

Erschienenene Publikationen
Published Papers

- (1) **Entwurf fehlertoleranter Zustandsautomaten mit variablem Schutz für spezifische Eingabesequenzen**
M. Augustin, M. Gössel, R. Kraemer
Proc. 24. GI/GMM/ITG-Workshop: Testmethoden und Zuverlässigkeit von Schaltungen und Systemen, 47 (2012)
- (2) **Ce_xAl_yO_z/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
Thin Solid Films **520**, 4518 (2012)
- (3) **Energy Budget of an Implantable Glucose Measurement System**
T. Basmer, D. Genschow, M. Fröhlich, M. Birkholz
Biomedical Technology **57**, 276 (2012)
- (4) **Nanostructured Silicon for Ge Nanoheteroepitaxy**
J. Bauer, Y. Yamamoto, P. Zaumseil, O. Fursenko, K. Schulz, G. Kozłowski, T. Schroeder, B. Tillack
Microelectronic Engineering **97**, 169 (2012)
- (5) **Electrical Characterization of Advanced MIM Capacitors with ZrO₂ Insulator for High-Density Packaging and RF Applications**
T. Bertaud, C. Bermond, S. Blonkowski, Ch. Vallée, T. Lacrevez, A. Farcy, M. Gros-Jean, B. Fléchet
IEEE Transactions on Components, Packaging and Manufacturing Technology **2**(3), 502 (2012)
- (6) **HfO₂-based RRAM for Embedded Non-Volatile Memory: From Materials Science to Integrated 1T1R RRAM Arrays**
T. Bertaud, D. Walczyk, M. Sowinska, D. Wolansky, B. Tillack, G. Schoof, V. Stikanov, Ch. Wenger, S. Thiess, T. Schroeder, Ch. Walczyk
ECS Transactions **50**(4), 21 (2012)
- (7) **In-Operando and Non-Destructive Analysis of the Resistive Switching in the Ti/HfO₂/TiN-based System by Hard X-Ray Photoelectron Spectroscopy**
T. Bertaud, M. Sowinska, D. Walczyk, S. Thiess, A. Glosovskii, Ch. Walczyk, T. Schroeder
Applied Physics Letters **101**, 143501 (2012)
- (8) **Resistive Switching of HfO₂ based Metal-Insulator-Metal Diodes: Impact of the Top Electrode Material**
T. Bertaud, D. Walczyk, Ch. Walczyk, Ch. Wenger, S. Kubotsch, M. Sowinska, T. Schroeder, Ch. Wenger, C. Vallée, P. Gonon, C. Mannequin, V. Jousseume, H. Grampeix
Thin Solid Films **520**, 4551 (2012)
- (9) **Resistive Switching of Ti/HfO₂-based Memory Devices: Impact of the Atmosphere and Oxygen Partial Pressure**
T. Bertaud, M. Sowinska, D. Walczyk, Ch. Walczyk, St. Kubotsch, Ch. Wenger, T. Schroeder
IOP Conference Series: Material Science and Engineering **41**, 012018 (2012)
- (10) **Minimal-invasiver Blutzuckersensor (MIBS)**
M. Birkholz, K.-E. Ehwald, M. Fröhlich, P. Kulse, T. Basmer, R. Ehwald, T. Guschauski, U. Stoll, H. Siegel, S. Schmaderer, J. Szeponik, D. Zahn
Proc. 16. GMA/ITG-Fachtagung Sensoren und Messsysteme 2012, 177 (2012)

- (11) **Textured Strontium Titanate Layers on Platinum by Atomic Layer Deposition**
T. Blomberg, J. Anttila, S. Haukka,
M. Touminen, M. Lukosius, Ch. Wenger,
T. Saukkonen
Thin Solid Films **520**, 6535 (2012)
- (12) **Support for a Long Lifetime and Short End-to-End Delays with TDMA Protocols in Sensor Networks**
M. Brzozowski, H. Salomon, P. Langendörfer
International Journal of Distributed Sensor Networks (2012)
- (13) **High Temperature X-Ray Diffraction Measurements on Ge/Si(001) Heterostructures: a Study on the Residual Tensile Strain**
G. Capellini, M. De Seta, P. Zaumseil,
G. Kozłowski, T. Schroeder
Journal of Applied Physics **111**, 073518 (2012)
- (14) **Tensile Strained Ge Layers Obtained Via a Si-CMOS Compatible Approach**
G. Capellini, G. Kozłowski, Y. Yamamoto,
M. Lisker, T. Schroeder, A. Ghrib,
M. de Kersauson, M. El Kurdi, P. Boucaud,
B. Tillack
Proc. International SiGe Technology and Device Meeting (ISTDM 2012), (2012)
- (15) **Narrow Intersubband Transition in n-type Ge/SiGe Multi Quantum Wells: Control of the Terahertz Absorption Energy Through the Temperature Dependent Depolarization Shift**
M. De Seta, G. Capellini, M. Ortolani,
M. Virgilio, G. Grosso, G. Nicotra, P. Zaumseil
Nanotechnology **23**, 465708 (2012)
- (16) **120 GHz Radar Mixed-Signal Transceiver**
W. Debski, W. Winkler, Y. Sun, M. Marinkovic,
J. Borngräber, J.C. Scheytt
Proc. European Microwave Integrated Circuit Conference (EuMIC 2012), (2012)
- (17) **An X-Band, High Performance, SiGe-HBT Power Amplifier for Phased Arrays**
T. Dinc, I. Kalyoncu, M. Kaynak, Y. Gurbuz
Proc. European Microwave Conference, (EuMW 2012), 472 (2012)
- (18) **Side Channel Attacks and the Non-Volatile Memory of the Future**
Z. Dyka, Ch. Walczyk, D. Walczyk, Ch. Wenger,
P. Langendörfer
Proc. International Conference on Compilers, Architectures and Synthesis for Embedded Systems (CASES 2012), 13 (2012)
- (19) **Towards Strong Security in Embedded and Pervasive Systems: Energy and Area Optimized Serial Polynomial Multipliers in GF(2^k)**
Z. Dyka, P. Langendörfer, F. Vater, St. Peter
Proc. 5th IFIP International Conference on New Technologies, Mobility and Security, (NTMS 2012), (2012)
- (20) **60 GHz Wireless Broadband Cable Replacement for Machine Vision Applications**
M. Ehrig, M. Petri
Proc. International Symposium on Signals, Systems and Electronics (ISSSE 2012), (2012)
- (21) **A 60 GHz Eight-Element Phased-Array Receiver Front-End in 0.25 μm SiGe BiCMOS Technology**
M. Elkhoully, Ch.-S. Choi, S. Glisic, F. Ellinger,
J.C. Scheytt
EuMA International Journal of Microwave and Wireless Technologies **4**(06), 579 (2012)

- (22) **Exploring Pausible Clocking Based GALS Design for 40-nm System Integration**
X. Fan, M. Krstic, E. Grass, B. Sanders, Ch. Heer
Proc. Design, Automation and Test in Europe, (DATE 2012), 1118 (2012)
- (23) **Performance Analysis of GALS Datalink based on Pausible Clocking**
X. Fan, M. Krstic, E. Grass
Proc. 18th IEEE International Symposium on Asynchronous Circuits and Systems (ASYNC 2012), 126 (2012)
- (24) **Simulation Methodology for Dose Effects in Lateral DMOS Transistors**
P. Fernandez-Martinez, F.R. Palomo, S. Diez, S. Hidalgo, M. Ullan, D. Flores, R. Sorge
Microelectronics Journal **43**, 50 (2012)
- (25) **Long-Term Reliability of High-Performance SiGe:C Heterojunction Bipolar Transistors**
G.G. Fischer, D. Micusik, A. Pocej
IEEE Bipolar/BiCMOS Circuits and Technology Meeting, (BCTM 2012), 182 (2012)
- (26) **Untersuchungen zur Biostabilität eines implantierbaren Glucosesensors**
M. Fröhlich, K.-E. Ehwald, P. Kulse, O. Fursenko, J. Katzer, M. Birkholz
Proc. DPG Frühjahrstagung, Fachverband Biologische Physik, BP 8.15 (2012)
- (27) **Biostability of an Implantable Glucose Sensor Chip**
M. Fröhlich, M. Birkholz, K.-E. Ehwald, P. Kulse, O. Fursenko, J. Katzer
IOP Conference Series: Materials Science and Engineering **41**, 012022 (2012)
- (28) **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
Materials Science and Engineering B **177**(10), 750 (2012)
- (29) **Optical Properties and Band Gap Characterization of High Dielectric Constant Oxides**
O. Fursenko, J. Bauer, G. Lupina, P. Dudek, M. Lukosius, Ch. Wenger, P. Zaumseil
Thin Solid Films **520**, 4532 (2012)
- (30) **Highly Efficient CW Parametric Conversion at 1550 nm in SOI Waveguides by Reverse biased p-i-n Junction**
A. Gajda, L. Zimmermann, G. Winzer, H. Tian, M.J. Far, R. Elschner, T. Richter, C. Schubert, B. Tillack, K. Petermann
Optics Express **20**(12), 13100 (2012)
- (31) **High Efficiency CW Four-Wave Mixing at 1.5 μm in SOI Nano-Rib Waveguides Using p-i-n Diodes**
A. Gajda, G. Winzer, B. Tillack, K. Petermann, L. Zimmermann, H. Tian, R. Elschner, T. Richter, C. Schubert
Proc. 9th International Conference on Group IV Photonics, 225 (2012)
- (32) **60 GHz Polarimetric MIMO Sensing: Architectures and Technology**
A.P. Garcia Ariza, R. Müller, R. Stephan, F. Wollenschläger, A. Schulz, M. Elkhoully, J.C. Scheytt, U. Trautwein, J. Müller, R.S. Thomä, M.A. Hein
Proc. European Conference on Antennas and Propagation, (EuCAP 2012), 2578 (2012)

- (33) **Synchronous Signal Acquisition and Processing in FMCW-Radar Applications**
D. Genschow, M. Mahlig
Proc. International Symposium on Signals, Systems and Electronics (ISSSE 2012), (2012)
- (34) **Continuously Tunable Delay Line Based on SOI Tapered Bragg Gratings**
I. Giuntoni, D. Stolarek, D.I. Kroushkov, J. Bruns, L. Zimmermann, B. Tillack, K. Petermann
Optics Express **20**(10), 11241 (2012)
- (35) **Asynchronous Circuit Design: From Basics to Practical Applications**
E. Grass, M. Krstic, X. Fan, St. Zeidler
Proc. of the 15th IEEE Symposium on Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2012), 5 (2012)
- (36) **130 Nanometer CMOS MEMS Based Novel Microfluidic System for Cytometry at 5 GHz to 7 GHz**
S. Guha, K. Schmalz, Ch. Wenger, W. Krautschneider
Proc. 1st International Conference on MicroFluidic Handling Systems (MFHS 2012), (2012)
- (37) **Advanced Transistor Architectures for Half-Terahertz SiGe HBTs**
B. Heinemann, A. Fox, H. Rücker
ECS Transactions **50**(9), 61 (2012)
- (38) **Eine strahlungsresistente 0.13 Mikrometer CMOS Bibliothek**
U. Jagdhold
Proc. VDE VDI Zuverlässigkeit und Entwurf, (2012)
- (39) **Clock Jitter Generator with Picoseconds Resolution**
G. Jovanovic, M. Stojcev, T. Nikolic, Z. Stamenkovic
Proc. 28th International Conference on Microelectronics (MIEL 2012), 369 (2012)
- (40) **Programmable Jitter Generator Based on Voltage Controlled Delay Line**
G. Jovanovic, M. Stojcev, T. Nikolic, Z. Stamenkovic
Scientific Publications of State University of Novi Pazar Series A: Applied Mathematics, Informatics and Mechanics **4**(1), 61 (2012)
- (41) **Development of CMOS Integrated AlN Based SAW-Filter and the Role of Si Substrate Resistivity**
U. Kaletta, D. Wolansky, M. Fraschke, Ch. Wenger
Proc. 2012 International Conference Semiconductor Conference Dresden – Grenoble (ISCDG), (2012)
- (42) **Integrated ZnO and AlN based Surface Acoustic Wave Devices on Silicon**
U. Kaletta, Ch. Wenger, P.V. Santos, S. Rauwerdink, W. Seidel, M. Fraschke, D. Wolansky, A. Scheit
Proc. 2nd International Advances in Applied Physics and Materials Science Congress (APMAS 2012), abstr. book, 183 (2012)
- (43) **P-type Doping of Silicon Suitable for Structures with High Aspect Ratios by Using a Dopant Source of Boron Oxide Grown by Atomic Layer Deposition**
B. Kalkofen, V.M. Mothukuru, M. Lisker, E.P. Burte
ECS Transactions **45** (6), 55 (2012)

- (44) **A SiGe Switched LNA for X-Band Phased-Arrays**
I. Kalyoncu, T. Dinc, M. Kaynak, Y. Gurbuz
Proc. European Microwave Conference (EuMW 2012), 103 (2012)
- (45) **Direct Band Gap Luminescence from Ge Pin Diodes on Si Substrates**
E. Kasper, M. Oehme, J. Werner, T. Arguirov, M. Kittler
Frontiers of Optoelectronics in China 5(3), 256 (2012)
- (46) **Room Temperature Direct Band Gap Emission from Ge p-i-n Heterojunction Photodiodes**
E. Kasper, M. Oehme, T. Arguirov, J. Werner, M. Kittler, J. Schulze
Advances in Optoelectronics (2012)
- (47) **Behavior of N Atoms after Thermal Nitridation of Si_{1-x}Ge_x Surface**
T. Kawashima, M. Sakuraba, B. Tillack, J. Murota
Thin Solid Films 520, 3392 (2012)
- (48) **A Q-Band RF-MEMS Absorptive SPST in a BiCMOS Technology**
M. Kaynak, W. Zhang, M. Wietstruck, B. Tillack
Proc. 13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), (2012)
- (49) **BiCMOS Embedded RF-MEMS Technologies for mm-Wave Applications**
M. Kaynak
Proc. European Microwave Conference (EuMW 2012), (2012)
- (50) **Capacitance Tuning Behavior of a BiCMOS Embedded RF-MEMS Switch**
M. Kaynak, M. Wietstruck, W. Zhang, R. Scholz, B. Tillack
Novel RF MEMS Technologies, (Series in Micro and Nanoengineering 20) / Ed: G. Papaioanou u.a., Bucuresti: Editura, Academiei Romane, 93 (2012)
- (51) **Latest Developments on SiGe Technology and RFMEMS-BiCMOS Co-Integration**
M. Kaynak
Proc. GigaHertz 2012 Symposium, (2012)
- (52) **MEMS Module Integration into SiGe BiCMOS Technology for Embedded System Applications**
M. Kaynak, V. Valenta, H. Schumacher, B. Tillack
Proc. IEEE Bipolar/BiCMOS Circuits and Technology Meeting, (BCTM 2012), 49 (2012)
- (53) **RF-MEMS Switch Module in a 0.25 μm BiCMOS Technology**
M. Kaynak, M. Wietstruck, W. Zhang, J. Drews, R. Scholz, D. Knoll, F. Korndörfer, C. Wipf, K. Schulz, M. Elkhouly, K. Kaletta, M. v. Suchodoletz, K. Zoschke, M. Wilke, O. Ehrmann, V. Mühlhaus, G. Liu, T. Purtova, A. C. Ulusoy, H. Schumacher, B. Tillack
Proc. Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), 25 (2012)
- (54) **Packaged BiCMOS Embedded RF-MEMS Switches with Integrated Inductive Loads**
M. Kaynak, M. Wietstruck, W. Zhang, J. Drews, R. Barth, D. Knoll, F. Korndörfer, R. Scholz, K. Schulz, C. Wipf, B. Tillack, K. Kaletta, M. v. Suchodoletz, K. Zoschke, M. Wilke, O. Ehrmann, A. C. Ulusoy, T. Purtova, G. Liu, H. Schumacher
Proc. International Microwave Symposium (IMS 2012), (2012)

- (55) **SFDR Considerations for Current Steering High-Speed Digital to Analog Converters**
M. Khafaji, J.C. Scheytt, U. Jörges, C. Carta, D. Micusik, F. Ellinger
Proc. IEEE Bipolar/BiCMOS Circuits and Technology Meeting, Portland, (BCTM 2012), 169 (2012)
- (56) **Strain Control of Si and Si_{1-y}C_y Layers in Si/Si_{1-y}C_y/Si(100) Heterostructures**
T. Kikuchi, M. Sakuraba, I. Costina, B. Tillack, J. Murota
Proc. 6th International SiGe Technology and Device Meeting (ISTDM 2012),
- (57) **Comparison of the Impact of Thermal Treatments on the Second and on the Millisecond Scales on the Precipitation of Interstitial Oxygen (ECS Proceedings)**
G. Kissinger, D. Kot, W. von Ammon
ECS Transactions **50**(5), 145 (2012)
- (58) **Comparison of the Impact of Thermal Treatments on the Second and on the Millisecond Scales on the Precipitation of Interstitial Oxygen**
G. Kissinger, D. Kot, W. von Ammon
ECS Journal of Solid State Science and Technology **1**(6), P269 (2012)
- (59) **Nitrogen Doped 300 mm Czochralski Silicon Wafers Optimized with Respect to Voids with Laterally Homogeneous Internal Getter Capabilities**
G. Kissinger, G. Raming, R. Wahlich, T. Müller
Materials Science Forum **725**, 221 (2012)
- (60) **Oxygen Precipitation after Thermal Processing on the Second and on the Millisecond Scales**
G. Kissinger, D. Kot, W. von Ammon, J. Dabrowski, A. Sattler
Proc. 6th International Symposium on Advanced Science and Technology of Silicon Materials, 15 (2012)
- (61) **Preface: Advanced Silicon Materials Research for Electronic and Photovoltaic Applications**
G. Kissinger, S. Pizzini, H. Yamada-Kaneta, J. Kang
Physica Status Solidi C **9**, (10–11), 1865 (2012)
- (62) **300 mm Czochralski Silicon Wafers Optimized with Respect to Voids with Laterally Homogeneous Oxygen Precipitation**
G. Kissinger, G. Raming, R. Wahlich, T. Müller
Physica B: Condensed Matter **407**(15), 2993 (2012)
- (63) **Distribution of Defects and Breakdown Sites in UMG-Si Solar Cells Studied by Luminescence Imaging**
A. Klossek, D. Mankovics, M. Kittler
Energy Procedia **27**, 143 (2012)
- (64) **A Highly Integrated IR-UWB Transceiver for Communication and Localization**
O. Klymenko, D. Martynenko, G. Fischer
Proc. International System on Chip Design Conference (SOC Design 2012), 57 (2012)
- (65) **Low-Cost, High-Voltage SiGe:C HBTs for a 0.18 μm BiCMOS Process**
D. Knoll, V. Dmitriev, T. Egorova, V. Seletskij, N. Shelepin, R. Barth, G.G. Fischer, T. Grabolla, B. Tillack
Proc. IEEE Bipolar/BiCMOS Circuits and Technology Meeting, Portland, (BCTM 2012), 153 (2012)

