Ch. Choi
IEEE Photonics Technology Letters **23**, (23), 1805 (2011)
- (66) **3 Gb/s Link with SiGe BiCMOS Receiver Front-End and CMOS Mixed-Mode QPSK Demodulator**
M. Ko, D. Kim, H. Rucker, W.-Y. Choi
Journal of Semiconductor Technology and Science **11**(4), 256 (2011)
- (67) **3 Gb/s Radio Link with SiGe BiCMOS 60-GHz Receiver Front-End**
M. Ko, D. Kim, H. Rucker, W.-Y. Choi
Proc. RFIC Workshop, (2011)
- (68) **Compliant Substrate Versus Plastic Relaxation Effects in Ge Nanoheteroepitaxy on Free-Standing Si(001) Nanopillars**
G. Kozlowski, P. Zaumseil, M.A. Schubert, Y. Yamamoto, J. Bauer, J. Matejova, T. Schulli, B. Tillack, T. Schroeder
Applied Physics Letters **99**, 141901 (2011)
- (69) **Selective Ge CVD Heteroepitaxy on Free-Standing Si (001) Nanopatterns: a Combined Raman, TEM and FEM Study**
G. Kozlowski, Y. Yamamoto, A. Bauer, M.A. Schubert, B. Dietrich, B. Tillack, T. Schroeder
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- (70) **Design zuverlässiger Systeme: Was kann auf welcher Ebene getan werden?**
R. Kraemer
Proc. 5. GMM/GI/ITG-Fachtagung Zuverlässigkeit und Entwurf (ZuE 2011), 26 (2011)
- (71) **EASY-A: Gigabit Wireless Communications in the 60 GHz ISM Band**
R. Kraemer, E. Grass
Proc. 16th International OFDM-Workshop 2011 (InOWo'11), 71 (2011)
- (72) **Reliable Architecture for Heterogeneous Home-Networks: The OMEGA I-MAC Approach**
R. Kraemer, M. Brzozowski, S. Nowak
Proc. 10th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services (TELSIKS), 279 (2011)
- (73) **Physical Layer Design, Link Budget Analysis and Digital Baseband Implementation for 60 GHz Short-Range Applications**
S. Krone, F. Guderian, G. Fettweis, M. Petri, M. Piz, M. Marinkovic, M. Peter, R. Felbecker, W. Keusgen
International Journal of Microwave and Wireless Technologies **3**, 189 (2011)
- (74) **Moonrake Chip – GALS Demonstrator in 40 nm CMOS Technology**
M. Krstic, X. Fan, E. Grass, A. Strano, D. Bertozzi, Ch. Heer, B. Sanders, L. Benini, M.R. Kakooe
Proc. of the International Symposium on System-on-Chip (SoC 2011), (2011)
- (75) **A 122 GHz Multiprobe Reflectometer for Dielectric Sensor Readout in SiGe BiCMOS**
B. Lämmle, K. Schmalz, J.C. Scheytt, D. Kissinger, R. Weigel
Proc. IEEE Compound Semiconductor IC Symposium (CSICS 2011), (2011)

- (76) **Fast and Accurate Design Methodology for Millimeter-Wave Integrated Circuits**
B. Lämmle, K. Schmalz, J.C. Scheytt,
D. Kissinger, R. Weigel
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- (77) **Simulationsgestützte Algorithmenentwicklung für drahtlose Sensornetze**
St. Lange, O. Stecklina, M. Methfessel
Proc. Fachgespräch Sensornetze 2011, 45 (2011)
- (78) **Wireless Sensor and Actuator Networks for the Protection of Critical Infrastructures**
P. Langendörfer
EURESCOM mess@ge – The Magazine for Telecom Insiders **1**, 11 (2011)
- (79) **A Monolithically Integrated Optical Receiver with a Silicon Avalanche Photodiode for Fiber-Wireless IEEE 802.11 WLAN Applications**
M.-J. Lee, J.-S. Youn, H. Rücker, W.Y. Choi
Proc. IEEE Topical Meeting on Microwave Photonics, (2011)
- (80) **Direct Graphene Growth on Insulator**
G. Lippert, J. Dabrowski, M. Lemme,
Ch. Marcus, O. Seifarth, G. Lupina
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- (81) **A Sub-Atmospheric Chemical Vapor Deposition Process for Deposition of Oxide Liner in High Aspect Ratio through Silicon Vias**
M. Lisker, St. Marschmeyer, M. Kaynak, I. Tekin
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- (82) **Sub-Atmospheric Chemical Vapor Deposition of SiO₂ for Dielectric Layers in High Aspect Ratio TSVs**
M. Lisker, St. Marschmeyer, M. Kaynak, I. Tekin
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- (83) **Atomic Vapor Depositions of TiTaO Thin Films for Metal Insulator Metal Applications**
M. Lukosius, C. Baristiran Kaynak, Ch. Wenger,
G. Ruhl, S. Rushwoth, P. Baumann
Thin Solid Films **519**(11), 3831 (2011)
- (84) **Electrical Characteristics of TiTaO Based MIM Capacitors**
M. Lukosius, Ch. Wenger, G. Ruhl, S. Rushwoth
Journal of Vacuum Science and Technology B **29**(1), 01AC01 (2011)
- (85) **HfO₂, Sr-Ta-O and Ti-Ta-O High-k Dielectrics for Metal-Insulator-Metal Applications**
M. Lukosius, C. Baristiran Kaynak,
S. Rushwoth, Ch. Wenger
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- (86) **Metal-Insulator-Metal Capacitors with MOCVD Grown Ce-Al- as a Dielectric**
M. Lukosius, C. Baristiran Kaynak, A. Abrustis,
M. Skapas, V. Kubilius, A. Zauner, G. Ruhl,
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- (87) **Characterization of Group II Hafnates and Zirconates for Metal-Insulator-Metal Capacitors**
G. Lupina, O. Seifarth, P. Dudek,
G. Kozłowski, J. Dabrowski, H.-J. Thieme,
G. Lippert, T. Schroeder, H.-J. Müssig
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- (88) **Abscheidung von Graphenschichten auf Kupfersubstraten**
H. Lux, C. Villringer, O. Seifarth, M. Hofmann,
S. Schrader, W. Mehr
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- (89) **Drain-Extended MOS Transistors Capable for Operation at 10V and at Radio Frequencies**
A. Mai, H. Rücker
Solid State Electronics **65-66**, 45 (2011)
- (90) **A 245 GHz CB LNA in SiGe**
Y. Mao, K. Schmalz, J. Borngräber, J.C. Scheytt
Proc. European Microwave Week, 224 (2011)
- (91) **Comparison of 122 GHz LNAs in SiGe with Different Transmission Line Topologies**
Y. Mao, K. Schmalz, J. Borngräber, J.C. Scheytt
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- (92) **Characterization of Fluorocarbon Polymers Deposited with Different Chamber Pressure and Source Power in the Deposition Cycle of the Bosch Process**
St. Marschmeyer, M. Fraschke, T. Milewski, S. Schulze
Proc. Plasma Etch and Strip in Microelectronics (PESM 2011), abstr. book (2011)
- (93) **Fully Differential Baseband Pulse Generator for IEEE 802.15.4a Standard**
D. Martynenko, G. Fischer, O. Klymenko
Proc. International Conference on Computer as a Tool (EUROCON 2011), 131 (2011)
- (94) **Low Power Programmable Frequency Divider for IEEE 802.15.4a Standard**
D. Martynenko, G. Fischer, O. Klymenko
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- (95) **Characterization of Crystalline Silicon on Glass Using Photoluminescence**
T. Mchedlidze, J. Schneider, T. Arguirov, M. Kittler
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- (96) **Characterization of Traps in Crystalline Silicon on Glass Film Using Deep-Level Transient Spectroscopy**
T. Mchedlidze, J.H. Zollondz, M. Kittler
Solid State Phenomena **178-179**, 100 (2011)
- (97) **Fast Light-Induced Solid Phase Crystallization of Nanometer Thick Silicon Layers on Quartz**
T. Mchedlidze, T. Arguirov, M. Kittler
Solid State Phenomena **178-179**, 110 (2011)
- (98) **Structural Characterization of Crystallized Si Thin Film Material by HRTEM and Raman Spectroscopy**
T. Mchedlidze, M. Beigmohamadi, B. Berghoff, R. Sohal, S. Suckow, T. Arguirov, N. Wilck, J. Mayer, B. Spangenberg, M. Kittler
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- (99) **Structures Responsible for Radiative and Non-Radiative Recombination Activity of Dislocations in Silicon**
T. Mchedlidze, T. Arguirov, O. Kononchuk, M. Trushin, M. Reiche, M. Kittler
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- (100) **Micro-Cavities Based on Width Modulated SOI Waveguides**
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- (140) **Alternative Ge Heteroepitaxy Approaches on Si(001): From Micro-Pattern to Free Standing Si Nano-Structures**
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- (141) **Physical and Electrical Performance Limits of High-Speed SiGeC HBTs-Part I: Vertical Scaling**
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Ch. Walczyk, Ch. Wenger, D. Walczyk, M. Lukosius, I. Costina, M. Fraschke, J. Dabrowski, A. Fox, D. Wolansky, S. Thiess, E. Miranda, B. Tillack, T. Schroeder
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- (181) Materialcharakterisierung eines komplexen Metallschichtstapels für einen monolithisch-integrierten RF-MEMS Schalter**
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- (182) Complex Interface and Growth Analysis of Single Crystalline Epi-Si(111)/Y₂O₃/Pr₂O₃/Si(111) Heterostructures: Strain Engineering by Oxide Buffer Control**
A. Wilke, J.-M. Yang, J.W. Kim, O. Seifarth,
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T. Schroeder
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- (183) Hybrid Cascode with an Isolated NLD MOS and HBT for X-Band Power Amplifier Applications**
Ch. Wipf, R. Sorge, P. Weger
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- (184) Overview on ATE Test and Debugging Methods for Asynchronous Circuits**
Ch. Wolf, St. Zeidler, M. Krstic, R. Kraemer
Proc. Microprocessor Test and Verification (MTV 2011), (2011)
- (185) Low Threading Dislocation Density Ge Deposited on Si(100) Using RPCVD**
Y. Yamamoto, P. Zaumseil, T. Arguirov, M. Kittler, B. Tillack
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- (186) Low Threading Dislocation Ge on Si by Combining Deposition and Etching**
Y. Yamamoto, B. Tillack
Proc. 7th International Conference on Si Epitaxy and Heterostructures (ICSI-7), (2011)
- (187) A Bandwidth Adjustable Integrated Optical Receiver with an on-Chip Silicon Avalanche Photodetector**
J.-S. Youn, M.J. Lee, K.-Y. Park, H. Rücker, W.-Y. Choi
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- (188) A 9 Gb/s Optical Receiver Front-End with a Monolithically Integrated Avalanche Photodetector**
Y.-S. Youn, M.J. Lee, K.Y. Park, H. Rücker, W.Y. Choi
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- (189) Effect of Graded-Temperature Arsenic Prelayer on Quality of GaAs on Ge/Si Substrates by Metalorganic Vapor Phase Epitaxy**
H.W. Yu, E. Y. Chang, Y. Yamamoto, B. Tillack, W. C. Wang, C. I. Kuo, Y. Y. Wong, H. Q. Nguyen
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- (190) About the Strain Behaviour of Different Metal Oxide Layers Epitaxially Grown on Si(111)**
P. Zaumseil, T. Schroeder
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- (191) Characterization of Structural Defects in Germanium Epitaxially Grown on Nano-structured Silicon**
P. Zaumseil, Y. Yamamoto, A. Bauer, M.A. Schubert, J. Matejova, G. Kozlowski, T. Schroeder, B. Tillack
Solid State Phenomena **178-179**, 43 (2011)
- (192) Preparation and Characterization of Ge Epitaxially Grown on Nano-Structured Periodic Si Pillars and Bars on Si(001) Substrate**
P. Zaumseil, Y. Yamamoto, A. Bauer, M.A. Schubert, J. Matejova, G. Kozlowski, T. Schroeder, B. Tillack
Proc. 7th International Conference on Si Epitaxy and Heterostructures (ICSI-7), (2011)
- (193) X-Ray Characterization of Ge Epitaxially Grown on Nano-Structured Si(001) Wafers**
P. Zaumseil, Y. Yamamoto, A. Bauer, M.A. Schubert, T. Schroeder
Journal of Applied Physics **109** 023511 (2011)
- (194) Design of a Test Processor for Asynchronous Chip Test**
St. Zeidler, Ch. Wolf, M. Krstic, F. Vater, R. Kraemer
Proc. IEEE 20th Asian Test Symposium 2011, (2011)
- (195) Fundamental Mode Colpitts VCOs at 115 and 165-GHz**
Y. Zhao, B. Heinemann, U.R. Pfeiffer
Proc. 25th IEEE Bipolar/BiCMOS Circuits and Technology Meeting (BCTM 2011), 33 (2011)

- (196) High-Precision Flip-Chip Technology for Alloptical Wavelength Conversion Using SOI Photonic Circuit**
L. Zimmermann, G.B. Preve, K. Voigt,
G. Winzer, J. Kreissl, L. Moerl, C. Stamatiadis,
L. Stampoulidis, H. Avramopoulos
Proc. 8th International Conference on Group
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Eingeladene Vorträge **Invited Presentations**

