



Publications from the Technology Platform “Extended CMOS” of the Research Fab Microelectronics Germany (2020)

- Aftowicz M., Kabin I. et. al. (2020): Horizontal SCA Attacks against kP Algorithm Using K-Means and PCA. In: 2020 9th Mediterranean Conference on Embedded Computing, MECO 2020 (,Conference Paper,Scopus). DOI:10.1109/MECO49872.2020.9134109. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088538516&doi=10.1109%2fMECO49872.2020.9134109&partnerID=40&md5=ec31b89de4ebeeec093ffa9500bf13b0>
- Ahmad W.A., Kissinger D. et. al. (2020): Millimeter-Wave Single-Layer Full-Band WR12 Vertical Waveguide Transition. In: IEEE Radio and Wireless Symposium, RWS (,Conference Paper,Scopus). DOI:10.1109/RWS45077.2020.9050127. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083215152&doi=10.1109%2fRWS45077.2020.9050127&partnerID=40&md5=5bae1d00da0622f4afb8f385c7918552>
- Ahmad W.A., Kucharski M. et. al. (2020): Multimode W-Band and D-Band MIMO Scalable Radar Platform. In: IEEE Transactions on Microwave Theory and Techniques (,Article,Scopus). DOI:10.1109/TMTT.2020.3038532. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097383131&doi=10.1109%2fTMTT.2020.3038532&partnerID=40&md5=dacbac0ce0e60e34298b6115c462e68b>
- Ahmad W.A., Kucharski M. et. al. (2020): Modular scalable 80- And 160-GHz radar sensor platform for multiple radar techniques and applications. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9223918. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094200962&doi=10.1109%2fIMS30576.2020.9223918&partnerID=40&md5=463817da1ab19e4fc159748f2a10d47f>
- Ahmad W.A., Kucharski M. et. al. (2020): A Planar Differential Wide Fan-Beam Antenna Array Architecture: Modular High-Gain Array for 79-GHz Multiple-Input, Multiple-Output Radar Applications. In: IEEE Antennas and Propagation Magazine (,Article,Scopus). DOI:10.1109/MAP.2020.2976913. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082080105&doi=10.1109%2fMAP.2020.2976913&partnerID=40&md5=de668e4c700819dbd8aa36c30f193d8c>
- Akhtar F., Dabrowski J. et. al. (2020): Investigation of the Oxidation Behavior of Graphene/Ge(001) Versus Graphene/Ge(110) Systems. In: ACS Applied Materials and Interfaces (,Article,Scopus). DOI:10.1021/acsami.9b18448. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077947371&doi=10.1021%2facami.9b18448&partnerID=40&md5=588a35ebf2d65b9e4cf9855f8651314d>
- Aldana S., Pérez E. et. al. (2020): Kinetic Monte Carlo analysis of data retention in Al:HfO₂-based resistive random access memories. In: Semiconductor Science and Technology (,Article,Scopus). DOI:10.1088/1361-6641/abb072. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092428895&doi=10.1088%2f1361-6641%2fab072&partnerID=40&md5=587b880ce0bfd2771deb29baee98a834>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Ali A., Yun J. et. al. (2020): 168-195 GHz Power Amplifier with Output Power Larger Than 18 dBm in BiCMOS Technology. In: IEEE Access (,Article,Scopus). DOI:10.1109/ACCESS.2020.2990681. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084927925&doi=10.1109%2fACCESS.2020.2990681&partnerID=40&md5=7a2e818577b00f54225042faf71534ff>
- Ali A., Yun J. et. al. (2020): 220-360-GHz Broadband Frequency Multiplier Chains (x8) in 130-nm BiCMOS Technology. In: IEEE Transactions on Microwave Theory and Techniques (,Article,Scopus). DOI:10.1109/TMTT.2020.2988869. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087837568&doi=10.1109%2fTMTT.2020.2988869&partnerID=40&md5=1cd934612e785dcd41013a6d22e3546e>
- Ali A., Yun J. et. al. (2020): Wideband Frequency Quadrupler for D-Band Applications in BiCMOS Technology. In: 2020 23rd International Microwave and Radar Conference, MIKON 2020 (,Conference Paper,Scopus). DOI:10.23919/MIKON48703.2020.9253849. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097538116&doi=10.23919%2fMIKON48703.2020.9253849&partnerID=40&md5=5f2640e799f2e8bcb1e005100e376d0c>
- Ali A., Yun J. et. al. (2020): D-Band balanced PA with wideband performance in BiCMOS technology. In: 2020 International Workshop on Integrated Nonlinear Microwave and Millimetre-Wave Circuits, INMMiC 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.1109/INMMiC46721.2020.9160324. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092128836&doi=10.1109%2fINMMiC46721.2020.9160324&partnerID=40&md5=531af1003ec47de1cfb8e7640295c403>
- Ali A., Yun J. et. al. (2020): 90 GHz Bandwidth Single-Ended PA for D-Band Applications in BiCMOS Technology. In: 2020 4th Australian Microwave Symposium, AMS 2020 (,Conference Paper,Scopus). DOI:10.1109/AMS48904.2020.9059473. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084180945&doi=10.1109%2fAMS48904.2020.9059473&partnerID=40&md5=a70ca6a2e8e0b2fe1100639ca4f002d6>
- Ali T., Kuhnel K. et. al. (2020): A Study on the Temperature-Dependent Operation of Fluorite-Structure-Based Ferroelectric HfO₂Memory FeFET: A Temperature-Modulated Operation. In: IEEE Transactions on Electron Devices (,Article,Scopus). DOI:10.1109/TED.2020.2996582. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087339134&doi=10.1109%2fTED.2020.2996582&partnerID=40&md5=568bd41a9dc3cc043f5546a5394bba1e>
- Ali T., Kuhnel K. et. al. (2020): A Study on the Temperature-Dependent Operation of Fluorite-Structure-Based Ferroelectric HfO₂Memory FeFET: Pyroelectricity and Reliability. In: IEEE Transactions on Electron Devices (,Article,Scopus). DOI:10.1109/TED.2020.2995781. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087329268&doi=10.1109%2fTED.2020.2995781&partnerID=40&md5=a641b85a3f9e1d0b320a5b742c1a5409>
- Ali T., Kuhnel K. et. al. (2020): Impact of Ferroelectric Wakeup on Reliability of Laminate based Si-doped Hafnium Oxide (HSO) FeFET Memory Cells. In: IEEE International Reliability Physics Symposium Proceedings (,Conference Paper,Scopus). DOI:10.1109/IRPS45951.2020.9128337. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088386997&doi=10.1109%2fIRPS45951.2020.9128337&partnerID=40&md5=e50fca9bb9b624dda3361ed4f642fd7c>
- Ali T., Kühnel K. et. al. (2020): Effect of Substrate Implant Tuning on the Performance of MFIS Silicon Doped Hafnium Oxide (HSO) FeFET Memory. In: 2020 IEEE International Memory Workshop, IMW 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.1109/IMW48823.2020.9108153. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086996043&doi=10.1109%2fIMW48823.2020.9108153&partnerID=40&md5=c569d6dc037268e8ca4d801da03e0ca9>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Ali T., Seidel K. et. al. (2020): A Novel Dual Ferroelectric Layer Based MFMFIS FeFET with Optimal Stack Tuning Toward Low Power and High-Speed NVM for Neuromorphic Applications. In: Digest of Technical Papers - Symposium on VLSI Technology (,Conference Paper,Scopus). DOI:10.1109/VLSITechnology18217.2020.9265111. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098200580&doi=10.1109%2fVLSITechnology18217.2020.9265111&partnerID=40&md5=34daca1a2fd6186f8d1580fc3d5018da>
- Amini E., Kiyan T. et. al. (2020): Second generation of optical IC-backside protection structure. In: Proceedings of the International Symposium on the Physical and Failure Analysis of Integrated Circuits, IPFA (,Conference Paper,Scopus). DOI:10.1109/IPFA49335.2020.9261025. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098127510&doi=10.1109%2fIPFA49335.2020.9261025&partnerID=40&md5=5ee8ac3f362ffb97771cdca8aea70ee9>
- Andjelkovic M., Chen J. et. al. (2020): A Review of Particle Detectors for Space-Borne Self-Adaptive Fault-Tolerant Systems. In: 2020 IEEE East-West Design and Test Symposium, EWDTs 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.1109/EWDTs50664.2020.9225138. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096413113&doi=10.1109%2fEWDTs50664.2020.9225138&partnerID=40&md5=a62c51b862b6fb266c684fc52d09f647>
- Andjelkovic M., Simevski A. et. al. (2020): Design of Radiation Hardened RADFET Readout System for Space Applications. In: Proceedings - Euromicro Conference on Digital System Design, DSD 2020 (,Conference Paper,Scopus). DOI:10.1109/DSD51259.2020.00082. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096359022&doi=10.1109%2fDSD51259.2020.00082&partnerID=40&md5=fedcc822c21eaac8ef5a91222f9f4d92>
- Andrade H., Maharry A. et. al. (2020): Analysis and Monolithic Implementation of Differential Transimpedance Amplifiers. In: Journal of Lightwave Technology (,Article,Scopus). DOI:10.1109/JLT.2020.2990107. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089947812&doi=10.1109%2fJLT.2020.2990107&partnerID=40&md5=118a788729e1c632ff2521ec5149d885>
- Andrade H., Maharry A. et. al. (2020): Comparison of three monolithically integrated TIA topologies for 50 Gb/s OOK and PAM4. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2548762. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082652267&doi=10.1117%2f12.2548762&partnerID=40&md5=d25dfe2d663f281fa8d4363943f9a00b>
- Anfimov D.R., Fufurin I.L. et. al. (2020): Calculation technique of diffuse reflectance spectra using an ensemble of damped harmonic oscillators model for substances identification. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2555119. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090383290&doi=10.1117%2f12.2555119&partnerID=40&md5=b66df544bece7dc672a07f01372a3a41>
- Arnieri E., Boccia L. et. al. (2020): Channel characterization of a dual-band dual-polarized SAR with digital beamforming. In: International Journal of Microwave and Wireless Technologies (,Article,Scopus). DOI:10.1017/S175907872000063X. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088841647&doi=10.1017%2fS175907872000063X&partnerID=40&md5=b9606680759361d55f65d5def3658390>
- Attallah A.G., Koehler N. et. al. (2020): Thermal kinetics of free volume in porous spin-on dielectrics: Exploring the network- and pore-properties. In: Microporous and Mesoporous Materials (,Article,Scopus). DOI:10.1016/j.micromeso.2020.110457. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089515390&doi=10.1016%2fj.micromeso.2020.110457&partnerID=40&md5=9ced796c3c07adf84bf25eed790baaa3>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Babay M., Hallepee C. et. al. (2020): Highly sensitive capacitive sensor based on injection locked oscillators with ppm sensing resolution. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9223884. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094194866&doi=10.1109%2fIMS30576.2020.9223884&partnerID=40&md5=98e2cbf5ab01f0fd18fdccd39438fa6c>
- Bagolini L., Montanari M. et. al. (2020): Disentangling elastic and inelastic scattering pathways in the intersubband electron dynamics of n -type Ge/SiGe quantum fountains. In: Physical Review B (,Article,Scopus). DOI:10.1103/PhysRevB.101.245302. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086994561&doi=10.1103%2fPhysRevB.101.245302&partnerID=40&md5=48f195e3bb63f76bd0563eb8bd50ed4e>
- Basler, M. (2020): Monolithic integration of inductive components in a GaN-on-Si technology. In: CIPS 2020, 11th International Conference on Integrated Power Electronics Systems. Proceedings (Konferenzbeitrag). DOI:. Link:
- Batzer M.; Shields M. et. al. (2020): Single crystal diamond pyramids for applications in nanoscale quantum sensing. In: Optical Materials Express (,Article,Scopus). DOI:10.1364/OME.380362. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080855043&doi=10.1364%2fOME.380362&partnerID=40&md5=52c85294e190c1f867b2f841de85e62e>
- Bauer J., Gutke M. et. al. (2020): Novel UV-transparent 2-component polyurethane resin for chip-on-board LED micro lenses. In: Optical Materials Express (,Article,Scopus). DOI:10.1364/OME.393844. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090046051&doi=10.1364%2fOME.393844&partnerID=40&md5=8cd77fbe034024b5e154a9ea7a324c48>
- Becker A., Wenger C., Dabrowski J., (2020): Influence of temperature on growth of graphene on germanium. In: Journal of Applied Physics (,Article,Scopus). DOI:10.1063/5.0003234. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090019640&doi=10.1063%2f5.0003234&partnerID=40&md5=8cf46d332e382c1a3688ac5c89d2be36>
- Becker L., Storck P. et. al. (2020): Controlling the relaxation mechanism of low strain Si1-xGex/Si(001) layers and reducing the threading dislocation density by providing a preexisting dislocation source. In: Journal of Applied Physics (,Article,Scopus). DOI:10.1063/5.0032454. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097584569&doi=10.1063%2f5.0032454&partnerID=40&md5=8503be909ca128936b4af6b24e9606ab>
- Bejenari I., Burenkov A. et. al. (2020): Molecular dynamics modeling of the radial heat transfer from silicon nanowires. In: International Conference on Simulation of Semiconductor Processes and Devices, SISPAD (,Conference Paper,Scopus). DOI:10.23919/SISPAD49475.2020.9241646. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096244287&doi=10.23919%2fSISPAD49475.2020.9241646&partnerID=40&md5=730f871ace1d5be5e42bf8fd9c48319e>
- Belete M., Engström O. et. al. (2020): Electron Transport across Vertical Silicon/MoS2/Graphene Heterostructures: Towards Efficient Emitter Diodes for Graphene Base Hot Electron Transistors. In: ACS Applied Materials and Interfaces (,Article,Scopus). DOI:10.1021/acsami.9b21691. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081013899&doi=10.1021%2facami.9b21691&partnerID=40&md5=ade0d1cd98573e7b4b65dba4139d1af5>
- Benítez N.T., Baumgartner B. et. al. (2020): Mid-IR sensing platform for trace analysis in aqueous solutions based on a germanium-on-silicon waveguide chip with a mesoporous silica coating for analyte enrichment. In: Optics Express (,Article,Scopus). DOI:10.1364/OE.399646. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090819793&doi=10.1364%2fOE.399646&partnerID=40&md5=a353bcc46e85c9bfb4c24e28a6c50368>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Besendörfer S., Meissner E. et. al. (2020): Interplay between C-doping, threading dislocations, breakdown, and leakage in GaN on Si HEMT structures. In: AIP Advances (,Article,Scopus). DOI:10.1063/1.5141905. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083641852&doi=10.1063%2f1.5141905&partnerID=40&md5=981e513b07820d7c49d8491181f90c8e>
- Besendörfer S., Meissner E. et. al. (2020): The impact of dislocations on AlGaIn/GaN Schottky diodes and on gate failure of high electron mobility transistors. In: Scientific Reports (,Article,Scopus). DOI:10.1038/s41598-020-73977-2. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092570410&doi=10.1038%2fs41598-020-73977-2&partnerID=40&md5=ac6fe08971e306d3a802a46d656cc58a>
- Besendörfer S., Meissner E. et. al. (2020): Vertical breakdown of GaN on Si due to V-pits. In: Journal of Applied Physics (,Article,Scopus). DOI:10.1063/1.5129248. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077974071&doi=10.1063%2f1.5129248&partnerID=40&md5=1e12c20369a700a87c52fc1da2129300>
- Beyer S., Dünkel S. et. al. (2020): FeFET: A versatile CMOS compatible device with game-changing potential. In: 2020 IEEE International Memory Workshop, IMW 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.1109/IMW48823.2020.9108150. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086996668&doi=10.1109%2fIMW48823.2020.9108150&partnerID=40&md5=8c83bd71d2a8d0a9f0638f1dccc54dda>
- Beyreuther A., Herfurth N. et. al. (2020): Contactless device characterization of transistor structures in silicon using electro optical frequency mapping (EOFM). In: Microelectronics Reliability (,Article,Scopus). DOI:10.1016/j.microrel.2020.113583. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077791905&doi=10.1016%2fj.microrel.2020.113583&partnerID=40&md5=d371bdd1165d5237711f8d9ac6d1776c>
- Bouchet O., O'brien D. et. al. (2020): European h2020 project WORTECS wireless mixed reality prototyping. In: Journal of Communications (,Article,Scopus). DOI:10.12720/jcm.15.2.171-177. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078267210&doi=10.12720%2fjcm.15.2.171-177&partnerID=40&md5=800aa32061631334acdd4741a6d38715>
- Brzozowski M., Langendoerfer P., (2020): Bonded Wireless Networks: The Gateway to Real-Time Mobile Applications. In: 2020 28th International Conference on Software, Telecommunications and Computer Networks, SoftCOM 2020 (,Conference Paper,Scopus). DOI:10.23919/SoftCOM50211.2020.9238164. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096572646&doi=10.23919%2fSoftCOM50211.2020.9238164&partnerID=40&md5=22275c871d7adf2c0f7af77164676821>
- Burla M., Hoessbacher C. et. al. (2020): Novel applications of plasmonics and photonics devices to sub-THz wireless. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2550323. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081181210&doi=10.1117%2f12.2550323&partnerID=40&md5=dbcaf6416e9dfa9b8402e331235c5889>
- Caliskan C., Yazici M. et. al. (2020): A Switchless SiGe BiCMOS Bidirectional Amplifier for Wideband Radar Applications. In: IEEE Transactions on Circuits and Systems II: Express Briefs (,Article,Scopus). DOI:10.1109/TCSII.2019.2945862. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092114738&doi=10.1109%2fTCSII.2019.2945862&partnerID=40&md5=16b318547ce4aab82be132bb92ded944>
- Cao Z., Stocchi M. et. al. (2020): Advanced Thermal Modeling of IC - Package Interaction. In: IEEE Radio and Wireless Symposium, RWS (,Conference Paper,Scopus). DOI:10.1109/RWS45077.2020.9050057. Link:

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083226110&doi=10.1109%2fRWS45077.2020.9050057&partnerID=40&md5=2fefb8e63115651d7b8b47c6969db0b7>
- Castro C., Elschner R. et. al. (2020): 100 Gb/s Real-Time Transmission over a THz Wireless Fiber Extender using a Digital-Coherent Optical Modem. In: 2020 Optical Fiber Communications Conference and Exhibition; OFC 2020 - Proceedings (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085179009&partnerID=40&md5=3d123252bb5c28a51d9dc3f62a59877a>
 - Castro C., Elschner R. et. al. (2020): 100 Gb/s real-time transmission over a THz wireless fiber extender using a digital-coherent optical modem. In: Optics InfoBase Conference Papers (,Conference Paper,Scopus). DOI:10.1364/OFC.2020.M4I.2. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089945027&doi=10.1364%2fOFC.2020.M4I.2&partnerID=40&md5=160c165f08c5cca52e6e22a3c2a7905e>
 - Castro C., Elschner R. et. al. (2020): Experimental Demonstrations of High-Capacity THz-Wireless Transmission Systems for beyond 5G. In: IEEE Communications Magazine (,Article,Scopus). DOI:10.1109/MCOM.001.2000306. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097397565&doi=10.1109%2fMCOM.001.2000306&partnerID=40&md5=8e75cc31eca7e4918c338e153ddd479b>
 - Castro C., Elschner R. et. al. (2020): Long-range High-Speed THz-Wireless Transmission in the 300 GHz Band. In: 2020 3rd International Workshop on Mobile Terahertz Systems; IWMTS 2020 (,Conference Paper,Scopus). DOI:10.1109/IWMTS49292.2020.9166263. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092146334&doi=10.1109%2fIWMTS49292.2020.9166263&partnerID=40&md5=af060177b8928a763cfbcffebdfae23>
 - Chaudhary N., Savari S.A. et. al. (2020): Sem image denoising and contour image estimation using deep learning. In: ASMC (Advanced Semiconductor Manufacturing Conference) Proceedings (,Conference Paper,Scopus). DOI:10.1109/ASMC49169.2020.9185250. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089710414&doi=10.1109%2fASMC49169.2020.9185250&partnerID=40&md5=5db068b59cfc055944d7885147083eb1>
 - Chen J., Lange T. et. al. (2020): Prediction of solar particle events with SRAM-based soft error rate monitor and supervised machine learning. In: Microelectronics Reliability (,Article,Scopus). DOI:10.1016/j.microrel.2020.113799. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096006044&doi=10.1016%2fj.microrel.2020.113799&partnerID=40&md5=8726b15a6419780c292469b23b2bfbcf>
 - Chen J., Lange T. et. al. (2020): Hardware Accelerator Design with Supervised Machine Learning for Solar Particle Event Prediction. In: 33rd IEEE International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems, DFT 2020 (,Conference Paper,Scopus). DOI:10.1109/DFT50435.2020.9250856. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096419817&doi=10.1109%2fDFT50435.2020.9250856&partnerID=40&md5=29679d350c360ac381fbb3297c7873f2>
 - Ciano C., Persichetti L. et. al. (2020): Electron-phonon coupling in n -type Ge two-dimensional systems. In: Physical Review B (,Article,Scopus). DOI:10.1103/PhysRevB.102.205302. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097164864&doi=10.1103%2fPhysRevB.102.205302&partnerID=40&md5=6e224af5f0267a44c3bb3c8e62bcffff>
 - Ciano C., Virgilio M. et. al. (2020): Terahertz absorption-saturation and emission from electron-doped germanium quantum wells. In: Optics Express (,Article,Scopus). DOI:10.1364/OE.381471. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080874303&doi=10.1364%2fOE.381471&partnerID=40&md5=844276e0fa6bc734c032769278c2e222>
 - Ciano C., Virgilio M. et. al. (2020): Electron population dynamics in optically pumped asymmetric coupled Ge/SiGe quantum wells: Experiment and models. In: Photonics (,Article,Scopus).

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

DOI:10.3390/PHOTONICS7010002. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079757459&doi=10.3390%2fPHOTONICS7010002&partnerID=40&md5=62ce1a2624272c2e3f188ee76908aef2>

- Ciocoveanu R., Weigel R. et. al. (2020): Design of a 60 GHz 32% PAE Class-AB PA with 2nd Harmonic Control in 45-nm PD-SOI CMOS. In: IEEE Transactions on Circuits and Systems I: Regular Papers (,Conference Paper,Scopus). DOI:10.1109/TCSI.2020.2984042. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089889757&doi=10.1109%2fTCSI.2020.2984042&partnerID=40&md5=437894017363d67cac72f3b40ad065a>
- Clauß, B. (2020): Process monitoring and impulse detection in face milling using capacitive acceleration sensors based on MEMS. In: Procedia CIRP (Zeitschriftenaufsatz). DOI: 10.1016/j.procir.2020.03.037 .Link: <https://doi.org/10.1016/j.procir.2020.03.037>
- Cornet C., Chen L. et. al. (2020): Strong electron-phonon interaction in 2d vertical homovalent III-V singularities. In: ACS Nano (,Article,Scopus). DOI:10.1021/acsnano.0c04702. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094983712&doi=10.1021%2facsnano.0c04702&partnerID=40&md5=129ad7c31c95e0c250f29b27dd73291a>
- Curreli N., Serri M. et. al. (2020): Liquid Phase Exfoliated Indium Selenide Based Highly Sensitive Photodetectors. In: Advanced Functional Materials (,Article,Scopus). DOI:10.1002/adfm.201908427. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079733924&doi=10.1002%2fadfm.201908427&partnerID=40&md5=17a68502e1c788d8bb4930068e397c2e>
- Cwiklinski M., Bruckner P. et. al. (2020): First demonstration of G-Band Broadband GaN power amplifier MMICs operating beyond 200 GHz. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9224041. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094208190&doi=10.1109%2fIMS30576.2020.9224041&partnerID=40&md5=c46d883ccf3bbf123f8b95036de0eff8>
- Dadzis K., Menzel R. et. al. (2020): Characterization of Silicon Crystals Grown from Melt in a Granulate Crucible. In: Journal of Electronic Materials (,Article,Scopus). DOI:10.1007/s11664-020-08309-1. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088553908&doi=10.1007%2fs11664-020-08309-1&partnerID=40&md5=f6f17092fe3aaf8aefeeb82952d6a3c5>
- Dahiya A.S., Thireau J. et. al. (2020): Review - Energy Autonomous Wearable Sensors for Smart Healthcare: A Review. In: Journal of the Electrochemical Society (,Review,Scopus). DOI:10.1149/2.0162003JES. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081134710&doi=10.1149%2f2.0162003JES&partnerID=40&md5=12001a09b43d7cacb6218510f6c9ffe0>
- Datsuk A., Balashov A. et. al. (2020): An Approach to Verify Electro-thermal Material Stack-up File Based on Modeling of Poly Resistors with Different Geometry. In: Proceedings of the 2020 IEEE Conference of Russian Young Researchers in Electrical and Electronic Engineering, EIConRus 2020 (,Conference Paper,Scopus). DOI:10.1109/EIConRus49466.2020.9038937. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082985831&doi=10.1109%2fEIConRus49466.2020.9038937&partnerID=40&md5=1bae724c69620e70f7ae48dc9f39817f>
- Di Benedetto L., Licciardo G.D. et. al. (2020): A 4H-SiC UV Phototransistor with Excellent Optical Gain Based on Controlled Potential Barrier. In: IEEE Transactions on Electron Devices (,Article,Scopus). DOI:10.1109/TED.2019.2950986. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077779290&doi=10.1109%2fTED.2019.2950986&partnerID=40&md5=7dc7db1fea83af4c15610872b531b523>
- Ding A., Driad R. et. al. (2020): Non-Polar a-plane AlScN(1120) Thin Film Based SAW Resonators with Significantly Improved Electromechanical Coupling. In: IEEE International Ultrasonics Symposium; IUS (,Conference Paper,Scopus). DOI:10.1109/IUS46767.2020.9251391. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85097914458&doi=10.1109%2fUS46767.2020.9251391&partnerID=40&md5=4bf7dc1d25c29a250ac2e0a2628a4382](https://doi.org/10.1109/US46767.2020.9251391&partnerID=40&md5=4bf7dc1d25c29a250ac2e0a2628a4382)
- Ding A., Kirste L. et. al. (2020): Enhanced electromechanical coupling in SAW resonators based on sputtered non-polar Al_{0.77}Sc_{0.23}N₁₁ 2⁻⁰ thin films. In: Applied Physics Letters (,Article,Scopus). DOI:10.1063/1.5129329. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082677186&doi=10.1063%2f1.5129329&partnerID=40&md5=4b139c5648c3903b9ca0ae5bbf3aedde>
 - Dlugosch J.M., Devendra D. et. al. (2020): Metallic top contacts to self-assembled monolayers of aliphatic phosphonic acids on titanium nitride. In: Proceedings of the IEEE Conference on Nanotechnology (,Conference Paper,Scopus). DOI:10.1109/NANO47656.2020.9183521. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091015555&doi=10.1109%2fNANO47656.2020.9183521&partnerID=40&md5=5485e6202349bb285a9abdc7968e5adc>
 - Doering P., Driad R. et. al. (2020): Growth and Fabrication of Quasivertical Current Aperture Vertical Electron Transistor Structures. In: Physica Status Solidi (A) Applications and Materials Science (,Article,Scopus). DOI:10.1002/pssa.202000379. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091387136&doi=10.1002%2fpssa.202000379&partnerID=40&md5=9b4df222aff131ea983613c799591744>
 - Du H., Letz S. et. al. (2020): Effect of short-circuit degradation on the remaining useful lifetime of SiC MOSFETs and its failure analysis. In: Microelectronics Reliability (,Article,Scopus). DOI:10.1016/j.microrel.2020.113784. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096357518&doi=10.1016%2fj.microrel.2020.113784&partnerID=40&md5=93ecb8cd2d4797bbc23ee07b9f3d8e2f>
 - Dudek R., Hildebrandt M. et. al. (2020): Analysis of Solder Fatigue on Mounted Test Assemblies under Thermal Cycling Loads. In: 2020 21st International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems, EuroSimE 2020 (,Conference Paper,Scopus). DOI:10.1109/EuroSimE48426.2020.9152623. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090404479&doi=10.1109%2fEuroSimE48426.2020.9152623&partnerID=40&md5=74ebcd5171cc435e91298929e458e511>
 - Dudek R., Mathew A. et. al. (2020): Reliability modelling for different wire bonding technologies based on FEA and nano-indentation. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229761. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096510947&doi=10.1109%2fESTC48849.2020.9229761&partnerID=40&md5=87ebc5c087ff5d99d02e2ea03a128860>
 - Dug M., Weidling S. et. al. (2020): Full Error Detection and Correction Method Applied on Pipelined Structure Using Two Approaches. In: Journal of Circuits, Systems and Computers (,Article,Scopus). DOI:10.1142/S0218126620502187. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082186426&doi=10.1142%2fS0218126620502187&partnerID=40&md5=6e3cac08e65273713cbf317de4dd538d>
 - Dyka Z., Vogel E. et. al. (2020): No Resilience without Security. In: 2020 9th Mediterranean Conference on Embedded Computing, MECO 2020 (,Conference Paper,Scopus). DOI:10.1109/MECO49872.2020.9134179. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088528656&doi=10.1109%2fMECO49872.2020.9134179&partnerID=40&md5=41488029ade8ce121a69f5fb7cf09212>
 - Eissa M.H., Maletic N. et. al. (2020): 100 Gbps 0.8-m wireless link based on fully integrated 240 GHz IQ transmitter and receiver. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9224101. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85094209283&doi=10.1109%2fIMS30576.2020.9224101&partnerID=40&md5=2af663357c54497e75fc2459ce827bcf](https://doi.org/10.1109/2fIMS30576.2020.9224101&partnerID=40&md5=2af663357c54497e75fc2459ce827bcf)
- Engst C.R., Eisele I., Kutter C., (2020): Defect characterization of unannealed neutron transmutation doped silicon by means of deep temperature microwave detected photo induced current transient spectroscopy. In: Journal of Applied Physics (,Article,Scopus). DOI:10.1063/1.5134663. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078295563&doi=10.1063%2f1.5134663&partnerID=40&md5=9003c345b177439a6df442af4e6c3c41>
 - Etehad H.M., Zarrin P.S. et. al. (2020): Dielectrophoretic immobilization of yeast cells using CMOS integrated microfluidics. In: Micromachines (,Article,Scopus). DOI:10.3390/MI11050501. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085738885&doi=10.3390%2fMI11050501&partnerID=40&md5=113e665e963d48aeea24df370fff3fa5>
 - Faraji S., Meissner E. et. al. (2020): In-situ preparation of gan sacrificial layers on sapphire substrate in movpe reactor for self-separation of the overgrown gan crystal. In: Crystals (,Article,Scopus). DOI:10.3390/cryst10121100. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097169494&doi=10.3390%2fcryst10121100&partnerID=40&md5=2040d3c0b65a8a9c43e3721a864a43e2>
 - Feil N.M., Mayer E. et. al. (2020): Novel Method for Extracting Material Constants of Epitaxial Wurtzite AlScN Films on Sapphire Using Higher Order Surface Acoustic Wave Modes. In: IEEE International Ultrasonics Symposium; IUS (,Conference Paper,Scopus). DOI:10.1109/IUS46767.2020.9251767. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097912472&doi=10.1109%2fIUS46767.2020.9251767&partnerID=40&md5=e8c67f6018ffbf85be89cd71bae93301>
 - Fichtner S., Lofink F. et. al. (2020): Ferroelectricity in AlScN: Switching, Imprint and sub-150 nm Films. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234883. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096981225&doi=10.1109%2fIFCS-ISAF41089.2020.9234883&partnerID=40&md5=3fa352233066223ea320a8a042731260>
 - Fischer I.A., Clausen C.J. et. al. (2020): Composition analysis and transition energies of ultrathin Sn-rich GeSn quantum wells. In: Physical Review Materials (,Article,Scopus). DOI:10.1103/PhysRevMaterials.4.024601. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082738355&doi=10.1103%2fPhysRevMaterials.4.024601&partnerID=40&md5=008a62bf1d0df9bc3b4529a681c090da>
 - Forsten H., Kiuru T. et. al. (2020): Scalable 60 GHz FMCW Frequency-Division Multiplexing MIMO Radar. In: IEEE Transactions on Microwave Theory and Techniques (,Article,Scopus). DOI:10.1109/TMTT.2020.2980521. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087808901&doi=10.1109%2fTMTT.2020.2980521&partnerID=40&md5=1ca4ce8e206bd491c338626eac630024>
 - Franz J., Roben F., (2020): Market Response for Real-Time Energy Balancing: Simulation using Field Test Data. In: International Conference on the European Energy Market, EEM (,Conference Paper,Scopus). DOI:10.1109/EEM49802.2020.9221882. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094815361&doi=10.1109%2fEEM49802.2020.9221882&partnerID=40&md5=d56332e186a04aee70e6efd1253b9b1b>
 - Fröhlich A., Hofmann C. et. al. (2020): Selective induction heating of metallic microstructures for wafer-level MEMS packaging. In: International Journal of Applied Electromagnetics and Mechanics (,Conference Paper,Scopus). DOI:10.3233/JAE-209121. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088009051&doi=10.3233%2fJAE-209121&partnerID=40&md5=d9296cf2ceb8a99656c21337d86b5ec8>
 - Fuchs F., Bilal Khan M. et. al. (2020): Formation and crystallographic orientation of NiSi₂-Si interfaces. In: Journal of Applied Physics (,Article,Scopus). DOI:10.1063/1.5143122. Link:

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090080562&doi=10.1063%2f1.5143122&partnerID=40&md5=9a74715bbcc4329a21dcd11e827e6b48>
- Gadallah A., Eissa M.H. et. al. (2020): A V-Band Miniaturized Bidirectional Switchless PALNA in SiGe:C BiCMOS Technology. In: IEEE Microwave and Wireless Components Letters (,Article,Scopus). DOI:10.1109/LMWC.2020.3005211. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089547090&doi=10.1109%2fLMWC.2020.3005211&partnerID=40&md5=814c4ca2767c518debda6dd3aa0c9ea6>
 - Gadallah A., Eissa M.H. et. al. (2020): A V-band Bidirectional Amplifier-Module for Hybrid Phased-Array Systems in BiCMOS Technology. In: IEEE Radio and Wireless Symposium, RWS (,Conference Paper,Scopus). DOI:10.1109/RWS45077.2020.9050023. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083224676&doi=10.1109%2fRWS45077.2020.9050023&partnerID=40&md5=62a3f694c17662c3366c8e604a17a026>
 - Gadhiya G., Rzepka S. et. al. (2020): The systematic study of fan-out wafer warpage using analytical, numerical and experimental methods. In: ASME 2020 International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems, InterPACK 2020 (,Conference Paper,Scopus). DOI:10.1115/IPACK2020-2555. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098323098&doi=10.1115%2fIPACK2020-2555&partnerID=40&md5=32edbd40f689f7b1b53a134854ff143d>
 - Gallacher K., Ortolani M. et. al. (2020): Design and simulation of losses in Ge/SiGe terahertz quantum cascade laser waveguides. In: Optics Express (,Article,Scopus). DOI:10.1364/OE.384993. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079409435&doi=10.1364%2fOE.384993&partnerID=40&md5=4f5d02225b605aaf0d58379bd225c2f8>
 - Gashi B., John L. et. al. (2020): Broadband and high-gain 400-GHz InGaAs mHEMT medium-power amplifier S-MMIC. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9223968. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094179218&doi=10.1109%2fIMS30576.2020.9223968&partnerID=40&md5=87b756cf1841504dddb14e815c69ce0a>
 - Gehner A., Döring S. et. al. (2020): Novel CMOS-integrated 512x320 tip-tilt micro mirror array and related technology platform. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2543052. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084174391&doi=10.1117%2f12.2543052&partnerID=40&md5=b946eb0fa439f333cbe58c878d4732c5>
 - Georgieva G., Voigt K. et. al. (2020): Cross-polarization effects in sheared 2D grating couplers in a photonic BiCMOS technology. In: Japanese Journal of Applied Physics (,Article,Scopus). DOI:10.35848/1347-4065/ab8e21. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085662272&doi=10.35848%2f1347-4065%2fab8e21&partnerID=40&md5=8c5503a9e565b2686e79327fa7f3286e>
 - Georgieva G., Voigt K. et. al. (2020): Design and performance analysis of integrated focusing grating couplers for the transverse-magnetic TM₀₀ mode in a photonic BiCMOS technology. In: Journal of the European Optical Society (,Article,Scopus). DOI:10.1186/s41476-020-00129-4. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083271470&doi=10.1186%2fs41476-020-00129-4&partnerID=40&md5=5a6414995b181d50b96f38a8d15e42a2>
 - Gepp M., Lorentz V. et. al. (2020): Spatial and Temporal Temperature Homogenization in an Automotive Lithium-Ion Pouch Cell Battery Module. In: Lecture Notes in Electrical Engineering (,Conference Paper,Scopus). DOI:10.1007/978-3-030-37161-6_47. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084838052&doi=10.1007%2f978-3-030-37161-6_47&partnerID=40&md5=afe241b8347ad993013ec45d2abe8367

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Gerwig M., Ali A.S. et. al. (2020): From Cyclopentasilane to Thin-Film Transistors. In: Advanced Electronic Materials (,Article,Scopus). DOI:10.1002/aelm.202000422. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097948018&doi=10.1002%2faelm.202000422&partnerID=40&md5=69cf54f4e865d1047c78d47eae3cb2bb>
- Giese C.; Quellmalz P.; Knittel P.; (2020): Development of All-Diamond Scanning Probes Based on Faraday Cage Angled Etching Techniques. In: MRS Advances (,Article,Scopus). DOI:10.1557/adv.2020.147. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093835892&doi=10.1557%2fadv.2020.147&partnerID=40&md5=8a966466b9f9c88a2ebbcd362a89da36>
- Giliberti D.A., Iseini F. et. al. (2020): An advanced audio system for stereo reproduction enhancement. In: 148th Audio Engineering Society International Convention (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091574858&partnerID=40&md5=40bba1d82b04c213d2d7264be87ef1b4>
- Gillibert R., Malerba M. et. al. (2020): Nanospectroscopy of a single patch antenna strongly coupled to a mid-infrared intersubband transition in a quantum well. In: Applied Physics Letters (,Article,Scopus). DOI:10.1063/5.0018865. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091449988&doi=10.1063%2f5.0018865&partnerID=40&md5=553c3d131df66b05e612189bd4c4ebac9>
- Goodarzi M., Cvetkovski D. et. al. (2020): A hybrid bayesian approach towards clock offset and skew estimation in 5G networks. In: IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, PIMRC (,Conference Paper,Scopus). DOI:10.1109/PIMRC48278.2020.9217175. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094122234&doi=10.1109%2fPIMRC48278.2020.9217175&partnerID=40&md5=146f8ba61e2adc66fd0156209d10d70c>
- Goodarzi M., Cvetkovski D. et. al. (2020): Synchronization in 5G: A Bayesian Approach. In: 2020 European Conference on Networks and Communications, EuCNC 2020 (,Conference Paper,Scopus). DOI:10.1109/EuCNC48522.2020.9200930. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093859720&doi=10.1109%2fEuCNC48522.2020.9200930&partnerID=40&md5=ee45eb4c3894638345baae3196088a53>
- Grahmann J., Schroedter R. et. al. (2020): Vibration analysis of micro mirrors for LIDAR using on-chip piezo-resistive sensor. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2551600. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084182147&doi=10.1117%2f12.2551600&partnerID=40&md5=9f67ace93437a053d3fd9da798749143>
- Grange T., Mukherjee S. et. al. (2020): Atomic-Scale Insights into Semiconductor Heterostructures: From Experimental Three-Dimensional Analysis of the Interface to a Generalized Theory of Interfacial Roughness Scattering. In: Physical Review Applied (,Article,Scopus). DOI:10.1103/PhysRevApplied.13.044062. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086984833&doi=10.1103%2fPhysRevApplied.13.044062&partnerID=40&md5=c942f37bd11778949aba2269eec796c8>
- Gröner L., Mengis L. et. al. (2020): Investigations of the deuterium permeability of As-deposited and oxidized Ti2AlN coatings. In: Materials (,Article,Scopus). DOI:10.3390/ma13092085. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085545424&doi=10.3390%2fma13092085&partnerID=40&md5=18bf0d770817ff5786a792bb286ac537>
- Gruessing S., Witzigmann B. et. al. (2020): Modeling of plasmonic semiconductor THz antennas in square and hexagonal array arrangements. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2543553. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85083756205&doi=10.1117%2f12.2543553&partnerID=40&md5=d786594112bb7d88f67b07a3cf7ff01c](https://doi.org/10.1117/12.2543553&partnerID=40&md5=d786594112bb7d88f67b07a3cf7ff01c)
- Guaracao J.M.M., Kircher M. et. al. (2020): First time of nanoscopic electrostatic drives pushing for ultrasonic transmission for gesture recognition. In: IEEE International Ultrasonics Symposium, IUS (,Conference Paper,Scopus). DOI:10.1109/IUS46767.2020.9251316. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097888854&doi=10.1109%2fIUS46767.2020.9251316&partnerID=40&md5=12f77bda8ca08161dac215af0fdc214d>
 - Guerra V., Rabadan J. et. al. (2020): WORTECS: Enabling untethered Virtual Reality through Optical Wireless Communication. In: 2020 South American Colloquium on Visible Light Communications, SACVC 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.1109/SACVLC50805.2020.9129888. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092651203&doi=10.1109%2fSACVLC50805.2020.9129888&partnerID=40&md5=68ea6ff033ae44b071d3d96f1b5be8f0>
 - Guner A., Mausolf T. et. al. (2020): A 440-540-GHz Subharmonic Mixer in 130-nm SiGe BiCMOS. In: IEEE Microwave and Wireless Components Letters (,Article,Scopus). DOI:10.1109/LMWC.2020.3030315. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097777165&doi=10.1109%2fLMWC.2020.3030315&partnerID=40&md5=f169fe44237972666b55de548a8cc830>
 - Gungor B., Turkmen E. et. al. (2020): A 6-mW W-Band LNA in 0.13 μ m SiGe BiCMOS for Passive Imaging Systems. In: Midwest Symposium on Circuits and Systems (,Conference Paper,Scopus). DOI:10.1109/MWSCAS48704.2020.9184517. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090564445&doi=10.1109%2fMWSCAS48704.2020.9184517&partnerID=40&md5=431c9be7c7960c6e90e36a1d8978d6c1>
 - Gu-Stoppel S., Lisek T. et. al. (2020): A triple-wafer-bonded AlScN driven quasi-static MEMS mirror with high linearity and large tilt angles. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2542800. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084174728&doi=10.1117%2f12.2542800&partnerID=40&md5=baa96f289e52aa76dfa45ff09828eb9a>
 - Gu-Stoppel S., Lisek T. et. al. (2020): AlScN based MEMS quasi-static mirror matrix with large tilting angle and high linearity. In: Sensors and Actuators, A: Physical (,Article,Scopus). DOI:10.1016/j.sna.2020.112107. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086502829&doi=10.1016%2fj.sna.2020.112107&partnerID=40&md5=95a1147bf091bcb49b64e0cce34c033e>
 - Haase M., Melzer M. et. al. (2020): On the relationship between SiF₄ plasma species and sample properties in ultra low-k etching processes. In: AIP Advances (,Article,Scopus). DOI:10.1063/1.5125498. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087587893&doi=10.1063%2f1.5125498&partnerID=40&md5=7a4a16d27fe10bba0d971aed1d488654>
 - Han H., Eigentler T.W. et. al. (2020): Design, implementation, evaluation and application of a 32-channel radio frequency signal generator for thermal magnetic resonance based anti-cancer treatment. In: Cancers (,Article,Scopus). DOI:10.3390/cancers12071720. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087291685&doi=10.3390%2fcancers12071720&partnerID=40&md5=4854b227bd0715991f6cd50aad1ba394>
 - Hartmann M., Tittmann-Otto J. et. al. (2020): Gate Spacer Investigation for Improving the Speed of High-Frequency Carbon Nanotube-Based Field-Effect Transistors. In: ACS Applied Materials and Interfaces (,Article,Scopus). DOI:10.1021/acsmi.0c01171. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086683079&doi=10.1021%2facsmi.0c01171&partnerID=40&md5=d7765245c5e13acb30ea69473464d52c>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Harutyunyan A., Heinig A. et. al. (2020): 5 mm Range 61 GHz System on Chip EPC Gen2 RFID tag in 22nm FD-SOI Technology. In: 2020 IEEE International Conference on RFID, RFID 2020 (,Conference Paper,Scopus). DOI:10.1109/RFID49298.2020.9244879. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097267931&doi=10.1109%2fRFID49298.2020.9244879&partnerID=40&md5=367e57137a3897863f4f276bd6effd6b>
- Hasani A., Lopacinski L. et. al. (2020): A Modified Rejection-Based Architecture to Find the First Two Minima in Min-Sum-Based LDPC Decoders. In: IEEE Wireless Communications and Networking Conference, WCNC (,Conference Paper,Scopus). DOI:10.1109/WCNC45663.2020.9120630. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087283812&doi=10.1109%2fWCNC45663.2020.9120630&partnerID=40&md5=08be99822097a85887cfeb2037b1cd2a>
- Hauke A., Oertel S. et. al. (2020): Screen-Printed Sensor for Low-Cost Chloride Analysis in Sweat for Rapid Diagnosis and Monitoring of Cystic Fibrosis. In: Biosensors (,Article,Scopus). DOI:10.3390/bios10090123. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090824542&doi=10.3390%2fbios10090123&partnerID=40&md5=9c74d28258af6537d84b36412740dab1>
- Hayakawa D., Iacobucci G. et. al. (2020): Development of the Thin TOF-PET scanner based on fast monolithic silicon pixel sensors. In: Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment (,Article,Scopus). DOI:10.1016/j.nima.2019.162433. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85069850656&doi=10.1016%2fj.nima.2019.162433&partnerID=40&md5=9ba6c8c5a33f5e9b0ff1b73504c4e919>
- Heinz F.; Thome F. et. al. (2020): Noise performance of sub-100-nm metamorphic HEMT technologies. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9223783. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094213585&doi=10.1109%2fIMS30576.2020.9223783&partnerID=40&md5=00147d9113ca45a9acc7a77d6e13eaa5>
- Hellinger C., Rusch O. et. al. (2020): Low-resistance ohmic contact formation by laser annealing of n-implanted 4h-sic. In: Materials Science Forum (,Conference Paper,Scopus). DOI:10.4028/www.scientific.net/MSF.1004.718. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089799907&doi=10.4028%2fwww.scientific.net%2fMSF.1004.718&partnerID=40&md5=d0c1152d62ec03ea1df5a30c7e340248>
- Henriksson A., Kasper L. et. al. (2020): An approach to ring resonator biosensing assisted by dielectrophoresis: Design, simulation and fabrication. In: Micromachines (,Article,Scopus). DOI:10.3390/mi11110954. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095932902&doi=10.3390%2fmi11110954&partnerID=40&md5=b85eb36794802ddec9e95b405eaed6f8>
- Hertel S., Vogel K. et. al. (2020): Electroplating of Pd/Sn multilayers for reactive bonding in packaging and assembly applications. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229651. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096608013&doi=10.1109%2fESTC48849.2020.9229651&partnerID=40&md5=fa59df197c968d6de2cb7e902d3a8412>
- Hertel S., Wiemer M., Otto T., (2020): Galvanic aluminum deposition on different seed layers for the printed circuit board and microsystem technologies (Part 2) [Galvanische aluminium-abscheidung auf unterschiedlichen startschichten für die leiterplatten- und mikrosystemtechnik (Teil 2)]. In: Galvanotechnik (,Article,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096320193&partnerID=40&md5=b227b9f16855cad3fce7d039631f1dc3>
- Hertel S., Wiemer M., Otto T., (2020): Galvanic aluminum deposition on different seed layers for the printed circuit board and microsystem technologies (Part 3) [Galvanische Aluminium-