- (66) **Substrate Design and Thermal Budget Tuning for Integration of Photonic Components in a High-Performance SiGe:C BiCMOS Process**
D. Knoll, H.H. Richter, B. Heinemann, S. Lischke, Y. Yamamoto, L. Zimmermann, B. Tillack
ECS Transactions **50**(9), 297 (2012)
- (67) **Silicon Photonics-Wireless Interface IC for 60-GHz Wireless Link**
M. Ko, J.-S. Youn, M.-J. Lee, K.-C. Choi, H. Rucker, W.-Y. Choi
IEEE Photonics Technology Letters **24**(13), 1112 (2012)
- (68) **Investigation of Optimal Silicon Avalanche Photodiode Pairs for 60-GHz Balanced Subharmonic Optoelectronic Mixers**
M. Ko, M.J. Lee, H. Rucker, W.-Y. Choi
Proc. Asia-Pacific Microwave Photonics Conference (APMP 2012), (2012)
- (69) **X-Ray Diffraction Study of Plastic Relaxation in Ge-rich SiGe Virtual Substrates**
V. Kopp, V.M. Kaganer, G. Capellini, M. de Stea, P. Zaumseil
Physical Review B **85**, 245311 (2012)
- (70) **Characterization of Deep Levels Introduced by RTA and by Subsequent Anneals in n-Type Silicon**
D. Kot, T. Mchedlidze, G. Kissinger, W. von Ammon
ECS Transactions **50**(5), 269 (2012)
- (71) **Impact of RTA on the Morphology of Oxygen Precipitates and on the Getter Efficiency for Cu and Ni in Si Wafers**
D. Kot, G. Kissinger, M.A. Schubert, T. Müller, A. Sattler
Materials Science Forum **725**, 239 (2012)
- (72) **Growth and Relaxation Processes in Ge Nanocrystals on Free-Standing Si(001) Nanopillars**
G. Kozłowski, P. Zaumseil, M.A. Schubert, Y. Yamamoto, J. Bauer, J. Matejova, T. Schüllli, B. Tillack, T. Schroeder
Nanotechnology **23**(11), 115704 (2012)
- (73) **How to Change a Winning Team: the Compliant Behaviour of Ge Nanocluster Arrays on Free-Standing Si Nanostructures**
G. Kozłowski, T. Schroeder
„Spotlight on Science“ – auf Internetseite der Europäischen Synchrotron Radiation Facility (ESRF) <http://www.esrf.eu/>
- (74) **The Epitaxial Growth of Low Defect SiGe Buffer Layers for Integration of New Materials on 300 mm Silicon Wafers**
G. Kozłowski, O. Fursenko, P. Zaumseil, T. Schroeder, M. Vorderwestner, P. Storck
ECS Transactions **50**(9), 613 (2012)
- (75) **Reliable Architecture for Heterogeneous Home-Networks: The Omega I-Mac Approach**
R. Kraemer, M. Brzozowski, St. Nowak
Facta Universitatis, Series: Electronics and Energetics **25**(1), 43 (2012)
- (76) **Applying Tire Pressure Monitoring Devices for Traffic Management Purposes**
M. Krstic, N. Savic, R. Kraemer, M. Junghans
Proc. International Symposium on Signals, Systems and Electronics (ISSSE 2012), (2012)
- (77) **Evaluation of GALS Methods in Scaled CMOS Technology – Moonrake Chip Experience**
M. Krstic, X. Fan, E. Grass, L. Benini, M.R. Kakoe, C. Heer, B. Sanders, A. Strano, D. Bertozzi
International Journal of Embedded and Real-Time Communication Systems (IJERTCS) **3**(4), 1 (2012)

- (78) **Fabrication of MEMS Actuators from the BEOL of a 0.25 μm BiCMOS Technology Platform**
P. Kulse, M. Birkholz, K.-E. Ehwald, J. Bauer, J. Drews, U. Haak, J. Katzer, K. Schulz, D. Wolansky
Microelectronic Engineering **97**, 276 (2012)
- (79) **Lithographic Aspects for the Fabrication of BiCMOS Embedded Bio-MEMS and RF-MEMS**
P. Kulse, M. Birkholz, K.-E. Ehwald, M. Kaynak, M. Wietstruck, J. Bauer, U. Haak, J. Drews, K. Schulz
Proceedings of SPIE **8352**, 83520E (2012)
- (80) **Design and Analysis of Down-Conversion Gate / Base-pumped Harmonic Mixers using Novel Reduced-Size 180 Hybrid with Different Input Frequencies**
J.J. Kuo, C.-H. Lien, Z.-M. Tsai, K.-Y. Lin, K. Schmalz, R. Scholz, H. Wang
IEEE Transactions on Microwave Theory and Techniques **60**(8), 2473 (2012)
- (81) **A 62 GHz Reflectometer for Biomedical Sensor Readout in SiGe BiCMOS Technology**
B. Lämmle, K. Schmalz, J.C. Scheytt, D. Kissinger, R. Weigel
Proc. 12th Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SIRF 2012), 45 (2012)
- (82) **An Integrated 125 GHz Sensor with Read-Out Circuit for Permittivity Measurement of Liquids**
B. Lämmle, K. Schmalz, J.C. Scheytt, D. Kissinger, R. Weigel
Proc. International Microwave Symposium (IMS 2012), (2012)
- (83) **Topologieüberwachung von drahtlosen Sensornetzen**
St. Lange, O. Stecklina
Proc. 11. GI/ITG KuVS Fachgespräch Drahtlose Sensornetze FGSN 2012, 56 (2012)
- (84) **Distributed Shared Memory as an Approach for Integrating WSNs and Cloud Computing**
P. Langendörfer, K. Piotrowski, M. Diaz, B. Rubio
Proc. NTMS Workshop on Wireless Sensor Networks: Architectures, Deployments and Trends (WSN-ADT), 1(2012)
- (85) **Wireless Sensor Networks for Critical Infrastructure Protection**
P. Langendörfer, L. Buttyan, A. Hessler, C. Castelluccia, A. Casaca, A. Alkassar, E. Osipov
Critical Infrastructure Security: Assessment, Prevention, Detection, Response, WIT Press, 155 (2012)
- (86) **Wireless Telemedicine Sensor Nodes: Requirements and Challenges Ahead**
P. Langendörfer, T. Basmer, K. Piotrowski, St. Ortmann
Proc. 2012 IEEE Radio & Wireless Symposium (RWW 2012), (2012)
- (87) **Migrating Legacy PON Equipment towards Colorless ONU through Hybrid Integrated SOI All-Optical λ -Converter**
I. Lazarou, C. Stamatidis, B. Schrenk, L. Stampoulidis, L. Zimmermann, K. Voigt, G.B. Preve, L. Moerl, J. Kreissl, H. Avramopoulos
Proc. OFC, (2012)

- (88) **Effects of Guard-Ring Structures on the Performance of Silicon Avalanche Photodetectors Fabricated with Standard CMOS Technology**
M.J. Lee, H. Rücker, W.-Y. Choi
IEEE Electron Device Letters **33**(1), 80 (2012)
- (89) **60-GHz Voltage-Controlled Oscillator and Frequency Divider in 0.25 μm SiGe BiCMOS Technology**
J.-M. Lee, W.-Y. Choi, H. Rücker
Proc. International SoC Design Conference (ISOCC 2012), 65 (2012)
- (90) **Molecular Beam Epitaxy of Graphene on Mica**
G. Lippert, J. Dabrowski, Y. Yamamoto, F. Herziger, J. Maultzsch, J. Baringhaus, C. Tegenkamp, M.C. Lemme, W. Mehr, G. Lupina
Physica Status Solidi B **249**(12), 2507 (2012)
- (91) **Low Dark Current Ge PIN Photodiode for a High-Performance, Photonic BiCMOS Process for Radio-over-Fiber Applications**
St. Lischke, D. Knoll, L. Zimmermann, Y. Yamamoto, M. Fraschke, A. Trusch, A. Krüger, M. Kroh, B. Tillack
Proc. 2012 IEEE Photonics Conference, (2012)
- (92) **Direct and Indirect Radiative Recombination from Ge**
C.W. Liu, T.-H. Cheng, Y.Y. Chen, S.-R. Jan, C.-Y. Chen, S.T. Chan, Y.-H. Nien, Y. Yamamoto, B. Tillack
Thin Solid Films **520**(8), 3249 (2012)
- (93) **Dual-Band Millimeter-Wave VCO with Embedded RF-MEMS Switch Module in BiCMOS Technology**
G. Liu, M. Kaynak, T. Purtova, A. C. Ulusoy, B. Tillack
Proc. Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), 175 (2012)
- (94) **Electrical and Morphological Properties of ALD and AVD Grown Perovskite-Type Dielectrics and Their Stacks for Metal-Insulator-Metal Applications**
M. Lukosius, Ch. Wenger, T. Blomberg, A. Abrutis, P.K. Baumann, G. Ruhl
ECS Journal of Solid State Science and Technology **1**(1), N1 (2012)
- (95) **Metal-Insulator-Metal Capacitors with ALD Grown SrTiO_3 : Influence of Pt Electrodes**
M. Lukosius, T. Blomberg, D. Walczyk, G. Ruhl, Ch. Wenger
IOP Conference Series: Materials Science and Engineering **41**, 012015 (2012)
- (96) **Properties of Atomic-Vapor and Atomic-Layer Deposited Sr, Ti, and Nb Doped Ta_2O_5 Metal-Insulator-Metal Capacitors**
M. Lukosius, C. Baristiran Kaynak, S. Kubotsch, T. Blomberg, G. Ruhl, Ch. Wenger
Thin Solid Films **520**, 4576 (2012)
- (97) **Complementary RF-LDMOS Transistors Realized with Standard CMOS Implantations**
A. Mai, H. Rücker
Proc. 42nd European Solid-State Device Research Conference (ESSDERC 2012), 181 (2012)
- (98) **Dislocation-Related Photoluminescence Imaging of mc-Si Wafers at Room Temperature**
D. Mankovics, R.P. Schmid, T. Arguirov, M. Kittler
Crystal Research and Technology **47**(11), 1148 (2012)
- (99) **Luminescence of Defects and Breakdown Sites in Multicrystalline Si Solar Cells**
D. Mankovics, A. Klossek, Ch. Krause, T. Arguirov, W. Seifert, M. Kittler
Physica Status Solidi A **209**(10), 1908 (2012)

- (100) A 245 GHz CB LNA and SHM Mixer in SiGe Technology**
Y. Mao, K. Schmalz, J. Borngräber, J.C. Scheytt
Proc. Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), 5 (2012)
- (101) 245-GHz LNA, Mixer, and Subharmonic Receiver in SiGe Technology**
Y. Mao, K. Schmalz, J. Borngräber, J.C. Scheytt
IEEE Transactions on Microwave Theory and Techniques **60**(12), 3823 (2012)
- (102) 245 GHz Subharmonic Receiver in SiGe**
Y. Mao, K. Schmalz, J. Borngräber, J.C. Scheytt
Proc. European Microwave Week, (EuMW 2012), 183 (2012)
- (103) Performance and Complexity Analysis of Channel Coding Schemes for Multi-Gbps Wireless Communications**
M. Marinkovic, M. Krstic, E. Grass, M. Piz
Proc. IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2012), 1966 (2012)
- (104) A Low Power 6.2-8.3 GHz Frequency Synthesizer in SiGe BiCMOS for IEEE802.15.4a Standard**
D. Martynenko, G. Fischer, O. Klymenko
Proc. International Symposium on Signals, Systems and Electronics (ISSSE 2012), (2012)
- (105) Implementation of the Ultra-Low Power Load-Independent LC VCO**
D. Martynenko, G. Fischer, O. Klymenko
Proc. IEEE International Conference on Circuits & Systems (ICCAS2012), 27 (2012)
- (106) A Low Power Programmable Frequency Divider Intended for Frequency Synthesizer Designed in Accordance to IEEE 802.15.4a Standard**
D. Martynenko, G. Fischer, O. Klymenko
Proc. IEEE International Conference on Circuits & Systems (ICCAS2012), 21 (2012)
- (107) UWB Transmitter for Communication and Localization for IEEE 802.15.4a Standard**
D. Martynenko, G. Fischer, O. Klymenko
Proc. IEEE International Conference on Circuits & Systems (ICCAS2012), 32 (2012)
- (108) Capability of Photoluminescence for Characterization of Multi-Crystalline Silicon**
T. Mchedlidze, W. Seifert, M. Kittler, A.T. Blumenau, B. Birkmann, T. Mono, M. Müller
Journal of Applied Physics **111**, 073504 (2012)
- (109) Investigation of Defect States in Heavily Dislocated Thin Silicon Films**
T. Mchedlidze, M. Kittler
Journal of Applied Physics **111**(5), 053706 (2012)
- (110) New Methodology for Process Design Kit (PDK) of BiCMOS Compatible RF MEMS**
A. Mehdaoui, G. Schröpfer, G. Lorenz, M. Kaynak, M. Wietstruck
Proc. 13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), (2012)
- (111) Vertical Graphene Base Transistor**
W. Mehr, J.C. Scheytt, J. Dabrowski, G. Lippert, Y.-H. Xie, M.C. Lemme, M. Ostling, G. Lupina
IEEE Electron Device Letters **33**(5), 691 (2012)

- (112) Feeder Realization for Quasi-Lumped Multilayer Resonators with Low Q-factor**
D. Miljanovic, M. Potrebic, D.V. Tasic, Z. Stamenkovic
Advances in Circuits, Systems, Automation and Mechanics, (Eds.), 63 (2012)
- (113) 60 GHz Ultrawideband Front-Ends with Gain Control, Phase Shifter and Wave Guide Transition in LTCC Technology**
R. Müller, F. Wollenschläger, A. Schulz, M. Elkhoully, U. Trautwein, M.A. Hein, J. Müller, A.P. Garcia Ariza, R.S. Thomä
Proc. European Conference on Antennas and Propagation, (EuCAP 2012), 3255 (2012)
- (114) Atomically Controlled CVD Processing of Group IV Semiconductors for Ultra-Large-Scale Integration**
J. Murota, M. Sakuraba, B. Tillack
Advances in Natural Sciences: Nanoscience and Nanotechnology 3(2), 023002 (2012)
- (115) Epitaxial growth of single crystalline lattice-matched $\text{Pr}_{0.9}\text{Y}_{1.1}\text{O}_3$ on SrO-passivated Si (001): growth orientation and crystallization tailoring by interface engineering**
G. Niu, P. Zaumseil, M.A. Schubert, M. H. Zoellner, J. Dabrowski, T. Schroeder
Proc. IEEE International Conference on Solid-State and Integrated Circuit Technology (IEEE ICSICT 2012), (2012)
- (116) Electrical Characterization of {311} Defects and Related Junction Leakage Currents in n-Type Si after Ion Implantation**
C. Nyamhere, F. Olivie, F. Christiano, Z. Essa, D. Bolze, Y. Yamamoto
AIP Conf. Proc. 1496, 171 (2012)
- (117) Subharmonic 220- and 320-GHz SiGe HBT Receiver Front-Ends**
E. Öjefors, B. Heinemann, U.R. Pfeiffer
IEEE Transactions on Microwave Theory and Techniques 60(5), 1397 (2012)
- (118) Board Implementation and its Performance for IR-UWB IEEE.802.15.4a from Multiple ASIC Chips**
S. Olonbayar, D. Kreiser, D. Martynenko, G. Fischer, O. Klymenko, R. Kraemer
Proc. 18th European Wireless Conference (EW 2012), VDE Verl. (2012)
- (119) A Telemedicine System for Improved Rehabilitation of Stroke Patients**
St. Ortmann, P. Langendörfer
Proc. International Conference on Health Informatics, 270 (2012)
- (120) StrokeBack - Telemedicine System Empowering Stroke Patients to Fight Back**
St. Ortmann
ICT for Health Website – European Commission http://ec.europa.eu/information_society/activities/health/research/fp7_projects/index.en.htm
- (121) Telemedical Assistance for Ambulant Rehabilitation of Stroke Patient**
St. Ortmann, P. Langendörfer, C.S. Lányi
Proc. 9th World Congress on Brain Injury, abstr. book, 336 (2012)
- (122) A Fully Digital Polar Modulator for Switch Mode RF Power Amplifier**
P. Ostrovskyy, J.C. Scheytt, S.J. Lee, B.H. Park, J. H. Jung
Proc. International Symposium on Circuits and Systems (ISCAS 2012)

- (123) **A 5-Gb/s 2.1-2.2 GHz Bandpass $\Delta\Sigma$ Modulator for Switch-Mode Power Amplifier**
P. Ostrovskyy, H. Gustat, M. Ortmanns,
J.C. Scheytt
IEEE Transactions on Microwave Theory and
Techniques 60(8) (2012)
- (124) **Performance Estimation of Fully Digital Polar Modulation Driving a 2 GHz Switch-Mode Power Amplifier**
P. Ostrovskyy, J.C. Scheytt, A. Sadeghfam,
H. Heuermann
Proc. European Microwave Week,
(EuMW 2012), 1039 (2012)
- (125) **Design of a Sensor Node Crypto Processor for IEEE 802.15.4 Applications**
G. Panic, T. Basmer, H. Schomann, St. Peter,
F. Vater, K. Tittelbach-Helmrich
Proc. 25th IEEE International System-on-Chip
Conference (SOCC 2012), 213 (2012)
- (126) **Customized Hardware Platform for Wireless Sensor Networks in Agricultural Applications**
U. Pesovic, D. Projovic, S. Randjic,
Z. Stamenkovic
Proc. 5th WSEAS International Conference on
Sensors and Signals, (2012)
- (127) **Implementation of IEEE 802.15.4 Transceiver on Software Defined Radio Platform**
U. Pesovic, D. Glied, P. Planinsic,
Z. Stamenkovic, S. Randic
Proc. 20th Telecommunications Forum
(TELFOR 2012), 376 (2012)
- (128) **Tool-Supported Methodology for Component-Based Design of Wireless Sensor Network Applications**
St. Peter, P. Langendörfer
Proc. of the 4th International Workshop on
Component-Based Design of Resource-Con-
strained Systems, (CORCS 2012), 526 (2012)
- (129) **Latency Impacts of Different Parallelism Levels in Data-Flow Architectures**
M. Petri
Proc. 15th International Symposium on
Wireless Personal Multimedia Communica-
tions, 497 (2012)
- (130) **Design Methodology for Fault Tolerant ASICs**
V. Petrovic, M. Ilic, G. Schoof, Z. Stamenkovic
Proc. of the 15th IEEE Symposium on Design
and Diagnostics of Electronic Circuits and
Systems Symposium (DDECS 2012), 8 (2012)
- (131) **Implementation of Middleware Switch ASIC Processor**
V. Petrovic, M. Ilic, G. Schoof, S. Montenegro
The TELFOR Journal 4(2), 83 (2012)
- (132) **SEU and SET Fault Injection Models for Fault Tolerant Circuits**
V. Petrovic, M. Ilic, G. Schoof, Z. Stamenkovic
Proc. of the 13th Biennial Baltic Electronics
Conference (BEC2012), (2012)
- (133) **Single Event Latchup Power Switch Cell Characterisation**
V. Petrovic, M. Ilic, G. Schoof
Proc. 4th Small Systems Simulations
Symposium (YU SSSS 2012), (2012)
- (134) **Morphology and Nanostructure of $\text{CeO}_2(111)$ Surfaces of Single Crystals and of Si(111) Supported Ceria Films**
H.H. Pieper, C. Derks, M.H. Zoellner,
R. Olbrich, L. Tröger, T. Schroeder,
M. Neumann, M. Reichling
Physical Chemistry Chemical Physics 14,
15361 (2012)



- (135) Long-Range Wireless Sensor Nodes-Lessons Learned**
K. Piotrowski, A. Sojka, P. Langendörfer
Proc. 6th European Conference on Antennas and Propagation, (EuCAP 2012), 57(2012)
- (136) Multi-Radio Wireless Sensor Node for Mobile Biomedical Monitoring**
K. Piotrowski, St. Ortmann, P. Langendörfer
Proc. BMT 2012, 46th DGBMT Annual Conference, 57(Suppl.1), 725 (2012)
- (137) A Novel Tunable Integrated Filter for Dispersion Compensation Realized in Silicon (SOI)**
A. Rahim, S. Schwarz, L. Zimmermann, J. Bruns, K. Voigt, D.I. Kroushkov, C.G. Schäffer, K. Petermann
Proc. of the Sino-German Joint Symposium on Opto- and Microelectronic Devices and Circuits (SODC 2012), M13 (2012)
- (138) Characterization of Dislocation-Based Nanotransistors**
M. Reiche, M. Kittler
SPIE Proceedings; 8549 (2012)
- (139) Group IV Materials and Properties**
M. Reiche, M. Kittler
Handbook of Silicon Photonics /Eds. L. Pavesi, L. Vivien, Taylor and Francis, 25 (2012)
- (140) Characterization of Germanium-Sulfide Thin Films Grown by Hot Wire Chemical Vapor Deposition**
D. Reso, M. Silinskas, N. Frenzel, M. Lisker, E.P. Burte
Frontiers in Electronic Materials: Correlation Effects, Spintronics, and Memristive Phenomena – Fundamentals and Applications/ eds.: J. Heber, D. Schlomm u.a., Weinheim: Wiley-VCH, 214 (2012)
- (141) Growth of Germanium Sulfide by Hot Wire Chemical Vapor Deposition for Nonvolatile Memory Applications**
D. Reso, M. Silinskas, M. Lisker, E.P. Burte
Journal of Non-Crystalline Solids 358, 1511 (2012)
- (142) RF-MEMS Switching Circuits Fabricated in a SiGe Process Technology**
S. Reyaz, C. Samuelsson, R. Malmqvist, M. Kaynak, A. Alvandpour, A. Rydberg
Proc. GigaHertz 2012 Symposium, (2012)
- (143) A V-Band RF-MEMS SPDT Switch Network in a SiGe BiCMOS Process Technology**
S. Reyaz, C. Samuelsson, R. Malmqvist, M. Kaynak, A. Rydberg
Proc. 13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), (2012)
- (144) Millimeter-Wave RF-MEMS SPDT Switch Networks in a SiGe BiCMOS Process Technology**
S. Reyaz, C. Samuelsson, R. Malmqvist, M. Kaynak, A. Rydberg
Proc. European Microwave Conference (EuMW 2012), 1071 (2012)
- (145) Half-Terahertz SiGe BiCMOS Technology**
H. Rucker, B. Heinemann, A. Fox
Proc. Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), 133 (2012)
- (146) SiGe BiCMOS Technologies for Applications above 100 GHz**
H. Rucker, B. Heinemann, A. Fox
Proc. 2012 IEEE Compound Semiconductor Integrated Circuit Symposium (CSICS 2012), (2012)