- (1) Optische Charakterisierung und Optimierung nanostrukturierter Oberflächen am Beispiel von Solarzellen und der Halbleitertechnologie**
J. Bauer
Workshop Funktionsschichten: Materialien und Prozesse, TH Wildau, December 05, 2011, Germany
- (2) HfO₂-based RRAM Devices at IHP: Some Results on Material Research and System Integration**
T. Bertaud, D. Walczyk, Ch. Walczyk,
M. Sowinska, T. Schroeder, Ch. Wenger
LTM/Leti HfO₂-based RRAM weekly Meeting,
Grenoble, June 28, 2011, France
- (3) Die Bio-Halbleiter-Grenzfläche: Kommunikationskanal oder Kommunikationsbarriere?**
M. Birkholz
Kolloquium Prozesse and Grenzflächen, BTU Cottbus, October 25, 2011, Germany
- (4) Patientenfreundliche Biosensoren dank Mikroelektronik**
M. Birkholz
Workshop Point of Care Testing, Birkenwerder, February 22, 2011, Germany
- (5) GALS Design for Digital System Integration**
X. Fan, M. Krstic, E. Grass
CREDES Seminar Hardware Design Today,
Tallin, October 19, 2011, Estonia
- (6) Moonrake SYNC/ GALS OFDM TX: Design and Test**
X. Fan
HiPEAC Interconnection Cluster, Chamonix,
April 07 - 09, 2011, France
- (7) Aktuelle Entwicklungen im Bereich drahtlose Breitbandkommunikation**
E. Grass
10. METRIK Evaluierungsworkshop, Döllnsee,
November, 18, 2011, Germany
- (8) 60 GHz Communication Systems: Applications, Standards and Future Research Topics**
E. Grass
IWPC-Workshop on 60m GHz Short Range Wireless - What is the Future?, Berlin, May 24, 2011, Germany
- (9) BiCMOS Embedded MEMS Technologies: RF-MEMS Switch and High-Q Passives**
M. Kaynak
7th International Summer School on RF-MEMS and RF-MST, Toulouse, July 04, 2011, France
- (10) MEMS Module Integration into SiGe BiCMOS Technology for Embedded Systems Applications**
M. Kaynak, M. Wietstruck, M. von Suchodoletz,
K. Zoschke, K. Kaletta, O. Ehrmann, S. Leidich,
S. Kurth, B. Tillack
Semiconductor Conference Dresden 2011,
Dresden, September 27 - 28, 2011, Germany
- (11) SiGe BiCMOS Technology and Modular Extension: Embedded RF-MEMS Module**
M. Kaynak
Emerging Micro-Nano Technologies for RF Applications, Ankara, August,11, 2011, Turkey

- (12) **Initial Stages of Oxygen and Vacancy Agglomeration: Kinetic and Getter Effects**
G. Kissinger, D. Kot, J. Dabrowski, W. Häckl, V.D. Akhmetov, A. Sattler
Kolloquium IKZ, Berlin, January 28, 2011, Germany
- (13) **Initial Stages of Oxygen and Vacancy Agglomeration: Kinetic and Getter Effects**
G. Kissinger, D. Kot, J. Dabrowski, W. Häckl, V.D. Akhmetov, A. Sattler
Low Carbon Earth Summit (LCES 2011), Dalian, October 19 - 26, 2011, China
- (14) **Dislocation Networks as Active Components in Novel Si Devices**
M. Kittler
FNMA2011 Szczecin, September 06 - 09, 2011, Poland
- (15) **Dislocations in Si: Properties and Attempt to an Application**
M. Kittler
University of Zielona Gora, May 31, 2011, Poland
- (16) **Recombination Activity of Crystal Defects in Solar Si**
M. Kittler
Solar World Innovations, Freiberg, May 26, 2011, Germany
- (17) **Recombination Activity of Crystal Defects in Solar Silicon**
M. Kittler
German Polish Conference on Crystal Growth (GPCCG 2011), Frankfurt (Oder)/Słubice, March 14 - 18, 2011, Germany/Poland
- (18) **Design zuverlässiger Systeme: Was kann auf welcher Ebene getan werden?**
R. Kraemer
5. GMM/GI/ITG-Fachtagung Zuverlässigkeit und Entwurf (ZuE 2011), Hamburg, September 27 - 29, 2011, Germany
- (19) **Reliable Architecture for Heterogeneous Home-Networks: The OMEGA I-MAC Approach**
R. Kraemer, M. Brzozowski, S. Nowak
10th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services (TELSIKS), Nis, October 05 - 08, 2011, Serbia
- (20) **Gigabit Wireless Communications in the 60 GHz ISM Band – a System Perspective**
M. Krstic, R. Kraemer, E. Grass, M. Petri
19th Telecommunications Forum (TELFOR 2011), Belgrade, November 22 - 24, 2011, Serbia
- (21) **Integrierte Dielektrische Millimeterwellen-Sensoren für Bio-Medizinische Anwendungen**
B. Lämmle, K. Schmalz, J.C. Scheytt, R. Weigel, D. Kissinger
12. GMM/ITG Fachtagung Entwicklung von Anlogschaltungen mit CAE-Methoden, (Analog 2011), Erlangen, November 07 - 09, 2011, Germany
- (22) **Direct Graphene Growth on Insulator at IHP**
G. Lippert
TU Berlin, May 16, 2011, Germany
- (23) **Direct Graphene Growth on Insulator by MBE**
G. Lippert
Kolloquium Leibniz-Universität Hannover, December 14, 2011, Germany
- (24) **Graphene - its Properties, Fabrication Methods and Applications**
G. Lupina, J. Dabrowski, G. Lippert, M. Zoellner, T. Grzela, O. Seifarth
Symposium on Nanomaterials and their Application to Biology and Medicine, Poznan, June, 15, 2011, Poland

- (25) **Si-basierte Hochgeschwindigkeits-Elektronik zwischen GHz und THz-Technologie und Anwendungen in der drahtlosen Kommunikation, Biomedizin und Luft- und Raumfahrt**
W. Mehr
Leibniz-Sozietät in Klasse Naturwissenschaften, Berlin, March 10, 2011, Germany
- (26) **Wo liegt die solare Zukunft?**
W. Mehr
Zukunftsdialog Solarkraftwerke, Smart PV oder Modulexport - Wo liegt die solare Zukunft der Hauptstadtregion?, Berlin, March 07, 2011, Germany
- (27) **Atomically Controlled CVD Processing of Group IV Semiconductors for Ultralarge Scale Integration**
J. Murota, M. Sakuraba, B. Tillack
3rd International Workshop on Nanotechnology and Application (IWNA 2011), Vung Tau, November 10 - 12, 2011, Vietnam
- (28) **Google, Facebook, StudiVZ oder Big Brother – Wer weiß mehr über Dich?**
St. Ortmann
Gauß Festwoche, Frankfurt (Oder), April 14, 2011, Germany
- (29) **Hochintegrierte Schaltungen in Siliziumtechnologie für Sensorikanwendungen im mm-Wellen- und sub-mm-Wellen-Bereich**
J.C. Scheytt
Mikroelektronikverbund THz-Präsentationen, München, March 29, 2011, Germany
- (30) **mm-Wave System-on-Chip & System-in-Package Design for 122 GHz Radar Sensors**
J.C. Scheytt, Y. Sun, S. Beer, T. Zwick, M. Kaynak
12th International Symposium on RF MEMS and RF Microsystems, Athens, June 27 - 29, 2011, Greece
- (31) **Adding New Functional Modules to Existing Silicon Microelectronics: Embedded RRAM Memories**
T. Schroeder
In-Vivo Electronics Testing by Modern Synchrotron Radiation, Grenoble, January 27, 2011, France
- (32) **Alternative Ge Heteroepitaxy Approaches on Si(001): From Micro-Pattern to Free Standing Si Nano-Structures**
T. Schroeder, P. Zaumseil, L. Zimmermann, Y. Yamamoto, J. Bauer, J. Matejova, G. Kozłowski, A. Schubert, B. Tillack
The 7th International Conference of Si Epitaxy and Heterostructures (ICSI-7), Leuven, August 28 - September 01, 2011, Belgium
- (33) **Alternative Semiconductor Integration on Si by Heteroepitaxy: Oxide Heterostructure Buffer versus Patterned Si Wafer Approaches**
T. Schroeder
IBM Zurich, Switzerland, January 14, 2011
- (34) **Synchrotron Diagnostics for Si Photo-voltaics: Analysis of Metal Precipitation**
W. Seifert, T. Arguirov, O. Vyvenko, M. Trushin, W. Kwapił, M. Rinio, A. Zuschlag, G. Martines-Criado, M. Salome, I. Zizak
Hercules Industrial Course: Neutrons and Synchrotron X-Rays for Industrial Applications, Grenoble, May 02 - 04, 2011, France
- (35) **Synchrotrondiagnostik von Metallausscheidungen in Solarsilizium**
W. Seifert
SolarWorld Innovations Lecture Series, Freiberg, June 24, 2011, Germany
- (36) **Circuits and Systems for RF-MIMO WLAN**
Z. Stamenkovic, K. Tittelbach-Helmrich, R. Kraemer, S. Ruiz, O. Gago, J. Ibanez, I. Santamaria, M. Wickert, R. Eickhoff
2nd International Symposium on Innovation and Technology (ISIT 2011), Lima, November 28 - 30, 2011, Peru

- (37) **Implementation, Integration and Verification of MIMAX WLAN Modem**
Z. Stamenkovic, K. Tittelbach-Helmrich, M. Wickert, J. Ibanez, S. Ruiz, G. Dimosthenous
6th International Workshop on Reconfigurable Communication-Centric Systems-on-Chip, Montpellier, June 20 - 22, 2011, France
- (38) **IQlevel - Innovative High Quality Level Meter**
O. Stecklina
3. Ideenschmiede, Frankfurt (Oder), May 10, 2011, Germany
- (39) **SiGe BiCMOS Platform – Baseline Technology for More than Moore Process Module Integration**
B. Tillack
14th IEEE International Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDEC 2011), Cottbus, April 13 - 15, 2011, Germany
- (40) **SiGe BiCMOS Platform: Baseline Technology for More than Moore Process Module Integration**
B. Tillack
Kolloquium Universität Erlangen-Nürnberg, November 09, 2011, Germany
- (41) **Grenzflächencharakterisierung von Ti/HfO₂ basierten MIM-Dioden**
Ch. Walczyk, M. Sowinska, T. Schroeder, T. Bertaud, D. Walczyk, M. Lukosius, M. Fraschke, A. Schubert, B. Tillack, Ch. Wenger
DGM Arbeitskreis: Materialien für nichtflüchtige Speicher, Frankfurt (Oder), May 05, 2011, Germany
- (42) **Modern Materials Research for „More Than Moore“ Silicon Microelectronics: Example of Embedded Non-Volatile Memory Integration for Wireless SiGe BiCMOS Circuits**
Ch. Walczyk
University of Lund, June 10, 2011, Sweden
- (43) **ALD and AVD Grown Perovskite-Type Dielectrics for Metal-Insulator-Metal Applications**
Ch. Wenger, M. Lukosius, T. Blomberg, A. Abrutis, P.K. Baumann, G. Ruhl
220th ECS Meeting and the Electrochemical Energy Summit, Boston, October 09 - 14, 2011, USA
- (44) **CVD Grown Ternary High-k Oxides for MIM Capacitors**
Ch. Wenger, G. Ruhl
Novel High-k Application Workshop 2011, Dresden, March 30, 2011, Germany
- (45) **Embedded HfO₂ based 1T1R Cells for Future RRAM Applications**
Ch. Wenger, T. Bertaud, Ch. Walczyk, D. Walczyk, M. Sowinska
58th AVS International Symposium & Exhibition, Nashville, October 30 - November 04, 2011, USA
- (46) **Mikroelektronik für Telemedizin und Sensorik**
Ch. Wenger
Deutsch-Polnisches Innovationsforum Gesundheitsdienstleistungen, Frankfurt (Oder), February 15, 2011, Germany
- (47) **Resistive Switching Characteristics of CMOS embedded HfO₂-based 1T1R Cells**
Ch. Wenger
Novel High-k Application Workshop 2011, Dresden, March 30, 2011, Germany
- (48) **Ge Photonics for Si Technology**
Y. Yamamoto, G. Kozlowski, B. Tillack, T. Schroeder
Trends in der Materialforschung für die Mikro- und Optoelektronik, Berlin, April 11, 2011, Germany

(49) Aktuelle Entwicklungen in der Mikroelektronik – Beiträge des Leibniz-Institutes für Innovative Mikroelektronik (IHP) in Frankfurt (Oder)

P. Zaumseil

Kolloquium Universität Siegen, December, 08, 2011, Germany

(50) Characterization of Structural Defects in Germanium Epitaxially Grown on Nanostructured Silicon

P. Zaumseil, Y. Yamamoto, A. Bauer,

M.A. Schubert, J. Matejova, G. Kozlowski,

T. Schroeder, B. Tillack

XIV. International Conference on Gettering and Defect Engineering in Semiconductor Technology (GADEST 2011), Styria, September 25 - 30, 2011, Austria