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

Abscheidung auf unterschiedlichen Startschichten für die Leiterplatten- und Mikrosystemtechnik (Teil 3)]. In: Galvanotechnik (,Article,Scopus). Link:

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096337959&partnerID=40&md5=59d6bab9d475f2387b47dd82f9e301cd>

- Hertel S., Wiemer M., Otto T., (2020): Galvanic deposition of aluminum on different seed layers for the printed circuit board and microsystem technology (Part 1) [Galvanische Aluminium-Abscheidung auf unterschiedlichen Startschichten für die Leiterplatten- und Mikrosystemtechnik (Teil 1)]. In: Galvanotechnik (,Article,Scopus). Link:
<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095848636&partnerID=40&md5=11ae4af6e70829390fb2e81124bc8be7>
- Hessler S., Knopf S. et. al. (2020): Advancing the sensitivity of integrated epoxy-based Bragg grating refractometry by high-index nanolayers. In: Optics Letters (,Article,Scopus). DOI:10.1364/OL.402768. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092522529&doi=10.1364%2fOL.402768&partnerID=40&md5=eec275994f100f28afb7f524fb84aa8f>
- Hirsch A., Trempa M. et. al. (2020): Investigation of gas bubble growth in fused silica crucibles for silicon Czochralski crystal growth. In: Journal of Crystal Growth (,Article,Scopus). DOI:10.1016/j.jcrysgro.2019.125470. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077515132&doi=10.1016%2fj.jcrysgro.2019.125470&partnerID=40&md5=2b1b9bcac428ad95823f5efbbeff7460>
- Hoffmann M.A., Sharma A. et. al. (2020): Spectroscopic ellipsometry and magneto-optical Kerr effect spectroscopy study of thermally treated Co60Fe20B20 thin films. In: Journal of Physics Condensed Matter (,Article,Scopus). DOI:10.1088/1361-648X/ab4d2f. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075812590&doi=10.1088%2f1361-648X%2fab4d2f&partnerID=40&md5=ff80e4f62f954410c42edfe3ec5efe1f>
- Hofmann, C. (2020): Induktives Fügen in der Mikrosystemtechnik. In: Prozesswärme (Zeitschriftenaufsatz). DOI:. Link:
- Hofstetter D., Beck H. et. al. (2020): Evidence of strong electron-phonon interaction in a GaN-based quantum cascade emitter. In: Superlattices and Microstructures (,Article,Scopus). DOI:10.1016/j.spmi.2020.106631. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086999950&doi=10.1016%2fj.spmi.2020.106631&partnerID=40&md5=db196a764c74f45927d327921405ec61>
- Hoppe M., Rohling H. et. al. (2020): Wide and fast mode-hop free MEMS tunable ECDL concept and realization in the NIR and MIR spectral regime. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2546213. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084178732&doi=10.1117%2f12.2546213&partnerID=40&md5=c051940e4cdc9da6dd7d99b9e2509e9e>
- Hoppe M., Rohling H. et. al. (2020): Innovative Concept of Tunable ECDLs Based on MEMS in the NIR and MIR Spectral Regime. In: Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091663915&partnerID=40&md5=802f72aeacee9d4e9fd94dc86ea86a2f>
- Hoppe M., Rohling H. et. al. (2020): Innovative concept of tunable ECDLs based on MEMS in the NIR and MIR spectral regime. In: Optics InfoBase Conference Papers (,Conference Paper,Scopus). DOI:10.1364/CLEO_AT.2020.JTh2D.2. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095125299&doi=10.1364%2fCLEO_AT.2020.JTh2D.2&partnerID=40&md5=832282819bd04a958ea44be2337112ef
- Hrobak M., Thurn K. et. al. (2020): A Modular MIMO Millimeter-Wave Imaging Radar System for Space Applications and Its Components. In: Journal of Infrared, Millimeter, and Terahertz Waves (,Article,Scopus). DOI:10.1007/s10762-020-00736-9. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096765773&doi=10.1007%2fs10762-020-00736-9&partnerID=40&md5=0583698b1cc882cb1184bf762387be25>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Hutzler A., Fritsch B. et. al. (2020): Highly accurate determination of heterogeneously stacked Van-der-Waals materials by optical microspectroscopy. In: Scientific Reports (,Article,Scopus). DOI:10.1038/s41598-020-70580-3. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089410421&doi=10.1038%2fs41598-020-70580-3&partnerID=40&md5=99d1f8da7d48e50ba7cdb66faea9213f>
- Huynh D.K., Le Q.H. et. al. (2020): Analysis of Hot-Carrier Degradation in 22nm FDSOI Transistors Using RF Small-Signal Characteristics. In: GeMIC 2020 - Proceedings of the 2020 German Microwave Conference (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085003044&partnerID=40&md5=317d1e5a94927eebd87e5d4665c7c370>
- Ihle, Martin (2020): Aufbaukonzept für HF-Systeme. In: (Patent). Link: <https://worldwide.espacenet.com/publicationDetails/biblio?DB=worldwide.espacenet.com&FT=D&CC=DE&NR=102018214126A1> |t Frontpage
- Ildefonso A., Tzintzarov G.N. et. al. (2020): Tradeoffs between RF Performance and SET Robustness in Low-Noise Amplifiers in a Complementary SiGe BiCMOS Platform. In: IEEE Transactions on Nuclear Science (,Article,Scopus). DOI:10.1109/TNS.2020.2996298. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088860439&doi=10.1109%2fTNS.2020.2996298&partnerID=40&md5=de887a7d2f326c1e2e6f6b2c288a112c>
- Jeftenic N., Simic M., Stamenkovic Z., (2020): Impact of Environmental Parameters on SNR and RSS in LoRaWAN. In: 2nd International Conference on Electrical, Communication and Computer Engineering, ICECCE 2020 (,Conference Paper,Scopus). DOI:10.1109/ICECCE49384.2020.9179250. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091913760&doi=10.1109%2fICECCE49384.2020.9179250&partnerID=40&md5=2d7f5a602d2f647635c6b9f2613fb834>
- John L., Neiningner P. et. al. (2020): Considerations for Through-Substrate-Via Placement in InGaAs mHEMT THz Circuits Using Thin-Film Wiring. In: GeMIC 2020 - Proceedings of the 2020 German Microwave Conference (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085035974&partnerID=40&md5=d34b9fb65872041b82bda2ea95a36d07>
- John L., Tessmann A. et. al. (2020): Broadband 300-GHz Power Amplifier MMICs in InGaAs mHEMT Technology. In: IEEE Transactions on Terahertz Science and Technology (,Article,Scopus). DOI:10.1109/TTHZ.2020.2965808. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084516447&doi=10.1109%2fTTHZ.2020.2965808&partnerID=40&md5=d93c7618de748e03062ca98f589c132a>
- Johrmann N., Ecke R., Wunderle B., (2020): Nanoindentation as part of material characterization of thin metal films. In: 2020 21st International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems, EuroSimE 2020 (,Conference Paper,Scopus). DOI:10.1109/EuroSimE48426.2020.9152706. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090424877&doi=10.1109%2fEuroSimE48426.2020.9152706&partnerID=40&md5=9c5127afebc8d536513a7510709feefa>
- Kabin I., Dyka Z. et. al. (2020): Resistance of the Montgomery kP Algorithm against Simple SCA: Theory and Practice. In: 21st IEEE Latin-American Test Symposium, LATS 2020 (,Conference Paper,Scopus). DOI:10.1109/LATS49555.2020.9093678. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085513866&doi=10.1109%2fLATS49555.2020.9093678&partnerID=40&md5=9e2298c1470794b8cacdd29da3b8cd6e>
- Kabin I., Dyka Z. et. al. (2020): Horizontal Attacks Against ECC: From Simulations to ASIC. In: Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) (,Conference Paper,Scopus). DOI:10.1007/978-3-030-42051-2_5. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081688963&doi=10.1007%2f978-3-030-42051-2_5&partnerID=40&md5=b41a2fb24de7ee89381357d8e1a25340

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Kabin I., Dyka Z. et. al. (2020): Methods increasing inherent resistance of ECC designs against horizontal attacks. In: Integration (,Article,Scopus). DOI:10.1016/j.vlsi.2020.03.001. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082683763&doi=10.1016%2fj.vlsi.2020.03.001&partnerID=40&md5=4e365a7f5985fa51f20df591abace9b8>
- Kabin I., Dyka Z. et. al. (2020): Breaking a fully Balanced ASIC Coprocessor Implementing Complete Addition Formulas on Weierstrass Elliptic Curves. In: Proceedings - Euromicro Conference on Digital System Design, DSD 2020 (,Conference Paper,Scopus). DOI:10.1109/DSD51259.2020.00051. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096354056&doi=10.1109%2fDSD51259.2020.00051&partnerID=40&md5=8ce9e05ffce3f2094af8dcee61fa377a>
- Kabin I., Dyka Z., Langendoerfer P., (2020): Automated Simple Analysis Attack. In: 2020 9th Mediterranean Conference on Embedded Computing, MECO 2020 (,Conference Paper,Scopus). DOI:10.1109/MECO49872.2020.9134160. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088513832&doi=10.1109%2fMECO49872.2020.9134160&partnerID=40&md5=5bc523b101c3074cad1f93ef5f02e9af>
- Kaciulis S., Bolli E. et. al. (2020): Surface and structural analysis of epitaxial La_{1-x}Sr_x(Mn_{1-y}Co_y)zO₃ films. In: Surface and Interface Analysis (,Conference Paper,Scopus). DOI:10.1002/sia.6767. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081733018&doi=10.1002%2fsia.6767&partnerID=40&md5=5998f0d46c7f8e7fcdbae15c231ff8d4>
- Kampfe T., Vogel T. et. al. (2020): Heavy Ion Irradiation Effects on Structural and Ferroelectric Properties of HfO₂ Films. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234942. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096979900&doi=10.1109%2fIFCS-ISAF41089.2020.9234942&partnerID=40&md5=07d5d296caf9769859464ddd60f64d70>
- Kampfe T., Wang B. et. al. (2020): Tuning Domain Wall Conductance in Lithium Niobate Thin-Films. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234905. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096950021&doi=10.1109%2fIFCS-ISAF41089.2020.9234905&partnerID=40&md5=f01ed8db194ad23133d95cf8cb67d353>
- Kämpfe T., Wang B. et. al. (2020): Tunable non-volatile memory by conductive ferroelectric domain walls in lithium niobate thin films. In: Crystals (,Article,Scopus). DOI:10.3390/cryst10090804. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090823837&doi=10.3390%2fcryst10090804&partnerID=40&md5=c8594041f5326d3c50ad2da8a6b252e9>
- Kandis H., Gungor B. et. al. (2020): A 0.9 mW Compact Power Detector with 30 dB Dynamic Range for Automotive Radar Applications. In: Midwest Symposium on Circuits and Systems (,Conference Paper,Scopus). DOI:10.1109/MWSCAS48704.2020.9184669. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090582805&doi=10.1109%2fMWSCAS48704.2020.9184669&partnerID=40&md5=4577d2f819e333e6999a818734677c43>
- Kaufmann C., Yanez C.C., Pangalos G., (2020): Fast Power System Frequency Estimation by Shape Class Approximation for Synthetic Inertia Provision by Battery Energy Storage Systems. In: 2020 IEEE 11th International Symposium on Power Electronics for Distributed Generation Systems, PEDG 2020 (,Conference Paper,Scopus). DOI:10.1109/PEDG48541.2020.9244458. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097518778&doi=10.1109%2fPEDG48541.2020.9244458&partnerID=40&md5=57387f9bdfca49fc92dab0063f19ae94>
- Kaule E., Doerner R. et. al. (2020): Modeling the Noise of Transferred-Substrate InP DHBTs at Highest Frequencies. In: GeMIC 2020 - Proceedings of the 2020 German Microwave Conference