- (147) SiGe BiCMOS Technology for mm-Wave Systems**
H. Rücker, B. Heinemann
Proc. International SoC Design Conference (ISOCC 2012), 266 (2012)
- (148) Complex Product Development: Using a Combined VoC Lead User Approach**
A. Sänn, D. Baier
Studies in Classification, Data Analysis and Knowledge Organization, 45 (2012)
- (149) Lead Users and Non-Lead-Users: Breakthrough Preferences Measured by Online Analysis**
A. Sänn
Proc. of the R&D Management Conference 2012, abstr. book, 44 (2012)
- (150) Lead Users and Non-Lead-Users: Preferences Measured by Conjoint Analysis**
A. Sänn, D. Baier
Proc. of the 34th Marketing Science Conference (ISMS 2012), abstr. book, 17 (2012)
- (151) Gigahertz Monolithic Delay Lines for Surface Acoustic Waves on Silicon**
P.V. Santos, S. Rauwerdink, K. Biermann, B. Drescher, W. Seidel, Ch. Wenger, U. Kaletta, M. Fraschke, D. Wolansky, M. Kaynak
IOP Conference Series: Materials Science and Engineering **41**, 012009 (2012)
- (152) SiGe BiCMOS Transceivers, Antennas, and Ultra-Low-Cost Packaging for the ISM Bands at 122 and 245 GHz**
J.C. Scheytt, Y. Sun, K. Schmalz, R. Wang
Proc. International Microwave Symposium (IMS 2012), (2012)
- (153) A 245 GHz LNA in SiGe Technology**
K. Schmalz, J. Borngräber, Y. Mao, H. Rücker, R. Weber
IEEE Microwave and Wireless Components Letters **22**, (10), 533 (2012)
- (154) A 245 GHz Transmitter in SiGe Technology**
K. Schmalz, J. Borngräber, B. Heinemann, H. Rücker, J.C. Scheytt
Proc. IEEE Radio Frequency Integrated Circuits Symposium (RFIC 2012), 195 (2012)
- (155) Systemarchitektur für Raumfahrtanwendungen**
G. Schoof, V. Petrovic, S. Montenegro
Proc. 24. GI/GMM/ITG-Workshop Testmethoden und Zuverlässigkeit von Schaltungen und Systemen, 29 (2012)
- (156) Embedded Low Power Clock Generator for Sensor Nodes**
O. Schrape, F. Vater
Proc. Norchip 2012 (2012)
- (157) Smarter ICs**
H. Schumacher, M. Kaynak, V. Valenta, B. Tillack
IEEE Microwave Magazine Nov./Dec., S33 (2012)
- (158) A Distributed Intrusion Detection System for Industrial Automation Networks**
F. Schuster, A. Paul
Proc. 17th International Conference on Emerging Technologies & Factory Automation (EFTA 2012), (2012)
- (159) Low-Power BiCMOS Track-and-Hold Circuit with Reduced Signal Feedthrough**
B. Sedighi, Y. Borokhovych, H. Gustat, J.C. Scheytt
Proc. International Microwave Symposium, (IMS 2012), (2012)

- (160) Low-Power SiGe BiCMOS Transimpedance Amplifier for 25-GBaud Optical Links**
B. Sedighi, J.C. Scheytt
IEEE Transactions on Circuits and Systems II **59**(8), 461 (2012)
- (161) Low-Power 20-Gb/s SiGe BiCMOS Driver with 2.5 V Output Swing**
B. Sedighi, P. Ostrovskyy, J.C. Scheytt
Proc. International Microwave Symposium (IMS 2012), (2012)
- (162) Low-Power 8-Bit 5-GS/s D/A Converter for Multi-Gigabit Wireless Transceivers**
B. Sedighi, M. Khafaji, J.C. Scheytt
International Journal of Microwave and Wireless Technologies, 1 (2012)
- (163) 40 Gb/s VCSEL Driver IC with a New Output Current and Pre-Emphasis Adjustment Method**
B. Sedighi, J.C. Scheytt
Proc. International Microwave Symposium 2012 (IMS 2012), (2012)
- (164) A 77 GHz On-Chip Dipole Antenna with Etched Silicon Substrate**
M. Seyyed-Esfahlan, M. Kaynak, I. Tekin
Proc. 13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), (2012)
- (165) Platform for Automated HW/SW Co-Verification, Testing and Simulation of Microprocessors**
A. Simevski, R. Kraemer, M. Krstic
Proc. 13th Latin American Test Workshop (LATW 2012), 1 (2012)
- (166) Scalable Design of a Programmable NMR Voter with Inputs' State Descriptor and Self-Checking Capability**
A. Simevski, E. Hadzieva, R. Kraemer, M. Krstic
Proc. NASA/ESA Conference on Adaptive Hardware and Systems (AHS 2012), 182 (2012)
- (167) GaP Collector Development for SiGe HBT Performance Increase: A Heterostructure Growth Study**
O. Skibitzki, F. Hatami, Y. Yamamoto, P. Zaumseil, A. Trampert, M.A. Schubert, B. Tillack, W. T. Masselink, T. Schroeder
Journal of Applied Physics **111**, 073515 (2012)
- (168) Solid-Phase Epitaxy of Undoped Amorphous Silicon by in-situ Postannealing**
O. Skibitzki, Y. Yamamoto, M.A. Schubert, B. Tillack
Thin Solid Films **520**, 3271 (2012)
- (169) Single Error Plus Single Erasure Correction with Redundancy Repair Scheme for Memory Reliability Improvement**
P. Skoncej
Proc. 24. GI/GMM/ITG Workshop Testmethoden und Zuverlässigkeit von Schaltungen und Systemen, 87 (2012)
- (170) WBR - Word and Block-Level Hard Error Repair for Memories**
P. Skoncej
Proc. Non-Volatile Memory Technology Symposium (NVMTS 2012), (2012)
- (171) ImRNG: A Lightweight Pseudorandom Number Generator for Wireless Sensor Networks**
A. Sojka, K. Piotrowski
Proc. International Conference on Security and Cryptography (Secrypt 2012), (2012)
- (172) Concept of Vertical Bipolar Transistor with Lateral Drift Region, Applied to High Voltage SiGe HBT**
R. Sorge, A. Fischer, R. Pliquett, C. Wipf, R. Barth
Proc. Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), 223 (2012)

- (173) Hard X-Ray Photoelectron Spectroscopy Study of the Electroforming in Ti/HfO₂-based Resistive Switching Structures**
M. Sowinska, T. Bertaud, D. Walczyk, S. Thiess, M.A. Schubert, M. Lukosius, W. Drube, Ch. Walczyk, T. Schroeder
Applied Physics Letters **100**, 233509 (2012)
- (174) In-Operando HAXPES Analysis of the Resistive Switching Phenomenon in Ti/HfO₂-Based Systems**
M. Sowinska, T. Bertaud, D. Walczyk, S. Thiess, Ch. Walczyk, T. Schroeder
Technical Digest of Frontiers in Electronic Materials: A Collection of ext. abstr. of the Nature Conference, 2012, 235 (2012)
- (175) A Hybrid Photonic Integrated Wavelength Converter on a Silicon-on-Insulator Substrate**
C. Stamatiadis, L. Stampoulidis, K. Vyrsoinos, I. Lazarou, D. Kalavrouziotis, L. Zimmermann, K. Voigts, G.B. Preves, L. Moerl, J. Kreissl, H. Avramopoulos
Proc. OFC 2012, (2012)
- (176) Photonic Provisioning Using a Packaged SOI Hybrid All-Optical Wavelength Converter in a Meshed Optical Network Testbed**
Ch. Stamatiadis, D. Kalavrouziotis, A. Pagano, R. Morro, E. Riccardi, L. Stamoulidis, K. Voigt, G.B. Preve, L. Moerl, J. Kreissl, K. Landles, St. Duffy, H. Avramopoulos, L. Zimmermann, K. Petermann
Journal of Lightwave Technology **30**(18), 2941 (2012)
- (177) MIMO Transmission in IEEE 802.11a WLAN**
Z. Stamenkovic
Proc. 5th WSEAS International Conference on Sensors and Signals, 20 (2012)
- (178) Rear View Camera System for Car Driving Assistance**
Z. Stamenkovic, K. Tittelbach-Helmrich, J. Domke, C. Lörchner-Gerdaus, J. Anders, V. Sark, M. Eric, N. Sira
Proc. 28th International Conference on Microelectronics (MIEL 2012), 383 (2012)
- (179) TandemStack - a Flexible and Customizable Sensor Node Platform for Low Power Applications**
O. Stecklina, D. Genschow, Ch. Goltz
Proc. Sensornets 2012, 65 (2012)
- (180) A Compact Linear 60-GHz PA with 29.2% PAE Operating at Weak Avalanche Area in SiGe**
Y. Sun, G.G. Fischer, J.C. Scheytt
IEEE Transactions on Microwave Theory and Techniques **60**, 2581 (2012)
- (181) A Low-Phase-Noise 61 GHz Push-Push VCO with Divider Chain and Buffer in SiGe BiCMOS for 122 GHz ISM Applications**
Y. Sun, J.C. Scheytt
Proc. IEEE Radio Frequency Integrated Circuits Symposium (RFIC 2012), 79 (2012)
- (182) Field Emission Tip Array Fabrication Utilizing Geometrical Hindrance in the Oxidation of Si**
K. Sun, W. Zhang, B. Li, J. Young Lee, Y-H. Xie, T. Schroeder, J. Katzer, X. Wei, T.P. Russell
IEEE Transactions on Nanotechnology **11**(5), 999 (2012)
- (183) A 12-Bit 20-GHz Reduced Size Pipeline Accumulator in 0.25 μm SiGe:C Technology for DDS Applications**
B. Sveistrup Jensen, M. Khafaji, T. Keinicke Johansen, V. Krozer, J.C. Scheytt
IET Circuits, Devices & Systems **6**(1), 19 (2012)

- (184) Structural and Optical Quality of GaN Grown on $\text{Sc}_2\text{O}_3/\text{Y}_2\text{O}_3/\text{Si}$ (111)**
L. Tarnawska, P. Zaumseil, M.A. Schubert, S. Okur, U. Ozgur, H. Morkoc, R. Paszkiewicz, P. Storck, T. Schroeder
Journal of Applied Physics **111**, 073509 (2012)
- (185) A 77 GHz on-Chip Strip Dipole Antenna Integrated with Balun Circuits for Automotive Radar**
I. Tekin, M. Kaynak
Proc. IEEE International Symposium on Antennas and Propagation and USNC-URSI National Radio Science Meeting, (2012)
- (186) Fabrication of Low-Loss SOI Nano-Waveguides Including BEOL Processes for Nonlinear Applications**
H. Tian, G. Winzer, A. Gajda, K. Petermann, B. Tillack, L. Zimmermann
Journal of the European Optical Society 7, 12032 (2012)
- (187) SiGe BiCMOS – A More than Moore Baseline Technology for Functional Diversification of Opto- and Microelectronic Devices and Circuits**
B. Tillack, B. Heinemann, M. Kaynak, H. Rücker, L. Zimmermann, Ch. Wenger
Proc. of the Sino-German Joint Symposium on Opto- and Microelectronic Devices and Circuits (SODC 2012), M02 (2012)
- (188) SiGe BiCMOS Platform-Baseline Technology for More than Moore Functional Diversification**
B. Tillack
Proc. 24. GI/GMM/ITG-Workshop Testmethoden und Zuverlässigkeit von Schaltungen und Systemen, 9 (2012)
- (189) An Accurate and Versatile Equivalent Circuit Model for RF-MEMS Circuit Optimization in BiCMOS Technology**
N. Torres Matabosch, F. Coccetti, M. Kaynak, W. Zhang, B. Tillack, R. Plana, J.L. Casaux
Proc. European Microwave Conference (EuMW 2012), 143 (2012)
- (190) An Accurate Equivalent Circuit Model for RF-MEMS Circuit Optimization and Fabrication Process Monitoring in BiCMOS Technology**
N. Torres Matabosch, F. Coccetti, M. Kaynak, W. Zhang, B. Tillack, J.L. Casaux
Proc. 13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), (2012)
- (191) Reconfigurable Millimeter-Wave ICs in an RF-MEMS Embedded BiCMOS Technology**
A.C. Ulusoy, M. Kaynak, G. Liu, B. Tillack, H. Schumacher
Proc. GigaHertz 2012 Symposium, (2012)
- (192) Reconfigurable Millimeter-Wave ICs in an RF-MEMS Embedded BiCMOS Technology**
A.C. Ulusoy, M. Kaynak, G. Liu, T. Purtova, B. Tillack, H. Schumacher
Proc. 13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), (2012)
- (193) From Enabling Technology to Applications: Reconfigurable SiGe BiCMOS ICs with Fully Integrated RF MEMS Switches for Millimetre Wave Transceivers**
V. Valenta, M. Kaynak, G. Liu, A.C. Ulusoy, T. Purtova, A. Trasser, H. Schumacher
Proc. ESA Microwave Technologies & Techniques Workshop, (2012)

- (194) An Integration Approach for Graphene Double-Gate Transistors**
S. Vaziri, A.D. Smith, C. Henkel, M. Östling, M.C. Lemme, G. Lupina, G. Lippert, J. Dabrowski, W. Mehr
Proc. 42nd European Solid-State Device Research Conference (ESSDERC 2012), 250 (2012)
- (195) A Satellite Internal Communication Controller: Design and Implementation**
M. Veleski, V. Petrovic, Z. Stamenkovic
Advances in Circuits, Systems, Automation and Mechanics, 87 (2012)
- (196) Resistive Switching Behavior in TiN/HfO₂/Ti/TiN Devices**
D. Walczyk, T. Bertaud, M. Sowinska, M. Lukosius, M.A. Schubert, A. Fox, D. Wolansky, A. Scheit, M. Fraschke, G. Schoof, Ch. Wolf, R. Kraemer, B. Tillack, R. Korolevych, V. Stikanov, Ch. Wenger, T. Schroeder, Ch. Walczyk
Proc. 2012 International Semiconductor Conference Dresden-Grenoble (ISCDG 2012), (2012)
- (197) A Micromachined Double-Dipole Antenna for 122-140 GHz Applications Based on a SiGe BiCMOS Technology**
R. Wang, Y. Sun, M. Kaynak, St. Beer, J. Borngräber, J.C. Scheytt
Proc. International Microwave Symposium 2012, (2012)
- (198) Giant Optical Response from Graphene-Plasmonic System**
P. Wang, W. Zhang, O. Liang, M. Pantoja, J. Katzer, T. Schroeder, Y.-H. Xie
ACS Nano **6**(7), 6244 (2012)
- (199) The Effect of Composition on the Bandgap Width in Insulating Nb_xTa_yO_z Nanolayers**
W.C. Wang, H.Y. Chou, M. Badylevich, T. Blomberg, Ch. Wenger, J.A. Kittl, V.V. Afanas'ev
IOP Conference Series: Material Science and Engineering **41**, 012004 (2012)
- (200) Microwave Biosensor for Characterization of Compartments in Teflon Capillaries**
J. Wessel, J.C. Scheytt, K. Schmalz, B. Cahill, G. Gastrock
Proc. European Microwave Week, (EuMW 2012), 534 (2012)
- (201) Material Properties Characterization of BiCMOS BEOL Metal Stacks for RF-MEMS Applications**
M. Wietstruck, M. Kaynak, W. Zhang, S. Kurth, B. Erler, B. Tillack
Novel RF MEMS Technologies, (Series in Micro and Nanoengineering; 20) / Ed: G. Papaioanou u.a., Bucuresti: Editura, Academiei Romane, 161 (2012)
- (202) The Influence of High Temperature Stress on a BiCMOS Embedded RF-MEMS Switch**
M. Wietstruck, M. Kaynak, W. Zhang, K. Kaletta, B. Tillack
Proc. 13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), (2012)
- (203) A New Method to Analyze the Behavior of SiGe:C HBTs under RF Large Signal Stress**
Ch. Wipf
Proc. Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), 97 (2012)
- (204) Detection and Reduction of Via Faults**
D. Wolansky, H. Rücker, J. Bauer, U. Haak, W. Höppner, J. Katzer, P. Kulse, A. Mai, A. Scheit, K. Schulz
Proc. International Semiconductor Conference Dresden Grenoble, (ISCDG 2012), (2012)



- (205) 15 Gbps Communication over an USB3.0 Cable and Even More**
A. Wolf, J.C. Scheytt
Proc. IEEE International Conference on Communication and Signal Processing (SSD -CSP 2012), (2012)
- (206) Atomic Layer Deposition of HfO₂ Thin Films Employing a Heteroleptic Hafnium Precursor**
B.K. Xu, A.P. Milanov, H. Parala, Ch. Wenger, C. Baristiran Kaynak, K. Lakribssi, T. Toader, C. Bock, D. Rogalla, H.-W. Becker, U. Kunze, A. Devi
Chemical Vapor Deposition **18**, 1 (2012)
- (207) Low Threading Dislocation Density Ge Growth and Heavy Phosphorus Doping in Ge**
Y. Yamamoto, P. Zaumseil, G. Kozlowski, R. Kurps, B. Tillack
Proc. University of Vigo and JSPS Core-to-Core Program Joint Seminar: Atomically Controlled Processing for Ultralarge Scale Integration (2012)
- (208) Low Threading Dislocation Ge on Si by Combining Deposition and Etching**
Y. Yamamoto, G. Kozlowski, P. Zaumseil, B. Tillack
Thin Solid Films **520**, 3216 (2012)
- (209) Phosphorus Atomic Layer Doping in Ge Using RPCVD**
Y. Yamamoto, R. Kurps, Ch. Mai, I. Costina, J. Murota, B. Tillack
Proc. 6th International SiGe Technology and Device Meeting (ISTDM 2012), abstr. book, 14 (2012)
- (210) Phosphorus Profile Control in Ge by Si Delta Layers**
Y. Yamamoto, P. Zaumseil, R. Kurps, J. Murota, B. Tillack
ECS Transactions **50**(9), 255 (2012)
- (211) Phosphorus Profile Control in Ge by Si Delta Layers**
Y. Yamamoto, P. Zaumseil, R. Kurps, J. Murota, B. Tillack
Proc. SiGe, Ge, and Related Compounds 5: Materials, Processing and Devices, ECS Meeting, abstr. 3126 (2012)
- (212) A 12.5-Gb/s SiGe BiCMOS Optical Receiver with a Monolithically Integrated 850-nm Avalanche Photodetector**
J.-S. Youn, M.-J. Lee, K.-Y. Park, H. Rücker, W.-Y. Choi
Proc. OFC NFOEC 2012, (2012)
- (213) An Integrated 12.5-Gb/s Optoelectronic Receiver with a Silicon Avalanche Photodetector in Standard SiGe BiCMOS Technology**
J.-S. Youn, M.-J. Lee, K.-Y. Park, H. Rücker, W.-Y. Choi
Optics Express **20**(27), 28153 (2012)
- (214) Bit-Error Rate Analysis of Integrated Optoelectronic Receiver**
J.-S. Youn, M.-J. Lee, K.-Y. Park, W.-Y. Choi, H. Rücker
Proc. Photonic Global Conference, Program and abstr. (2012)
- (215) Compliant Si Nanostructures on SOI for Ge Nanoheteroepitaxy - A Case Study for Lattice Mismatched Semiconductor Integration on Si(001)**
P. Zaumseil, G. Kozlowski, Y. Yamamoto, J. Bauer, M.A. Schubert, T.U. Schüllli, B. Tillack, T. Schroeder
Journal of Applied Physics **112**, 043506 (2012)