(51) X-Ray Characterization of Ge Epitaxially Grown on Nano-Structured Si

P. Zaumseil, Y. Yamamoto, J. Matejova,

T. Schroeder

E-MRS Fall Meeting, Warsaw, September 19 - 23, 2011, Poland

**Vorträge
Presentations****(1) TEM Investigations of GaN/Sc₂O₃/Y₂O₃/Si(111)**

D. Albrecht, L. Tarnawska, T. Schroeder,

T. Niermann, M. Lehmann

Microscopy Conference 2011, Kiel, August 28 - September 02, 2011, Germany

(2) PVD Deposited High-Purity SiC/Si Layers for e-Beam Crystallized Thin Film Solar Cells on Glass

D. Amkreutz, W. Seifert, S. Schönau,

A. Schubert, S. Common

26th European Photovoltaic Solar Energy Conference and Exhibition (EU PVSEC), Hamburg, September 05 - 09, 2011, Germany**(3) Room Temperature Direct band-gap Emission from an Unstrained Ge p-i-n LED on Si**

T. Arguirov, M. Kittler, M. Oehme,

N.V. Abrosimov, E. Kasper, J. Schulze

XIV. International Conference on Gettering and Defect Engineering in Semiconductor Technology (GADEST 2011), Styria, September 25 - 30, 2011, Austria

(4) Room-Temperature Direct Band-Gap Emission from Unstrained Ge p-i-n LED on Si

T. Arguirov, M. Kittler, M. Oehme,

N.V. Abrosimov, E. Kasper, J. Schulze

48. Punktdefekttreffen, Dresden, October 13 - 14, 2011, Germany

(5) Effiziente Synthese von Schaltungen mit spezifischer Fehlertoleranz

M. Augustin, M. Gössel, R. Kraemer

23.GI/GMM/ITG Workshop Testmethoden und Zuverlässigkeit von Schaltungen und Systemen (TuZ), Passau,

February 27 - March 01, 2011, Germany

- (6) **Implementation of Selective Fault Tolerance with Conventional Synthesis Tools**
 M. Augustin, M. Gössel, R. Kraemer
 14th IEEE International Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2011), Cottbus, April 13 - 15, 2011, Germany
- (7) **Selective Fault Tolerance for Finite State Machines**
 M. Augustin, M. Gössel, R. Kraemer
 17th IEEE International On-Line Testing Symposium (IOLTS 2011), Athens, July 13 - 15, 2011, Greece
- (8) **Broadband 31-65 GHz Inductorless Active BALUN with 12.4 dB Gain in 0.13 μm SiGe:C BiCMOS Technology**
 A. Awny, A. Thiede, Ch. Wipf, J.C. Scheytt
 European Microwave Week, Manchester, October 09 - 14, 2011, UK
- (9) **Design and Test of Decision Feedback Equalizers for 80 Gbit/s Bit Rate and Beyond**
 A. Awny, A. Thiede, J.C. Scheytt
 International Microwave Symposium (IMS 2011), Baltimore, June 05 - 10, 2011, USA
- (10) **Integration of CoFe_2 with Silicon for Tunnel Devices**
 R. Bachelet, P. de Coux, B. Warot-Fonrose, G. Herranz, V. Skumryev, L. Tarnawska, P. Zaumseil, T. Schroeder, J. Fontcuberta, F. Sánchez
 Workshop on Oxide Electronics (WOE 18), Napa Valley, September 26 - 28, 2011, USA
- (11) **$\text{Ce}_x\text{Al}_y\text{O}_z/\text{TiN}$ Stack Analysis for MIM Applications: Effect of Annealing and the Metal Electrode Deposition Method**
 C. Baristiran Kaynak, M. Lukosius, B. Tillack, Ch. Wenger, A. Abrutis, M. Skapas
 E-MRS Spring Meeting, Nice, May 09 - 13, 2011, France
- (12) **Single SrTiO_3 and $\text{Al}_2\text{O}_3/\text{SrTiO}_3/\text{Al}_2\text{O}_3$ based MIM Capacitors: Impact of the Bottom Electrode Material**
 C. Baristiran Kaynak, M. Lukosius, B. Tillack, Ch. Wenger, T. Blomberg, G. Ruhl
 17th Conference on Insulating Films on Semiconductors (INFOS 2011), Grenoble, June 21 - 24, 2011, France
- (13) **Implementation Analysis of the IEEE 802.15.4 MAC for Wireless Sensor Networks**
 T. Basmer, H. Schomann, St. Peter
 International Conference on Selected Topics in Mobile & Wireless Networking, Shanghai, October 10 - 12, 2011, China
- (14) **Alignment Technology for Backside Integration Technique**
 J. Bauer, P. Kulse, U. Haak, G. Old, G. Scheuring, St. Döbereiner, F. Hillmann, H.-J. Brück, M. Kaynak, K.-E. Ehwald, St. Marschmeyer, M. Birkholz, K. Schulz
 27th European Mask and Lithography Conference EMLC 2011, Dresden, January 18 - 19, 2011, Germany
- (15) **Backside Integration: Lithography and Etching**
 J. Bauer, M. Fraschke, P. Kulse, U. Haak, G. Old, G. Scheuring, St. Döbereiner, F. Hillmann, H.-J. Brück, M. Kaynak, K.-E. Ehwald, St. Marschmeyer, M. Birkholz, K. Schulz
 ForMaT-Workshop Mikro-Nano-Integration, Future Challenges in Plasma Etching, Ilmenau, January 27, 2011, Germany
- (16) **Ge Nanoheterostructures Characterization by Ellipsometry**
 J. Bauer, O. Fursenko, Y. Yamamoto, G. Kozlowski
 6th Workshop Ellipsometry, Berlin, February 21 - 24, 2011, Germany

- (17) **Optical Properties and Band Gap Studies of High-k Dielectrics**
 J. Bauer, O. Fursenko, G. Lupina, P. Dudek, M. Lukosius, Ch. Wenger, P. Zaumseil
 6th Workshop Ellipsometry, Berlin, February 21 - 24, 2011, Germany
- (18) **Resistive Switching of HfO₂ based MIM Diodes: Impact of the Top Electrode Material**
 T. Bertaud, D. Walczyk, Ch. Walczyk, Ch. Wenger, T. Schroeder, C. Vallée, P. Gonon, C. Mannequin, V. Jousseau, H. Grampeix
 E-MRS Spring Meeting, Nice, May 09 - 13, 2011, France
- (19) **Bioelectronics - The Merger of Microelectronics and Biotech at the Nanoscale**
 M. Birkholz
 German-Turkish Workshop for Nano-Bio- and Biosensing Technologies, Ankara, June 20 - 22, 2011, Turkey
- (20) **Halbleitertechnologie für die Biosensorik - und das Beispiel eines monolithisch integrierten Glucosesensorchips**
 M. Birkholz, K.-E. Ehwald, P. Kulse, M. Fröhlich, T. Basmer, T. Guschauski, R. Ehwald, J. Drews, U. Haak, St. Marschmeyer, E. Matthus, K. Schulz, W. Winkler, D. Wolansky, S. Schmaderer, J. Szeponik, D. Zahn, U. Stoll, H. Siegel
 7. Deutsches Biosensor Symposium, Heiligenstadt, April 03 - 06, 2011, Germany
- (21) **10 GS/s 8-bit Bipolar THA in SiGe Technology**
 Y. Borokhovych, J.C. Scheytt
 NORCHIP 2011, Lund, November, 14 - 15, 2011, Sweden
- (22) **Deep Level Transient Spectroscopy Study of Ion Implantation-induced Extended Defects in Silicon**
 J. Boucher, F. Olivié, K. Koukos, E. Bedel-Pereira, D. Bolze, Y. Yamamoto, F. Christiano
 26th International Conference on Defects in Semiconductors, (ICDS-26), Nelson, July 17 - 22, 2011, New Zealand
- (23) **Electrical Characterization of Extended Defects in Ion Implanted Ultra-Shallow Junctions: Impact on Leakage Current**
 J. Boucher, F. Olivié, E. Bedel-Pereira, D. Bolze, Y. Yamamoto, Z. Essa, A. Pakfar, F. Christiano
 E-MRS 2011 Spring Meeting, Nice, May 11 - 13, 2011, France
- (24) **Physical, Optical and Electrical Characterization of Extended Defects on Ion Implanted Ultra-Shallow Junctions: Impact on Induced Leakage Current**
 J. Boucher, K. Koukos, E. Bedel-Pereira, F. Olivé, D. Bolze, Y. Yamamoto, F. Christiano
 E-MRS 2011 Spring Meeting, Nice, May 11 - 13, 2011, France
- (25) **Physical, Optical and Electrical Characterization of Extended Defects on Ion Implanted Ultra-Shallow Junctions: Impact on Induced Leakage Current**
 J. Boucher, K. Koukos, E. Bedel-Pereira, F. Olivé, D. Bolze, Y. Yamamoto, F. Christiano
 International Workshop on INSIGHT 2011 in Semiconductor Device Fabrication, Metrology and Modeling, Napa, May 15 - 18, 2011, USA
- (26) **Cross-Platform Protocol Development for Sensor Networks: Lesson Learned**
 M. Brzozowski, H. Salomon, K. Piotrowski, P. Langendörfer
 ACM/IEEE International Conference on Software Engineering (ICSE 2011), SESENA Workshop, Honolulu, May 21 - 28, 2011, USA

- (27) **Inter-Mac – From Vision to Demonstration; Enabling Heterogeneous Meshed Home Area Network**
 M. Brzozowski, St. Nowak, F.-M. Schaefer
 14th ITG Conference on Electronic Media Technology Dortmund Fernsehseminar, March 23 - 24, 2011, Germany
- (28) **Towards THz SiGe HBTs**
 P. Chevalier, T.F. Meister, B. Heinemann, S. Van Huynenbroeck, W. Liebl, A. Fox, A. Sibaja-Hernandez, A. Chantre
 25th IEEE Bipolar / BiCMOS Circuits and Technology Meeting (BCTM 2011), Atlanta, October 09 - 11, 2011, USA
- (29) **24 GHz Transceiver Front-End with Integrated Ramp Generator**
 W. Debski, W. Winkler, D. Genschow, R. Kraemer
 European Microwave Week, Manchester, October 09 - 14, 2011, UK
- (30) **A 6 Bit and a 7 Bit 80MS/s SAR ADC for an IR-UWB Receiver**
 J. Digel, M. Masini, M. Grötzing, M. Berroth, G. Fischer, S. Olonbayar, J.C. Scheytt
 IEEE Conference on Microwaves, Communications, Antennas and Electronic Systems (COMCAS 2011), Tel Aviv, November 07 - 09, 2011, Israel
- (31) **An Integrating Digitizer for an IR-UWB Receiver**
 J. Digel, M. Masini, M. Grötzing, M. Berroth, G. Fischer, S. Olonbayar, H. Gustat, J.C. Scheytt
 Entwicklung von Anlogschaltungen mit CAE Methoden (Analog 2011), Erlangen, November 07 - 09, 2011, Germany
- (32) **Algorithmically Determining the Optimum Polynomial Multiplier in GF (2k)**
 Z. Dyka, P. Langendörfer
 Western European Workshop on Research in Cryptology (WEWORC 2011), Weimar, July 20 - 22, 2011, Germany
- (33) **Physical Layer Amendments for MIMO Features in 802.11a**
 R. Eickhoff, K. Tittelbach-Helmrich, M. Wickert, J. Wagner, U. Mayer, V. Elvira, J. Ibanez, Z. Stamenkovic, F. Ellinger
 Future Network and Mobile Summit 2011, Warsaw, June 15 - 17, 2011, Poland
- (34) **60 GHz Four Channel Beamforming Transmitter in 0.25 μ m**
 M. Elkhoully, S. Glisic, J.C. Scheytt, F. Ellinger
 2011 European Microwave Integrated Circuit Conference (EuMIC), Manchester, October 09 - 14, 2011, UK
- (35) **A Frequency Ramp Generator Based on Fractional-N PLL**
 A. Ergintav, Y. Sun, F. Herzel, J.C. Scheytt
 Kleinheubacher Tagung 2011, Miltenberg, September 26, 2011, Germany
- (36) **GALS Design for On-Chip Ground Bounce Suppression**
 X. Fan, M. Krstic, Ch. Wolf, E. Grass
 IEEE International Symposium on Asynchronous Circuits and Systems - ASYNC 2011, Ithaca, April 27 - 29, 2011, USA
- (37) **HICUM / L2 Models for SiGe-HBTs in IHP 0.13 μ m BiCMOS Technology**
 G.G. Fischer
 AK Bipolar, München, May 06, 2011, Germany
- (38) **Impulse Radio UWB Chipsatz für hochgenaue Indoor-Lokalisierung**
 G. Fischer, O. Klymenko, D. Martynenko
 Electrical and Electronic Engineering for Communication (EEECOM 2011), Ulm, May 25 - 26, 2011, Germany