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085057119&partnerID=40&md5=50d7017be266bdf87b7a8d80e90ba57f>
- Kaynak C.B., Goeritz A. et. al. (2020): Thermo-mechanical modeling and experimental validation of an uncooled microbolometer. In: 2020 IEEE 20th Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, SiRF 2020 (,Conference Paper,Scopus). DOI:10.1109/SIRF46766.2020.9040193. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083163335&doi=10.1109%2fSIRF46766.2020.9040193&partnerID=40&md5=9b4b8766d37d429c91158fdf362364f0>
 - Kaynak C.B., Goeritz A. et. al. (2020): Layer transfer process development for SiGe based microbolometer integration. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229812. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096601799&doi=10.1109%2fESTC48849.2020.9229812&partnerID=40&md5=a8fbe3366e9eb8a266c5ba91788514e3>
 - Kemmer T., Dammann M. et. al. (2020): Failure Analysis of 100 nm AlGaIn/GaN HEMTs Stressed under On-and Off-State Stress. In: IEEE International Reliability Physics Symposium Proceedings (,Conference Paper,Scopus). DOI: 10.1109/IRPS45951.2020.9128308. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088380440&doi=10.1109%2fIRPS45951.2020.9128308&partnerID=40&md5=3b81405c17b31765b7dfc6c4298b6885>
 - Khomenkova L., Lehniger D. et. al. (2020): Whether Ge-Rich ZrO₂ and Ge-Rich HfO₂ Materials Have Similar Reaction on Annealing Treatment?. In: ECS Transactions (,Conference Paper,Scopus). DOI:10.1149/09701.0049ecst. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085740170&doi=10.1149%2f09701.0049ecst&partnerID=40&md5=9005c611f56ec999f79ea60c823f1054>
 - Kia A.M., Bönhardt S. et. al. (2020): Development of Rutile Titanium Oxide Thin Films as Battery Material Component Using Atomic Layer Deposition. In: Physica Status Solidi (A) Applications and Materials Science (,Article,Scopus). DOI:10.1002/pssa.201800769. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071023480&doi=10.1002%2fpssa.201800769&partnerID=40&md5=1ebd0d2d02a564032a74492fff0172e5>
 - Kiani M., Du N. et. al. (2020): Disturbing-free determination of yeast concentration in DI water and in glucose using impedance biochips. In: Biosensors (,Article,Scopus). DOI:10.3390/bios10010007. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078223688&doi=10.3390%2fbios10010007&partnerID=40&md5=4f3893386a7464201b434ba911721f9d>
 - Kim M., Kim M.-H. et. al. (2020): A Fully Integrated 25 Gb/s Si Ring Modulator Transmitter with a Temperature Controller. In: 2020 Optical Fiber Communications Conference and Exhibition, OFC 2020 - Proceedings (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085193885&partnerID=40&md5=240adb13b2089415bdbc6d01d02af4d6>
 - Kim M., Kim M.-H. et. al. (2020): A fully integrated 25 Gb/s Si ring modulator transmitter with a temperature controller. In: Optics InfoBase Conference Papers (,Conference Paper,Scopus). DOI:10.1364/OFC.2020.T3H.7. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089955706&doi=10.1364%2fOFC.2020.T3H.7&partnerID=40&md5=836900935c8032745d7ad7064972a177>
 - Kirrbach R., Faulwaßer M. et. al. (2020): Monolithic hybrid transmitter-receiver lens for rotary on-axis communications. In: Applied Sciences (Switzerland) (,Article,Scopus). DOI:10.3390/app10041540. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080909824&doi=10.3390%2fapp10041540&partnerID=40&md5=a7529fd6d13065de5a5f798c08e3e599>
 - Kissinger G., Kot D. et. al. (2020): Editors' Choice - Precipitation of Suboxides in Silicon, their Role in Getting of Copper Impurities and Carrier Recombination. In: ECS Journal of Solid State Science and Technology (,Article,Scopus). DOI:10.1149/2162-8777/aba0ce. Link:

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088317310&doi=10.1149%2f2162-8777%2faba0ce&partnerID=40&md5=f9426e4c79b4748b946c6dc9ef9877f0>
- Kittmann A., Müller C. et. al. (2020): Sensitivity and noise analysis of SAW magnetic field sensors with varied magnetostrictive layer thicknesses. In: Sensors and Actuators, A: Physical (,Article,Scopus). DOI:10.1016/j.sna.2020.111998. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085550563&doi=10.1016%2fj.sna.2020.111998&partnerID=40&md5=b2802372b097de9451cc8193d34def9b>
 - Klann D., Aftowicz M. et. al. (2020): Integration and Implementation of four different Elliptic Curves in a single high-speed Design considering SCA. In: Proceedings - 2020 15th IEEE International Conference on Design and Technology of Integrated Systems in Nanoscale Era, DTIS 2020 (,Conference Paper,Scopus). DOI:10.1109/DTIS48698.2020.9081300. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085214624&doi=10.1109%2fDTIS48698.2020.9081300&partnerID=40&md5=5c4e817cec4534c62edb3b6989a08cc0>
 - Klesse W.M., Rathsfeld A. et. al. (2020): Fast scatterometric measurement of periodic surface structures in plasma-etching processes. In: Measurement: Journal of the International Measurement Confederation (,Article,Scopus). DOI:10.1016/j.measurement.2020.108721. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097074593&doi=10.1016%2fj.measurement.2020.108721&partnerID=40&md5=ada09ca36b3b8c65ba94b19c5c33a5a2>
 - Kobylnski P., Wierzbowski M., Piotrowski K., (2020): High-resolution net load forecasting for micro-neighbourhoods with high penetration of renewable energy sources. In: International Journal of Electrical Power and Energy Systems (,Article,Scopus). DOI:10.1016/j.ijepes.2019.105635. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074149558&doi=10.1016%2fj.ijepes.2019.105635&partnerID=40&md5=5a271373b48f2d9bd162c94f2baad7a3>
 - Koch D., Moench S. et. al. (2020): Static and dynamic characterization of a monolithic integrated temperature sensor in a 600 v gan power ic. In: PCIM Europe Conference Proceedings (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089659639&partnerID=40&md5=e5d5e17e08864e19adb2e183e00c8ab6>
 - Koch U., Uhl C. et. al. (2020): A monolithic bipolar CMOS electronic–plasmonic high-speed transmitter. In: Nature Electronics (,Article,Scopus). DOI:10.1038/s41928-020-0417-9. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085885198&doi=10.1038%2fs41928-020-0417-9&partnerID=40&md5=b0f926c837a6b5ecec0e4c58de1f93c5>
 - Kocher M., Schlichting H. et. al. (2020): Influence of shallow pits and device design of 4H-SiC VDMOS transistors on in-line defect analysis by photoluminescence and differential interference contrast mapping. In: Materials Science Forum (,Conference Paper,Scopus). DOI:10.4028/www.scientific.net/MSF.1004.299. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089821009&doi=10.4028%2fwww.scientific.net%2fMSF.1004.299&partnerID=40&md5=0b1df019c2aee62f254702b976673bb8>
 - Korsia M.T., Domingo J.M.C. et. al. (2020): Optimizing piezoelectric cantilever design for electronic nose applications. In: Chemosensors (,Article,Scopus). DOI:10.3390/chemosensors8040114. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096391581&doi=10.3390%2fchemosensors8040114&partnerID=40&md5=6aacbb3474363eda1f066dada2827a34>
 - Kosiba K., Rothkirch A. et. al. (2020): Phase formation of a biocompatible Ti-based alloy under kinetic constraints studied via in-situ high-energy X-ray diffraction. In: Progress in Natural Science: Materials International (,Article,Scopus). DOI:10.1016/j.pnsc.2020.06.004. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087302709&doi=10.1016%2fj.pnsc.2020.06.004&partnerID=40&md5=d3071333e20bb64181ab9bacfdbd9fd4>
 - Krasikova M., Baloshin Y. et. al. (2020): Noise reduction using structures based on coupled Helmholtz resonators. In: AIP Conference Proceedings (,Conference Paper,Scopus).

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- DOI:10.1063/5.0032103. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098073169&doi=10.1063%2f5.0032103&partnerID=40&md5=1cdf3cd278a11fa69c724d0346074d87>
- Krenkel M., Lange N. et. al. (2020): Modeling and validation of CMUTs with mechanically coupled plate actuators. In: IEEE International Ultrasonics Symposium, IUS (,Conference Paper,Scopus). DOI:10.1109/IUS46767.2020.9251313. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097906311&doi=10.1109%2fIUS46767.2020.9251313&partnerID=40&md5=a2b866ce5181660f8fb3c30832d2d2a5>
 - Krishna Nichenametla C., Calvo J. et. al. (2020): Doping Effects in CMOS-compatible CoSi Thin Films for Thermoelectric and Sensor Applications. In: Zeitschrift für Anorganische und Allgemeine Chemie (,Article,Scopus). DOI:10.1002/zaac.202000084. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086177694&doi=10.1002%2fzaac.202000084&partnerID=40&md5=88b6f05b4ca4933eb13b587092f3cd50>
 - Kucharski M., Ahmad W.A. et. al. (2020): Monostatic and Bistatic G-Band BiCMOS Radar Transceivers With On-Chip Antennas and Tunable TX-to-RX Leakage Cancellation. In: IEEE Journal of Solid-State Circuits (,Article,Scopus). DOI:10.1109/JSSC.2020.3041045. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097958988&doi=10.1109%2fJSSC.2020.3041045&partnerID=40&md5=6b6925fe521141a437ab70321e9adfe6>
 - Kuentzer F.A., Krstic M., (2020): Soft Error Detection and Correction Architecture for Asynchronous Bundled Data Designs. In: IEEE Transactions on Circuits and Systems I: Regular Papers (,Article,Scopus). DOI:10.1109/TCSI.2020.2998911. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096575994&doi=10.1109%2fTCSI.2020.2998911&partnerID=40&md5=0c9613b20006a7fa12ecbd9e66d4b543>
 - Lakey A., Ali Z. et. al. (2020): Corrigendum to “Impedimetric array in polymer microfluidic cartridge for low cost point-of-care diagnostics” (Biosensors and Bioelectronics (2019) 129 (147–154), (S0956566319300223), (10.1016/j.bios.2018.12.054)). In: Biosensors and Bioelectronics (,Erratum,Scopus). DOI:10.1016/j.bios.2019.111956. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076171578&doi=10.1016%2fj.bios.2019.111956&partnerID=40&md5=f253c825285d0282c10d05ce89c298b2>
 - Lange C., Rueß A. et. al. (2020): Dimensioning battery energy storage systems for peak shaving based on a real-time control algorithm. In: Applied Energy (,Article,Scopus). DOI:10.1016/j.apenergy.2020.115993. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092111184&doi=10.1016%2fj.apenergy.2020.115993&partnerID=40&md5=4da859fcffed211dc70e8ce8c5126adf3>
 - Lange F., Ernst O. et. al. (2020): In-plane growth of germanium nanowires on nanostructured Si(001)/SiO₂ substrates. In: Nano Futures (,Article,Scopus). DOI:10.1088/2399-1984/ab82a0. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089855267&doi=10.1088%2f2399-1984%2fab82a0&partnerID=40&md5=b0087cc8be6e6e664ce88204f2568759>
 - Le Q.H., Huynh D.K. et. al. (2020): W-Band Noise Characterization with Back-Gate Effects for Advanced 22nm FDSOI mm-Wave MOSFETs. In: Digest of Papers - IEEE Radio Frequency Integrated Circuits Symposium (,Conference Paper,Scopus). DOI:10.1109/RFIC49505.2020.9218369. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093919693&doi=10.1109%2fRFIC49505.2020.9218369&partnerID=40&md5=3241c09d201c967c390db75121a6e7a7>
 - Lebedev V.; Yoshikawa T. et. al. (2020): Microstructural and optical emission properties of diamond multiply twinned particles. In: Journal of Applied Physics (,Article,Scopus). DOI:10.1063/1.5127170. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077969934&doi=10.1063%2f1.5127170&partnerID=40&md5=6d27435a315602b436ebf031c44d1c85>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Lederer M., Kämpfe T. et. al. (2020): Structural and electrical comparison of si and zr doped hafnium oxide thin films and integrated fefets utilizing transmission kikuchi diffraction. In: Nanomaterials (,Article,Scopus). DOI:10.3390/nano10020384. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079869711&doi=10.3390%2fnano10020384&partnerID=40&md5=5ff2ef8a976abe331e6129927f37affa>
- Lederer M., Muller F. et. al. (2020): Integration of Hafnium Oxide on Epitaxial SiGe for p-type Ferroelectric FET Application. In: IEEE Electron Device Letters (,Article,Scopus). DOI:10.1109/LED.2020.3031308. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097354340&doi=10.1109%2fLED.2020.3031308&partnerID=40&md5=dda2bf874343f4e408cea441a493a537>
- Lehniger K., Aftowicz M.J. et. al. (2020): Challenges of Return-Oriented-Programming on the Xtensa Hardware Architecture. In: Proceedings - Euromicro Conference on Digital System Design, DSD 2020 (,Conference Paper,Scopus). DOI:10.1109/DSD51259.2020.00034. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096363933&doi=10.1109%2fDSD51259.2020.00034&partnerID=40&md5=57a326d8d3a4b44e5ea5f6a561994719>
- Lehniger D., Ali T. et. al. (2020): Furnace annealed HfO₂-Films for the Integration of Ferroelectric Functionalities into the BEoL. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234879. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096993636&doi=10.1109%2fIFCS-ISAF41089.2020.9234879&partnerID=40&md5=55417a0a71cd07afc44f49833a07a673>
- Lehniger D., Olivo R. et. al. (2020): Back-End-of-Line Compatible Low-Temperature Furnace Anneal for Ferroelectric Hafnium Zirconium Oxide Formation. In: Physica Status Solidi (A) Applications and Materials Science (,Article,Scopus). DOI:10.1002/pssa.201900840. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079845785&doi=10.1002%2fpssa.201900840&partnerID=40&md5=720e3c1c65c3e7bfebcc26e0deab6dc9>
- Lenz C., Ziesche S. et. al. (2020): Real embedding process of SiC devices in a monolithic ceramic package using LTCC technology. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229653. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096511247&doi=10.1109%2fESTC48849.2020.9229653&partnerID=40&md5=9c58400f9bdb1907a6e4bd14fc2af966>
- Leone S.; Brueckner P. et. al. (2020): Optimization of Metal-Organic Chemical Vapor Deposition Regrown n-GaN. In: Physica Status Solidi (B) Basic Research (,Article,Scopus). DOI:10.1002/pssb.201900436. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074789596&doi=10.1002%2fpssb.201900436&partnerID=40&md5=bd99c1d8d91f71ca178f85e58d2ce465>
- Leone S.; Fornari R. et. al. (2020): Epitaxial growth of GaN/Ga₂O₃ and Ga₂O₃/GaN heterostructures for novel high electron mobility transistors. In: Journal of Crystal Growth (,Article,Scopus). DOI:10.1016/j.jcrysgro.2020.125511. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078165570&doi=10.1016%2fj.jcrysgro.2020.125511&partnerID=40&md5=5cdb1a86e3ec8272f12f2543af183fd1>
- Leone S.; Ligl J. et. al. (2020): Metal-Organic Chemical Vapor Deposition of Aluminum Scandium Nitride. In: Physica Status Solidi - Rapid Research Letters (,Article,Scopus). DOI:10.1002/pssr.201900535. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075116931&doi=10.1002%2fpssr.201900535&partnerID=40&md5=5cb153a2c1aa6b06a547f9cb1ce6f613>
- Lgl, Jana (2020): Metalorganic chemical vapor phase deposition of AlScN/GaN heterostructures. In: Journal of applied physics (Zeitschriftenaufsatz). DOI:. Link:

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Li Y., Breitenreiter A., Andjelkovic M., Chen J., Babic M., Krstic M., (2020): Double cell upsets mitigation through triple modular redundancy. In: Microelectronics Journal (,Article,Scopus). DOI:10.1016/j.mejo.2019.104683. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076841987&doi=10.1016%2fj.mejo.2019.104683&partnerID=40&md5=f1f90bbd8fb7cca80e736da07b4222f9>
- Lim M., Sledziewski T. et. al. (2020): Pre-deposition interfacial oxidation and post-deposition interface nitridation of LPCVD TEOS used as gate dielectric on 4H-SiC. In: Materials Science Forum (,Conference Paper,Scopus). DOI:10.4028/www.scientific.net/MSF.1004.535. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089797600&doi=10.4028%2fwww.scientific.net%2fMSF.1004.535&partnerID=40&md5=a937e189af3e5e7ff6fdc97e4813db24>
- Lippmann B., Unverricht N. et. al. (2020): Verification of physical designs using an integrated reverse engineering flow for nanoscale technologies. In: Integration (,Article,Scopus). DOI:10.1016/j.vlsi.2019.11.005. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076542769&doi=10.1016%2fj.vlsi.2019.11.005&partnerID=40&md5=497f27afdd4ef7988c711baad2ddef8b>
- Lischke S., Knoll D. et. al. (2020): (Invited) directly silicon-nitride waveguide coupled Ge photodiode for non-SOI PIC and epic platforms. In: ECS Transactions (,Conference Paper,Scopus). DOI:10.1149/09805.0315ecst. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092639211&doi=10.1149%2f09805.0315ecst&partnerID=40&md5=404d4cea3ad447872a49377f862466f8>
- Lisker M., Kruger A. et. al. (2020): Preparation of Germanium-on-insulator (GOI) wafers by means of layer transfer technique. In: 2020 Symposium on Design, Test, Integration and Packaging of MEMS and MOEMS, DTIP 2020 (,Conference Paper,Scopus). DOI:10.1109/DTIP51112.2020.9139149. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091983103&doi=10.1109%2fDTIP51112.2020.9139149&partnerID=40&md5=5d7d095d07167a1655a03879bf011ee2>
- Liu S., Cheng X. et. al. (2020): Impact of the transition region between active area and edge termination on electrical performance of SiC MOSFET. In: Solid-State Electronics (,Article,Scopus). DOI:10.1016/j.sse.2020.107873. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088147665&doi=10.1016%2fj.sse.2020.107873&partnerID=40&md5=ac4fd6dd5ddc74ef44cc24adb771613f>
- Lopacinski L., Eissa M.H. et. al. (2020): 5G and beyond: Multi Baseband PSSS Architecture for 100 Gbps Wireless Communication. In: Proceedings of 2020 IEEE Workshop on Microwave Theory and Techniques in Wireless Communications, MTTW 2020 (,Conference Paper,Scopus). DOI:10.1109/MTTW51045.2020.9245066. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096744118&doi=10.1109%2fMTTW51045.2020.9245066&partnerID=40&md5=f342ab3b22cf8765d4c12e2f4fca8b8d>
- Lukin G., Meissner E. et. al. (2020): Stress evolution in thick GaN layers grown by HVPE. In: Journal of Crystal Growth (,Article,Scopus). DOI:10.1016/j.jcrysgr.2020.125887. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091800186&doi=10.1016%2fj.jcrysgr.2020.125887&partnerID=40&md5=628510b21062876e1978d00a36affb1f>
- Lv H., Fidalgo J. et. al. (2020): Multi-Level Switching and Reversible Current Driven Domain-Wall Motion in Single CoFeB/MgO/CoFeB-Based Perpendicular Magnetic Tunnel Junctions. In: Advanced Electronic Materials (,Article,Scopus). DOI:10.1002/aelm.202000976. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098224560&doi=10.1002%2faelm.202000976&partnerID=40&md5=a807d885b0cb0bf5503a93612968c608>
- Mahadevaiah M.K., Perez E., Wenger C., (2020): Influence of specific forming algorithms on the device-to-device variability of memristive Al-doped HfO2 arrays. In: Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics (,Article,Scopus). DOI:10.1116/1.5126936. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85077233129&doi=10.1116%2f1.5126936&partnerID=40&md5=3a5e5ae2b22add965109ef9ef64a26e8](https://doi.org/10.1116%2f1.5126936&partnerID=40&md5=3a5e5ae2b22add965109ef9ef64a26e8)
- Mahajan D.D., Albahrani S.A. et. al. (2020): Physics-Oriented Device Model for Packaged GaN Devices. In: IEEE Transactions on Power Electronics (,Article,Scopus). DOI:10.1109/TPEL.2019.2953060. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080924636&doi=10.1109%2fTPEL.2019.2953060&partnerID=40&md5=bdc5fca96d547068767af6d56daacf48>
 - Mai C., Steglich P., Fraschke M., Mai A., (2020): Back-Side Release of Slot Waveguides for the Integration of Functional Materials in a Silicon Photonic Technology with a Full BEOL. In: IEEE Transactions on Components, Packaging and Manufacturing Technology (,Article,Scopus). DOI:10.1109/TCPMT.2020.3011149. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091119264&doi=10.1109%2fTCPMT.2020.3011149&partnerID=40&md5=fcef1cf4cdc8a5390c3b653d472b5b39>
 - Maletic N., Eissa M.H. et. al. (2020): Performance Investigation of 2-GBaud QAMs Using Fully-Integrated SiGe Chipset at 240-GHz. In: Proceedings of 2020 IEEE Workshop on Microwave Theory and Techniques in Wireless Communications, MTTW 2020 (,Conference Paper,Scopus). DOI:10.1109/MTTW51045.2020.9245044. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096789379&doi=10.1109%2fMTTW51045.2020.9245044&partnerID=40&md5=5277d6e4248fac64a15cd20b592fcc61>
 - Maletic N., Gutierrez J., Grass E., (2020): On the Impact of Residual Transceiver Impairments in mmWave RF Beamforming Systems. In: IEEE Communications Letters (,Article,Scopus). DOI:10.1109/LCOMM.2020.3013171. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096188680&doi=10.1109%2fLCOMM.2020.3013171&partnerID=40&md5=c4472fc4e83e10451ce18bd66a19f850>
 - Maletic N., Sark V. et. al. (2020): Performance evaluation of LoS round-trip ToF localization: A 60GHz band case study. In: WSA 2020 - 24th International ITG Workshop on Smart Antennas (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096791551&partnerID=40&md5=4160f6746ac65e627313e273fb0a388e>
 - Manganelli C.L., Virgilio M. et. al. (2020): Temperature dependence of strain–phonon coefficient in epitaxial Ge/Si(001): A comprehensive analysis. In: Journal of Raman Spectroscopy (,Article,Scopus). DOI:10.1002/jrs.5860. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080031546&doi=10.1002%2fjrs.5860&partnerID=40&md5=5cf3ae1915b2a65900cc67d29431921d>
 - Markovic D., Vujicic D. et. al. (2020): IoT Based Occupancy Detection System with Data Stream Processing and Artificial Neural Networks. In: Proceedings - 2020 23rd International Symposium on Design and Diagnostics of Electronic Circuits and Systems, DDECS 2020 (,Conference Paper,Scopus). DOI:10.1109/DDECS50862.2020.9095715. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085862230&doi=10.1109%2fDDECS50862.2020.9095715&partnerID=40&md5=4878f62ae06409f731677b58bae1c085>
 - Mart C., Kämpfe T., Czernohorsky M., EBlinger S., Kolodinski S., Wiatr M., Weinreich W., Eng L.M., (2020): The electrocaloric effect in doped hafnium oxide: Comparison of direct and indirect measurements. In: Applied Physics Letters (,Article,Scopus). DOI:10.1063/5.0012746. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089495304&doi=10.1063%2f5.0012746&partnerID=40&md5=4533de169bb90decbd86eec9838db1c6>
 - Mart C., Viegas A. et. al. (2020): Pyroelectric CMOS Compatible Sensor Element Based on Hafnium Oxide Thin Films. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234892. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85096960911&doi=10.1109%2fISAF41089.2020.9234892&partnerID=40&md5=639d4888400e26f888b59bfa90851abb](https://doi.org/10.1109/ISAF41089.2020.9234892&partnerID=40&md5=639d4888400e26f888b59bfa90851abb)
- Martin, Devin (2020): Dicing of MEMS devices. In: Handbook of silicon based MEMS materials and technologies (Aufsatz in Buch).
 - Martínez P.J., Letz S. et. al. (2020): Failure analysis of normally-off GaN HEMTs under avalanche conditions. In: Semiconductor Science and Technology (,Article,Scopus). DOI:10.1088/1361-6641/ab6bad. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082242131&doi=10.1088%2f1361-6641%2fab6bad&partnerID=40&md5=3d64b277cb8a171360a5a9b0832fcf5>
 - Mavliev R., Gottfried K., Rhoades R., (2020): Advanced Packaging Cost Reduction by Selective Copper Metallization. In: Proceedings - Electronic Components and Technology Conference (,Conference Paper,Scopus). DOI:10.1109/ECTC32862.2020.00060. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090268207&doi=10.1109%2fECTC32862.2020.00060&partnerID=40&md5=67c57e904b01f5520a3c20438a92ad96>
 - Mehrpoor G.R., Wohlfeil B. et. al. (2020): Modelling and performance study of monolithically integrated depletion type Silicon IQ modulators. In: Photonische Netze - 19. ITG-Fachtagung (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096493426&partnerID=40&md5=1eace988a93fc9a49c6f4232f961bb2c>
 - Meier D., Gashi B. et. al. (2020): Clutter mitigation based on adaptive singular value decomposition in tomographic radar images for material inspection. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9224056. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094199896&doi=10.1109%2fIMS30576.2020.9224056&partnerID=40&md5=fb1cb5f743168c1f730d4f61aa6faad9>
 - Meier D., Zech C. et. al. (2020): Propagation of Millimeter Waves in Composite Materials. In: IEEE Transactions on Antennas and Propagation (,Article,Scopus). DOI:10.1109/TAP.2019.2955213. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083326268&doi=10.1109%2fTAP.2019.2955213&partnerID=40&md5=19f57967b5f7b77d454e3036d60597ad>
 - Meinel, K. (2020): Piezoelectric scanning micromirror with built-in sensors based on thin film aluminum nitride. In: IEEE Sensors Journal (Zeitschriftenaufsatz).
 - Melnikov A., Schenk H.A.G. et. al. (2020): Minimization of nonlinearities in nano electrostatic drive actuators using validated coupled-field simulation. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2551271. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084178761&doi=10.1117%2f12.2551271&partnerID=40&md5=be7ae53f38469e13e3fe17dbca87e9c2>
 - Menrath T., Rosskopf A. et. al. (2020): Shape Optimization of a Pin Fin Heat Sink. In: 36th Annual Semiconductor Thermal Measurement, Modeling and Management Symposium, SEMI-THERM 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.23919/SEMI-THERM50369.2020.9142830. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092308780&doi=10.23919%2fSEMI-THERM50369.2020.9142830&partnerID=40&md5=5db91eaaa5812a8e5a4968ec6b345f8e>
 - Mesilhy H., Evanschitzky P. et. al. (2020): Pathfinding the perfect EUV mask: The role of the multilayer. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2551870. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084183482&doi=10.1117%2f12.2551870&partnerID=40&md5=c0f85c1230f4b4f441644723f771f8cc>
 - Mitra K.Y., Willert A. et. al. (2020): Inkjet Printing of Bioresorbable Materials for Manufacturing Transient Microelectronic Devices. In: Advanced Engineering Materials (,Article,Scopus). DOI:10.1002/adem.202000547. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090237000&doi=10.1002%2fadem.202000547&partnerID=40&md5=29ab4f2dbb726e96f46f54edfa40c173>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Moench S.; Müller S. et. al. (2020): Monolithic Integrated AlGaIn/GaN Power Converter Topologies on High-Voltage AlN/GaN Superlattice Buffer. In: Physica Status Solidi (A) Applications and Materials Science (,Article,Scopus). DOI:10.1002/pssa.202000404. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091731932&doi=10.1002%2fpssa.202000404&partnerID=40&md5=c2b14bc12eb1fa1ff36111e9806a816c>
- Moench S.; Reiner R. et. al. (2020): A 600V p-GaN Gate HEMT with Intrinsic Freewheeling Schottky-Diode in a GaN Power IC with Bootstrapped Driver and Sensors. In: Proceedings of the International Symposium on Power Semiconductor Devices and ICs (,Conference Paper,Scopus). DOI:10.1109/ISPSD46842.2020.9170089. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089704710&doi=10.1109%2fISPSD46842.2020.9170089&partnerID=40&md5=0c17003666e3467b87661f299d703a6d>
- Mönch, Stefan (2020): A 600V GaN-on-Si power IC with integrated gate driver, freewheeling diode, temperature and current sensors and auxiliary devices. In: CIPS 2020, 11th International Conference on Integrated Power Electronics Systems. Proceedings (Konferenzbeitrag).
- Mukherjee C., Fischer G.G. et. al. (2020): A unified aging compact model for hot carrier degradation under mixed-mode and reverse E-B stress in complementary SiGe HBTs. In: Solid-State Electronics (,Article,Scopus). DOI:10.1016/j.sse.2020.107900. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091771215&doi=10.1016%2fj.sse.2020.107900&partnerID=40&md5=e861ee1449a39ac5a8cb95ae03cc9efb>
- Mukherjee C., Marc F. et. al. (2020): A physical and versatile aging compact model for hot carrier degradation in SiGe HBTs under dynamic operating conditions. In: Solid-State Electronics (,Article,Scopus). DOI:10.1016/j.sse.2019.107635. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85072032682&doi=10.1016%2fj.sse.2019.107635&partnerID=40&md5=d80807b392d5e2f526572a1101603e6f>
- Muller K.-U., Stanitzki A., Kokozinski R., (2020): A 47 F2/bit Charge-Sharing based Sequence-dependent PUF with a Permutative Challenge. In: 2020 International Conference on Omni-Layer Intelligent Systems, COINS 2020 (,Conference Paper,Scopus). DOI:10.1109/COINS49042.2020.9191427. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092248754&doi=10.1109%2fCOINS49042.2020.9191427&partnerID=40&md5=69d8697a009c6b1eba518fa84ccc5315>
- Müller R.; Haertelt M. et. al. (2020): Thermoelectrically-cooled inas/gasb type-ii superlattice detectors as an alternative to hgcdte in a real-time mid-infrared backscattering spectroscopy system. In: Micromachines (,Article,Scopus). DOI:10.3390/mi11121124. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098126059&doi=10.3390%2fmi11121124&partnerID=40&md5=1cdf58ab0a2f22c6b809d8e3411097b8>
- Nagai M.; Nakamura Y. et. al. (2020): Formation of U-shaped diamond trenches with vertical {111} sidewalls by anisotropic etching of diamond (110) surfaces. In: Diamond and Related Materials (,Article,Scopus). DOI:10.1016/j.diamond.2020.107713. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078145184&doi=10.1016%2fj.diamond.2020.107713&partnerID=40&md5=f261a0031b589c9d8edb37eddda4d196>
- Nair S.R., Rogers L.J. et. al. (2020): Quantum magnetic sensor using fibre-cavity diamond nitrogen-vacancy centre laser. In: 2020 Conference on Lasers and Electro-Optics Pacific Rim; CLEO-PR 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.1364/CLEOPR.2020.P5_17. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098063240&doi=10.1364%2fCLEOPR.2020.P5_17&partnerID=40&md5=4031ffc80e9f16278f22aa590c9ece1d
- Naskar N., Schneiderei M.F. et. al. (2020): Impact of surface chemistry and doping concentrations on biofunctionalization of GaN/Ga-in-N quantum wells. In: Sensors (Switzerland) (,Article,Scopus). DOI:10.3390/s20154179. Link:

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088882454&doi=10.3390%2fs20154179&partnerID=40&md5=21d960b80e18be880f0ca79e3c4d7521>
- Natkhin M., Müller J. et. al. (2020): Protection of forests against environmental risks - The SCHUWA-project. In: Sensoren und Messsysteme - Beiträge der 19. ITG/GMA-Fachtagung (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082501572&partnerID=40&md5=d547f5a1523134b06a423fb6e42e8e57>
 - Neining P., Amirpour R. et. al. (2020): A Phase Shifter with Integrated PA MMIC for Ka-Band Frequencies. In: GeMIC 2020 - Proceedings of the 2020 German Microwave Conference (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085008353&partnerID=40&md5=37c77c4f25920cce5c34c14822bfa7a4>
 - Nickel M., Jimenez-Saez A. et. al. (2020): Ridge Gap Waveguide Based Liquid Crystal Phase Shifter. In: IEEE Access (,Article,Scopus). DOI:10.1109/ACCESS.2020.2989547. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084921281&doi=10.1109%2fACCESS.2020.2989547&partnerID=40&md5=2f75c7fa18e481528f405aa6a7c47483>
 - Nikolic M.V., Milovanovic V. et. al. (2020): Semiconductor gas sensors: Materials, technology, design, and application. In: Sensors (Switzerland) (,Review,Scopus). DOI:10.3390/s20226694. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096613609&doi=10.3390%2fs20226694&partnerID=40&md5=0ee31d88a76ed60d259fbc11b3595fc>
 - Nissen, Nils F. (2020): Chiplelets - Exploring the Green Potential of Advanced Multi-Chip Packages. In: International Congress "Electronics Goes Green 2020+ ". Proceedings (Konferenzbeitrag). Link: https://online.electronicsgoesgreen.org/wp-content/uploads/2020/10/Proceedings_EGG2020_v2.pdf |t Volltext |s PDF |n Gesamter Tagungsband
 - Novak, M. (2020): Selektives Ag-Sintern auf Organischer Leiterplatte. In: Elektronische Baugruppen und Leiterplatten, EBL 2020 (Konferenzbeitrag).
 - Ntouni G.D.; Merkle T. et. al. (2020): Real-time experimental wireless testbed with digital beamforming at 300 GHz. In: 2020 European Conference on Networks and Communications; EuCNC 2020 (,Conference Paper,Scopus). DOI:10.1109/EuCNC48522.2020.9200948. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093867811&doi=10.1109%2fEuCNC48522.2020.9200948&partnerID=40&md5=3ec944a3805e99e78e1c297088922c94>
 - Okuno J., Kunihiro T. et. al. (2020): SoC compatible 1 T1 C FeRAM memory array based on ferroelectric Hf0.5Zr0.5O2. In: Digest of Technical Papers - Symposium on VLSI Technology (,Conference Paper,Scopus). DOI:10.1109/VLSITechnology18217.2020.9265063. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098178156&doi=10.1109%2fVLSITechnology18217.2020.9265063&partnerID=40&md5=33c626bfe95fe3e2f862675d19c8dc3e>
 - Otto A., Kaulfersch E. et. al. (2020): PHM Features for large circuit boards to be implemented into electric drivetrain applications. In: ASME 2020 International Technical Conference and Exhibition on Packaging and Integration of Electronic and Photonic Microsystems, InterPACK 2020 (,Conference Paper,Scopus). DOI:10.1115/IPACK2020-2614. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098326203&doi=10.1115%2fIPACK2020-2614&partnerID=40&md5=f40f9bfa03a4684b6d85789c3ac050d3>
 - Paesler M., Lisec T., Kapels H., (2020): Novel Integrated BEOL Compatible Inductances for Power Converter Applications. In: Conference Proceedings - IEEE Applied Power Electronics Conference and Exposition - APEC (,Conference Paper,Scopus). DOI:10.1109/APEC39645.2020.9124474. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087783781&doi=10.1109%2fAPEC39645.2020.9124474&partnerID=40&md5=d2a71196f1507a6c5ca6ac49f187fcda>
 - Palavesam N., Hell W. et. al. (2020): Influence of flexibility of the interconnects on the dynamic bending reliability of flexible hybrid electronics. In: Electronics (Switzerland) (,Article,Scopus). DOI:10.3390/electronics9020238. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85079505510&doi=10.3390%2felectronics9020238&partnerID=40&md5=63d53b213e36b6c1771058b04e47e3c8](https://doi.org/10.3390/electronics9020238&partnerID=40&md5=63d53b213e36b6c1771058b04e47e3c8)
- Palavesam, Nagarajan (2020): Reliability analysis of foil substrate based integration of silicon chips. In: (Dissertation). Link: <https://nbn-resolving.org/urn:nbn:de:bsz:14-qucosa2-730989> [t Volltext
 - Pannek C., Vetter T. et. al. (2020): Highly sensitive reflection based colorimetric gas sensor to detect CO in realistic fire scenarios. In: Sensors and Actuators, B: Chemical (,Article,Scopus). DOI:10.1016/j.snb.2019.127572. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076625369&doi=10.1016%2fj.snb.2019.127572&partnerID=40&md5=aaa2ecd1e45d6ec9d749f2be698eb134>
 - Pantoli L., Bello H. et. al. (2020): SiGe Sub-THz VCOs design approach for imaging applications. In: 2020 International Workshop on Integrated Nonlinear Microwave and Millimetre-Wave Circuits, INMMiC 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.1109/INMMiC46721.2020.9160077. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092169762&doi=10.1109%2fINMMiC46721.2020.9160077&partnerID=40&md5=77056ae1a3e422578b0bc15537aee02e>
 - Pantoli L., Bello H. et. al. (2020): A Compact, Low-Power and Constant Output Power 330 GHz Voltage-Controlled Oscillator in 130-nm SiGe BiCMOS. In: Journal of Infrared, Millimeter, and Terahertz Waves (,Article,Scopus). DOI:10.1007/s10762-020-00712-3. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086656109&doi=10.1007%2fs10762-020-00712-3&partnerID=40&md5=2233369ae4e35589799e74ff240d7c39>
 - Paolozzi L., Cardarelli R. et. al. (2020): Time resolution and power consumption of a monolithic silicon pixel prototype in SiGe BiCMOS technology. In: Journal of Instrumentation (,Article,Scopus). DOI:10.1088/1748-0221/15/11/P11025. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096705244&doi=10.1088%2f1748-0221%2f15%2f11%2fP11025&partnerID=40&md5=54398fcd20c20e4a9b970f20a3749f68>
 - Papadogianni A., Rombach J. et. al. (2020): Two-dimensional electron gas of the In₂O₃ surface: Enhanced thermopower; electrical transport properties; and reduction by adsorbates or compensating acceptor doping. In: Physical Review B (,Article,Scopus). DOI:10.1103/PhysRevB.102.075301. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090125551&doi=10.1103%2fPhysRevB.102.075301&partnerID=40&md5=d7ac3e539d0a1b6f14d6fcd889e90907>
 - Peczek A., Mai C. et. al. (2020): Comparison of cut-back method and optical backscatter reflectometry for wafer level waveguide characterization. In: IEEE International Conference on Microelectronic Test Structures (,Conference Paper,Scopus). DOI:10.1109/ICMTS48187.2020.9107905. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086468126&doi=10.1109%2fICMTS48187.2020.9107905&partnerID=40&md5=819af5be86c0810df56f2bccd7e292a5>
 - Pérez E., Ossorio Ó.G. et. al. (2020): Programming pulse width assessment for reliable and low-energy endurance performance in al:HfO₂-based rram arrays. In: Electronics (Switzerland) (,Article,Scopus). DOI:10.3390/electronics9050864. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085380033&doi=10.3390%2felectronics9050864&partnerID=40&md5=3b43fddb564a6e8996aebd55a0299eb5>
 - Peric Z.H., Dincic M.R. et. al. (2020): New Solutions for the Support Region Calculation of Logarithmic Quantizers for the Laplacian Source. In: Proceedings - 2020 23rd International Symposium on Design and Diagnostics of Electronic Circuits and Systems, DDECS 2020 (,Conference Paper,Scopus). DOI:10.1109/DDECS50862.2020.9095582. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085863744&doi=10.1109%2fDDECS50862.2020.9095582&partnerID=40&md5=4353d6d6bc b4fb0ed3eb3188a67f3653>
 - Perlot N., Rödiger J., Freund R., (2020): Single-mode optical antenna for high-speed and quantum communications. In: Photonische Netze - 19. ITG-Fachtagung (,Conference Paper,Scopus). Link:

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85072665193&partnerID=40&md5=bd69cbfa311c0336516748c882426f94>
- Persichetti L., Montanari M. et. al. (2020): Intersubband transition engineering in the conduction band of asymmetric coupled Ge/SiGe quantum wells. In: Crystals (,Article,Scopus). DOI:10.3390/cryst10030179. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081214416&doi=10.3390%2fcryst10030179&partnerID=40&md5=4674270ff58f7c275659652da9c17082>
 - Petryk D., Dyka Z. et. al. (2020): Metal Fillers as Potential Low Cost Countermeasure against Optical Fault Injection Attacks. In: 2020 IEEE East-West Design and Test Symposium, EWDTs 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.1109/EWDTs50664.2020.9225092. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096427488&doi=10.1109%2fEWDTs50664.2020.9225092&partnerID=40&md5=46668ce12bc5d8bef2cc30fcb7a84ab>
 - Petryk D., Dyka Z., Langendorfer P., (2020): Sensitivity of Standard Library Cells to Optical Fault Injection Attacks in IHP 250 nm Technology. In: 2020 9th Mediterranean Conference on Embedded Computing, MECO 2020 (,Conference Paper,Scopus). DOI:10.1109/MECO49872.2020.9134146. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088513082&doi=10.1109%2fMECO49872.2020.9134146&partnerID=40&md5=778a1dca1f4fa3411e848d275360ee61>
 - Petryk D., Dyka Z. et. al. (2020): Evaluation of the Sensitivity of RRAM Cells to Optical Fault Injection Attacks. In: Proceedings - Euromicro Conference on Digital System Design, DSD 2020 (,Conference Paper,Scopus). DOI:10.1109/DSD51259.2020.00047. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096363820&doi=10.1109%2fDSD51259.2020.00047&partnerID=40&md5=dacb71be9e7ce827fa299bc56f3fb48f>
 - Pezoldt J.; Cimalla V.; (2020): Imprinting the polytype structure of silicon carbide by rapid thermal processing. In: Crystals (,Article,Scopus). DOI:10.3390/cryst10060523. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090724714&doi=10.3390%2fcryst10060523&partnerID=40&md5=3f44614a66882d1097af19dd135c16cc>
 - Piros E., Lonsky M. et. al. (2020): Role of oxygen defects in conductive-filament formation in Y2O3-based analog RRAM devices as revealed by fluctuation spectroscopy. In: Physical Review Applied (,Article,Scopus). DOI:10.1103/PhysRevApplied.14.034029. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093098530&doi=10.1103%2fPhysRevApplied.14.034029&partnerID=40&md5=ef0515f3f99bd4922f8e4393e97dddf1>
 - Piros E., Petzold S. et. al. (2020): Enhanced thermal stability of yttrium oxide-based RRAM devices with inhomogeneous Schottky-barrier. In: Applied Physics Letters (,Article,Scopus). DOI:10.1063/5.0009645. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088038432&doi=10.1063%2f5.0009645&partnerID=40&md5=6fc63072fe64e6f3a9be0b65173449bb>
 - Poongodan P.K., Vanselow F., Maurer L., (2020): A two-level, high voltage driver circuit with nanosecond delay for ultrasonic transducers. In: 2020 9th International Conference on Modern Circuits and Systems Technologies, MOCAST 2020 (,Conference Paper,Scopus). DOI:10.1109/MOCAST49295.2020.9200247. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093859281&doi=10.1109%2fMOCAST49295.2020.9200247&partnerID=40&md5=1d41ec504e2e0b7cac9c0f3b1bea0195>
 - Pourteau M.-L., Gharbi A. et. al. (2020): Sub-20 nm multilayer nanopillar patterning for hybrid SET/CMOS integration. In: Micro and Nano Engineering (,Article,Scopus). DOI:10.1016/j.mne.2020.100074. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089526572&doi=10.1016%2fj.mne.2020.100074&partnerID=40&md5=3352cb95513eab62e31bdc0a90d47a89>
 - Preuß A., Korb M. et. al. (2020): Synthesis of β -Ketoiminato Copper(II) Complexes and Their Use in Copper Deposition. In: Zeitschrift für Anorganische und Allgemeine Chemie (,Article,Scopus).