- (216) 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
Thin Solid Films **520**, 3240 (2012)
- (217) The Role of SiGe Buffer in Growth and Relaxation of Ge on Free-Standing Si(001) Nano-Pillars**
P. Zaumseil, G. Kozlowski, M.A. Schubert, Y. Yamamoto, J. Bauer, T.U. Schüllli, B. Tillack, T. Schroeder
Nanotechnology **23**, 355706 (2012)
- (218) Entwurf einer neuen Testprozessorklösung für den Funktionaltest asynchroner Schaltungen**
St. Zeidler, Ch. Wolf, M. Krstic, R. Kraemer
Proc. 24. GI/GMM/ITG-Workshop: Testmethoden und Zuverlässigkeit von Schaltungen und Systemen, 11 (2012)
- (219) Functional Pattern Generation for Asynchronous Designs in a Test Processor Environment**
St. Zeidler, Ch. Wolf, M. Krstic, R. Kraemer
Proc. 2012 IEEE 21st Asian Test Symposium, 296 (2012)
- (220) EM and Lumped-Element Model of BiCMOS Embedded Capacitive RF-MEMS Switch**
W. Zhang, M. Kaynak, M. Wietstruck, V. Mühlhaus, B. Tillack
Proc. 7th German Microwave Conference (GeMIC 2012), (2012)
- (221) Aircraft Cabin-integrated 57-64GHz WLAN Communication System**
V. Ziegler, B. Schulte, J. Sabater, S. Bovelli, J. Kunisch, K. Maulwurf, M. Martinez-Vazquez, C. Oikonomopoulos-Zachos, S. Glisic, M. Ehrig, E. Grass
Proc. IEEE International Microwave Symposium (IMS 2012), (2012)
- (222) Broadband 57–64-GHz WLAN Communication System Integrated Into an Aircraft Cabin**
V. Ziegler, B. Schulte, J. Sabater, S. Bovelli, J. Kunisch, K. Maulwurf, M. Martinez-Vazquez, C. Oikonomopoulos-Zachos, S. Glisic, M. Ehrig, E. Grass
IEEE Transactions on Microwave Theory and Techniques **60**(12), 4209 (2012)
- (223) Hybrid Integration of Coherent Receivers for Terabit Ethernet on SOI Waveguide PLC**
L. Zimmermann, M. Kroh, K. Voigt, G. Winzer, H. Tian, L. Stampoulidis, B. Tillack, K. Petermann
Proc. of the 9th International Conference on Group IV (GFP), 153 (2012)
- (224) Silicon Photonics for Nonlinear Applications**
L. Zimmermann, H. Tian, A. Gajda, K. Voigt, G. Winzer, K. Petermann, B. Tillack
Proc. of the Sino-German Joint Symposium on Opto- and Microelectronic Devices and Circuits (SODC 2012), M05 (2012)
- (225) Stacking Behaviour of twin-free Type-B Oriented CeO₂(111) Films on Hexagonal-Pr₂O₃(001)/Si(111) Systems**
M.H. Zoellner, J. Dabrowski, P. Zaumseil, A. Giussani, M.A. Schubert, G. Lupina, H. Wilkens, J. Wollschläger, M. Reichling, M. Bäumer, T. Schroeder
Physical Review B **85**, 035302 (2012)



(226) Stoichiometry-Structure Correlation of Epitaxial $Ce_{1-x}Pr_xO_{2-\delta}$ ($x=0-1$) Thin Films on Si (111)

M.H. Zoellner, P. Zaumseil, H. Wilkens, S. Gevers, J. Wollschläger, M. Bäumer, Y.-H. Xie, G. Niu, T. Schroeder
Journal of Crystal Growth **355**, 159 (2012)

Eingeladene Vorträge
Invited Presentations

- (1) Light Emission from Ge on Si**
T. Arguirov, M. Kittler, M. Oehme et al.
4th Sino-German Symposium The Silicon Age, Berlin, September 18-23, 2012, Germany
- (2) Simulationen zur optischen Charakterisierung (Reflektometrie und Ellipsometrie) nanostrukturierter Oberflächen**
J. Bauer
WTT-Kooperationsforum, TH Wildau, May 15, 2012, Germany
- (3) HfO₂-based RRAM for Embedded Non-Volatile Memory: From Material Science to Integrated 1T1R RRAM Arrays**
T. Bertaud, Ch. Walczyk, D. Walczyk, M. Sowinska, D. Wolansky, B. Tillack, G. Schoof, Ch. Wenger, S. Thiess, T. Schroeder
222nd ECS Meeting, Honolulu, October 07-12, 2012, USA
- (4) HfO₂-based RRAM Integration for Future Embedded Non-Volatile Memory Applications**
T. Bertaud, Ch. Walczyk, D. Walczyk, M. Sowinska, T. Schroeder, Ch. Wenger
Novel High k Applications Workshop, Dresden, January 25, 2012, Germany
- (5) In-Operando HAXPES as a Non-Destructive Technique for Investigating the Resistive Switching Phenomenon**
T. Bertaud
Leti Workshop on Innovative Memory Technologies 2012, Minatec Grenoble, June 21, 2012, France
- (6) Overview of IHP Activities on HfO₂-based RRAM Integration**
T. Bertaud, Ch. Walczyk, D. Walczyk, M. Sowinska, T. Schroeder, Ch. Wenger
Leti Seminar, Grenoble, February 10, 2012, France
- (7) IR-UWB Transceiver für hoch-präzise Lokalisierung**
G. Fischer, O. Klymenko, D. Martynenko
Workshop on Ultra-Wideband Localization Systems for Industrial Applications, Karlsruhe, January 24, 2012, Germany
- (8) Spectroscopic Ellipsometry/ Reflectometry for Process Control of Si-Technologies**
O. Fursenko, J. Bauer
7th Workshop Ellipsometry, Leipzig, March 05-07, 2012, Germany
- (9) Von der Idee zum System: Wireless Engine – eine Idee auf dem Weg zur Realisierung**
E. Grass
IHP-Symposium, Frankfurt (Oder), February 13, 2012, Germany
- (10) Overview of Biosystems**
S. Guha
Young Researchers Meet, Berlin, September 14, 2012, Germany

- (11) **Advanced Transistor Architectures for Half-Terahertz SiGe HBTs**
B. Heinemann, A. Fox, H. Rücker
ECS Meeting, SiGe, Ge, and Related Compounds 5: Materials, Processing, and Devices, Honolulu, October 07-12, 2012, USA
- (12) **BiCMOS Embedded RF-MEMS Technology**
M. Kaynak
The 7th German Microwave Conference (GeMiC 2012), Ilmenau, March 12, 2012, Germany
- (13) **BiCMOS Embedded RF-MEMS Technology and Application of it in mm-Wave Reconfigurable ICs**
M. Kaynak, B. Tillack
Analogschaltungen 2012, TU Berlin, March 22-23, 2012, Germany
- (14) **Latest Developments on SiGe Technology and RF-MEMS-BiCMOS Co-Integration**
M. Kaynak
GigaHertz 2012 Symposium, Stockholm, March 06-07, 2012, Sweden
- (15) **MEMS-BiCMOS Integration and on-Chip Antennas for mm-Wave Application**
M. Kaynak
RF-MEMS Based Antennas Workshop, Middle East Technical University, Ankara, June 29, 2012, Turkey
- (16) **Nitrogen Doped 300 mm Czochralski Silicon Wafers Optimized with Respect to Voids with Laterally Homogeneous Internal Getter Capabilities**
G. Kissinger, G. Raming, R. Wahlich, T. Müller
4th Sino-German Symposium The Silicon Age, Berlin, September 18-23, 2012, Germany
- (17) **Oxygen Precipitation after Thermal Processing on the Second and on the Millisecond Scales**
G. Kissinger, D. Kot, W. von Ammon, J. Dabrowski, A. Sattler
6th International Symposium on Advanced Science and Technology of Silicon Materials, Kona, Hawaii, November 19-23, 2012, USA
- (18) **The Silicon Age**
M. Kittler
4th Sino-German Symposium The Silicon Age, Berlin, September 18-23, 2012, Germany
- (19) **Electrical Activity of Crystal Defects in Solar Silicon**
M. Kittler, T. Arguirov, A. Klossek, Ch. Krause, D. Mankovics, T. Mchedlidze, W. Seifert, M. Trushin
E-MRS Spring Meeting, Symposium A, Strasbourg, May 15-17, 2012, France
- (20) **Forschung über CMOS-kompatible Lichtemitter für die integrierte Silizium-Photonik**
M. Kittler, T. Arguirov, M. Oehme, M. Reiche
Laser Optics 2012, Berlin, March 19-21, 2012, Germany
- (21) **Luminescence and EBIC Analysis of Crystal Defects in Solar Silicon**
M. Kittler, T. Arguirov, A. Klossek, Ch. Krause, D. Mankovics, T. Mchedlidze, W. Seifert, M. Trushin
11th International Workshop on Beam Injection Assessment of Microstructures (BI-AMS 2012), Annaba, June 25-28, 2012, Algeria
- (22) **IR-UWB Receiver Design Principles**
O. Klymenko, G. Fischer, D. Martynenko
Workshop on Ultra-Wideband Localization Systems for Industrial Applications, Karlsruhe, January 24, 2012, Germany



- (23) **Epitaxial Growth of Low Defect SiGe Buffer Layers for Integration of New Materials on 300 mm Silicon Wafers**
G. Kozlowski, T. Schroeder, P. Storck
222nd Electrochemical Society Meeting,
Honolulu, October 07-12, 2012, Hawaii, USA
- (24) **On the Compliant Behaviour of Free-Standing Si Nanostructures on Si(001) for Ge Nanoheteroepitaxy**
G. Kozlowski, P. Zaumseil, M.A. Schubert,
Y. Yamamoto, J. Bauer, B. Tillack, T. Schroeder
Tyndall, Cork, September 11, 2012, Ireland
- (25) **On the Compliant Behaviour of Free-Standing Si Nanostructures on Si(001) for Ge Nanoheteroepitaxy**
G. Kozlowski, P. Zaumseil, M.A. Schubert,
Y. Yamamoto, J. Bauer, B. Tillack, T. Schroeder
Bremen University, 2012, Germany
- (26) **On the Compliant Behaviour of Ge Nanocrystals on Free-Standing Si Nanopillars**
G. Kozlowski, P. Zaumseil, M.A. Schubert,
Y. Yamamoto, J. Bauer, T. Schüllli, B. Tillack,
T. Schroeder
ESRF User Meeting, Grenoble,
February 07-08, 2012, France
- (27) **Drahtlose Kommunikationssysteme und deren Software für die Verwendung im Auto**
R. Kraemer
11. EUROFORUM-Jahrestagung Software
im Automobil, Stuttgart, June 06-07, 2012,
Germany
- (28) **The All IHP Sensor Node: Highly Integrated Sensor Nodes Using IHP Components**
D. Kreiser, M. Brzozowski, G. Panic,
S. Olonbayar, T. Basmer, P. Langendörfer
The 10th ACM International Symposium on
Mobility Management and Wireless Access
(MOBIWAC 2012), Paphos,
October 21-22, 2012, Cyprus
- (29) **Evaluating GALS Systems-Outlook and Future Prospects**
M. Krstic
2012 IEEE 27th Convention of Electrical and
Electronics Engineers (IEEI 2012), Eilat,
November 14-17, 2012, Israel
- (30) **A Holistic Approach towards Secure Wireless Sensor Networks**
P. Langendörfer, Z. Dyka
Ringvorlesung KIT, Karlsruhe, July 06, 2012,
Germany
- (31) **Sichere drahtlose Kommunikation für Geräte mit begrenzter Rechen- und Speicherkapazität**
P. Langendörfer, O. Stecklina
IT- und Datensicherheit im Unternehmen,
IHK Cottbus, June 05, 2012, Germany
- (32) **Atomic Vapor Depositions of Metal Insulator Metal Capacitors: Investigation, Development and Integration**
M. Lukosius
Leibniz-Doktoranden-Forum der Sektion D,
Berlin, June 08, 2012, Germany
- (33) **Graphene Growth on Insulators: Van der Waals and Catalytic Oxide Surfaces**
G. Lupina, G. Lippert, J. Dabrowski,
M. Zoellner, T. Schroeder, W. Mehr
Workshop des Leibniz-Verbundes
Nanotechnologie, Berlin,
January 30-31, 2012, Germany
- (34) **Graphene: Synthesis and Applications**
G. Lupina
Summer School IRTG 2012, Zeuthen,
July, 24, 2012, Germany
- (35) **IC Design für UWB-Sender**
D. Martynenko, G. Fischer, O. Klymenko
Workshop on Ultra-Wideband Localization
Systems for Industrial Applications, Karlsruhe,
January 24, 2012, Germany

- (36) Light-Induced Crystallization of Thin Silicon Films**
T. Mchedlidze, T. Arguirov, M. Kittler
4th Sino-German Symposium The Silicon Age, Berlin, September 18-23, 2012, Germany
- (37) Atomically Controlled CVD Technology of Group IV Semiconductors for Ultralarge Scale Integration**
J. Murota, M. Sakuraba, B. Tillack
IEEE International Conference on Solid-State and Integrated Circuit Technology (IEEE ICSICT 2012), Xian, October 29-November 01, 2012, China
- (38) Crystalline Rare Earth Oxides on Si for the Integration of Alternative Semiconductors on Si Wafers**
G. Niu, A. Giussani, O. Seifarth, P. Zaumseil, M.A. Schubert, M.H. Zoellner, J. Dabrowski, P. Storck, T. Schroeder
The 2nd International Conference on Small Science (ICSS 2012), Orlando, December 16-19, 2012, USA
- (39) Board Implementation and its Performance for IR-UWB IEEE.802.15.4a from Multiple ASIC Chips**
S. Olonbayar, D. Kreiser, D. Martynenko, G. Fischer, O. Klymenko, R. Kraemer
18th European Wireless Conference (EW 2012), Poznan, April 17-20, 2012, Poland
- (40) FP7 Project StrokeBack**
St. Ortmann, P. Langendörfer
FP7 Cluster Meeting: ICT Solutions in the Rehabilitation Area, Brussels, October 19, 2012, Belgium
- (41) Google, Facebook oder Big Brother-wer weiß mehr über dich?**
St. Ortmann
Tag der Wissenschaft 2012, Luckenwalde, February 13, 2012, Germany
- (42) Single-Chips für Medizintechnik**
St. Ortmann, P. Langendörfer, K. Piotrowski
Jahreshauptversammlung Verein Brandenburgischer Ingenieure und Wirtschaftler e.V., Frankfurt (Oder), January 28, 2012, Germany
- (43) Telemedizin und Rehabilitation: technische Möglichkeiten und Forschungspotentiale**
St. Ortmann
Symposium Tele-Rehabilitation, Frankfurt (Oder), April 11, 2012, Germany
- (44) User-Centric Design in Telemedical Stroke Rehabilitation**
St. Ortmann
NET-EUCEN Workshop eHealth Scenarios and Indicators for User Centricity, Brussels, September 05, 2012, Belgium
- (45) A Holistic Approach Towards Secure Wireless Sensor Networks**
K. Piotrowski, St. Peter, Z. Dyka, P. Langendörfer
ZUSYS Graduiertenschule, Cottbus, June, 29, 2012, Germany
- (46) Drahtlose Sensoren und Sensornetze – die Konzepte und Anwendungen**
K. Piotrowski
Ortsverein des VBIW, Eisenhüttenstadt, August 21, 2012, Germany
- (47) Dislocation-Based Nanotransistors in Silicon**
M. Reiche, M. Kittler, M. Krause, H. Übensee
4th Sino-German Symposium The Silicon Age, Berlin, September 18-23, 2012, Germany
- (48) Physics and Modeling of Strain Effects in SiGe Heterojunction Bipolar Transistors**
H. Rucker, B. Heinemann
International Workshop Mathematics for Semiconductor Heterostructures – Modeling, Analysis and Numerics, Berlin, September 24-28, 2012, Germany



- (49) **SiGe BiCMOS Technologies for Applications above 100 GHz**
 H. Rücker, B. Heinemann, A. Fox
 2012 IEEE Compound Semiconductor Integrated Circuit Symposium (CSICS 2012),
 Lan Jolla, October 14-17, 2012, USA
- (50) **SiGe BiCMOS Technology for mm-Wave Systems**
 H. Rücker, B. Heinemann
 International SoC Design Conference (ISOCC 2012), Jeju, November 04-07, 2012,
 Korea
- (51) **Innovationshemmnisse in Hochschulen und Forschungseinrichtungen**
 A. Sänn
 Round Table Hochschule trifft Wirtschaft,
 Potsdam, November 26, 2012, Germany
- (52) **IHP BiCMOS Technologies for RF and Mixed Signal Applications**
 R.F. Scholz, F. Teply, M. Cirillo
 4th International Workshop on Analogue and Mixed Signal Integrated Circuits for Space Applications (AMICSA 2012), Noordwijk,
 August 26-28, 2012, The Netherlands
- (53) **Clear Experimental Proof of the Compliant Behaviour of Free-Standing Si Nanostructures on SOI for Ge Nanoheteroepitaxy by GI-XRD**
 T. Schroeder, G. Kozlowski, P. Zaumseil,
 Y. Yamamoto, J. Bauer, T. Schüllli, B. Tillack
 International SiGe Technology and Device Meeting (ISTDM 2012), Berkeley,
 June 04-06, 2012, USA
- (54) **Compliant behavior of Free-Standing Si Nanostructures for Ge Nanoheteroepitaxy: Bulk Si and SOI Wafer Approaches**
 T. Schroeder
 IBM Zurich, August 02, 2012, Switzerland
- (55) **Ge Photonics for Si Microelectronics: From Micro- to Nanostructure Integration Approaches**
 T. Schroeder, G. Capellini, G. Kozlowski,
 A. Bauer, M. Lisker, Y. Yamamoto, Ch. Wenger,
 P. Zaumseil, B. Tillack
 Workshop des Leibniz-Verbundes Nanotechnologie, Berlin, January 30-31, 2012, Germany
- (56) **Lattice Mismatched Semiconductor Integration on Si(001): SOI for Ge Nano-heteroepitaxy**
 T. Schroeder
 4th Sino-German Symposium The Silicon Age,
 Berlin, September 18-23, 2012, Germany
- (57) **„More than Moore“ Materials Research for Innovative Module Integration in IHP’s BiCMOS**
 T. Schroeder
 Fraunhofer IPMS, Dresden, June 28, 2012,
 Germany
- (58) **Selective Ge Micro- and Nanostructures on Patterned Si(001) Wafers for Photonics and CMOS**
 T. Schroeder, G. Kozlowski, P. Zaumseil,
 J. Bauer, Y. Yamamoto, B. Tillack
 13th Leibniz Conference of Advanced Science-Nanoscience 2012, Lichtenwalde,
 April 26-27, 2012, Germany
- (59) **Synchrotrondiagnostik von Metallausscheidungen in Solarsilizium**
 W. Seifert
 Freiberg, June 24, 2012, Germany
- (60) **A Methodology for Fault Tolerant ASIC Design**
 Z. Stamenkovic
 11th WSEAS International Conference on Circuits, Systems Electronics, Control and Signal Processing, Montreux,
 December 29-31, 2012, Switzerland

(61) MIMO Transmission in IEEE 802.11a WLAN

Z. Stamenkovic
5th WSEAS International Conference on
Sensors and Signals, Sliema,
September 07-09, 2012, Malta

(62) Erweiterte Sicherheit für kritische Infrastrukturen (ESCI)

O. Stecklina
CAST Workshop Darmstadt, October 11, 2012,
Germany

(63) MmW Communications and Radar

Y. Sun
Marie Curie University, Paris,
November 30, 2012, France

(64) 60 GHz Transceiver for Gbps Wireless Communication

Y. Sun
Southeast University Nanjing,
August 18, 2012, China

(65) SiGe BiCMOS Platform: Baseline Technology for More than Moore Functional Diversification

B. Tillack
24. GI/GMM/ITG-Workshop Testmethoden
und Zuverlässigkeit von Schaltungen und
Systemen, Cottbus, February 28, 2012,
Germany

(66) Functionalized Materials in CMOS Technologies

Ch. Wenger
1st Annual World Congress of Advanced Mate-
rials (WCAM 2012), Beijing,
June 04-08, 2012, China

(67) X-Ray Characterization of Ge Dots Epitaxially Grown on Nano-Structured Si Islands on SOI Substrates

P. Zaumseil, G. Kozlowski, Y. Yamamoto,
T. Schroeder
The 11th Biennial Conference on High
Resolution X-Ray Diffraction and Imaging
(X-TOP 2012), St. Petersburg,
September 15-20, 2012, Russia

(68) Technology for Free Carrier Lifetime Reduction in Silicon Nanowaveguides for Nonlinear Applications

L. Zimmermann, A. Gajda, H. Tan, B. Tillack
E-MRS Spring Meeting, Strasbourg,
May 15, 2012, France

Vorträge
Presentations

(1) MOCVD Growth of High-k Dielectric Ce-Al-O Layers from Various MO Precursors for MIM Applications