- (39) **SiGe:C HBT Architecture with Epitaxial External Base**
 A. Fox, B. Heinemann, R. Barth,
 St. Marschmeyer, Ch. Wipf, Y. Yamamoto
 25th IEEE Bipolar / BiCMOS Circuits and
 Technology Meeting (BCTM 2011), Atlanta,
 October 09 - 11, 2011, USA
- (40) **Silicon Etching from Backside to Improve Device Performance**
 M. Fraschke, J. Bauer, P. Kulse, U. Haak,
 G. Old, G. Scheuring, St. Döbereiner,
 F. Hillmann, H.-J. Brück, M. Kaynak,
 K.-E. Ehwald, St. Marschmeyer, M. Birkholz,
 K. Schulz
 ForMaF-Workshop Mikro-Nano-Integration –
 Future Challenges in Plasma Etching,
 Ilmenau, January 27, 2011, Germany
- (41) **Characterization of Si Nanowaveguide Line Edge Roughness and its Effect on Light Transmission**
 O. Fursenko, J. Bauer, A. Knopf,
 St. Marschmeyer, L. Zimmermann, G. Winzer
 E-MRS 2011 Spring Meeting, Nice,
 May 11 - 13, 2011, France
- (42) **Optical Properties and Band Gap Characterization of High-k Oxides**
 O. Fursenko, J. Bauer, G. Lupina, P. Dudek,
 M. Lukosius, Ch. Wenger, P. Zaumseil
 E-MRS 2011 Spring Meeting, Nice,
 May 11 - 13, 2011, France
- (43) **Dual-Polarized Architecture for Channel Sounding at 60 GHz with Digital Phase Control based on 0.25 μm SiGe BiCMOS and LTCC Technology**
 A.P. Garcia Ariza, R. Müller, F. Wollenschläger,
 L. Xia, M. Elkhoully, Y. Sun, U. Trautwein,
 R.S. Thomä
 European Conference on Antennas and Propagation 2011, Rome, April 11 - 15, 2011, Italy
- (44) **Investigations of Emitter Homogeneity on Laser Doped Emitters**
 S. Germershausen, L. Bartholomäus, U. Seidel,
 N. Hanisch, A. Schieferdecker, K.-H. Küsters,
 M. Kittler, M. Ametowobla, F. Einsele,
 G. Dallmann
 1st International Conference on Crystalline
 Silicon Photovoltaics (SiliconPV 2011),
 Freiburg, April 17 - 24, 2011, Germany
- (45) **Integrated Bragg Gratings on SOI Rib Waveguides for Dispersion Compensation**
 I. Giuntoni, A. Gajda, M. Krause, D. Stolarek, R.
 Steingrüber, J. Bruns, L. Zimmermann,
 E. Brinkmeyer, B. Tillack, K. Petermann
 ITG-Workshop für Silicon Photonics, Nürnberg,
 May 11, 2011, Germany
- (46) **Integrated Dispersion Compensator Based on SOI Tapered Gratings**
 I. Giuntoni, D. Stolarek, A. Gajda, J. Bruns,
 L. Zimmermann, B. Tillack, K. Petermann
 37th European Conference and Exhibition
 Optical Communication (ECOC 2011), Geneva,
 September 18 - 22, 2011, Switzerland
- (47) **A Fully Integrated 60 GHz Transmitter Front-End in SiGe BiCMOS Technology**
 S. Glisic, K. Schmalz, F. Herzel, R. Wang,
 M. Elkhoully, J.C. Scheytt
 11th Topical Meeting on Silicon Monolithic
 Integrated Circuits in RF Systems (SiRF 2011),
 Phoenix, January 17 - 19, 2011, USA
- (48) **Structural and Dielectric Properties of $\text{CeO}_2/\text{Pr}_2\text{O}_3/\text{Si}(111)$ Heterostructures as a Function of Oxygen Content in the Buried Pr Oxide Layer**
 T. Grzela, M. Zoellner, J. Dabrowski,
 D. Walczyk, Ch. Walczyk, T. Schroeder
 E-MRS Fall Meeting 2011, Warsaw,
 September 19 - 23, 2011, Poland

- (49) **Half Terahertz Silicon-Germanium Heterojunction Bipolartransistor (SiGe HBT)**
 B. Heinemann
 Parlamentarischer Abend, Berlin,
 June 07, 2011 Germany
- (50) **German Point of Load Converter Initiative to Design a Pol Converter Demonstrator for Space Application**
 H.-V. Heyer, J.C. Scheytt, St. Scholz, A. Hasan, Y. Ma, G. Grau
 9th European Space Power Conference (ESPC 2011), Saint Raphael,
 June 06 - 10, 2011, France
- (51) **Design und Test einer Reaktionskammer zur Abscheidung von Kohlenstofffunktions-schichten auf Nickel- und Iridiumsubstraten**
 M. Hofmann, D. Biniok, O. Seifarth, H. Beyer, S. Schrader, W. Mehr
 Nachwuchswissenschaftlerkonferenz Mittel-deutscher Hochschulen (NWKL 12),
 Wernigerode, April 14, 2011, Germany
- (52) **Drahtlose Adaption von AS-Interface durch Optimierungen in IEEE 802.15.4a**
 J. Hund, M. Bahr, C. Schwingenschlögl, R. Kraemer
 Jahreskolloquium Kommunikation in der Automation (KommA 2011), Magdeburg,
 September 27 - 28, 2011, Germany
- (53) **Extension of IEEE 802.15.4a Improve Resilience for Wireless Automation Using Soft-Bit Combination**
 J. Hund, C. Schwingenschlögl, R. Kraemer
 IEEE International Conference on Ultra-Wide-band (ICUWB 2011), Bologna,
 September 14 - 16, 2011, Italy
- (54) **Fully Integrated 50 Gbit/s Half-Rate Linear Phase Detector in SiGe BiCMOS**
 N. Joram, A. Barghouthi, Ch. Knochenhauer, F. Ellinger, J.C. Scheytt
 International Microwave Symposium (IMS 2011), Baltimore, June 05 - 10, 2011, USA
- (55) **Logic Framework for High-Speed Serial Links in SiGe BiCMOS**
 N. Joram, A. Barghouthi, Ch. Knochenhauer, F. Ellinger, J.C. Scheytt
 Semiconductor Conference (SCD 2011), Dresden, September, 27 - 28, 2011, Germany
- (56) **Behavior of N Atoms after Thermal Nitridation of Si_{1-x}Ge_x Surface**
 T. Kawashima, M. Sakuraba, B. Tillack, J. Murota
 7th Conference on Si Epitaxy and Heterostructures, (ICSI-7), Leuven,
 August 28 - September 01, 2011, Belgium
- (57) **BiCMOS Embedded MEMS Technologies: RF-MEMS Switch and High-Q Passives**
 M. Kaynak
 URSI General Assembly and Scientific Symposium of International Union of Radio Science (URSI GASS 2011), Istanbul,
 August 13 - 20, 2011, Turkey
- (58) **BiCMOS Embedded RF-MEMS Modules for mm-Wave-Applications**
 M. Kaynak
 Parlamentarischer Abend, Berlin,
 June, 07, 2011, Germany
- (59) **Capacitance Tuning Behavior of a BiCMOS Embedded RF-MEMS Switch**
 M. Kaynak, M. Wietstruck, W. Zhang, R. Scholz, B. Tillack
 12th International Symposium on RF MEMS and RF Microsystems (MEMSWAVE 2011), Athens, June 27 - 29, 2011, Greece
- (60) **Robustness and Reliability of BiCMOS Embedded RF-MEMS Switch**
 M. Kaynak, F. Korndörfer, M. Wietstruck, D. Knoll, R. Scholz, C. Wipf, C. Krause, B. Tillack
 Silicon Monolithic Integrated Circuits in RF Systems (SIRF 2011), Phoenix,
 January 17 - 19, 2011, USA

- (61) **SFDR Considerations for Current-Steering DACs**
 M. Khafaji
 11th Workshop on Analogue Integrated Circuit Design, Dresden,
 December 12, 2011, Germany
- (62) **300 mm Czochralski Silicon Wafers Optimized with Respect to Voids with Laterally Homogeneous Internal Getter Capabilities**
 G. Kissinger, G. Raming, R. Wahlich, T. Müller
 14th International Conference on Defects, Recognition, Imaging and Physics in Semiconductors (DRIP 14), Miyazaki,
 September 25 - 29, 2011, Japan
- (63) **300 mm Czochralski Silicon Wafers Optimized with Respect to Voids with Laterally Homogeneous Oxygen Precipitation**
 G. Kissinger, G. Raming, R. Wahlich, T. Müller
 26th International Conference on Defects in Semiconductors, (ICDS-26), Nelson,
 July 17 - 22, 2011, New Zealand
- (64) **Joint Lab IHP / BTU Cottbus – Stand und Ziele PVComB**
 M. Kittler, A. Klossek
 Projekttreffen PVComB, Teilvorhaben Analytik, Potsdam, May 27, 2011, Germany
- (65) **Characterization of Thin-Film Samples by Photoluminescence and Correlation between PL and EBIC**
 A. Klossek, Ch. Krause, T. Arguirov, W. Seifert, M. Kittler
 48. Punktdefekttreffen, Dresden,
 October 13 - 14, 2011, Germany
- (66) **Methodische Arbeiten und Untersuchung von elektronenstrahlkristallisierten Si-Schichten auf Glas – Stand PVComB-Analytik**
 A. Klossek, W. Seifert, M. Krause, M. Kittler
 Projekttreffen PVComB, Teilvorhaben Analytik, TU Berlin, April 01, 2011, Germany
- (67) **An Ultra Low-Power 7th Order Active-RC LPF for IEEE 802.15.4a Standard Compliant Transceiver**
 O. Klymenko, G. Fischer, D. Martynenko
 7th Conference on Ph.D. Research in Micro-electronics and Electronics (PRIME 2011), Trento, July 03 - 07, 2011, Italy
- (68) **Fully Integrated Auto-Zero Feedback with Lower Cutoff Frequency below 50 kHz in a 40 GBit/s Transimpedance Amplifier**
 Ch. Knochenhauer, R. Wolf, B. Sedighi, F. Ellinger
 Semiconductor Conference (SCD 2011) Dresden, September 27 - 28, 2011, Germany
- (69) **Emitter CMP Process Optimization for Self-Aligned SiGe:C HBT Fabrication**
 D. Knoll, H. Ma, R. Barth, J. Drews, A. Fox, B. Heinemann, A. Wolff
 Silicon Monolithic Integrated Circuits in RF Systems (SiRF 2011), Phoenix, January 17 - 19, 2011, USA
- (70) **Untersuchung der Kantenrauigkeit von Si-Nanowellenleiter und deren Einfluss auf die optische Transmission**
 O. Knopf, O. Fursenko, J. Bauer, St. Marschmeyer, L. Zimmermann, G. Winzer
 GGM-Fachgruppe 1.2.6. Prozesskontrolle, Inspektion & Analytik, Regensburg, March 17, 2011, Germany
- (71) **3-Gb/s Radio Link with SiGe BiCMOS 60-GHz Receiver Front-End**
 M. Ko, D. Kim, H. Rücker, W.-Y. Choi
 RFIC Workshop, Jeju, September 22 - 24, 2011, Korea

- (72) **Impact of RTA on the Morphology of Oxygen Precipitates Investigated by FTIR Spectroscopy and TEM and on the Getter Efficiency for Cu and Ni in Silicon Wafers Investigated by Haze Tests**
 D. Kot, G. Kissinger, M.A. Schubert, T. Schubert, A. Sattler
 14th International Conference on Defects, Recognition, Imaging, and Physics in Semiconductors (DRIP-14), Miyazaki, September 25 - 29, 2011, Japan
- (73) **Impact of RTA on the Morphology of Oxygen Precipitates Investigated by FTIR Spectroscopy and TEM and on the Getter Efficiency for Cu and Ni in Silicon Wafers Investigated by Haze Tests**
 D. Kot, G. Kissinger, M.A. Schubert, T. Müller, A. Sattler
 Punktdefekttreffen, Dresden, October 13 - 14, 2011, Germany
- (74) **Materials Science Characterization of Ge/SiGe/Si(001) Heterostructures**
 G. Kozłowski, P. Zaumseil, T. Schroeder
 Projektmeeting, Burghausen, November 10, 2011, Germany
- (75) **Structure Characterization of Ge Nanoclusters on Patterned Si(001)**
 G. Kozłowski, P. Zaumseil, Y. Yamamoto, J. Bauer, B. Tillack, T. Schroeder
 2011 International Students and Young Scientist Workshop Photonics and Microsystems, Cottbus, July 08 - 10, 2011, Germany
- (76) **Structure Characterization on Selective Ge CVD-Heteroepitaxy on Free Standing Si(001) Nanopatterns**
 G. Kozłowski, P. Zaumseil, Y. Yamamoto, J. Bauer, B. Tillack, T. Schroeder
 E-MRS Spring Meeting, Nice, May 09 - 13, 2011, France
- (77) **Structure Characterization on Selective Ge CVD-Heteroepitaxy on Free Standing Si(001) Nanopatterns**
 G. Kozłowski, P. Zaumseil, Y. Yamamoto, J. Bauer, B. Tillack, T. Schroeder
 DPG Frühjahrstagung, Dresden, March 13 - 18, 2011, Germany
- (78) **Structure Characterization on Selective Ge Nanostructures on Free Standing Si(001) Patterns**
 G. Kozłowski, P. Zaumseil, M.A. Schubert, Y. Yamamoto, J. Bauer, J. Matejova, B. Tillack, T. Schroeder
 8th Autumn School on X-Ray Scattering from Surfaces and Thin Layers, Smolenice, October 04 - 07, 2011, Slovakia
- (79) **EASY-A: Gigabit Wireless Communications in the 60 GHz ISM Band**
 R. Kraemer, E. Grass
 16th International OFDM-Workshop 2011 (InOwo'11), Hamburg, August 31 - September 01, 2011, Germany
- (80) **Funkkommunikation: Stand der Technik und Berufschancen**
 R. Kraemer
 Studieninformationstag an der BTU, Cottbus, January 13, 2011, Germany
- (81) **Unknown Origin of Very Intense D3 Like Luminescence in Solar Silicon**
 Ch. Krause, D. Mankovics
 48. Punktdefekttreffen, Dresden, October 13 - 14, 2011, Germany
- (82) **Design and Implementation of a UWB-Baseband IEEE 802.15.4a for Non-Coherent Energy Detection Receiver**
 D. Kreiser, S. Olonbayar
 Wireless Communications (WCSP 2011), Nanjing, November 09 - 11, 2011, China

- (83) Dependable and Fault Tolerant System Design**
M. Krstic
DAAD Workshop on Embedded System Design, Skopje, July 04 - 08, 2011, Macedonia
- (84) Moonrake Chip – Complex GALS Demonstrator in 40 nm CMOS**
M. Krstic, X. Fan
17th IEEE International Symposium on Asynchronous Circuits and Systems, Ithaca, April 27 - 29, 2011, USA
- (85) Moonrake Chip - GALS Demonstrator in 40 nm CMOS Technology**
M. Krstic, X. Fan, E. Grass, A. Strano, D. Bertozzi, Ch. Heer, B. Sanders, L. Benini, M.R. Kakoee
The International Symposium on System-on-Chip (SoC 2011), Tampere, November 01 - 02, 2011, Finland
- (86) Durchführung interner Audits am IHP**
B. Kuck
DGQ Regionalkreis Frankfurt (Oder), September 07, 2011, Germany
- (87) CMOS-embedded BioMEMS with Backside Etched Cavities for Affinity Sensorics**
P. Kulse, M. Birkholz, K.-E. Ehwald, J. Bauer, J. Drews, U. Haak, J. Katzer, St. Marschmeyer, D. Wolansky, K. Schulz
E-MRS Spring Meeting 2011, Nice, May 09 - 13, 2011, France
- (88) Fabrication of MEMS Actuators from the BEOL Module of a 0.25 μm BiCMOS Platform**
P. Kulse, M. Birkholz, K.-E. Ehwald, J. Bauer, J. Drews, U. Haak, J. Katzer, K. Schulz, D. Wolansky
Micro and Nano Engineering (MNE 2011), Berlin, September 19 - 23, 2011, Germany
- (89) Looking into Solar Cells with X-Ray Eyes**
W. Kwapił, P. Gundel, M. Schubert, A. Zuschlag, W. Seifert, M. Rinio, M. Martinez-Criado, I. Zizak, S.A. Sans
ESRF User Meeting 2011, Workshop X-Rays and Neutrons in Energy-Related Materials, Grenoble, February 09, 2011, France
- (90) A 122 GHz Multiprobe Reflectometer for Dielectric Sensor Readout in SiGe BiCMOS**
B. Lämmle, K. Schmalz, J.C. Scheytt, D. Kissinger, R. Weigel
IEEE Compound Semiconductor IC Symposium (CSICS 2011), Hawaii, October 16 - 19, 2011, USA
- (91) Fast and Accurate Design Methodology for Millimeter-Wave Integrated Circuits**
B. Lämmle, K. Schmalz, J.C. Scheytt, D. Kissinger, R. Weigel
General Assembly and Scientific Symposium of the International Union of Radio Science, U:R:S:I: GASS 2011, Istanbul, August 13 - 20 2011, Turkey
- (92) Simulationsgestützte Algorithmenentwicklung für drahtlose Sensornetze**
St. Lange, O. Stecklina, M. Methfessel
Fachgespräch Sensornetze 2011, Paderborn, September 15 - 16, 2011, Germany
- (93) Demonstrating self-Contained on-Node Counter Measures for Various Jamming Attacks in Wireless Sensor Networks**
P. Langendörfer, St. Ortman, St. Kornemann
4th ACM Conference on Wireless Network Security (ACM WiSec ,11), Hamburg, June 14 - 17, 2011, Germany
- (94) Wireless Sensor Networks a Building Block for Tomorrows Smart Cities - Current Status and Challenges Ahead**
P. Langendörfer
6th Future Internet Cluster Workshop with Focus on Networking and Sensing Networks for a Smarter Environment, Poznan, October 27, 2011, Poland

- (95) **A Monolithically Integrated Optical Receiver with a Silicon Avalanche Photodiode for Fiber-Wireless IEEE 802.11 WLAN Applications**
 M.-J. Lee, J.-S. Youn, H. Rücker, W.Y. Choi
 IEEE Topical Meeting on Microwave Photonics, Singapore, October 18-21, 2011, Singapore
- (96) **Direct Graphene Growth on Insulator**
 G. Lippert, J. Dabrowski, M. Lemme, O. Seifarth, G. Lupina
 Winterschule Graphene – Electronic Properties of Novel Materials, Kirchberg, February 26 - March 05, 2011, Austria
- (97) **Graphene Directly Grown on SiO₂-Derived Insulators**
 G. Lippert, O. Seifarth, J. Dabrowski, G. Lupina, W. Mehr, M.C. Lemme
 Semiconductor Conference (SCD 2011) Dresden, September 27 - 28, 2011, Germany
- (98) **Graphene Nanotechnology for Tomorrow's Electronic Devices**
 G. Lippert
 Parlamentarischer Abend, Berlin, June 07, 2011, Germany
- (99) **Interface Interaction Mica-Graphene**
 G. Lippert, F. Herzinger, J. Dabrowski, O. Fursenko, J. Maultzsch, G. Lupina
 Seminar, PDI Berlin, August 31, 2011, Germany
- (100) **Interface Interaction Mica-Graphene**
 G. Lippert, F. Herzinger, J. Dabrowski, O. Fursenko, J. Maultzsch, G. Lupina
 TU Berlin, August 31, 2011, Germany
- (101) **A SA-CVD Process for Deposition of Oxide Liner in High Aspect Ratio through Silicon Vias**
 M. Lisker, St. Marschmeyer, M. Kaynak
 EuroCVD 18 Kinsale, September, 04 - 09, 2011, Ireland
- (102) **Sub-Atmospheric Chemical Vapor Deposition of SiO₂ for Dielectric Layers in High Aspect Ratio TSVs**
 M. Lisker, St. Marschmeyer, M. Kaynak, I. Tekin
 219th ECS Meeting, Montreal, May 01 - 06, 2011, Canada
- (103) **AVD and ALD Growth and Properties of Sr, Ti and Nb doped Ta₂O₅ MIM Capacitors**
 M. Lukosius, T. Blomberg, G. Ruhl, Ch. Wenger
 E-MRS Spring Meeting 2011, Nice, May 09 - 13, 2011, France
- (104) **Metal-Insulator-Metal Capacitors with MOCVD Grown Ce-Al- as a Dielectric**
 M. Lukosius, C. Baristiran Kaynak, A. Abrustis, M. Skapas, V. Kubilius, A. Zauner, G. Ruhl, Ch. Wenger
 INFOS 2011, Grenoble, June 21 - 24, 2011, France
- (105) **Temperature Dependent Interaction of Graphene with TiO₂ and Al₂O₃ Layers**
 G. Lupina, O. Seifarth, G. Lippert, J. Dabrowski, I. Costina, T. Schroeder, C.C. Bof Bufon, O.G. Schmidt
 Graphene 2011, Bilbao, April 11 - 14, 2011, Spain
- (106) **Abscheidung von Graphenschichten auf Kupfersubstraten**
 H. Lux, C. Villringer, O. Seifarth, M. Hofmann, S. Schrader, W. Mehr
 Nachwuchswissenschaftlerkonferenz Mitteldeutscher Hochschulen (NWK 12), Wernigerode, April 14, 2011, Germany
- (107) **Defektcharakterisierung in mc-Si: Vergleichende Untersuchungen mit PL-Mapping und Spektroskopie, PL-Imaging und Kathodolumineszenz**
 D. Mankovics, Ch. Krause, T. Arguirov
 Projekttreffen SolarWinS, Ochsenfurt, Juli 05 - 07, 2011, Germany

- (108) Dislocation-Related Photoluminescence Imaging of Mc-Si Wafers at Room Temperature**
 D. Mankovics, R.P. Schmid, T. Arguirov,
 German Polish Conference on Crystal Growth (GPCCG 2011), Frankfurt (Oder)/
 Stubice, March 14 - 18, 2011, Germany/ Poland
- (109) A 245 GHz CB LNA in SiGe**
 Y. Mao, K. Schmalz, J. Borngräber, J.C. Scheytt
 European Microwave Week, Manchester,
 October 09 - 14, 2011, UK
- (110) Comparison of 122 GHz LNAs in SiGe with Different Transmission Line Topologies**
 Y. Mao, K. Schmalz, J. Borngräber, J.C. Scheytt
 IEEE MTT-S International Microwave Workshop Series on Millimeter Wave Integration Technologies (IMWS 2011),
 Sitges, September 15 - 16, 2011, Spain
- (111) Characterization of Fluorocarbon Polymers Deposited with Different Chamber Pressure and Source Power in the Deposition Cycle of the Bosch Process**
 St. Marschmeyer, M. Fraschke, T. Milewski,
 S. Schulze
 Plasma Etch and Strip in Microelectronics (PESM 2011), Mechelen,
 May 05 - 06, 2011, Belgium
- (112) Deep Silicon Etching and Applications in IHP**
 St. Marschmeyer
 1. Workshop Tiefes Siliziumätzen, Dresden,
 April 14, 2011, Germany
- (113) Fully Differential Baseband Pulse Generator for IEEE 802.15.4a Standard**
 D. Martynenko, G. Fischer, O. Klymenko
 International Conference on Computer as a Tool (EUROCON 2011), Lisbon,
 April 27 - 29, 2011, Portugal
- (114) Low Power Programmable Frequency Divider for IEEE 802.15.4a Standard**
 D. Martynenko, G. Fischer, O. Klymenko
 NORCHIP 2011, Lund,
 November, 14 - 15, 2011, Sweden
- (115) X-Ray Diffraction Analysis of Surface Si Nanostructures Used for Ge Nanoheteroepitaxy**
 J. Matejova, G. Kozlowski, P. Zaumseil, V. Holy,
 T. Schroeder
 Struktura 2011, Turnov,
 June 20 - 23, 2011, Czech Republic
- (116) X-Ray Diffraction Analysis of Surface Si Nanostructures Used for Ge Nanoheteroepitaxy**
 J. Matejova, G. Kozlowski, P. Zaumseil, V. Holy
 E-MRS Spring Meeting, Nice,
 May 09 - 13, 2011, France
- (117) XRD-Based Determination of Strain Field in Si Nanostructures for Ge/Si(001) Nanoheteroepitaxy**
 J. Matejova, G. Kozlowski, P. Zaumseil, V. Holy,
 T. Schroeder
 8th Autumn School on X-Ray Scattering from Surfaces and Thin Layers, Smolenice,
 October 04 - 07, 2011, Slovakia
- (118) Characterization of Traps in Crystalline Silicon on Glass Film Using Deep-Level Transient Spectroscopy**
 T. Mchedlidze, J.H. Zollondz, M. Kittler
 XIV. International Conference on Gettering and Defect Engineering in Semiconductor Technology (GADEST 2011), Styria,
 September 25 - 30, 2011, Austria
- (119) Crystallization of Silicon Nanolayers by Light**
 T. Mchedlidze, T. Arguirov, M. Kittler
 48. Punktdefekttreffen, Dresden,
 October 13 - 14, 2011, Germany