A. Abrutis, M. Lukosius, M. Skapas,
S. Stanionyte, V. Kubilius, Ch. Wenger,
A. Zauner
E-MRS, Strasbourg, May 14-18, 2012, France

(2) Dislocation Luminescence in Highly Doped Degenerated Germanium at Room Temperature

T. Argüirov, O. Vyvenko, M. Oehme, J. Schulze,
M. Kittler
International Conference on Extended
Defects in Semiconductors (EDS-2012),
Thessaloniki, June 24-29, 2012, Greece

- (3) **Entwurf fehlertoleranter Zustandsautomaten mit variablem Schutz für spezifische Eingabesequenzen**
M. Augustin, M. Gössel, R. Kraemer
24. GI/GMM/ITG-Workshop: Testmethoden und Zuverlässigkeit von Schaltungen und Systemen, Cottbus, February 26-28, 2012, Germany
- (4) **Energy Budget of an Implantable Glucose Measurement System**
T. Basmer, D. Genschow, M. Fröhlich, M. Birkholz
BMT 2012, Jena, September, 16-19, 2012, Germany
- (5) **Non-Destructive HAXPES Studies of Ti/HfO₂-based Resistive Switching Cells**
T. Bertaud, M. Sowinska, D. Walczyk, Ch. Walczyk, S. Thiess, W. Drube, T. Schroeder
Hard X-Ray Photoelectron Spectroscopy and Standing Waves: Status and Trends, Grenoble, February 06-08, 2012, France
- (6) **Resistive Switching of Ti/HfO₂-based Memory Devices: Impact of the Atmosphere and Oxygen Partial Pressure**
T. Bertaud, M. Sowinska, D. Walczyk, Ch. Walczyk, St. Kubotsch, Ch. Wenger, T. Schroeder
E-MRS Spring Meeting, Strasbourg, May 14-18, 2012, France
- (7) **Resistive Switching on HfO₂ based Metal-Insulator-Metal Structures: Effects of the Top Metal Electrode and the Oxygen Partial Pressure**
T. Bertaud, D. Walczyk, Ch. Walczyk, S. Kubotsch, M. Sowinska, T. Schroeder, C. Vallée, V. Jousseume, Ch. Wenger
DPG Frühjahrstagung 2012, Berlin, March 25-30, 2012, Germany
- (8) **Oberflächenmodifizieren mit einem ND: YVO₄-Laser**
H. Beyer, M. Hofmann, M. Burger, C. Villringer, G. Dittmar, W. Mehr, S. Schrader
FH Brandenburg, April 19, 2012, Germany
- (9) **Microelectronic Biosensors for On-Line Monitoring of Key Molecules in Bioprocesses**
M. Birkholz, M. Fröhlich, T. Basmer, S. Trippel, S. Junne, P. Neubauer
2nd BioProScale Symposium, Berlin, February 14-16, 2012, Germany
- (10) **Minimal-invasiver Blutzuckersensor (MIBS)**
M. Birkholz, K.-E. Ehwald, M. Fröhlich, P. Kulse, T. Basmer, R. Ehwald, T. Guschanski, U. Stoll, H. Siegel, S. Schmaderer, J. Szeponik, D. Zahn
16. GMA/ITG-Fachtagung Sensoren und Messsysteme 2012, Nürnberg, May 22-23, 2012, Germany
- (11) **Praktische Erfahrungen mit der präklinischen Testung von Glucose-sensorsystemen**
M. Birkholz
Workshop Technische und (Prä)Klinische Prüfung von Intelligenten Implantaten, Frankfurt/Main, December 19, 2012, Germany
- (12) **Tensile Strained Ge Layers Obtained Via a Si-CMOS Compatible Approach**
G. Capellini, G. Kozlowski, Y. Yamamoto, M. Lisker, T. Schroeder, A. Ghrib, M. de Kersauson, M. El Kurdi, P. Boucaud, B. Tillack
International SiGe Technology and Device Meeting (ISTDM 2012), Berkeley, June 04-06, 2012, USA

- (13) **120 GHz Radar Mixed-Signal Transceiver**
 W. Debski, W. Winkler, Y. Sun, M. Marinkovic,
 J. Borngräber, J.C. Scheytt
 European Microwave Integrated Circuit
 Conference (EuMIC 2012), Amsterdam,
 October 28-November 02, 2012,
 The Netherlands
- (14) **An X-Band, High Performance, SiGe-HBT
 Power Amplifier for Phased Arrays**
 T. Dinc, I. Kalyoncu, M. Kaynak, Y. Gurbuz
 European Microwave Conference
 (EuMW 2012), Amsterdam,
 October 28-November 02, 2012,
 The Netherlands
- (15) **SiGeC: Heterojunction Bipolar Transistor
 Matching between Different CMOS
 Baselines by Tuning the Vertical Profiles
 at a Nanometer Scale**
 V. Dmitriev, D. Knoll, T. Egorova, V. Seletskij,
 Y. Yamamoto, B. Tillack
 20th International Symposium Nano-
 structures: Physics and Technology,
 Nizhny Novgorod, June, 24-30, 2012, Russia
- (16) **Side Channel Attacks and the Non-Volatile
 Memory of the Future**
 Z. Dyka, Ch. Walczyk, D. Walczyk, Ch. Wenger,
 P. Langendörfer
 International Conference on Compilers, Archi-
 tectures and Synthesis for Embedded Systems
 (CASES 2012), Tampere,
 October 08, 2012, Finland
- (17) **Towards Strong Security in Embedded and
 Pervasive Systems: Energy and Area
 Optimized Serial Polynomial Multipliers
 in GF(2k)**
 Z. Dyka, P. Langendörfer, F. Vater, St. Peter
 5th IFIP International Conference on New
 Technologies, Mobility and Security (NTMS
 2012), Istanbul, May 07-10, 2012, Turkey
- (18) **60 GHz Wireless Broadband Cable
 Replacement for Machine Vision
 Applications**
 M. Ehrig, M. Petri
 International Symposium on Signals, Systems
 and Electronics (ISSSE 2012), Potsdam,
 October 03-05, 2012, Germany
- (19) **Development of Fabrication Process for
 Silicon Nitride Waveguides on 200 mm
 Wafer for Astrophotonic Applications**
 R. Eisermann, J.C. Boggio, H.N.J. Fernando,
 M. Lisker, E. Matthus, H. Richter, K. Schulz,
 L. Zimmermann
 Astrophotonics Summer School 2012,
 Wiesenburg, September 27, 2012, Germany
- (20) **120 GHz Phased-Array Circuits in
 0.25 μm SiGe BiCMOS Technology**
 M. Elkhoully, S. Glisic, F. Ellinger, J.C. Scheytt
 7th German Microwave Conference
 (GeMIC 2012), Ilmenau,
 March 12-14, 2012, Germany
- (21) **Moonrake Chip - Exploring Pausible
 Clocking Based GALS Design for 40-nm
 System Integration**
 X. Fan, M. Krstic, E. Grass, B. Sanders, Ch. Heer
 Design, Automation and Test in Europe,
 (DATE 2012), Dresden, March 12-16, 2012,
 Germany
- (22) **Performance Analysis of GALS Datalink
 based on Pausible Clocking Scheme**
 X. Fan, M. Krstic, E. Grass
 18th IEEE International Symposium on
 Asynchronous Circuits and Systems
 (ASYNC 2012), Copenhagen,
 May 07-09, 2012, Denmark

- (23) **Long-Term Reliability of High-Performance SiGe:C Heterojunction Bipolar Transistors**
G.G. Fischer, D. Micusik, A. Pocej
IEEE Bipolar/BiCMOS Circuits and Technology Meeting (BCTM 2012), Portland, October 01-03, 2012, USA
- (24) **Biostability and Material Durability of an Implantable Glucose Sensor**
M. Fröhlich, M. Birkholz, K.-E. Ehwald, P. Kulse, O. Fursenko, J. Katzer
E-MRS Spring Meeting, Strasbourg, May 14-18, 2012, France
- (25) **Untersuchungen zur Biostabilität eines implantierbaren Glucosesensors**
M. Fröhlich, K.-E. Ehwald, P. Kulse, O. Fursenko, J. Katzer, M. Birkholz
DPG Frühjahrstagung, Berlin, March 25-30, 2012, Germany
- (26) **High Efficiency CW Four-Wave Mixing at 1.5 μm in SOI Nano-Rib Waveguides Using p-i-n Diodes**
A. Gajda, G. Winzer, B. Tillack, K. Petermann, L. Zimmermann, H. Tian, R. Elschner, T. Richter, C. Schubert
9th International Conference on Group IV Photonics, San Diego, August 29-31, 2012, USA
- (27) **60 GHz Polarimetric MIMO Sensing**
A.P. Garcia Ariza, R. Müller, F. Wollenschläger, R. Stephan, A. Schulz, M. Elkhoully, J.C. Scheytt, U. Trautwein, J. Müller, R.S. Thomä, M.A. Hein
3rd MC and Scientific Meeting, Barcelona, February 08-10, 2012, Spain
- (28) **60 GHz Polarimetric MIMO Sensing: Architectures and Technology**
A.P. Garcia Ariza, R. Müller, R. Stephan, F. Wollenschläger, A. Schulz, M. Elkhoully, J.C. Scheytt, U. Trautwein, J. Müller, R.S. Thomä, M.A. Hein
European Conference on Antennas and Propagation (EuCAP 2012), Prague, March 26-30, 2012, Czech Republic
- (29) **Synchronous Signal Acquisition and Processing in FMCW-Radar Applications**
D. Genschow, M. Mahlig
International Symposium on Signals, Systems and Electronics (ISSSE 2012), Potsdam, October 03-05, 2012, Germany
- (30) **Asynchronous Circuit Design: From Basics to Practical Applications**
E. Grass, M. Krstic, X. Fan, St. Zeidler
The 15th IEEE Symposium on Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2012), Tallin, April 18-20, 2012, Estonia
- (31) **Das WLAN der Zukunft - Antrittsvorlesung**
E. Grass
Humboldt-Universität, Tag der Informatik, Berlin, May 03, 2012, Germany
- (32) **Drahtlose Breitbandkommunikationssysteme**
E. Grass
Sommerschule Mikroelektronik 2012, Frankfurt (Oder), September 06, 2012, Germany
- (33) **60-GHz-Multimode-Chip-Set and Demonstrator**
E. Grass
European Microwave Week (EuMW 2012), MicroApps Seminar, Amsterdam, October 29-31, 2012, The Netherlands

- (34) **STM Study of Growing Co_xGe_y Structures on Ge(001) Substrate**
T. Grzela, W. Koczorowski, A. Wykrota, R. Czajka, N. Curson, G. Capellini, N. Curson
7th Workshop on Applications of Scanning Probe Microscopy STM/AFM 2012, Zakopane, November 28-December 02, 2012, Poland
- (35) **STM Study of Growing Co_xGe_y Structures on Ge(001) Substrate**
T. Grzela, W. Koczorowski, A. Wykrota, R. Czajka, G. Capellini, N. Curson
8th Interregional Workshop on Advanced Nanomaterials (IWAN 2012), Frankfurt (Oder), November 12-13, 2012, Germany
- (36) **130 Nanometer CMOS MEMS Based Novel Microfluidic System for Cytometry at 5 GHz to 7 GHz**
S. Guha, K. Schmalz, Ch. Wenger, W. Krautschneider
1st International Conference on Microfluidic Handling Systems (MFHS 2012), Enschede, October 10-12, 2012, The Netherlands
- (37) **Wide Frequency Range Fractional-N Synthesizer with Improved Phase Noise for Flexible Payloads**
H.-V. Heyer, H. Telle, A. Koelnberger, F. Herzel, J.C. Scheytt, P. Piironen, E. Lia
2nd ESA Workshop on Advanced Flexible Telecom Payloads, Noordwijk, April 17-19, 2012, The Netherlands
- (38) **P-Type Conductivity in Oxygen Deficient HfO_{2-x} Thin Films Grown by Reactive Molecular Beam Epitaxy**
E. Hildebrandt, J. Kurian, M. Müller, T. Schroeder, H.-J. Kleebe, L. Alff
DPG Frühjahrstagung, Berlin, March 26-30, 2012, Germany
- (39) **Eine strahlungsresistente 0.13 Mikrometer CMOS Bibliothek**
U. Jagdhold
VDE VDI Zuverlässigkeit und Entwurf, Bremen, September, 26, 2012, Germany
- (40) **Clock Jitter Generator with Picoseconds Resolution**
G. Jovanovic, M. Stojcev, T. Nikolic, Z. Stamenkovic
28th International Conference on Microelectronics (MIEL 2012), Nis, May 13-16, 2012, Serbia
- (41) **Development of CMOS Integrated AIN Based SAW-Filter and the Role of Si Substrate Resistivity**
U. Kaletta, D. Wolansky, M. Fraschke, Ch. Wenger
2012 International Semiconductor Conference Dresden – Grenoble (ISCDG), Grenoble, September, 24-26, 2012, France
- (42) **Integrated ZnO and AIN based Surface Acoustic Wave Devices on Silicon**
U. Kaletta, Ch. Wenger, P.V. Santos, S. Rauwerdink, W. Seidel, M. Fraschke, D. Wolansky, A. Scheit
2nd International Advances in Applied Physics and Materials Science Congress (APMAS 2012), Antalya, April 26-29, 2012, Turkey
- (43) **Investigation of AIN and ZnO Layers for Surface Acoustic Wave (SAW) Devices**
U. Kaletta, M. Fraschke, D. Wolansky, P. Zaumseil, P.V. Santos, Ch. Wenger
Leibniz-Doktoranden Forum der Sektion D, Berlin, June 07-08, 2012, Germany

- (44) P-type Doping of Silicon Suitable for Structures with High Aspect Ratios by Using a Dopant Source of Boron Oxide Grown by Atomic Layer Deposition**
B. Kalkofen, V.M. Mothukuru, M. Lisker, E.P. Burte
221st ECS Conference, Seattle, May 06-10, 2012, USA
- (45) Atomic Layer Deposition of Oxide Layers as Dopant Source for Ultra-Shallow Doping of Silicon**
B. Kalkofen, M. Klingsporn, M. Lisker, E.P. Burte
12th International Conference on Atomic Layer Deposition (ALD 2012), Dresden, June 17-20, 2012, Germany
- (46) A SiGe Switched LNA for X-Band Phased-Arrays**
I. Kalyoncu, T. Dinc, M. Kaynak, Y. Gurbuz
European Microwave Conference (EuMW 2012), Amsterdam, October 28-November 02, 2012, The Netherlands
- (47) A Q-Band RF-MEMS Absorptive SPST in a BiCMOS Technology**
M. Kaynak, W. Zhang, M. Wietstruck, B. Tillack
13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), Antalya, July 03-04, 2012, Turkey
- (48) BiCMOS Embedded RF-MEMS Technologies for mm-Wave Applications**
M. Kaynak
European Microwave Conference (EuMW 2012), Amsterdam, October 28-November 02, 2012, The Netherlands
- (49) MEMS Module Integration into SiGe BiCMOS Technology for Embedded System Applications**
M. Kaynak, V. Valenta, H. Schumacher, B. Tillack
IEEE Bipolar/BiCMOS Circuits and Technology Meeting (BCTM 2012), Portland, October 01-03, 2012, USA
- (50) RF-MEMS Switch Module in a 0.25 μm BiCMOS Technology**
M. Kaynak, M. Wietstruck, W. Zhang, J. Drews, R. Scholz, D. Knoll, F. Korndörfer, C. Wipf, K. Schulz, M. Elkhoully, K. Kaletta, M. v. Suchodoletz, K. Zoschke, M. Wilke, O. Ehrmann, V. Mühlhaus, G. Liu, T. Purtova, A.C. Ulusoy, H. Schumacher, B. Tillack
Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), Santa Clara, January 16-18, 2012, USA
- (51) Packaged BiCMOS Embedded RF-MEMS Switches with Integrated Inductive Loads**
M. Kaynak, M. Wietstruck, W. Zhang, J. Drews, R. Barth, D. Knoll, F. Korndörfer, R. Scholz, K. Schulz, C. Wipf, B. Tillack, K. Kaletta, M. v. Suchodoletz, K. Zoschke, M. Wilke, O. Ehrmann, A. C. Ulusoy, T. Purtova, G. Liu, H. Schumacher
International Microwave Symposium (IMS 2012), Montreal, June 17-22, 2012, Canada
- (52) SFDR Considerations for Current Steering High-Speed Digital to Analog Converters**
M. Khafaji, J.C. Scheytt, U. Jörges, C. Carta, D. Micusik, F. Ellinger
IEEE Bipolar/BiCMOS Circuits and Technology Meeting (BCTM 2012), Portland, October 01-03, 2012, USA

- (53) **Strain Control of Si and Si_{1-y}C_y Layers in Si/Si_{1-y}C_y/Si(100) Heterostructures**
T. Kikuchi, M. Sakuraba, I. Costina, B. Tillack, J. Murota
6th International SiGe Technology and Device Meeting (ISTDM 2012), Berkeley, June 04-06, 2012, USA
- (54) **Comparison of the Impact of Thermal Treatments on the Second and on the Millisecond Scales on the Precipitation of Interstitial Oxygen**
G. Kissinger, D. Kot, W. von Ammon
High Purity Silicon 12, ECS Fall Meeting, Honolulu, October 07-12, 2012, USA
- (55) **Chatty Things - Making the Internet of Things Readily Usable for the Masses with XMPP**
R. Klauck, M. Kirsche
8th IEEE International Conference on Collaborative Computing Networking Applications and Worksharing, Pittsburgh, October 14-17, 2012, USA
- (56) **Microstructural Changes in Polycrystalline Si Thin Film Solar Cells Induced by Rapid Thermal Processing**
M. Klingsporn, S. Steffens, Ch. Becker, M.A. Schubert, I. Costina, D. Abbou-Ras
E-MRS Spring Meeting, Strasbourg, May 14-18, 2012, France
- (57) **Characterisation of Thin-Film a Si/ μ c-Si Tandem Solar Cells on Glass Substrate**
A. Klosek, Ch. Krause, T. Argüirov, H.-M. Krause, W. Seifert, F. Friedrich, O. Gabriel, B. Stannowski, M. Kittler
E-MRS Spring Meeting, Strasbourg, May 14-18, 2012, France
- (58) **Distribution of Defects and Breakdown Sites in UMG-Si Cells Studied by Luminescence Imaging**
A. Klosek, D. Mankovics, M. Kittler
SiliconPV 2012, Leuven, April 03-05, 2012, Belgium
- (59) **A Highly Integrated IR-UWB Transceiver for Communication and Localization**
O. Klymenko, D. Martynenko, G. Fischer
International System on Chip Design Conference 2012, Jeju Island, November 04-07, 2012, Korea
- (60) **Low-Cost, High-Voltage SiGe:C HBTs for a 0.18 μ m BiCMOS Process**
D. Knoll, V. Dmitriev, T. Egorova, V. Seletskij, N. Shelepin, R. Barth, G.G. Fischer, T. Grabolla, B. Tillack
IEEE Bipolar/BiCMOS Circuits and Technology Meeting (BCTM 2012), Portland, October 01-03, 2012, USA
- (61) **Substrate Design and Thermal Budget Tuning for Integration of Photonic Components in a High-Performance SiGe:C BiCMOS Process**
D. Knoll, H.H. Richter, B. Heinemann, S. Lischke, Y. Yamamoto, L. Zimmermann, B. Tillack
5th International SiGe, Ge and Related Compounds: Materials, Processing and Devices Symposium-2012 ECS Conference, Hawaii, October 07-12, 2012, USA
- (62) **Investigation of Optimal Silicon Avalanche Photodiode Pairs for 60-GHz Balanced Subharmonic Optoelectronic Mixers**
M. Ko, M.J. Lee, H. Rucker, W.-Y. Choi
Asia-Pacific Microwave Photonics Conference (APMP 2012), Kyoto, April 25-27, 2012, Japan