- (120) Fast Light-Induced Solid Phase Crystallization of Nanometer Thick Silicon Layers on Quartz**
 T. Mchedlidze, T. Arguirov, M. Kittler
 XIV. International Conference on Gettering and Defect Engineering in Semiconductor Technology (GADEST 2011), Styria, September 25 - 30, 2011, Austria
- (121) Installation for Fast Light-Induced Solid Phase Crystallization Process**
 T. Mchedlidze, M. Kittler
 Project Meeting SINOVA, Jena, March 25, 2011, Germany
- (122) Investigation of Recombination of CSG Thin Films**
 T. Mchedlidze, M. Kittler
 48. Punktdefekttreffen, Dresden, October 13 - 14, 2011, Germany
- (123) Photoluminescence and Raman Spectroscopy for PV Material Characterization**
 T. Mchedlidze
 Seminar IKZ, Berlin, June 09, Germany
- (124) Micro-Cavities Based on Width Modulated SOI Waveguides**
 St. Meister, A. Al-Saadi, B.A. Franke, S. Mahdi, M. Szczambura, B. Kuhlow, L. Zimmermann, H.H. Richter, D. Stolarek, S.K. Schrader, H.J. Eichler
 SPIE Photonics West, San Francisco, January 22 - 27, 2011, USA
- (125) Bluetooth Scatternet Tree Formation for Wireless Sensor Networks**
 M. Methfessel, St. Peter, St. Lange
 4th IEEE International Workshop on Wireless Sensor, Actuator and Robot Networks, (WiSARN- Fall 2011), Valencia, October 17, 2011, Spain
- (126) Performance Investigation on an MIMO-Capable 802.11a Compliant Protocol Implementation**
 E. Miletic, K. Tittelbach-Helmrich, G. Panic
 The 7th International Conference on Mobile Ad-hoc and Sensor Networks (MSN 2011), Beijing, December 16 - 18, 2011, China
- (127) Sample Synchronization of Multiple Multiplexed DA and AD Converters in FPGAs**
 T. Ohlemueller, M. Petri
 14th IEEE International Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2011), Cottbus, April 13 - 15, 2011, Germany
- (128) A 820 GHz SiGe Chipset for Tetrahertz Active Imaging Applications**
 E. Öjefors, J. Grzyb, Y. Zhao, B. Heinemann, B. Tillack, U.R. Pfeiffer
 2011 IEEE International Solid-State Circuits Conference (ISSCC 2011), San Francisco, February 20 - 24, 2011, USA
- (129) IEEE.802.154a IR-UWB Non-Coherent Receiver Design and Performance**
 S. Olonbayar, D. Kreiser, R. Kraemer
 Wireless Congress, Munich, November 09, 2011, Germany
- (130) Department System Design – Chair of Systems**
 St. Ortmann, R. Kraemer, M. Krstic, E. Grass, P. Langendörfer
 Evaluierung Institut für Informatik
 BTU Cottbus, March 24, 2011, Germany
- (131) Enabling Secure and Privacy-Aware Mobile Sensing and e-Health Applications on Everybodys Smartphone**
 St. Ortmann, M. Maaser
 1st International Conference on Consumer Electronics (ICCE 2011), Berlin, September, 06 - 08, 2011, Germany

- (132) MATRIX - Middleware für die Realisierung Internet-basierter telemedizinischer Dienste**
 St. Ortmann, S. Pilgermann, B. Parandian
 Lange Nacht der Wissenschaften 2011, Berlin,
 May 28, 2011, Germany
- (133) MATRIX-Middleware für ambulante telemedizinische Dienste**
 St. Ortmann, M. Maaser, O. Maye, B. Parandian,
 Ch. Carius-Düssel, M. Schultz, S. Lun Lau,
 I. König, K. David
 6. Landeskonferenz Telematik im
 Gesundheitswesen, Potsdam,
 February 16, 2011, Germany
- (134) Middleware-Plattform für die Realisierung internet-basierter telemedizinischer Dienste**
 St. Ortmann, S. Pilgermann
 BMBF-Konferenz Zukünftiges Internet, Berlin,
 July 05 - 06, 2011, Germany
- (135) No Room for Privacy in Social Networking?**
 St. Ortmann, P. Langendörfer, M. Schreier
 BMBF-Konferenz Zukünftiges Internet, Berlin,
 July 05 - 06, 2011, Germany
- (136) Self-Contained Detection of Jamming Attacks on Wireless Sensor Nodes**
 St. Ortmann, St. Kornemann, P. Langendörfer,
 St. Peter
 8th Conference on Detection of Intrusions
 and Malware & Vulnerability Assessment
 (DIMVA), Amsterdam,
 July 07 - 08, 2011, The Netherlands
- (137) Telemedizinisch assistierte ambulante Betreuung von Patienten**
 St. Ortmann, M. Maaser, B. Parandian,
 M. Schulz
 4. Deutscher AAL-Kongress 2011, Berlin,
 January 25 - 26, 2011, Germany
- (138) The Impact of Social Networks on User Privacy - What Social Networks Really Learn about their Users**
 St. Ortmann, P. Langendörfer
 7th International Conference on Web
 Information Systems and Technologies
 (WEBIST 2011), Noordwijkerhout,
 May 06 - 09, 2011, The Netherlands
- (139) A Fractional-N Synthesizer for Software-Defined Radio with Reduced Level of Spurious Tones**
 S.A. Osmany, F. Herzel, J.C. Scheytt
 25th IEEE Bipolar/BiCMOS Circuits and
 Technology Meeting (BCTM 2011), Atlanta,
 October 09 - 11, 2011, USA
- (140) Sensor Node Processor for Security Applications**
 G. Panic, T. Basmer, O. Schrape, St. Peter,
 F. Vater, K. Tittelbach-Helmrich
 18th IEEE International Conference on
 Electronics, Circuits and Systems (ICECS
 2011), Beirut,
 December 11 - 14, 2011, Lebanon
- (141) Capacitive Aptasensor for the Sensitive Detection of Adipokine**
 J.-W. Park, S. Kallempudi, J.H. Niazi,
 Ch. Wenger, K.B. Pi, B.-S. Youn, Y. Gurbuz,
 M.B. Gu
 10th Workshop on Biosensors and
 Bioanalytical Microtechniques in
 Environmental and Clinical Analysis, Weimar,
 June 19 - 22, 2011, Germany
- (142) A Wireless ECG Sensor Node Based on Huffman Data Encoder**
 U. Pesovic, S. Randjic, Z. Stamenkovic
 14th IEEE Symposium on Design and
 Diagnostic of Electronic Circuits and Systems,
 Cottbus, April 13 - 15, 2011, Germany

- (143) A Tamper Resistant Sensor Node**
St. Peter, M. Schreier, P. Langendörfer
4th NIS Summer School on Security 2011,
Crete, June 30, 2011, Greece
- (144) Assessment Models to Improve the Usability of Security in Wireless Sensor Networks**
St. Peter
Workshop on Models in Effects Plus Clustering
Event, Amsterdam,
July 04, 2011, The Netherlands
- (145) Wireless Sensor and Actuator Networks for the Protection of Critical Infrastructures**
St. Peter, M. Schreier, P. Langendörfer
4th NIS Summer School on Security 2011,
Crete, June 30, 2011, Greece
- (146) Configurable, Modular and Scalable OFDM Baseband Processor for Data Rates up to 4 Gbps**
M. Petri
IASTED International Conference on Wireless
Communications (WC 2011), Vancouver,
June 01 - 03, 2011, Canada
- (147) Implementation of Middleware Switch ASIC Processor**
V. Petrovic, M. Ilic, G. Schoof, S. Montenegro
19th Telecommunications Forum
(TELFOR 2011), Belgrade,
November 22 - 24, 2011, Serbia
- (148) Middleware Switch ASIC Implementation**
V. Petrovic, G. Schoof, S. Montenegro
18th IEEE International Conference on
Electronics, Circuits and Systems
(ICECS 2011), Beirut,
December 11 - 14, 2011, Lebanon
- (149) Development of Low-Loss Silicon Rib Waveguides with 4 μm Height**
H.H. Richter, R. Eisermann, M. Fraschke,
L. Zimmermann, K. Schulz, M. Lisker,
W. Höppner, J. Drews, G. Winzer, B. Tillack
DPG Frühjahrstagung, Dresden,
March 13 - 18, 2011, Germany
- (150) Impact of Back End Stress on SiGe Bipolar Transistors**
H. Rücker, B. Heinemann, R. Barth, M. Lisker
International Electron Devices Meeting,
(IEDM 2011), Washington,
December 05 - 07, 2011, USA
- (151) Austausch zur ForMaT-Initiative Erweiterte Sicherheit für Kritische Infrastrukturen (ESCI)**
A. Sänn
BWL-Austauschtreffen, Halle an der Saale,
October 21, 2011, Germany
- (152) Lead Users and Non-Lead Users: Do their Preferences Really Differ in Product Design?**
A. Sänn, D. Baier
The 18th International Product Development
Management, Delft,
June 05 - 06, 2011, The Netherlands
- (153) Field Emission from Single and Few-Layer Graphene Flakes**
A.S. Santandrea, F. Giubileo, V. Grossi,
S. Santucci, M. Passacantando, T. Schroeder,
G. Lupina, A. Di Bartolomeo
GraphITA, Assergi-L'Aquila,
May 15 - 18, 2011, Italy
- (154) The Effect of Internal Stresses on the Recombination Activity of Structural Defects in Multi-Crystalline Solar Silicon**
G. Sarau, S. Christiansen, M. Holla, W. Seifert
37th IEEE Photovoltaic Solar Energy
Conference (PVSC 2011), Seattle,
June 19 - 24, 2011, USA

- (155) 122 GHz Transmitter Using Frequency Doublers**
 N. Sarmah, K. Schmalz, W. Winkler,
 J.C. Scheytt
 Silicon Monolithic Integrated Circuits in RF
 Systems, (SiRF 2011), Phoenix,
 January 17 - 19, 2011, USA
- (156) Feivel - Ein optisches Indoor-Positionierungssystem**
 J. Schäffner
 bbw-Hochschule Frankfurt (Oder),
 December 17, 2011, Germany
- (157) Qualitätsmanagement und Durchführung eines internen Audits am Beispiel des IHP**
 J. Schäffner
 bbw-Hochschule Frankfurt (Oder),
 November 15, 2011, Germany
- (158) Study on Homoepitaxial Germanium Nanowire Growth**
 J. Schmidtbauer, R. Bansen, T. Boeck,
 R. Heimburger, Th. Teubner, T. Schroeder
 Euro MBE 2011, L'Alpe d'Huez,
 March 20 - 23, 2011, France
- (159) Reliable Network-Centric System Architecture**
 G. Schoof, S. Montenegro, V. Petrovic
 The 3rd Workshop on Design for Reliability
 (DFR ,11), Crete, January 23, 2011, Greece
- (160) A Digital Design Flow for Differential ECL High Speed Applications**
 O. Schrape, M. Krstic, G. Philipp, F. Winkler
 IP-Embedded System Conference
 (IP-SOC 2011), Grenoble,
 December 07 - 08, 2011, France
- (161) Alternative Ge Heteroepitaxy Approaches on Si(001): Selective Ge CVD Growth on Free Standing Si Nano-Structures**
 T. Schroeder, P. Zaumseil, G. Kozlowksi,
 Y. Yamamoto, J. Bauer, M.A. Schubert,
 J. Matejova, B. Tillack
 7th Interregional Workshop on Advanced
 Nanomaterials, Wroclaw,
 November 03 - 04, 2011, Poland
- (162) Engineered Si Wafers: The Example of Ge and GaN Virtual Substrates**
 T. Schroeder
 Projektmeeting, Burghausen,
 November 10, 2011, Germany
- (163) Erste Erfahrungen mit dem Transmission-elektronenmikroskop FEI Tecnai Osiris**
 A. Schubert
 TEM Präparatorentreffen Berlin/Brandenburg,
 Berlin April 14, 2011, Germany
- (164) 8-bit 5 GS/s D/A Converter for Multi-Gigabit Wireless Transceivers**
 B. Sedighi, M. Khafaji, J.C. Scheytt
 European Microwave Week, Manchester,
 October 09 - 14, 2011, UK
- (165) Direct Growth of Graphene on Insulators: The Interaction with the Substrate**
 O. Seifarth, G. Lippert, J. Dabrowski, G. Lupina
 DPG Spring Meeting, Dresden,
 March 13 - 18, 2011, Germany
- (166) Substrate Interactions of Graphene Directly Grown on Van-der-Waals Type Insulators**
 O. Seifarth, M. Weser, G. Lippert, J. Dabrowski,
 Y. Dedkov, K. Horn, G. Lupina, W. Mehr
 Graphene 2011, Bilbao,
 April 11 - 14, 2011, Spain
- (167) Analysen von VGFM- und BGA-Ingots**
 W. Seifert, M. Kittler
 Projekttreffen AvantSolar, Berlin,
 June 09, 2011, Germany

- (168) Analysis of Electron-Beam Crystallized Large Grained Si Films on Glass Substrate by EBIC, EBSD and PL**
 W. Seifert, D. Amkreutz, T. Arguirov,
 H.M. Krause, M. Schmidt
 XIV. International Conference on Gettering and Defect Engineering in Semiconductor Technology (GADEST 2011), Styria, September 25 - 30, 2011, Austria
- (169) Entwicklung der Charakterisierung für neuartiges multikristallines Silizium und Solarzellen (II)**
 W. Seifert
 UMG-Projekttreffen, Frankfurt (Oder), March 31, 2011, Germany
- (170) Materialcharakterisierung von mc-Si am IHP**
 W. Seifert, V.D. Akhmetov, Ch. Krause,
 H-M. Krause, F. Weber
 Projekttreffen AvantSolar, Berlin, March 02, 2011, Germany
- (171) Stand der FTIR-Diagnostik von O, C und N**
 W. Seifert, T. Arguirov, M. Kittler
 Projekttreffen SolarWinS, Ochsenfurt, Juli 05 - 07, 2011, Germany
- (172) An Overview of Dependable Microprocessor Architectures - Pursuing the State-of-the-Art**
 A. Simevski, R. Kraemer, M. Krstic
 10th International Conference on Electronics, Telecommunications, Automation and Informatics (ETAI-2011), Ohrid, September, 16 - 20, 2011, Republic of Macedonia
- (173) Low-Complexity Integrated Circuit Aging Monitor**
 A. Simevski, R. Kraemer, M. Krstic
 14th International Symposium on Design & Diagnostics of Electronic Circuits & Systems (DDECS 2011), Cottbus, April 13 - 15, 2011, Germany
- (174) GaP Collector Development for SiGe HBT Performance Increase: A Heterostructure Growth Study**
 O. Skibitzki, F. Hatami, P. Zaumseil,
 B. Dietrich, Y. Yamamoto, M.A. Schubert,
 B. Tillack, W. T. Masselink, T. Schroeder
 8th Autumn School on X-Ray Scattering from Surfaces and Thin Layers, Smolenice, October 04 - 07, 2011, Slovakia
- (175) GaP Heterostructure Growth Study for Future SiGe HBT Performance Increase**
 O. Skibitzki, F. Hatami, P. Zaumseil,
 B. Dietrich, Y. Yamamoto, M.A. Schubert,
 W. T. Masselink, B. Tillack, T. Schroeder
 7th International Conference on Si Epitaxy and Heterostructures (ICSI-7), Leuven, August 28 - September 01, 2011, Belgium
- (176) Solid-Phase Epitaxy of Undoped Amorphous Silicon by in-situ Postannealing**
 O. Skibitzki, Y. Yamamoto, M.A. Schubert,
 B. Tillack
 7th International Conference on Si Epitaxy and Heterostructures (ICSI-7), Leuven, August 28 - September 01, 2011, Belgium
- (177) Getting Ready for Non-Volatile Memories**
 P. Skoncej, G. Schoof
 2nd Workshop on Resilient Architectures (WRA 2011), Porto Alegre, December 04, 2011, Brazil
- (178) Non-Volatile Memory Controller Design Using Fault-Tolerant Techniques for Memory Reliability Improvement**
 P. Skoncej, G. Schoof
 Smart Systems Integration 2011, Dresden, March 22 - 23, 2011, Germany

- (179) Symbiosis on a Lightweight ECC Security and Distributed Shared Memory in Wireless Sensor Networks**
A. Sojka, K. Piotrowski, P. Langendörfer
4th International Workshop on Dependable Network Computing and Mobile Systems (DNCMS, SRDS), Madrid,
October 04 - 07, 2011, Spain
- (180) Complementary RF LDMOS Module for 12 V DC/DC Converter and 6 GHz Power Applications**
R. Sorge, A. Fischer, A. Mai, P. Schley,
J. Schmidt, Ch. Wipf, T. Mausolf, R. Pliquett,
R. Barth, K.-E. Ehwald
Silicon Monolithic Integrated Circuits in RF Systems, (SiRF 2011), Phoenix,
January 17 - 19, 2011, USA
- (181) Integration of Isolated RF-LDMOS Transistors in a 0.25 μm SiGe:C BiCMOS Process**
R. Sorge, A. Fischer, J. Schmidt, C. Wipf,
R. Barth, R. Pliquett
25th IEEE Bipolar/BiCMOS Circuits and Technology Meeting (BCTM 2011), Atlanta,
October 09 - 11, 2011, USA
- (182) Hard X-Ray Photoelectron Spectroscopy at PETRA III Beamline P09**
M. Sowinska, K. Furman, D. Walczyk,
Ch. Walczyk, Ch. Wenger, T. Schroeder,
S. Thiess, H. Schulz-Ritter, S. Botta,
A. Allagholi, F. Okrent, W. Drube,
A. Gloskovskij, G. Fecher, C. Felser, G. Berner,
M. Sing, R. Claessen
European XFEL User's Meeting 2011 –
HASYLAB User's Meeting 2011, Hamburg,
January 28, 2011, Germany
- (183) Nondestructive in-situ HAXPES Study of Resistive Switching TiN/Ti/HfO₂/TiN RRAM Cells**
M. Sowinska, D. Walczyk, Ch. Wenger,
Ch. Walczyk, T. Bertaud, S. Thiess, W. Drube,
T. Schroeder
4th International Workshop on Hard X-Ray Photoelectron Spectroscopy, Hamburg,
September 13 - 19, 2011, Germany
- (184) Nondestructive Hard X-Ray Photoelectron Spectroscopy Study of Resistive Switching TiN/Ti/HfO₂/TiN RRAM Cells**
M. Sowinska, S. Thiess, Ch. Walczyk,
D. Walczyk, Ch. Wenger, M. Lukosius, W. Drube,
T. Schroeder
75th Annual Meeting of the DPG and DPG Spring Meeting, Dresden,
March 13 - 18, 2011, Germany
- (185) Configurable Processors**
Z. Stamenkovic
DAAD Workshop on Embedded System Design,
Skopje, July 04 - 08, 2011, Macedonia
- (186) Discrete-Time RF Phase and Pulse Width Modulation for Power Efficient Switch-Mode Transmitter**
A. Stanitzki, J.C. Scheytt
Semiconductor Conference Dresden
(SCD 2011), Dresden,
September 27 - 28, 2011, Germany
- (187) Hybrid Simulation Environment for Rapid MSP430 System Design Test and Validation Using MSPSim and SystemC**
O. Stecklina, F. Vater, T. Basmer, E. Bergmann,
H. Menzel
14th IEEE International Symposium on Design and Diagnostics of Electronic Circuits and Systems (DDECS 2011), Cottbus,
April 13 - 15, 2011, Germany

- (188) Towards a Secure Address Space Separation for Low Power Sensor Nodes**
O. Stecklina, P. Langendörfer, H. Menzel
1st International Conference on Pervasive and Embedded Computing and Communication Systems (PECCS 2011), Algarve, March 05 - 07, 2011, Portugal
- (189) Ubiquitous Computing Asks for Ubiquitous Line of Defense**
O. Stecklina, P. Langendörfer
Workshop über IT-Sicherheit in kollaborativen und stark vernetzten Systemen, Berlin, October 04 2011, Germany
- (190) An Integrated Differential 60 GHz Sliding-IF Receiver in SiGe BiCMOS**
Y. Sun, K. Schmalz, S. Glisic, R. Wang, J.C. Scheytt
International Conference on Solid-State and Integrated Circuit (ICSIC 2011), Shanghai, March 11 - 13, 2011, China
- (191) An Integrated Harmonic Transmitter Front-End for 122 GHz FMCW/CW Radar Sensor**
Y. Sun, J.C. Scheytt
European Microwave Week, (EuMIC 2011), Manchester, October 09 - 14, 2011, UK
- (192) Mobility Spectrum Analysis in AlGaIn / GaN Heterostructures for HFET Fabrication**
A. Szyszka, M. Wosko, A. Apostoluk, W. Macherzynski, R. Paszkiewicz, B. Masenelli, T. Schroeder, M. Tlaczala
Interregional Workshop between Saxonia, Silesia and Czech Advanced Nanomaterials – Synthesis, Properties, Characterization, Wroclaw, November 03 - 04, 2011, Poland
- (193) A Bi-Layer Oxide Buffer Approach for the Integration of Single Crystalline GaN on Si(111) Platform**
L. Tarnawska, P. Zaumseil, M. Kittler, P. Storck, R. Paszkiewicz, T. Schroeder
16th European Molecular Beam Epitaxy Workshop, Alpe d'Huez, March 20 - 23, 2011, France
- (194) Growth of Single Crystalline GaN on Si(111) Platform via Sc₂O₃/Y₂O₃ Buffer**
L. Tarnawska, P. Zaumseil, M. Kittler, P. Storck, R. Paszkiewicz, T. Schroeder
E-MRS Spring Meeting 2011, Nice, May 09 - 13, 2011, France
- (195) Growth of Single Crystalline GaN on Si(111) Platform via Sc₂O₃/Y₂O₃ Buffer**
L. Tarnawska, P. Zaumseil, P. Storck, R. Paszkiewicz, T. Schroeder
7th Interregional Workshop between Saxonia, Silesia and Czech Advanced Nanomaterials-Synthesis, Properties Characterization, Wroclaw, November, 03 - 04, 2011, Poland
- (196) X-Ray Diffraction Study of GaN/Sc₂O₃/Y₂O₃/Si(111) Heterostructures**
L. Tarnawska, P. Zaumseil, P. Storck, R. Paszkiewicz, T. Schroeder
8th Autumn School on X-Ray Scattering from Surfaces and Thin Layers, Smolenice, October 04 - 07, 2011, Slovakia
- (197) Radiation Hardness Evaluation of a 0.25 μm SiGe BiCMOS Technology with LDMOS Module**
F.E. Teply, D. Venkitachalam, R. Sorge, R.F. Scholz, H.-V. Heyer, M. Ullan, S. Diez, F. Faccio
Conference on Radiation Effects on Components and Systems (RADECS 2011), Sevilla, September 19 - 23, 2011, Spain
- (198) Application of Synchrotron Microscopy and Spectroscopy Techniques for the Analysis of Transition Metals Precipitation in Multicrystalline Solar Silicon**
M. Trushin, O. Vyvenko, W. Seifert, M. Kittler
German Polish Conference on Crystal Growth (GPCCG 2011), Frankfurt (Oder)/Ślubiice, March 14 - 18, 2011, Germany/Poland

- (199) Scanning X-Ray Excited Optical Luminescence Microscopy as a New Tool for the Analysis of Recombination Active Defects in Multicrystalline Silicon**
 M. Trushin, O. Vyvenko, W. Seifert, A. Klossek, I. Zizak, M. Kittler
 XIV. International Conference on Gettering and Defect Engineering in Semiconductor Technology (GADEST 2011), Styria, September 25 - 30, 2011, Austria
- (200) Fully Passive Si-Photonic 90° Hybrid for Coherent Receiver Applications**
 K. Voigt, L. Zimmermann, G. Winzer, H. Tian, B. Tillack, K. Petermann
 37th European Conference and Exhibition Optical Communication (ECOC 2011), Geneva, September 18 - 22, 2011, Switzerland
- (201) Embedded HfO₂-based RRAM for SoC Applications**
 Ch. Walczyk, T. Schroeder, D. Walczyk, M. Lukosius, M. Fraschke, I. Costina, A. Fox, D. Wolansky, J. Dabrowski, O. Schrape, G. Schoof, B. Tillack, E. Miranda, S. Thiess, Ch. Wenger
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- (202) Resistive Switching Characteristics of CMOS embedded HfO₂-based 1T1R Cells**
 D. Walczyk, Ch. Walczyk, T. Schroeder, T. Bertaud, M. Sowinska, M. Lukosius, M. Fraschke, B. Tillack, Ch. Wenger
 17th Conference on Insulating Films on Semiconductors (INFOS 2011), Grenoble, June 21 - 24, 2011, France
- (203) An On-Board Differential Patch Array Antenna and Interconnects Design for 60 GHz Applications**
 R. Wang, Y. Sun, Ch. Wipf, J.C. Scheytt
 IEEE Conference on Microwaves, Communications, Antennas and Electronic Systems (COMCAS 2011), Tel Aviv, November 07 - 09, 2011, Israel
- (204) Spontaneous and Stimulated Raman Scattering in Planar Silicon Waveguides**
 S. Wang, St. Meister, S. Mahdi, B. Franke, A. Al-Saadi, L. Zimmermann, H.H. Richter, D. Stolarek, V. Lisinetskii, S.K. Schrader, H. Eichler
 SPIE Photonics West, San Francisco, January 22 - 27, 2011, USA
- (205) Entwicklung AIN-basierter Oberflächensensoren für die Bioanalytik**
 Ch. Wenger, U. Kaletta
 5. Senftenberger Innovationsforum Multiparameteranalytik, Senftenberg, March 10, 2011, Germany
- (206) MaxCaps - Materials for Next Generation Capacitors and Memories**
 Ch. Wenger
 The European Nanoelectronics Forum, Dublin, November 15 - 16, 2011, Ireland
- (207) Mikrowellensensor zur Charakterisierung von Kompartimenten in Teflon-Kapillaren**
 J. Wessel, K. Schmalz, J.C. Scheytt
 7. Deutsches Biosensor Symposium, Heiligenstadt, April 03 - 06, 2011, Germany
- (208) Mikrowellensensor zur Charakterisierung von Kompartimenten in Teflon-Kapillaren**
 J. Wessel, K. Schmalz, J.C. Scheytt
 Anlogschaltungen 2011, München, March 14, 2011, Germany
- (209) Material Parameter Estimation of BEOL RF MEMS Structures**
 M. Wietstruck
 MEMUNITY Workshop, Ilmenau, October 18, 2011, Germany