- (63) Simulation and Measurements of in-Band Spurs and Phase Noise for an Integrated 8-12 GHz Fractional-N PLL Synthesizer in SiGe BiCMOS**
A. Koelnberger, H. Telle, H.-V. Heyer, F. Herzel, J.C. Scheytt, P. Piironen, E. Lia
ESA Workshop on Microwave Technology and Techniques, Noordwijk, May 21-23, 2012, The Netherlands
- (64) Energetic Spectra of Dislocation Networks Produced by Hydrophilic Bonding of Silicon Wafers**
I. Kolevatsov, M. Trushin, O. Vyvenko, M. Kittler, O. Kononchuk
International Conference on Extended Defects in Semiconductors (EDS-2012), Thessaloniki, June 24-29, 2012, Greece
- (65) Characterization of Deep Levels Introduced by RTA and by Subsequent Anneals in n-Type Silicon**
D. Kot, T. Mchedlidze, G. Kissinger, W. von Ammon
High Purity Silicon 12, ECS Fall Meeting, Honolulu, October 07 - 12, 2012, USA
- (66) On the Strain Partitioning in Ge Clusters on Free-Standing Si(001) Nanopillars**
G. Kozlowski, P. Zaumseil, M.A. Schubert, Y. Yamamoto, J. Bauer, T. Schulli, B. Tillack, T. Schroeder
DPG-Frühjahrstagung, Berlin, March 25-30, 2012, Germany
- (67) On the Strain Partitioning Phenomenon in Freestanding Ge/Si Nanostructures on Si(001)**
G. Kozlowski, P. Zaumseil, M.A. Schubert, Y. Yamamoto, J. Bauer, T.U. Schulli, B. Tillack, T. Schroeder
Workshop des Leibniz-Verbundes Nanotechnologie, Berlin, January 30-31, 2012, Germany
- (68) The Epitaxial Growth of Low Defect SiGe Buffer Layers for Integration of New Materials on 300 mm Silicon Wafers**
G. Kozlowski, O. Fursenko, P. Zaumseil, T. Schroeder, M. Vorderwestner, P. Storck
5th International SiGe, Ge and Related Compounds: Materials, Processing and Devices Symposium - 2012 ECS Conference, Hawaii, October 07-12, 2012, USA
- (69) Funkkommunikation: Stand der Technik und Berufschancen**
R. Kraemer
Studieninformationstag, BTU Cottbus, January 12, 2012, Germany
- (70) UWB nach 802.15.4a für Industrieanwendungen**
R. Kraemer, S. Olonbayar
Workshop on Ultra-Wideband Localization Systems for Industrial Applications, Karlsruhe, January 24, 2012, Germany
- (71) Applying Tire Pressure Monitoring Devices for Traffic Management Purposes**
M. Krstic, N. Savic, R. Kraemer, M. Junghans
International Symposium on Signals, Systems and Electronics (ISSSE 2012), Potsdam, October 03-05, 2012, Germany
- (72) Investigation of HfO₂-based RRAM-Structures**
St. Kubotsch, T. Bertaud, D. Walczyk, M. Sowinska, H. Beyer, T. Schroeder, Ch. Wenger, Ch. Walczyk
Laser Optics 2012, Berlin, March 20, 2012, Germany
- (73) Evaluation of CMOS-established Metals for Interdigitated Array Microelectrodes**
P. Kulse, M. Birkholz, D. Bolze, K.-E. Ehwald, U. Haak, A. Schubert, M. Adamovski, U. Wollenberger
E-MRS Spring Meeting, Strasbourg, May 14-18, 2012, France

- (74) **Lithographic Aspects for the Fabrication of BiCMOS Embedded Bio-MEMS and RF-MEMS**
 P. Kulse, M. Birkholz, K.-E. Ehwald, M. Kaynak, M. Wietstruck, J. Bauer, U. Haak, J. Drews, K. Schulz
 28th European Mask and Lithography Conference (EMLC 2012), Dresden, January 17-18, 2012, Germany
- (75) **A 62 GHz Reflectometer for Biomedical Sensor Readout in SiGe BiCMOS Technology**
 B. Lämmle, K. Schmalz, J.C. Scheytt, D. Kissinger, R. Weigel
 12th Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems (SIRF 2012), Santa Clara, January 16-18, 2012, USA
- (76) **An Integrated 125 GHz Sensor with Read-Out Circuit for Permittivity Measurement of Liquids**
 B. Lämmle, K. Schmalz, J.C. Scheytt, D. Kissinger, R. Weigel
 International Microwave Symposium (IMS 2012), Montreal, June 17-22, 2012, Canada
- (77) **Topologieüberwachung von drahtlosen Sensornetzen**
 St. Lange, O. Stecklina
 11. GI/ITG KuVS Fachgespräch Drahtlose Sensornetze (FGSN 2012), Darmstadt, September 13-14, 2012, Germany
- (78) **Distributed Shared Memory as an Approach for Integrating WSNs and Cloud Computing**
 P. Langendörfer, K. Piotrowski, M. Diaz, B. Rubio
 NTMS Workshop on Wireless Sensor Networks: Architectures, Deployments and Tends (WSN-ADT), Istanbul, May 07-10, 2012, Turkey
- (79) **Projektmanagement von EU-Forschungsvorhaben: Chancen und Risiken der internationalen Kooperation**
 P. Langendörfer, St. Ortmann
 Seminar Management des internationalen Technologietransfers, Frankfurt (Oder), May 12, 2012, Germany
- (80) **Wireless Body Area Network zur Überwachung und Auswertung von Vital- und Umgebungs-Parameter**
 P. Langendörfer, K. Piotrowski, A. Sojka
 WTT-Kooperationsforum, Best Practice Wireless-Anwendungen, Berlin, June 14, 2012, Germany
- (81) **Wireless Telemedicine Sensor Nodes: Requirements and Challenges Ahead**
 P. Langendörfer, T. Basmer, K. Piotrowski, St. Ortmann
 2012 IEEE Radio & Wireless Symposium (RWW 2012), Santa Clara, January 15-18, 2012, USA
- (82) **Migrating Legacy PON Equipment towards Colorless ONU through Hybrid Integrated SOI All-Optical λ -Converter**
 I. Lazarou, C. Stamatidis, B. Schrenk, L. Stampoulidis, L. Zimmermann, K. Voigt, G.B. Preve, L. Moerl, J. Kreissl, H. Avramopoulos
 OFC, Los Angeles, March 04-08, 2012, USA
- (83) **60-GHz Voltage-Controlled Oscillator and Frequency Divider in 0.25 μ m SiGe BiCMOS Technology**
 J.-M. Lee, W.-Y Choi, H. Rucker
 International SoC Design Conference (ISODC 2012), Jeju, November 04-07, 2012, Korea

- (84) Direct Growth of Few-Layer Graphene on Mica**
G. Lippert, M.H. Zoellner, J. Dabrowski, G. Lupina
DPG Frühjahrstagung 2012, Berlin, March 25-30, 2012, Germany
- (85) Growth of Graphene for Applications in High-Frequency Electronic Devices**
G. Lippert, J. Dabrowski, M. Lukosius, M. Zoellner, G. Lupina
8th Interregional Workshop on Advanced Nanomaterials (IWAN), Frankfurt (Oder), November 12-13, 2012, Germany
- (86) MBE Based Van der Waals Epitaxy of Highly Ordered Graphene**
G. Lippert, J. Dabrowski, Y. Yamamoto, F. Herziger, J. Maultzsch, J. Baringhaus, C. Tegenkamp, G. Lupina
17th International Conference on Molecular Beam Epitaxy, Nara, September 23-28, 2012, Japan
- (87) Molecular Beam Epitaxy of Graphene on Mica**
G. Lippert, J. Dabrowski, Y. Yamamoto, F. Herziger, J. Maultzsch, J. Baringhaus, C. Tegenkamp, M.C. Lemme, G. Lupina
International Winterschool on Electronic Properties of Novel Materials (IWEPM), Kirchberg, March 06, 2012, Austria
- (88) Low Dark Current Ge PIN Photodiode for a High-Performance, Photonic BiCMOS Process for Radio-over-Fiber Applications**
St. Lischke, D. Knoll, L. Zimmermann, Y. Yamamoto, M. Fraschke, A. Trusch, A. Krüger, M. Kroh, B. Tillack
2012 IEEE Photonics Conference, Burlingame, September 23-27, 2012, USA
- (89) Compressive-Strained PECVD Silicon Nitride as a Stressor Layer**
M. Lisker
GMM Fachgruppe 1.2.3. Abscheide- und Ätzverfahren, Erlangen, December 12-13, 2012, Germany
- (90) „Science Fab“ für hochintegrierte InP / BiCMOS Höchstfrequenzsysteme**
M. Lisker, B. Tillack, N. Weimann, T. Krämer
SAW-Vortreffen zum SAW-Verfahren 2012, Dortmund, September 14, 2012, Germany
- (91) Dual-Band Millimeter-Wave VCO with Embedded RF-MEMS Switch Module in BiCMOS Technology**
G. Liu, M. Kaynak, T. Purtova, A. C. Ulusoy, B. Tillack
Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), Santa Clara, January 16-18, 2012, USA
- (92) Properties of Atomic Layer Deposited Pt / Sr TiO₃ Metal-Insulator-Metal Capacitors**
M. Lukosius, T. Blomberg, D. Walczyk, G. Ruhl, Ch. Wenger
E-MRS Spring Meeting, Strasbourg, May 14-18, 2012, France
- (93) Properties of Stacked Al₂O₃ / SrTiO₃ Metal-Insulator-Metal Capacitors**
M. Lukosius, T. Blomberg, G. Ruhl, Ch. Wenger
17th Workshop on Dielectrics in Microelectronics (WODIM 2012), Dresden, June 25-27, 2012, Germany
- (94) Direct Growth of Graphene on Insulating Oxide and Silicate Substrates**
G. Lupina, G. Lippert, J. Dabrowski, M. Zoellner, T. Schroeder, J. Maultzsch, F. Herziger, M. Lemme
Graphene Week, Delft, June 04-08, 2012, The Netherlands

- (95) Complementary RF-LDMOS Transistors Realized with Standard CMOS Implantations**
A. Mai, H. Rücker
42nd European Solid-State Device Research Conference (ESSDERC 2012), Bordeaux, September 17-21, 2012, France
- (96) Luminescence of Defects and Breakdown Sites in Multicrystalline Si Solar Cells**
D. Mankovics, A. Klossek, Ch. Krause, T. Arguirov, W. Seifert, M. Kittler
E-MRS Spring Meeting, Strasbourg, May 14-18, 2012, France
- (97) A 245 GHz CB LNA and SHM Mixer on SiGe Technology**
Y. Mao, K. Schmalz, J. Borngräber, J.C. Scheytt
Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), Santa Clara, January 16-18, 2012, USA
- (98) 245 GHz Subharmonic Receiver in SiGe**
Y. Mao, K. Schmalz, J. Borngräber, J.C. Scheytt
European Microwave Week (EuMW 2012), Amsterdam, October 28-November 02, 2012, The Netherlands
- (99) Performance and Complexity Analysis of Channel Coding Schemes for Multi-Gbps Wireless Communications**
M. Marinkovic, M. Krstic, E. Grass, M. Piz
IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC 2012), Sydney, September 09-12, 2012, Australia
- (100) Deep Silicon Etching and Applications in IHP**
St. Marschmeyer
2. Workshop Tiefes Siliziumätzen, Chemnitz, April 17, 2012, Germany
- (101) A Low Power 6.3 - 8.5 GHz Frequency Synthesizer in SiGe BiCMOS for IEEE802.15.4a Standard**
D. Martynenko, G. Fischer, O. Klymenko
International Symposium on Signals, Systems and Electronics (ISSSE 2012), Potsdam, October 03-05, 2012, Germany
- (102) Implementation of an Ultra-Low Power Load Independent LC VCO**
D. Martynenko, G. Fischer, O. Klymenko
IEEE International Conference on Circuits & Systems (ICCAS 2012), Kuala Lumpur, October 03-05, 2012, Malaysia
- (103) Low Power Programmable Frequency Divider Intended for Frequency Synthesizer Designed in Accordance to IEEE 802.15.4a Standard**
D. Martynenko, G. Fischer, O. Klymenko
IEEE International Conference on Circuits & Systems (ICCAS 2012), Kuala Lumpur, October 03-05, 2012, Malaysia
- (104) UWB Transmitter for Communication and Localization for IEEE 802.15.4a Standard**
D. Martynenko, G. Fischer, O. Klymenko
IEEE International Conference on Circuits & Systems (ICCAS 2012), Kuala Lumpur, October 03-05, 2012, Malaysia
- (105) New Methodology for Process Design Kit (PDK) of BiCMOS compatible RF-MEMS**
A. Mehdaoui, G. Schröpfer, G. Lorenz, M. Kaynak, M. Wietstruck
13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), Antalya, July 03-04, 2012, Turkey
- (106) A New Complementary Vertical Graphene Transistor: Concept and Simulations**
W. Mehr, J. Dabrowski, J.C. Scheytt, G. Lippert, G. Lupina
International Winterschool on Electronic Properties of Novel Materials (IWEPM), Kirchberg, March 06, 2012, Austria

- (107) Complementary Hot Carrier Transistor with Graphene Base Electrode**
W. Mehr, J. Dabrowski, J.C. Scheytt, G. Lippert, Y.-H. Xie, M. Lemme, S. Vaziri, G. Lupina
Graphene 2012, Brussels, April 10-13, 2012, Belgium
- (108) Effiziente breitbandige Leistungsverstärker: neue multidimensionale Herausforderungen und innovative Konzepte**
Ch. Meliani
Electrical and Electronic Engineering for Communication Workshop (EEEFOM 2012), Ulm, May 22-23, 2012, Germany
- (109) Feeder Realization for Quasi-Lumped Multilayer Resonators with Low q-factor**
D. Miljanovic, M. Potrebic, D.V. Tasic, Z. Stamenkovic
11th WSEAS International Conference on Circuits, Systems Electronics, Control and Signal Processing, Montreux, December 29-31, 2012, Switzerland
- (110) 60 GHz Ultrawideband Front-Ends with Gain Control, Phase Shifter and Wave Guide Transition in LTCC**
R. Müller, F. Wollenschläger, A. Schulz, M. Elkhoully, U. Trautwein, M.A. Hein, J. Müller, A.P. Garcia Ariza, R.S. Thomä
European Conference on Antennas and Propagation, (EuCAP 2012), Prague, March 26-30, 2012, Czech Republic
- (111) Epitaxial Growth of Functional Single-Crystalline Oxides on Si(001) Substrates**
G. Niu, T. Schroeder
Alexander von Humboldt Network Meeting, Kiel, February 08-10, 2012, Germany
- (112) Epitaxial Growth of Lattice-Matched $\text{Pr}_{0.4}\text{Y}_{1.6}\text{O}_3$ on SrO-Passivated Si(001): Growth Orientation Tailoring by Interface Engineering**
G. Niu, P. Zaumseil, M.A. Schubert, M. Zoellner, J. Dabrowski, T. Schroeder
IEEE International Conference on Solid-State and Integrated Circuit Technology (IEEE ICSICT 2012), Xian, October 29-November 01, 2012, China
- (113) Heteroepitaxy of Single Crystalline $\text{Pr}_x\text{Y}_{2-x}\text{O}_3$ (x=0-2) on SrO-Buffered Si(001): Interface Engineering and Crystallography Tailoring**
G. Niu, P. Zaumseil, M.A. Schubert, M. H. Zoellner, J. Dabrowski, T. Schroeder
2012 MRS Fall Meeting, Boston, November 25-30, 2012, USA
- (114) Electrical Characterization of 311 Defects and Related Junction Leakage Currents in n-Type Si After Ion Implantation**
C. Nyamhere, F. Olivie, F. Christiano, Z. Essa, D. Bolze, Y. Yamamoto
19. International Conference on Ion Implantation Technology, Valladolid, June 25-29, 2012, Spain
- (115) Characterisation of a Ceria Film on Si(111) with Non-Contact Atomic Force Microscopy**
R. Olbrich, H.H. Pieper, M.H. Zoellner, T. Schroeder, M. Reichling
DPG-Frühjahrstagung, Berlin, March 25-30, 2012, Germany
- (116) A Telemedicine System for Improved Rehabilitation of Stroke Patients**
St. Ortman, P. Langendörfer
International Conference on Health Informatics, Algarve, February 01-04, 2012, Portugal

- (117) Middleware-Plattform für die Realisierung Internet-basierter telemedizinischer Dienste**
St. Ortmann, S. Pilgermann
26. Treffpunkt Medizintechnik: Diagnostik und Therapie kardiovaskulärer Erkrankungen, Berlin, June 07, 2012, Germany
- (118) Telemedical Assistance for Ambulant Rehabilitation of Stroke Patient**
St. Ortmann, P. Langendörfer, C.S. Lányi
9th World Congress on Brain Injury, Edinburgh, March 21-25, 2012, Scotland
- (119) A Fully Digital Polar Modulator for Switch Mode RF Power Amplifier**
P. Ostrovskyy, J.C. Scheytt, S.J. Lee, B.H. Park, J. H. Jung
International Symposium on Circuits and Systems (ISCAS 2012), Seoul, May 20-23, 2012, South Korea
- (120) Performance Estimation of Fully Digital Polar Modulation Driving a 2 GHz Switch-Mode Power Amplifier**
P. Ostrovskyy, J.C. Scheytt, A. Sadeghfam, H. Heuermann
European Microwave Week, (EuMW 2012), Amsterdam, October 28-November 02, 2012, The Netherlands
- (121) Design of a Sensor Node for IEEE 802.15.4 Applications**
G. Panic, T. Basmer, H. Schomann, St. Peter, F. Vater, K. Tittelbach-Helmrich
25th IEEE International System-on-Chip Conference (SOCC 2012), Niagara Falls, September 12-14, 2012, USA
- (122) Profinet IO Vulnerability Assessment and Attack Derivation**
A. Paul, F. Schuster, H. König
7th Conference on Critical Information Infrastructures Security, Lillehammer, September 17-18, 2012, Norway
- (123) Customized Hardware Platform for Wireless Sensor Networks in Agricultural Applications**
U. Pesovic, D. Projovic, S. Randjic, Z. Stamenkovic
5th WSEAS International Conference on Sensors and Signals, Sliema, September 07-09, 2012, Malta
- (124) Implementation of IEEE 802.15.4 Transceiver on Software Defined Radio Platform**
U. Pesovic, D. Gliach, P. Planinsic, Z. Stamenkovic, S. Randic
20th Telecommunications Forum (TELFOR 2012), Belgrade, November 20-22, 2012, Serbia
- (125) Tool-Supported Methodology for Component-Based Design of Wireless Sensor Network Applications**
St. Peter, P. Langendörfer
The 4th International Workshop on Component-Based Design of Resource-Constrained Systems, (CORCS 2012), Izmir, July 16-20, 2012, Turkey
- (126) Beam Steering for LTE Backhaul**
M. Petri, R. Kraemer, M. Günther
NEC Heidelberg, August 15, 2012, Germany
- (127) Latency Impacts of Different Parallelism Levels in Data-Flow Architectures**
M. Petri
15th International Symposium on Wireless Personal Multimedia Communications, Taipeh, September 24-27, 2012, Taiwan
- (128) Design Methodology for Fault Tolerant ASICs**
V. Petrovic, M. Ilic, G. Schoof, Z. Stamenkovic
The 15th IEEE Symposium on Design and Diagnostics of Electronic Circuits and Systems Symposium (DDECS 2012), Tallin, April 18-20, 2012, Estonia



- (129) SEU and SET Fault Injection Models for Fault Tolerant Circuits**
V. Petrovic, M. Ilic, G. Schoof, Z. Stamenkovic
The 13th Biennial Baltic Electronics Conference (BEC 2012), Tallin, October, 03-05, 2012, Estonia
- (130) Single Event Latchup Power Switch Cell Characterization**
V. Petrovic, M. Ilic, G. Schoof
4th Small Systems Simulations Symposium (SSSS 2012), Nis, February 12-14, 2012, Serbia
- (131) Long-Range Wireless Sensor Nodes-Lessons Learned**
K. Piotrowski, A. Sojka, P. Langendörfer
6th European Conference on Antennas and Propagation, (EuCAP 2012), Prague, March 26-30, 2012, Czech Republic
- (132) Multi-Radio Wireless Sensor Node for Mobile Biomedical Monitoring**
K. Piotrowski, St. Ortmann, P. Langendörfer
BMT 2012, 46th DGBMT Annual Conference, Jena, September 16-19, 2012, Germany
- (133) A Novel Tunable Integrates Filter for Dispersion Compensation Realized in Silicon (SOI)**
A. Rahim, S. Schwarz, L. Zimmermann, J. Bruns, K. Voigt,
The Sino-German Joint Symposium on Opto- and Microelectronic Devices and Circuits (SODC 2012), Hangzhou, September 24-27, 2012, China
- (134) Electrons on Dislocations**
M. Reiche, M. Kittler, M. Krause, H. Übensee
International Conference on Extended Defects in Semiconductors (EDS 2012), Thessaloniki, June 24-29, 2012, Greece
- (135) Characterization of Germanium-Sulfide Thin Films Grown by Hot Wire Chemical Vapor Deposition**
D. Reso, M. Silinskas, N. Frenzel, M. Lisker, E.P. Burte
Nature Conference Aachen 2012, Aachen, June 17-20, 2012, Germany
- (136) RF-MEMS Switching Circuits Fabricated in a SiGe Process Technology**
S. Reyaz, C. Samuelsson, R. Malmqvist, M. Kaynak, A. Alvandpour, A. Rydberg
GigaHertz 2012 Symposium, Stockholm, March 06-07, 2012, Sweden
- (137) A V-Band RF-MEMS SPDT Switch Network in a SiGe BiCMOS Process Technology**
S. Reyaz, C. Samuelsson, R. Malmqvist, M. Kaynak, A. Rydberg
13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), Antalya, July 03-04, 2012, Turkey
- (138) Millimeter-Wave RF-MEMS SPDT Switch Networks in a SiGe BiCMOS Process Technology**
S. Reyaz, C. Samuelsson, R. Malmqvist, M. Kaynak, A. Rydberg
European Microwave Conference (EuMW 2012), Amsterdam, October 28-November 02, 2012, The Netherlands
- (139) Plasma Etch Challenges for Technological Fabrication of Silicon Photonic Components**
H.H. Richter, M. Fraschke, R. Eisermann, St. Marschmeyer, D. Stolarek, K. Schulz, L. Zimmermann, B. Tillack
DPG Frühjahrstagung der Sektion AMOP, Stuttgart, March 12-16, 2012, Germany

- (140) Half-Terahertz SiGe BiCMOS Technology**
 H. Rücker, B. Heinemann, A. Fox
 Silicon Monolithic Integrated Circuits on
 RF Systems (SiRF 2012), Santa Clara,
 January 16-18, 2012, USA
- (141) Austausch zur ForMaT-Initiative Erweiterte
 Sicherheit für Kritische Infrastrukturen
 (ESCI)**
 A. Sänn
 Dresden, January 27, 2012, Germany
- (142) Complex Product Development: Using a
 Combined VoC Lead User Approach**
 A. Sänn, D. Baier
 The 36th Annual Conference of the German
 Classification Society on Data Analysis,
 Machine Learning and Knowledge Discovery,
 (GFKI 2012), Hildesheim,
 August 01-03, 2012, Germany
- (143) Lead Users and Non-Lead-Users:
 Breakthrough Preferences Measured by
 Online Analysis**
 A. Sänn
 The R&D Management Conference 2012,
 Grenoble, May 23-25, 2012, France
- (144) Lead Users and Non-Lead-Users:
 Preferences Measured by Conjoint Analysis**
 A. Sänn, D. Baier
 34th Marketing Science Conference (ISMS
 2012), Boston, June 07, 2012, USA
- (145) SiGe BiCMOS Transceivers, Antennas, and
 Ultra-Low-Cost Packaging for the ISM
 Bands at 122 and 245 GHz**
 J.C. Scheytt, Y. Sun, K. Schmalz, R. Wang
 International Microwave Symposium (IMS
 2012), Montreal, June 17-22, 2012, Canada
- (146) 122 GHz FMCW Radar Transceiver and
 Components in 0.13 μm SiGe BiCMOS
 Technology**
 J.C. Scheytt, Y. Sun
 Diskussionssitzung des FA 9.1. Messverfahren
 der Informationstechnik zum Thema Radar-
 techniken, Bochum, May 31, 2012, Germany
- (147) A 245 GHz Transmitter in SiGe Technology**
 K. Schmalz, J. Borngräber, B. Heinemann,
 H. Rücker, J.C. Scheytt
 IEEE Radio Frequency Integrated Circuits
 Symposium (RFIC 2012), Montreal,
 June 17-19, 2012, Canada
- (148) Systemarchitektur für Raumfahrt-
 anwendungen**
 G. Schoof, V. Petrovic, S. Montenegro
 24. GI/GMM/ITG-Workshop Testmethoden
 und Zuverlässigkeit von Schaltungen und Sys-
 temen, Cottbus, February 26, 2012, Germany
- (149) Embedded Low Power Clock Generator
 for Sensor Nodes**
 O. Schrape, F. Vater
 Norchip 2012, Kopenhagen,
 November 12-13, 2012, Denmark
- (150) Klassische Ionendünnung von Focused Ion
 Beam Proben aus der Si-Halbleiter-
 technologie für die Transmissions-
 elektronenmikroskopie**
 A. Schubert
 9. Präparatorentreffen Berlin-Brandenburg,
 Dresden, April 20, 2012, Germany
- (151) A Distributed Intrusion Detection System
 for Industrial Automation Networks**
 F. Schuster, A. Paul
 17th International Conference on Emerging
 Technologies & Factory Automation, Krakow,
 September 17-21, 2012, Poland

- (152) Low-Power BiCMOS Track-and-Hold Circuit with Reduced Signal Feedthrough**
B. Sedighi, Y. Borokhovych, H. Gustat, J.C. Scheytt
International Microwave Symposium, (IMS 2012), Montreal, June 17-22, 2012, Canada
- (153) Low-Power 20-GB/s SiGe BiCMOS Driver with 2.5 V Output Swing**
B. Sedighi, P. Ostrovskyy, J.C. Scheytt
International Microwave Symposium (IMS 2012), Montreal, June 17-22, 2012, Canada
- (154) 40 Gb/s VCSEL Driver IC with a New Output Current and Pre-Emphasis Adjustment Method**
B. Sedighi, J.C. Scheytt
International Microwave Symposium 2012 (IMS 2012), Montreal, June 17-22, 2012, Canada
- (155) A 77 GHz On-Chip Dipole Antenna with Etched Silicon Substrate**
M. Seyyed-Esfahlan, M. Kaynak, I. Tekin
13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), Antalya, July 03-04, 2012, Turkey
- (156) Platform for Automated HW/SW Co-Verification, Testing and Simulation of Microprocessors**
A. Simevski, R. Kraemer, M. Krstic
13th Latin American Test Workshop (LATW 2012), Quito, April 10-13, 2012, Ecuador
- (157) Scalable Design of a Programmable NMR Voter with Inputs State Descriptor and Self-Checking**
A. Simevski, E. Hadzieva, R. Kraemer, M. Krstic
NASA/ESA Conference on Adaptive Hardware and Systems (AHS 2012), Nuremberg, June 25-28, 2012, Germany
- (158) Heterostructure Growth Study for GaP Collector Integration in SiGe HBT Technology**
O. Skibitzki, F. Hatami, P. Zaumseil, Y. Yamamoto, A. Trampert, M.A. Schubert, B. Tillack, W. T. Masselink, T. Schroeder
DPG Frühjahrstagung, Berlin, March 25-30, 2012, Germany
- (159) Heterostructure Growth Study for GaP Collector Material Integration in Future SiGe HBTs**
O. Skibitzki, F. Hatami, Y. Yamamoto, P. Zaumseil, A. Trampert, M.A. Schubert, B. Tillack, W.T. Masselink, T. Schroeder
Wilhelm and Else Heraeus Physics School „Microelectronics for Society-More than Moore Expands More Moore“, Bad Honnef, June 10-16, 2012, Germany
- (160) Single Error Plus Single Erasure Correction with Redundancy Repair Scheme for Memory Reliability Improvement**
P. Skoncej
24. GI/GMM/ITG Workshop Testmethoden und Zuverlässigkeit von Schaltungen und Systemen, Cottbus, February 26-28, 2012, Germany
- (161) WBR-Word and Block-Level Hard Error Repair for Memories**
P. Skoncej
Non-Volatile Memory Technology Symposium (NVMTS 2012), Singapore, October 31-November 02, 2012, Singapore
- (162) ImRNG: A Cryptographic Pseudorandom Number Generator for Wireless Sensor Networks**
A. Sojka, K. Piotrowski
International Conference on Security and Cryptography (Secrypt 2012), Rom, July 24-27, 2012, Italy

- (163) Concept of Vertical Bipolar Transistor with Lateral Drift Region, Applied to High Voltage SiGe HBT**
R. Sorge, A. Fischer, R. Pliquett, C. Wipf, R. Barth
Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), Santa Clara, January 16-18, 2012, USA
- (164) Correlation of the Electrical with the Material Changes during Resistance Switching of Ti/HfO₂ RRAM Devices by in-Operando HAXPES Study**
M. Sowinska, T. Bertaud, D. Walczyk, S. Thiess, Ch. Walczyk, T. Schroeder
IWAN Workshop, Frankfurt (Oder), November 12-13, 2012, Germany
- (165) HAXPES as a Non-Destructive Technique for RRAM Investigations**
M. Sowinska, T. Bertaud, D. Walczyk, S. Thiess, Ch. Walczyk, T. Schroeder
17th Workshop on Dielectrics in Microelectronics, Dresden, June 25-27, 2012, Germany
- (166) In-Operando HAXPES Analysis of the Resistive Switching Phenomenon in Ti/HfO₂-Based Systems**
M. Sowinska, T. Bertaud, D. Walczyk, S. Thiess, Ch. Walczyk, T. Schroeder
Frontiers in Electronic Materials: Correlation Effects and Memristive Phenomena, Aachen, June 17-20, 2012, Germany
- (167) Unveiling the Resistive Switching Mechanism of Ti/HfO₂/TiN RRAM Cells by Nondestructive Hard X-Ray Photoelectron Spectroscopy**
M. Sowinska, T. Bertaud, D. Walczyk, Ch. Walczyk, S. Thiess, W. Drube, T. Schroeder
DPG Frühjahrstagung, Berlin, March 25-30, 2012, Germany
- (168) A Hybrid Photonic Integrated Wavelength Converter on a Silicon-on-Insulator Substrate**
C. Stamatiadis, L. Stampoulidis, K. Vysokinos, I. Lazarou, D. Kalavrouziotis, L. Zimmermann, K. Voigts, G.B. Preves, L. Moerl, J. Kreissl, H. Avramopoulos
OFC 2012, Los Angeles, March 04-08, 2012, USA
- (169) Rear View Camera System for Car Driving Assistance**
Z. Stamenkovic, K. Tittelbach-Helmrich, J. Domke, C. Lörchner-Gerdaus, J. Anders, V. Sark, M. Eric, N. Sira
28th International Conference on Microelectronics (MIEL 2012), Nis, May 13-16, 2012, Serbia
- (170) Erweiterte Sicherheit für Kritische Infrastrukturen (ESCI)**
O. Stecklina
Innovationsforum „ISI4people“, Berlin, June 21-22, 2012, Germany
- (171) TandemStack – a Flexible and Customizable Sensor Node Platform for Low Power Applications**
O. Stecklina, D. Genschow, Ch. Goltz
Sensornets 2012, Rome, February 24-26, 2012, Italy
- (172) A Low-Phase-Noise 61 GHz Push-Push VCO with Divider Chain and Buffer for 122 GHz ISM**
Y. Sun, J.C. Scheytt
IEEE Radio Frequency Integrated Circuits Symposium (RFIC 2012), Montreal, June 17-19, 2012, Canada

- (173) MBE Grown GaN/Sc₂O₃/Y₂O₃/Si(111) Heterostructures as a Template for MOCVD GaN Deposition**
L. Tarnawska, M. Wosko, A. Szyzka,
R. Paszkiewicz, T. Schroeder
IWAN Workshop, Frankfurt (Oder),
November 12-13, 2012, Germany
- (174) Novel Buffer Approach for GaN Integration on Si(111) Platform through Sc₂O₃/Y₂O₃ bi-Layer**
L. Tarnawska
PhD Seminar at Wroclaw University of
Technology, Wroclaw, May 30, 2012, Poland
- (175) Structural and Optical Quality of GaN Films Grown on Sc₂O₃/Y₂O₃/Si(111)**
L. Tarnawska, P. Zaumseil, P. Storck,
T. Schroeder
DPG-Frühjahrstagung 2012, Berlin,
March 25-30, 2012, Germany
- (176) Virtual GaN Substrate on Si(111) via Novel Oxide bi-Layer Approach**
L. Tarnawska, J. Dabrowski, P. Storck,
T. Schroeder
Deutscher MBE Workshop 2012, Hannover,
September 11-12, 2012, Germany
- (177) A 77 GHz on-Chip Strip Dipole Antenna Integrated with Balun Circuits for Automotive Radar**
I. Tekin, M. Kaynak
IEEE International Symposium on Antennas
and Propagation and USNC-URSI National
Radio Science Meeting, Chicago,
July 08-14, 2012, USA
- (178) Bias Dependency in Modern SiGe HBTs and CMOS**
F.E. Teply
7th RADECS Thematic Day on Academic and
PhD Research Activities (RADFAC 2012),
Surrey, April, 03, 2012, UK
- (179) SiGe BiCMOS-A More than Moore Baseline Technology for Functional Diversification of Opto- and Microelectronic Devices and Circuits**
B. Tillack, B. Heinemann, M. Kaynak,
H. Rücker, L. Zimmermann, Ch. Wenger
The Sino-German Joint Symposium on Opto-
and Microelectronic Devices and Circuits
(SODC 2012), Hangzhou,
September 24-27, 2012, China
- (180) An Accurate and Versatile Equivalent Circuit Model for RF-MEMS Circuit Optimization in BiCMOS Technology**
N. Torres Matabosch, F. Coccetti, M. Kaynak,
W. Zhang, B. Tillack, R. Plana, J.L. Casaux
European Microwave Conference
(EuMW 2012), Amsterdam,
October 28-November 02, 2012,
The Netherlands
- (181) An Accurate Equivalent Circuit Model for RF-MEMS Circuit Optimization and Fabrication Process Monitoring in BiCMOS Technology**
N. Torres Matabosch, F. Coccetti, M. Kaynak,
W. Zhang, B. Tillack, J.L. Cazaux
13th Symposium on RF-MEMS and RF-Micro-
systems (MEMSWAVE 2012), Antalya,
July 03-04, 2012, Turkey
- (182) Combined Raman-DLTS Investigations of n-Type Cu-In-S Absorber Layers Grown on Cu Tape Substrate**
M. Trushin, T. Arguirov, M. Kittler, W. Seifert,
A. Klossek, T. Bernhard, W. Gerlach-
Blumenthal, A. Hänsel, O. Tober, M. Schwabe
International Conference on Extended
Defects in Semiconductors (EDS-2012),
Thessaloniki, June 24-29, 2012, Greece

(183) Reconfigurable Millimeter-Wave ICs in an RF-MEMS Embedded BiCMOS Technology

A.C. Ulusoy, M. Kaynak, G. Liu, B. Tillack, H. Schumacher
GigaHertz 2012 Symposium, Stockholm, March 06-07, 2012, Sweden

(184) Reconfigurable Millimeter-Wave ICs in an RF-MEMS Embedded BiCMOS Technology

A.C. Ulusoy, M. Kaynak, G. Liu, T. Purtova, B. Tillack, H. Schumacher
13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), Antalya, July 03-04, 2012, Turkey

(185) From Enabling Technology to Applications: Reconfigurable SiGe BiCMOS ICs with Fully Integrated RF-MEMS Switches for Millimetre Wave Transceivers

V. Valenta, M. Kaynak, G. Liu, A.C. Ulusoy, T. Purtova, A. Trasser, H. Schumacher
ESA Microwave Technologies & Techniques Workshop, Noordwijk, May 21-23, 2012, The Netherlands

(186) An Integration Approach for Graphene Double Gate Transistors

S. Vaziri, A.D. Smith, C. Henkel, M. Östling, M.C. Lemme, G. Lupina, G. Lippert, J. Dabrowski, W. Mehr
42nd European Solid-State Device Research Conference (ESSDERC 2012), Bordeaux, 17-21, 2012, France

(187) A Satellite Internal Communication Controller: Design and Implementation

M. Valeski, V. Petrovic, Z. Stamenkovic
11th WSEAS International Conference on Circuits, Systems Electronics, Control and Signal Processing, Montreux, December 29-31, 2012, Switzerland

(188) Advanced Media Technologies for Stroke Rehabilitation

E. Vogiatzaki, P. Langendörfer, St. Ortman
17th Annual CyberPsychology & CyberTherapy Conference-Experience the Future of Health & Well Being (iACToR's), Brussels, September 25-28, Belgium

(189) Pulse-Induced Resistive Switching of CMOS Embedded HfO₂-based 1T1R Cells

D. Walczyk, Ch. Walczyk, T. Bertaud, M. Sowinska, M. Lukosius, St. Kubotsch, T. Schroeder, Ch. Wenger
DPG Frühjahrstagung, Berlin, March 25-30, 2012, Germany

(190) Pulse-Induced Resistive Switching of Si CMOS Embedded HfO₂-based 1T1R Devices

D. Walczyk, T. Bertaud, M. Sowinska, M. Lukosius, D. Wolansky, M. Fräschke, A. Scheit, B. Tillack, T. Schroeder, Ch. Wenger, Ch. Walczyk
E-MRS Spring Meeting, Strasbourg, May 14-18, 2012, France

(191) Resistive Switching Behavior in TiN / HfO₂ / Ti / TiN Devices

D. Walczyk, T. Bertaud, M. Sowinska, M. Lukosius, M.A. Schubert, A. Fox, D. Wolansky, A. Scheit, M. Fräschke, G. Schoof, Ch. Wolf, R. Kraemer, B. Tillack, R. Korolevych, V. Stikanov, Ch. Wenger, T. Schroeder, Ch. Walczyk
2012 International Semiconductor Conference Dresden-Grenoble (ISCDG 2012), Grenoble, September 24-26, 2012, France

(192) A Micromachined Double-Dipole Antenna for 122-140 GHz Applications Based on a SiGe BiCMOS Technology

R. Wang, Y. Sun, M. Kaynak, St. Beer, J. Borngräber, J.C. Scheytt
International Microwave Symposium 2012, Montreal, June 17-22, 2012, Canada



- (193) Effect of Composition on the Bandgap Width in Insulating Niobate $Nb_xMe_yO_z$ (ME=Ta or Gd) Nanolayers**
 W.C. Wang, H.Y. Chou, M. Badylevich, T. Blomberg, Ch. Wenger, D. Dewulf, A. Hardy, M.K. Van Bael, V.V. Afanasev
 E-MRS Spring Meeting, Strasbourg, May 14-18, 2012, France
- (194) The Effect of Composition on the Bandgap Width in Insulating $Nb_xTa_yO_z$ Nanolayers**
 W.C. Wang, H.Y. Chou, M. Badylevich, T. Blomberg, Ch. Wenger, J.A. Kittl, V.V. Afanas'ev
 E-MRS Spring Meeting, Strasbourg, May 14-18, 2012, France
- (195) Microwave Biosensor for Characterization of Compartments in Teflon Capillaries**
 J. Wessel, J.C. Scheytt, K. Schmalz, B. Cahill, G. Gastrock
 European Microwave Week, (EuMW 2012), Amsterdam, October 28-November 02, 2012, The Netherlands
- (196) Dual Use in der wissenschaftlichen Praxis, Ausfuhrkontrolle am IHP**
 W. Wichmann
 Sommerschule Helmholtz-Kolleg (HRSST 2012), Kröchlendorf, August 24, 2012, Germany
- (197) The Influence of High Temperature Stress on a BiCMOS Embedded RF-MEMS Switch**
 M. Wietstruck, M. Kaynak, W. Zhang, K. Kaletta, B. Tillack
 13th Symposium on RF-MEMS and RF-Microsystems (MEMSWAVE 2012), Antalya, July 02-04, 2012, Turkey
- (198) In-situ XRD and XRR Investigations of the Oxidation Pro-Cess in Ultra thin Praseodymia Films on Si(111)**
 H. Wilkens, S. Gevers, M.H. Zoellner, T. Schroeder, J. Wollschlaeger
 DPG-Frühjahrstagung, Berlin, March 25-30, 2012, Germany
- (199) A New Method to Analyze the Behavior of SiGe:C HBTs under RF Large Signal Stress**
 Ch. Wipf
 Silicon Monolithic Integrated Circuits on RF Systems (SiRF 2012), Santa Clara, January 16-18, 2012, USA
- (200) Detection and Reduction of Via Faults**
 D. Wolansky, H. Rücker, J. Bauer, U. Haak, W. Höppner, J. Katzer, P. Kulse, A. Mai, A. Scheit, K. Schulz
 International Semiconductor Conference Dresden Grenoble 2012, (ISCDG 2012), September 24-25, 2012, France
- (201) 15 Gbps Communication over an USB3.0 Cable and Even More**
 A. Wolf, J.C. Scheytt
 IEEE International Conference on Communication and Signal Processing (SSD -CSP 2012), Chemnitz, March 20-23, 2012, Germany
- (202) Low Threading Dislocation Density Ge Growth and Heavy Phosphorus Doping in Ge**
 Y. Yamamoto, P. Zaumseil, G. Kozlowski, R. Kurps, B. Tillack
 University of Vigo and JSPS Core-to-Core Program Joint Seminar: Atomically Controlled Processing for Ultralarge Scale Integration, Vigo, September 04-06, 2012, Spain