- (210) Material Properties Characterization of BiCMOS BEOL Metal Stacks for RF-MEMS Applications**
 M. Wietstruck, M. Kaynak, W. Zhang, S. Kurth, B. Erler, B. Tillack
 12th International Symposium on RF MEMS and RF Microsystems (MEMSWAVE 2011), Athens, June 27 - 29, 2011, Greece
- (211) Materialcharakterisierung eines komplexen Metallschichtstapels für einen monolithisch-integrierten RF-MEMS Schalter**
 M. Wietstruck, M. Kaynak, B. Tillack, S. Kurth, B. Erler
 Mikrosystemtechnikkongress, (MST 2011), Darmstadt, October 10 - 12, 2011, Germany
- (212) Hybrid Cascode with an Isolated NLD MOS and HBT for X-Band Power Amplifier Applications**
 Ch. Wipf, R. Sorge, P. Weger
 Silicon Monolithic Integrated Circuits in RF Systems (SiRF 2011), Phoenix, January 17 - 19, 2011, USA
- (213) Overview on ATE Test and Debugging Methods for Asynchronous Circuits**
 Ch. Wolf, St. Zeidler, M. Krstic, R. Kraemer
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- (214) Low Threading Dislocation Ge on Si by Combining Deposition and Etching**
 Y. Yamamoto, B. Tillack
 7th International Conference on Si Epitaxy and Heterostructures (ICSI-7), Leuven, August 28 - September 01, 2011, Belgium
- (215) Interface Analysis of Epi-Si (111)/Y₂O₃/Pr₂O₃/Si (111) Heterostructures**
 J.-M. Yang, J.W. Kim, A. Wilke, O. Seifarth, T. Schroeder
 Korean Semiconductor Conference (KCS 2011), Jeju, March 2011, Korea
- (216) A 9 Gb/s Optical Receiver Front-End with a Monolithically Integrated Avalanche Photodetector**
 J.-S. Youn, M.J. Lee, K.Y. Park, H. Rücker, W.Y. Choi
 18th Korean Conference on Semiconductors, Seoul, February 18 - 18, 2011, Korea
- (217) Preparation and Characterization of Ge Epitaxially Grown on Nano-Structured Periodic Si Pillars and Bars on Si(001) Substrate**
 P. Zaumseil, Y. Yamamoto, A. Bauer, M.A. Schubert, J. Matejova, G. Kozłowski, T. Schroeder, B. Tillack
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- (218) Design of a Test Processor for Asynchronous Chip Test**
 St. Zeidler, Ch. Wolf, M. Krstic, F. Vater, R. Kraemer
 IEEE 20th Asian Test Symposium 2011, New Delhi, November 21-23, 2011, India
- (219) Fundamental Mode Colpitts VCOs at 115 and 165-GHz**
 Y. Zhao, B. Heinemann, U.R. Pfeiffer
 25th IEEE Bipolar/BiCMOS Circuits and Technology Meeting (BCTM 2011), Atlanta, October 09 - 11, 2011, USA
- (220) High-Precision Flip-Chip Technology for Alloptical Wavelength Conversion Using SOI Photonic Circuit**
 L. Zimmermann, G.B. Preve, K. Voigt, G. Winzer, J. Kreissl, L. Moerl, C. Stamatiadis, L. Stampoulidis, H. Avramopoulos
 8th International Conference on Group IV Photonics, London, September 14 - 16, 2011, UK

(221) Structures Investigation of Heteroepitaxial Type-B Oriented CeO₂ (111) on Cubic- and Hexagonal-Pr₂O₃/Si(111) Supports

M.H. Zöllner, A. Giussani, H. Wilkens,
J. Wollschläger, M.A. Schubert, M. Bäumer,
M. Reichling, P. Zaumseil, T. Schroeder
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(222) Studying the Structure – Stoichiometry Relationship of Mixed Ce_{2-x}Pr_xO_{3+δ} (x=0-2) Oxide Catalysts on Si (111) by XRD

M.H. Zöllner, H. Wilkens, J. Wollschläger,
P. Zaumseil, T. Schroeder
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**Berichte
Reports**

- (1) Specification of Secure Code update Protocol for WSA**
J.-M. Bohli, A. Hessler, D. Westhoff, St. Peter
WSAN4DCIP – Deliverable D2.3
- (2) Tampres - Deliverable D 1.1, Sensor Network Related Requirements**
C. Buschmann, St. Peter
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- (3) System Prototypes**
A. Grilo, J. Concalves, K. Piotrowski, St. Peter,
T. Holczer, L. Buttyan, M. Selhorst,
C. Fortunato, G. Weber
Deliverable 5.2, (2011)
- (4) Virtual Ge Substrates by Compositionally Graded SiGe Buffers on Si(001) – IHP Diagnostic Report**
G. Kozlowski, P. Zaumseil, T. Schroeder
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- (5) Si- und SiGe-Dünnschichten für thermoelektrische Anwendungen (Project SiGe-TE): Teilvorhaben 3**
H.-M. Krause, M. Kittler
Semiannual Reports,
February and August 2011
- (6) Implementation of the Secure Middleware Architecture with an Energy Management System**
P. Langendörfer, K. Piotrowski, A. Sojka
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- (7) Specification and Testing of the Secure Middleware Architecture with an Energy Management System**
P. Langendörfer, K. Piotrowski,
G. Panic, A. Sojka, A. Grilo,
P. R. Barreiros d'Almeida Pereira
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- (8) **Project SINOVA**
T. Mchedlidze, M. Kittler
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- (9) **Implementierung einer graphischen Oberfläche zur Visualisierung von Sensordaten**
S. Oehlert
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- (10) **Matrix-Ergebnisreport 3.4 - Spezifikation der Middleware Architektur**
St. Ortmann, M. Maaser, O. Maye
Report 2011
- (11) **FeuerWhere: Sensornetze als Lebensretter**
F.D. Pelaez, P. Langendörfer, K. Piotrowski, A. Sojka
Projekt des Monats on the iq-brandenburg website
- (12) **Interfaces for Management as well as Service and Application Support**
P. Pereira, A. Grilo, J. Goncalves, A. Hessler, T. Kakumaru, D. Westhoff, D. Garrido, M. Diaz Rodriguez, K. Piotrowski, St. Peter, C. Fortunato, N. Tupy
Report WSAN4CIP-Deliverable D4.6
- (13) **Definition of Performance and Security Parameters**
St. Peter, M. Lacoste, M. Hinkelmann, C. Buschmann
TAMPRES - Deliverable D1.3
- (14) **Implementation of the Secure Middleware Architecture with an Energy Management System**
St. Peter
Realflex Gesamt-Abschlussbericht
- (15) **Implementation of the Secure Middleware Architecture with an Energy Management System**
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- (16) **Periodic Activities and Management Report**
St. Peter
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- (17) **Tools and Methods for a Unified Secure design Flow of Sensor Node Hardware**
St. Peter, J.-M. Schmidt, M. Kirschbaum, M. Hinkelmann, F. Vater
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- (18) **Implementation of an IDS Scheme and Secure Code Attestation Protocol for WSAN**
K. Piotrowski, P. Langendörfer, St. Kornemann
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- (19) **Specification of an IDS Scheme and Secure Code Attestation Protocol for WSAN**
K. Piotrowski, P. Langendörfer, C. Castellucia, D. Westhoff
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- (20) **Analysis of Attacks on Sensor Nodes Software and Hardware**
J.-M. Schmidt, M. Kirschbaum, A. Francillon, M. Sekar, F. Vater, St. Peter
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- (21) **Project AvantSolar**
W. Seifert, M. Kittler
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- (22) **Report on System Integration**
J. Serrano, H. Sarmiento, A. Grilo, J. Goncalves, T. Holczer, J. M. Bohli, R. Rodriguez, D. Garrido, K. Piotrowski, M. Selhorst
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- (23) **HXPES on TiN/HfO₂/Ti based ReRAM Structures**
M. Sowinska, T. Bertaud, D. Walczyk, Ch. Walczyk, S. Thiess, T. Schroeder
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- (24) **Unveiling the Physics of the Switching Mechanism of Resistive TiN/Ti/HfO₂/TiN Non-Volatile Memory Cells**
 M. Sowinska, T. Bertaud, D. Walczyk,
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- (25) **SILTRONIC – IHP Technology Project on the Development of GaN and Ge Virtual Substrates on Si**
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- (26) **Siltronic – IHP Technology Project on the Development of GaN Virtual Substrates on Si Wafers**
 P. Storck, T. Schroeder
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- (27) **Investigation of the Stacking Behaviour of CeO₂(111) Films on Cubic- and Hexagonal-Pr₂O₃/Si(111)**
 H. Wilkens, M.H. Zöllner, T. Schroeder,
 J. Wollschläger
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- (28) **Implementation of an Adapter Board and Hardware Drivers for Connecting a Wireless Sensor Node to a Common Body Scale**
 K. Wolosz, St. Ortmann
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- (1) **Entwurf und prototypische Implementierung eines Bustest-Verfahrens basierend auf dem Broadside-Ansatzes**
 T. Basmer
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- (2) **Special Issue on 60 GHz Wireless Communication Circuits and Systems**
 E. Grass, H. Schumacher, V. Ziegler
 EuMA International Journal of Microwave and Wireless Technologies 3 (2011)
- (3) **Definition and Configuration of Reliable Event Detection for Application in Wireless Sensor Networks**
 St. Ortmann
 Shaker Verlag, (2011)
- (4) **Entwicklung eines Informationsfluss-Modells für ubiquitäre Systeme**
 St. Ortmann
 Saarbrücken, VDM Verlag Dr. Müller, (2011)
- (5) **Advanced Silicon Materials Research for Electronic and Photovoltaic Applications II**
 S. Pizzini, G. Kissinger, H. Tu,
 H. Yamada-Kaneta (Eds.)
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- (6) **Der Lead-User Ansatz im Bereich sicherheitskritischer Entwicklungen spezieller Sensornetzwerke**
 A. Sänn
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- (7) **Proceedings of the 14th IEEE International Symposium on Design and Diagnostics of Electronic Circuits and Systems**
 H.T. Vierhaus, A. Steininger, A. Pawlak,
 R. Kraemer, M. Schölzel, J. Raik (Eds.)
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**Habilitationen / Dissertationen
Habitations / Dissertations**

- (1) **High-Speed Data Capturing Components for Super Resolution Maximum Length Binary Sequence UWB Radar**
Y. Borokhovych
Dissertation, BTU Cottbus, (2011)
- (2) **Atomic Scale Engineering of HfO₂ Based Dielectrics for Future DRAM Applications**
P. Dudek
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- (3) **Tool-Supported Development of Secure Wireless Sensor Networks**
St. Peter
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- (4) **Assessment of the Feasibility of Distributed Shared Memory and Data Consistency for Wireless Sensor Networks**
K. Piotrowski
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- (5) **Electronic Properties of Interfaces produced by Silicon Wafer Hydrophilic Bonding**
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- (6) **Embedded Non-Volatile Memory for Bi(CMOS): Resistive Switching MIM's**
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**Diplom- / Master- / Bachelorarbeiten
Diploma Theses / Master Theses / Bachelor Theses**

- (1) **Modular strukturiertes Architekturkonzept für ein EDA-Werkzeug mit 3D-Fähigkeiten**
M. Ahlborg
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- (2) **Entwicklung und Implementierung effizienter Algorithmen zur Bestimmung optimaler Bedingungen für die Umsetzung gezielter Fehlertoleranzmaßnahmen**
M. Bülow
Diplomarbeit, BTU Cottbus (2011)
- (3) **Entwicklung eines eingebetteten Telediagnostiksystems**
K. Dkhil
Diplomarbeit, FH Brandenburg, (2011)
- (4) **In-situ Nucleation and Growth Study of Virtual GaN Substrates on Si**
B. Foltynski
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- (5) **Untersuchungen zur Biostabilität und Sterilisierbarkeit eines implantierbaren Glucosesensors**
M. Fröhlich
Diplomarbeit, Otto-von-Guericke-Universität Magdeburg, (2011)
- (6) **Strukturierte Goldabscheidung mittels Galvanik und PVD**
J. Kitzmann
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- (7) **Experimental Investigations of Arsenic Diffusion Mechanisms in Germanium**
K. Klein
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- (8) **Elektrische und analytische Charakterisierung von Bor-dotierten epitaktischen Germaniumschichten**
B. Knappe
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- (9) **Investigation of HfO₂-based RRAM Structures**
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- (10) **Defect Monitoring Using a Luminescence Imaging Technique for mc-Si Solar Wafers**
D. Mankovics
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- (11) **Konzeption und exemplarische Implementierung eines Softwaremoduls zur Erfassung von Prozessdaten in Schienenfahrzeugen und Übertragung zu einem stationären System**
N. Pagel
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- (12) **Light-induced Crystallization of Thin Silicon Films and their Characterization by Raman Spectroscopy**
N. Prasad Acharya
Masterarbeit, BTU Cottbus (2011)
- (13) **Charakterisierung von innovativen Materialien der Mikroelektronik mittels Hall-Messungen**
Ch. Reinicke
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- (14) **Vergleich planarer Spulen für verschiedene Metallisierungen und Rückseitenprozessierungen**
X. Ren
Masterarbeit, FH Lausitz (2011)
- (15) **Der Lead-User Ansatz im Bereich sicherheitskritischer Entwicklungen spezieller Sensornetzwerke**
A. Sänn
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- (16) **Entwurf und Implementierung eines Hardwarebeschleunigers für das IEEE 802.15.4 MAC-Protokoll**
H. Schomann
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- (17) **Entwurf eines schnellen Komparators mit Offsetkompensation in 0.25 µm BiCMOS Technologie**
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- (18) **Entwicklung und Umsetzung von Mechanismen zur Verbesserung der „Quality of Experience“ beim mobilen Zugriff auf Streaming orientierte Internet-Dienste über zellulare Netze**
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**Patente
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