(203) Phosphorus Atomic Layer Doping in Ge Using RPCVD

Y. Yamamoto, R. Kurps, Ch. Mai, I. Costina, J. Murota, B. Tillack
6th International SiGe Technology and Device Meeting (ISTDM 2012), Berkeley, June 04-06, 2012, USA

(204) Phosphorus Profile Control in Ge by Si Delta Layers

Y. Yamamoto, P. Zaumseil, R. Kurps, J. Murota, B. Tillack
SiGe, Ge, and Related Compounds 5: Materials, Processing and Devices, ECS Meeting, Honolulu, October 07-12, 2012, USA

(205) A 12.5 Gb/s SiGe BiCMOS Optical Receiver with a Monolithically Integrated 850-nm Avalanche Photodetector

J.-S. Youn, M.-J. Lee, K.-Y. Park, H. Rücker, W.-Y. Choi
OFC NFOEC 2012, Los Angeles, March 04-08, 2012, USA

(206) Bit-Error Rate Analysis of Integrated Optoelectronic Receiver

J.-S. Youn, M.-J. Lee, K.-Y. Park, W.-Y. Choi, H. Rücker
Photonic Global Conference, Singapore, December 13-16, 2012, Singapore

(207) A Test Processor Solution for Asynchronous Chip Test

St. Zeidler, Ch. Wolf, M. Krstic, R. Kraemer
18th IEEE International Symposium on Asynchronous Circuits and Systems (ASYNC,12), Lyngby, May 07-09, 2012, Denmark

(208) A Test Processor Solution for Asynchronous Chip Test

St. Zeidler, Ch. Wolf, M. Krstic, R. Kraemer
Leibniz-Doktoranden-Forum der Sektion D, Berlin, June 07-08, 2012, Germany

(209) Entwurf einer neuen Testprozessurlösung für den Funktionaltest asynchroner Schaltungen

St. Zeidler, Ch. Wolf, M. Krstic, R. Kraemer
24. GI/GMM/ITG-Workshop: Testmethoden und Zuverlässigkeit von Schaltungen und Systemen, Cottbus, February 26-28, 2012, Germany

(210) Methodology for Functional Pattern Generation for Asynchronous Designs in a Test Processor Environment

St. Zeidler, Ch. Wolf, M. Krstic, R. Kraemer
2012 IEEE 21st Asian Test Symposium, Niigata, November 19-22, 2012, Japan

(211) (HR)TEM-Investigations of GaN/Sc₂O₃/Si(111) Heterostructure

D. Zengler, L. Tarnawska, T. Schroeder, T. Niermann, M. Lehmann
The 15th European Microscopy Congress- (EMC 2012), Manchester, September 16-21, 2012, UK

(212) EM and Lumped-Element Model of BiCMOS Embedded Capacitive RF-MEMS Switch

W. Zhang, M. Kaynak, M. Wietstruck, V. Mühlhaus, B. Tillack
7th German Microwave Conference (GeMIC 2012), Ilmenau, March 12-14, 2012, Germany

(213) Aircraft Cabin-integrated 57-64GHz WLAN Communication System

V. Ziegler, B. Schulte, J. Sabater, S. Bovelli, J. Kunisch, K. Maulwurf, M. Martinez-Vazquez, C. Oikonomopoulos-Zachos, S. Glisic, M. Ehrig, E. Grass
IEEE International Microwave Symposium (IMS 2012), Montreal, June 17-22, 2012, Canada



(214) Hybrid Integration of Coherent Receivers for Terabit Ethernet on SOI Waveguide PLC

L. Zimmermann, M. Kroh, K. Voigt, G. Winzer, H. Tian, L. Stampoulidis, B. Tillack, K. Petermann
The 9th International Conference on Group IV (GFP), San Diego, August 29-30, 2012, USA

(215) Silicon Photonics for Nonlinear Applications

L. Zimmermann, H. Tian, A. Gajda, K. Voigt, G. Winzer, K. Petermann, B. Tillack
The Sino-German Joint Symposium on Opto- and Microelectronic Devices and Circuits (SODC 2012), Hangzhou, September 24-27, 2012, China

(216) Graphene Growth on Insulators

M.H. Zoellner, J. Dabrowski, G. Lippert, G. Lupina, T. Schroeder
Workshop des Leibniz-Verbundes Nanotechnologie, Berlin, January 30-31, 2012, Germany

(217) Structure-Stoichiometry Relationship of Mixed $Ce_{1-x}Pr_xO_{2-\delta}$ ($x=0-1$) Oxides on Si(111)

M.H. Zoellner, M. Bäumer, M. Reichling, H. Wilkens, J. Wollschläger, P. Zaumseil, T. Schroeder
DPG Frühjahrstagung 2012, Berlin, March 25-30, 2012, Germany

*Berichte
Reports*

- (1) Machbarkeitsstudie zur Nutzung einer Signifikanzanalyse für die Erkennung von Jammern in drahtlosen Sensornetzen**
St. Kornemann
Praktikumsbericht für BTU Cottbus, (2012)
- (2) Compositionally Graded SiGe Buffers on Si(001) with and without the Back-Side SiGe**
G. Kozłowski, P. Zaumseil, T. Schroeder
Industriebericht, (2012)
- (3) Abschlussbericht**
P. Langendörfer, T. Basmer
für Innoprofile Projekt TANDEM, (2012)
- (4) BMBF-Projekt MATRIX**
St. Ortmann
Zwischenbericht, (2012)
- (5) Light induced crystallization and characterization of Si nanostructures**
T. Mchedlidze, M. Kittler
BMBF-Verbundprojekt SINOVA (FKZ 03SF0352C), Teilprojekt, Final Report, 13.08.2012
- (6) MATRIX Ergebnisreport 3.5 – Systemmanagement- und Konfigurationservices**
St. Ortmann
Report (2012)
- (7) Periodic Summary & Activity Report**
St. Ortmann
StrokeBack Deliverable D1.2, (2012)
- (8) Schlussbericht Verbundvorhaben MATRIX**
St. Ortmann, M. Maaser, O. Maye
BMBF-Forschungsvorhaben Förderkennzeichen 16BS0801, (2012)

- (9) **StrokeBack Deliverable D1.1**
St. Ortmann
Intermediate Report, (2012)
- (10) **A 60-GHz Wireless Backhaul System with Beam Steering Capability for LTE Small Cell Connectivity**
M. Petri
Forwarding to Potential Partners, (2012)
- (11) **Middleware Switch Processor – User’s Manual**
V. Petrovic, G. Schoof, S. Montenegro, B. Vogel
(2012)
- (12) **Selection of Look and Feel of all Aspects of the StrokeBack System**
M. Schauer, L. Paramonov, St. Ortmann
Project FP-ICT StrokeBack, (2012)
- (13) **In-Situ HAXPES Study of Ti/HfO₂/TiN RRAM Structures**
M. Sowinska, D. Walczyk, T. Bertaud, S. Thiess, Ch. Walczyk, T. Schroeder
HASLAB Annual Report, (2012)
- (14) **D 5.4 Smart - Rasip**
O. Stecklina, F. Vater, T. Basmer
Smart Project No 100032, (2012)
- (15) **Virtual GaN Substrates on Si(111) via Oxide Heterostructures**
P. Storck, T. Schroeder
Industriebericht – Siltronic – IHP Technology Activity Report, (2012)
- (16) **Virtuelle GaN Substrate auf 4" Si(111) mittels Oxidheterostrukturen als Epitaxie-Pufferschicht: Defektanalyse auf atomarer Ebene mittels TEM zur Optimierung der Wachstumsstrategie**
P. Storck, T. Schroeder, M. Lehmann
Industriebericht, (2012)
- (17) **Abhörsichere, schaltbare und integrierbare SAW-Funkmodule**
Ch. Wenger
Schlussbericht zum Verbundprojekt, Teilprojekt: Integrierte (Bi)CMOS-ICs, (2012)
- (18) **Schlussbericht zum Verbundprojekt: Materialien für extrem hohe integrierte Kapazitäten (MaxCaps) Teilprojekt: Präparation und Charakterisierung von MIM-Kondensatoren**
Ch. Wenger
Report, (2012)
- (19) **Virtual GaN via AlGaN Multilayer Buffer on Si(111) Diagnostics Report**
P. Zaumseil, L. Tarnawska, D. Zengler, P. Storck, T. Schroeder, M. Lehmann
Industriebericht, (2012)

Monographien
Monographs

- (1) **X-Ray Techniques for Materials Research – from Laboratory Sources to Free Electron Lasers**
F. Boscherini, M. Birkholz, D. Chateigner, J.-Y. Buffiere, P.F. Fewster (Eds.)
Nuclear Instruments and Methods in Physics Research B 284, (2012)
- (2) **E-MRS Fall Meeting Symposium on Stress, Structure and Stoichiometry Effects on Nanomaterials**
V. Craciun, R. Gaboriaud, F. Sanchez, T. Schroeder (Guest Eds.)
Applied Surface Science 260, (2012)



(3) SiGe, Ge, and Related Compounds 5: Materials, Processing, and Devices

D. Harame, T. Krishnamohan, S. Miyazaki, A. Reznicek, B. Tillack, Y. C. Yeo, M. Caymax, G. Masini, G. Niu, K. Saraswat, B. Vincent, K. Uchida (Eds.)
Electrochemical Society,
ECS Transactions; 50(5), (2012)

(4) Distributed Shared Memory and Data Consistency (for Wireless Sensor Networks – Assessment of the Feasibility)

K. Piotrowski
Südwestdeutscher Verlag für Hochschulschriften, (2012)

(5) E-MRS 2012 Spring Meeting-Symposium A, Advanced Silicon Materials Research for Electronic and Photovoltaic Applications III

S. Pizzini, G. Kissinger, H. Yamada-Kaneta, J. Kang (Eds.)
Physica Status Solidi C C 9, (10-11),
1857-2210 (2012)

(6) Mechanismen zur Verbesserung der Quality of Experience beim mobilen Zugriff auf Streaming-orientierte Internetdienste

N. Todtenberg
Saarbrücken, AV Akademikerverl., (2012)

(7) E-MRS 2012 Spring Meeting: Symposium M

Ch. Wenger, J. Fompeyrine, Ch. Vallée, J.-P. Locquet (Eds.)
IOP Conference Series, Materials Science and Engineering 41, (2012)

Habilitationen / Dissertationen
Habilitations / Dissertations

(1) Spezifische Fehlertoleranz für kombinatorische und sequentielle Schaltungen

M. Augustin
Dissertation, BTU Cottbus, (2012)

(2) Characterization of Perovskite-Like High-k Dielectric Materials for Metal-Insulator-Metal Capacitors

C. Baristiran-Kaynak
Dissertation, TU Berlin, (2012)

(3) Energy-Efficient Means to Support Short End-to-End Delays in Wireless Sensor Networks

M. Brzozowski
Dissertation, BTU Cottbus, (2012)

(4) Analyse und Vorhersage des Flächen- und Energieverbrauches optimaler Hardware Polynom-Multiplizierer für GF (2n) für elliptische Kurven Kryptographie

Z. Dyka
Dissertation, BTU Cottbus, (2012)

(5) Structures for Nanoscale DRAM Memories

B. Hudec
Dissertation, IEE Bratislava, (2012)

(6) Entwurf eines robusten drahtlosen Kommunikationssystems für die industrielle Automatisierung unter harten Echtzeitbedingungen auf Basis von Ultrawideband-Impulsfunk

J. Hund
Dissertation, BTU Cottbus, (2012)

(7) On the Compliant Behaviour of Free-Standing Si Nanostructures on Si(001) for Ge Heteroepitaxy

G. Kozłowski
Dissertation, BTU Cottbus, (2012)

(8) Design and Analysis of Agile Frequency Synthesizer for Software-Defined Radio Applications

S.A. Osmany
Dissertation, Universität Ulm, (2012)

(9) Latenzverringierung in Basisbandprozessoren am Beispiel eines hochratigen OFDM-Kommunikationssystems

M. Petri
Dissertation, BTU Cottbus, (2012)

(10) Novel Oxide Buffer Approach for GaN Integration on Si(111) Platform Through Sc₂O₃/Y₂O₃-Bi-Layer

L. Tarnawska
Dissertation, BTU Cottbus, (2012)

Diplomarbeiten / Masterarbeiten / Bachelorarbeiten
Diploma Theses / Master Theses / Bachelor Theses

(1) Konzeption und Implementierung einer Datenbank zur zentralen Verwaltung von Mitarbeiterstammdaten einschließlich der Replikation dedizierter Benutzerdaten mit einem vorhandenen Verzeichnisdienst für das Leibniz-Institut für innovative Mikroelektronik

St. Baudach
Diplomarbeit, Wilhelm Büchner Hochschule, Darmstadt, (2012)

(2) Entwurf und Implementierung einer werkzeuggestützten Aufteilung von Sensorknoten-Software in isolierte Adressräume

E. Bergmann
Diplomarbeit, BTU Cottbus, (2012)

(3) 0.13 Micron CMOS-MEMS Based Microfluidic System for Cellomics at High Frequency

S. Guha
Masterarbeit, TUHH Hamburg, (2012)

(4) Implementierung von IPv6 für Low-Power Wireless Personal Area Networks (6LoWPan) auf Basis von IQ Level

D. Heyne
Bachelorarbeit, BTU Cottbus, (2012)

(5) Untersuchungen und Implementierung von Mechanismen zur verteilten Entscheidungsfindung in Automatisierungssystemen

Ch. Hildebrand
Masterarbeit, BTU Cottbus, (2012)



- (6) **Konstruktion eines externen Kontrollgeräts für Polierköpfe einer Waferpolieranlage**
M. Hopp
Bachelorarbeit, bbw-Hochschule
Frankfurt (Oder), (2012)
- (7) **Maskengenerierung für optoelektronische integrierte Schaltkreise**
S. Jätzlau
Bachelorarbeit, bbw-Hochschule
Frankfurt (Oder), (2012)
- (8) **Anwendung des Roboterarms AREXX RA1-PRO und Prüfung zeitkritischer Faktoren**
Ch. Köhler
Bachelorarbeit, TH Wildau (FH), (2012)
- (9) **Evaluierung und Implementierung von Mechanismen zur selbständigen Erkennung von Jamming Attacken in drahtlosen Sensornetzen**
St. Kornemann
Masterarbeit, BTU Cottbus, (2012)
- (10) **Qualifikation einer Poliersuspension zum chemisch-mechanischen Polieren**
A. Krüger
Bachelorarbeit, bbw-Hochschule
Frankfurt (Oder), (2012)
- (11) **Analytische und elektrische Charakterisierung von Germanium-basierten Dünnschichtsystemen**
Ch. Mai
Masterarbeit, BTU Cottbus, (2012)
- (12) **Entwurf und Realisierung einer anpassbaren grafischen Oberfläche zur Visualisierung variabler Sensordaten bei Annahme über die serielle Schnittstelle**
S. Oehlert
Masterarbeit, BTU Cottbus, (2012)
- (13) **Characterization and Modeling of the Degradation of SiGe Heterojunction Bipolar Transistors (HBT)**
A. Pocej
Masterarbeit, Hochschule Furtwangen University, (2012)
- (14) **Feingranulare Erkennung spezifischer Bewegungsabläufe im dreidimensionalen Raum zur IT-gestützten Betreuung therapeutischer Maßnahmen in der Telemedizin**
J. Schäffner
Bachelorarbeit, bbw-Hochschule
Frankfurt (Oder), (2012)
- (15) **Development and Implementation of Memory Management Features on Wireless Sensor Nodes**
K. Tolosz
Masterarbeit, West Pomeranian University of Technology, Szczecin, Poland, (2102)
- (16) **Prozessentwicklung eines Rückseitenpolierteilschritts in der Halbleiterfertigung**
A. Trusch
Bachelorarbeit, bbw-Hochschule
Frankfurt (Oder), (2012)
- (17) **Transfer und Charakterisierung von CVD-Graphen**
S. Trutz
Bachelorarbeit, TH Wildau, (2012)

Patente
Patents

- (1) **A CMOS-compatible Germanium Tunable Laser**
G. Capellini, Ch. Wenger, T. Schroeder,
G. Kozlowski
IHP.368.11 EP-Erst-Patentanmeldung
am 10.02.2012, AZ: EP12154997.6
- (2) **Individualisierte Spannungsversorgung von Bauelementen integrierter Schaltungen als Schutzmaßnahme gegen Seitenkanalangriffe**
Z. Dyka, P. Langendörfer
IHP.376.12 DE-Patentanmeldung
am 26.10.2012, AZ: 10 2012 219 661.7
- (3) **MEMS-Mikroviskosimeter**
K.-E. Ewald, M. Birkholz, W. Winkler, P. Kulse,
M. Fröhlich, D. Wolansky, E. Matthus, J. Drews,
K. Schulz, U. Haak, D. Genschow
IHP.373.11-DE-Patentanmeldung,
am 21.06.2012, AZ: 10 2012 210 470.4
- (4) **Signalkonditionierung eines Temperatursensors**
D. Genschow
IHP.366.11, DE-Patentanmeldung
am 15.05.2012, AZ: 10 2012 208 159.3
- (5) **Patentanmeldung mit Siltronic AG**
G. Kissinger, D. Kot, T. Müller, A. Sattler
DE-Patentanmeldung,
am 08.08.2012, AZ:102012214085.9
- (6) **In SOI mit Versetzungsnetzwerk integrierte Si-LED**
M. Kittler, T. Arguirov, M. Reiche
IHP.375.11, DE-Patentanmeldung
am 28.03.2012, AZ: 10 2012 204 987.8
- (7) **Hetero-Substrat zur Herstellung von integrierten Schaltkreisen mit optischen, optoelektronischen und elektronischen Komponenten**
D. Knoll, B. Heinemann, L. Zimmermann,
H.H. Richter
IHP.374.11, PCT-Anmeldung
am 30.11.2012, AZ: PCT/EP2012/074141
- (8) **P-type Graphene Base Transistor**
W. Mehr, J. Dabrowski, G. Lippert, M. Lemme,
G. Lupina, J.C. Scheytt
IHP.379.11, EP-Erstanmeldung
am 17.01.2012, AZ: 12 151 452.5
- (9) **Austausch von Information zwischen Bluetooth-Knoten zum Aufbau eines Scatternets**
M. Methfessel
IHP.372.11, EP-Erst-Patentanmeldung
am 19.04.2012, AZ: 12 164 726.7
- (10) **Spekulative Basisbandverarbeitung eines empfangenen Datenrahmens**
M. Petri
IHP.378.12 DE-Patentanmeldung,
am 03.08.2012, AZ: 10 2012 213 829.3
- (11) **Verfahren und Schaltungsanordnung zur Latenzverringern und / oder Energieeinsparung in Basisbandprozessoren sowie Anwendung derselben**
M. Petri
IHP.380.12, DE-Patentanmeldung,
am 03.08.2012, AZ: 10 2012 213 832.3
- (12) **Siliziumbasierter Heterobipolartransistor**
O. Skibitzki, T. Schroeder
IHP.360.PCT, PCT-Patentanmeldung,
am 17.02.2012, AZ: PCT/EP2012/052802



- (13) BILDMOS - und SOI-BILDMOS Transistor**
 R. Sorge
 IHP.356.PCT, PCT-Patentanmeldung
 am 19.01.2012, AZ: PCT/EP2012/050761
- (14) Vertikaler Bipolartransistor mit lateralem Kollektor-Driftgebiet**
 R. Sorge
 IHP.367.PCT-Anmeldung,
 am 22.06.2012, AZ: PCT/EP2012/062155
- (15) Schichtstruktur für Halbleiterbauelement mit Schutzvorrichtung gegen physikalische und chemische Angriffe**
 Ch. Wenger, P. Langendörfer, F. Vater
 IHP.381.12, DE-Patentanmeldung,
 am 03.09.2012, AZ: 10 2012 215 606.2
- (16) Halbleiterbauelemente mit steilem Phosphor-Profil in einer Germaniumschicht**
 Y. Yamamoto, B. Tillack
 IHP.365.11, DE-Patentanmeldung
 am 10.02.2012, AZ: 102012202067.5
- (17) Verfahren und Infrastruktur zum Test von nicht-zeitdeterministischen Schaltungen**
 St. Zeidler, M. Krstic, Ch. Wolf, R. Kraemer
 IHP.369.11, EP-Erstanmeldung,
 am 09.02.2012, AZ: 12 154 651.9