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- DOI:10.1002/zaac.201900208. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078751540&doi=10.1002%2fzaac.201900208&partnerID=40&md5=39364b07c8cc5fd89d3f3c3e9919c71c>
- Preuß A., Notz S. et. al. (2020): Ferrocenyl-Pyrenes, Ferrocenyl-9,10-Phenanthrenediones, and Ferrocenyl-9,10-Dimethoxyphenanthrenes: Charge-Transfer Studies and SWCNT Functionalization. In: Chemistry - A European Journal (,Article,Scopus). DOI:10.1002/chem.201904450. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078716471&doi=10.1002%2fchem.201904450&partnerID=40&md5=b54529d356fd446cc9faf5e6fccd3aaa>
 - Preuß A., Tamuliene J. et. al. (2020): Ruthenium(II) MOCVD Precursors for Phosphorus-Doped Ruthenium Layer Formation. In: European Journal of Inorganic Chemistry (,Article,Scopus). DOI:10.1002/ejic.201901310. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084039633&doi=10.1002%2fejic.201901310&partnerID=40&md5=dd07c75cf0bbf3bfabe06965f77eb72a>
 - Preuß, A. (2020): Cover Feature: Ferrocenyl-Pyrenes, Ferrocenyl-9,10-Phenanthrenediones, and Ferrocenyl-9,10-Dimethoxyphenanthrenes. In: Chemistry. A European journal (Zeitschriftenaufsatz).
 - Prigent G., Franc A.-L. et. al. (2020): Substrate integrated waveguide bandpass filters implemented on silicon interposer for terahertz applications. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9223781. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094205179&doi=10.1109%2fIMS30576.2020.9223781&partnerID=40&md5=818ea0e0298aab9e06cb493cb06af744>
 - Proske, Marina (2020): Environmental Impacts of Modular Design - Life Cycle Assessment of the Fairphone 3. In: International Congress "Electronics Goes Green 2020+". Proceedings (Konferenzbeitrag). Link: https://online.electronicsgoesgreen.org/wp-content/uploads/2020/10/Proceedings_EGG2020_v2.pdf
 - Proske, Marina (2020): The smartphone evolution - an analysis of the design evolution and environmental impact of smartphones. In: International Congress "Electronics Goes Green 2020+". Proceedings (Konferenzbeitrag). Link: https://online.electronicsgoesgreen.org/wp-content/uploads/2020/10/Proceedings_EGG2020_v2.pdf
 - Raddo T.R., Cimoli B., Sirbu B., Rommel S., Tekin T., Tafur Monroy I., (2020): An end-to-end 5G automotive ecosystem for autonomous driving vehicles. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2548146. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081178927&doi=10.1117%2f12.2548146&partnerID=40&md5=4e355750f4d956a965d9c39111e3753d>
 - Raman Nair S.; Rogers L.J. et. al. (2020): Amplification by stimulated emission of nitrogen-vacancy centres in a diamond-loaded fibre cavity. In: Nanophotonics (,Article,Scopus). DOI:10.1515/nanoph-2020-0305. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092698892&doi=10.1515%2fnanoph-2020-0305&partnerID=40&md5=4b55fcd067c2a549c818c31791c664f4>
 - Rasadujjaman M., Wang Y. et. al. (2020): Corrigendum to “A detailed ellipsometric porosimetry and positron annihilation spectroscopy study of porous organosilicate-glass films with various ratios of methyl terminal and ethylene bridging groups” [Microporous Mesoporous Mater. 306 (2020) 110434] (Microporous and Mesoporous Materials (2020) 306, (S1387181120304376), (10.1016/j.micromeso.2020.110434)). In: Microporous and Mesoporous Materials (,Erratum,Scopus). DOI:10.1016/j.micromeso.2020.110785. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097456654&doi=10.1016%2fj.micromeso.2020.110785&partnerID=40&md5=f227c23a574785947503e4cccfef8aad7>
 - Rashidi S., Rashidi S., Heydari R.K., Esmaeili S., Tran N., Thangi D., Wei W., (2020): WS2 and MoS2 counter electrode materials for dye-sensitized solar cells. In: Progress in Photovoltaics: Research and Applications (,Article,Scopus). DOI:10.1002/pip.3350. Link: Solar Cells <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85091363999&doi=10.1002%2fjip.3350&partnerID=40&md5=ac5640e54ab63ace0bc39d8f003e738c](https://doi.org/10.1002/2fjip.3350&partnerID=40&md5=ac5640e54ab63ace0bc39d8f003e738c)
- Ray A., Martín-García B. et. al. (2020): Impact of local structure on halogen ion migration in layered methylammonium copper halide memory devices. In: Journal of Materials Chemistry A (,Article,Scopus). DOI:10.1039/d0ta06248k. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091035883&doi=10.1039%2fd0ta06248k&partnerID=40&md5=abfcf2932bf11757374149b039a96269>
 - Rayapati V.R., Bürger D. et. al. (2020): Charged domains in ferroelectric, polycrystalline yttrium manganite thin films resolved with scanning electron microscopy. In: Nanotechnology (,Article,Scopus). DOI:10.1088/1361-6528/ab8b09. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085263839&doi=10.1088%2f1361-6528%2fab8b09&partnerID=40&md5=28b180fedd651b7b427fe577f2dbd80f>
 - Rehm R., Driad R. et. al. (2020): Toward AlGaIn Focal Plane Arrays for Solar-Blind Ultraviolet Detection. In: Physica Status Solidi (A) Applications and Materials Science (,Article,Scopus). DOI:10.1002/pssa.201900769. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077838997&doi=10.1002%2fpssa.201900769&partnerID=40&md5=d4acc697c640add4b000aec14b12ceec>
 - Reinecke P., Putze M.-T. et. al. (2020): Scalable hybrid microelectronic-microfluidic integration of highly sensitive biosensors. In: Advancing Microelectronics (,Article,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091254959&partnerID=40&md5=c9f253640358d84900faf7e4c17d39cc>
 - Reiner R., Gerrer T. et. al. (2020): Si-Substrate Removal for AlGaIn/GaN Devices on PCB Carriers. In: Proceedings of the International Symposium on Power Semiconductor Devices and ICs (,Conference Paper,Scopus). DOI:10.1109/ISPSD46842.2020.9170078. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090555116&doi=10.1109%2fISPSD46842.2020.9170078&partnerID=40&md5=7847a7381cf75d71994f85c13ed5a6cd>
 - Reinke P., Benkhelifa F. et. al. (2020): Influence of Different Surface Morphologies on the Performance of High-Voltage; Low-Resistance Diamond Schottky Diodes. In: IEEE Transactions on Electron Devices (,Article,Scopus). DOI:10.1109/TED.2020.2989733. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085548207&doi=10.1109%2fTED.2020.2989733&partnerID=40&md5=db39320f319de96cde32dd858492711a>
 - Reis D.M.D., Rzepka S., Hiller K., (2020): New Insight into Defects and Degradation Kinetics in Lead Zirconate Titanate. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234941. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096974449&doi=10.1109%2fIFCS-ISAF41089.2020.9234941&partnerID=40&md5=fdafe234da64c50ae9758be25d083887>
 - Reiser D., Drost A. et. al. (2020): Temperature driven memristive switching in Al/TiO₂/Al devices. In: Proceedings of the IEEE Conference on Nanotechnology (,Conference Paper,Scopus). DOI:10.1109/NANO47656.2020.9183631. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091015790&doi=10.1109%2fNANO47656.2020.9183631&partnerID=40&md5=d85e79c0a4d93d1d7788ec368646879c>
 - Rettner, Cornelius (2020): SiC Power Module with integrated RC-Snubber Design for Voltage Overshoot and Power Loss Reduction. In: CIPS 2020, 11th International Conference on Integrated Power Electronics Systems. Proceedings (Konferenzbeitrag).
 - Reuther G.M., Albrecht J. et. al. (2020): Determining adhesion of critical interfaces in microelectronics - A reverse Finite Element Modelling approach based on nanoindentation - Part I. In: 2020 21st International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems, EuroSimE 2020 (,Conference Paper,Scopus). DOI:10.1109/EuroSimE48426.2020.9152755. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85090416889&doi=10.1109%2fEuroSimE48426.2020.9152755&partnerID=40&md5=028c5f4b27facf6813aa7d05c7c38e7b](https://doi.org/10.1109/EuroSimE48426.2020.9152755&partnerID=40&md5=028c5f4b27facf6813aa7d05c7c38e7b)
- Rodrigues F.; Ferreira R. et. al. (2020): Hybrid fiber-optical/THz-wireless link transmission using low-cost IM/DD optics. In: 2020 Optical Fiber Communications Conference and Exhibition; OFC 2020 - Proceedings (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085175127&partnerID=40&md5=93aa98f3a9571d02a50d89c74cd839fa>
 - Rodriguez-Vazquez P., Grzyb J. et. al. (2020): Erratum: A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link with a 220-255 GHz Tunable LO in a SiGe HBT Technology((2020) DOI: 10.1109/TMTT.2020.2986196). In: IEEE Transactions on Microwave Theory and Techniques (,Erratum,Scopus). DOI:10.1109/TMTT.2020.3005301. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096185591&doi=10.1109%2fTMTT.2020.3005301&partnerID=40&md5=5153443d22e75b78e61c27a4767569b6>
 - Rodriguez-Vazquez P., Grzyb J. et. al. (2020): A QPSK 110-Gb/s Polarization-Diversity MIMO Wireless Link with a 220-255 GHz Tunable LO in a SiGe HBT Technology. In: IEEE Transactions on Microwave Theory and Techniques (,Article,Scopus). DOI:10.1109/TMTT.2020.2986196. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091027931&doi=10.1109%2fTMTT.2020.2986196&partnerID=40&md5=7851d941ccc56fc1c2f3c1c06e9d4c24>
 - Rogall O., Feil N.M. et. al. (2020): Determining Elastic Constants of AlScN Films on Silicon Substrates by Laser Ultrasonics. In: IEEE International Ultrasonics Symposium; IUS (,Conference Paper,Scopus). DOI:10.1109/IUS46767.2020.9251632. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097888821&doi=10.1109%2fIUS46767.2020.9251632&partnerID=40&md5=499d83128bea3823e3f86bf13574cb07>
 - Ronniger G., Lischke S. et. al. (2020): Investigation of Inter-Modal Four Wave Mixing in p-i-n Diode Assisted SOI Waveguides. In: 2020 IEEE Photonics Society Summer Topical Meeting Series, SUM 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.1109/SUM48678.2020.9161068. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090162571&doi=10.1109%2fSUM48678.2020.9161068&partnerID=40&md5=1deca9d5f0986f91624a22c203d9799c>
 - Roshanghias A., Dreissigacker M. et. al. (2020): On the feasibility of fan-out wafer-level packaging of capacitive micromachined ultrasound transducers (CMUT) by using inkjet-printed redistribution layers. In: Micromachines (,Article,Scopus). DOI:10.3390/M11060564. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087525868&doi=10.3390%2fM11060564&partnerID=40&md5=eee4bc1054c8ce6469749e285ee2f57b>
 - Roshanghias A., Dreissigacker M. et. al. (2020): On the feasibility of fan-out wafer-level packaging of capacitive micromachined ultrasound transducers (CMUT) by using inkjet-printed redistribution layers. In: Micromachines (,Article,Scopus). DOI:10.3390/M11060564. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087525868&doi=10.3390%2fM11060564&partnerID=40&md5=eee4bc1054c8ce6469749e285ee2f57b>
 - Rothbart N., Schmalz K., Hubers H.-W., (2020): A Compact Circular Multipass Cell for Millimeter-Wave/Terahertz Gas Spectroscopy. In: IEEE Transactions on Terahertz Science and Technology (,Article,Scopus). DOI:10.1109/TTHZ.2019.2950123. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074521046&doi=10.1109%2fTTHZ.2019.2950123&partnerID=40&md5=1944365cf6bf394ec895743870041d4d>
 - Rotzler S., Kallmayer C. et. al. (2020): Improving the washability of smart textiles: influence of different washing conditions on textile integrated conductor tracks. In: Journal of the Textile Institute (,Article,Scopus). DOI:10.1080/00405000.2020.1729056. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095930476&doi=10.1080%2f00405000.2020.1729056&partnerID=40&md5=7829cec08187e5671074ffc8008ce820>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Roy S., Niu G., Wang Q. et. al. (2020): Toward a Reliable Synaptic Simulation Using Al-Doped HfO₂ RRAM. In: ACS Applied Materials and Interfaces (,Article,Scopus). DOI:10.1021/acsami.9b21530. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080041753&doi=10.1021%2facami.9b21530&partnerID=40&md5=438b080f23c2be7425ae0998199955be>
- Ruffert, Christine (2020): Schöne neue Welt?. In: Tales of Science (Aufsatz in Buch).
- Rusch O., Hellinger C. et. al. (2020): Reducing on-resistance for SiC diodes by thin wafer and laser anneal technology. In: Materials Science Forum (,Conference Paper,Scopus). DOI:10.4028/www.scientific.net/MSF.1004.155. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089803520&doi=10.4028%2fwww.scientific.net%2fMSF.1004.155&partnerID=40&md5=6fae5a821b29697c8e03654d4f58f9fc>
- Sakolski O., Poongodan P.K. et. al. (2020): A Feedforward Compensated High-Voltage Linear Regulator with Fast Response, High-Current Sinking Capability. In: IEEE Solid-State Circuits Letters (,Article,Scopus). DOI:10.1109/LSSC.2020.3005787. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087483878&doi=10.1109%2fLSSC.2020.3005787&partnerID=40&md5=ed8b79fd48b82f1fc4e466dbb9e70a46>
- Saller K.B., Liao K.-C. et. al. (2020): Contact Architecture Controls Conductance in Monolayer Devices. In: ACS Applied Materials and Interfaces (,Article,Scopus). DOI:10.1021/acsami.0c08902. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086833197&doi=10.1021%2facami.0c08902&partnerID=40&md5=5a634086a50c8b664e4ba77b79c310cc>
- Samis S.; Friesicke C. et. al. (2020): Study of Power Amplifier Harmonic Output Termination for two AlGaIn/GaN Technologies at K-/Ka-Band. In: 2020 23rd International Microwave and Radar Conference; MIKON 2020 (,Conference Paper,Scopus). DOI:10.23919/MIKON48703.2020.9253908. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097556139&doi=10.23919%2fMIKON48703.2020.9253908&partnerID=40&md5=f7f3b8b0e468ddb40c4ce32fb57d6ba6>
- Sandner T., Gaumont E. et. al. (2020): Wafer-level vacuum-packaged translatory MEMS actuator with large stroke for NIR-FT spectrometers. In: Micromachines (,Article,Scopus). DOI:10.3390/mi11100883. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092505909&doi=10.3390%2fmi11100883&partnerID=40&md5=7ec6d310ed7a7d2e1e30f1ef99e541f1>
- Sandner T., Graßhoff T. et. al. (2020): System integration of hybrid large aperture micro scanner array for fast scanning LiDAR sensors. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2566185. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084171314&doi=10.1117%2f12.2566185&partnerID=40&md5=295e63b07b74f1348d9a4acb30392962>
- Saponara S., Ciampi G. et. al. (2020): Integrated Passive Devices and Switching Circuit Design for a 3D DC/DC Converter up to 60 v. In: Journal of Circuits, Systems and Computers (,Article,Scopus). DOI:10.1142/S0218126620500395. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85066089115&doi=10.1142%2fS0218126620500395&partnerID=40&md5=26a70c6f036022b21c8252a22c1aabaf>
- Saric R., Ulbricht M. et. al. (2020): Recognition of Objects in the Urban Environment using R-CNN and YOLO Deep Learning Algorithms. In: 2020 9th Mediterranean Conference on Embedded Computing, MECO 2020 (,Conference Paper,Scopus). DOI:10.1109/MECO49872.2020.9134080. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088538872&doi=10.1109%2fMECO49872.2020.9134080&partnerID=40&md5=2c698a1aa967b08966c7cae644970db0>
- Schein F.-L., Kahle R. et. al. (2020): Process modules for high-density interconnects in panel-level packaging. In: IEEE Transactions on Components, Packaging and Manufacturing Technology (,Article,Scopus). DOI:10.1109/TCPMT.2019.2956325. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85078284583&doi=10.1109%2fTCPMT.2019.2956325&partnerID=40&md5=92f655c9616fca418dc5a433c5b08c6e](https://doi.org/10.1109/FTCPMT.2019.2956325&partnerID=40&md5=92f655c9616fca418dc5a433c5b08c6e)
- Schellenberger M., Anger S. et. al. (2020): Smart Platform for Rapid Prototyping: A First Solution Approach to Improve Time-to-Market and Process Control in Low-Volume Device Fabrication. In: Lecture Notes in Electrical Engineering (,Conference Paper,Scopus). DOI:10.1007/978-3-030-48602-0_12. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086066982&doi=10.1007%2f978-3-030-48602-0_12&partnerID=40&md5=fe48cb1e6e7f2b8f6423afc7b3a81
 - Schenk, Harald (2020): Chapter 49 - Micro mirrors. In: Handbook of silicon based MEMS materials and technologies: A volume in Micro and Nano Technologies. (Aufsatz in Buch).
 - Schischke K., Nissen N.F., Schneider-Ramelow M., (2020): Flexible, stretchable, conformal electronics, and smart textiles: Environmental life cycle considerations for emerging applications. In: MRS Communications (,Review,Scopus). DOI:10.1557/mrc.2019.157. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076747739&doi=10.1557%2fmrc.2019.157&partnerID=40&md5=96e2d74fb7e8bcd04e552c6201ca5a12>
 - Schlichting H., Kocher M. et. al. (2020): Influence of aluminum compensation effects in 4h-sic on the performance of vdmos transistors. In: Materials Science Forum (,Conference Paper,Scopus). DOI:10.4028/www.scientific.net/MSF.1004.843. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089820222&doi=10.4028%2fwww.scientific.net%2fMSF.1004.843&partnerID=40&md5=8b2a3b0eb3bc00a19ef0fc6fe64e92ff>
 - Schlykow V., Schlykow V. et. al. (2020): Ge(Sn) nano-island/Si heterostructure photodetectors with plasmonic antennas. In: Nanotechnology (,Article,Scopus). DOI:10.1088/1361-6528/ab91ef. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086523676&doi=10.1088%2f1361-6528%2fab91ef&partnerID=40&md5=81b7bc897815b7f0b505ba03be7ca69e>
 - Schmieder M., Keusgen W. et. al. (2020): THz Channel Sounding: Design and Validation of a High Performance Channel Sounder at 300 GHz. In: 2020 IEEE Wireless Communications and Networking Conference Workshops; WCNCW 2020 - Proceedings (,Conference Paper,Scopus). DOI:10.1109/WCNCW48565.2020.9124887. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087924377&doi=10.1109%2fWCNCW48565.2020.9124887&partnerID=40&md5=45db67ea3e0c67fe5add915a85b36a4f>
 - Schneider T., Förste M. et. al. (2020): Recent progress of high temperature vapor phase epitaxy for the growth of GaN layers – Controlled coalescence of nucleation layers. In: Journal of Crystal Growth (,Article,Scopus). DOI:10.1016/j.jcrysgro.2019.125465. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077504263&doi=10.1016%2fj.jcrysgro.2019.125465&partnerID=40&md5=b3f6d0750e4bd4eca65229a9ed6e37c5>
 - Schoch B., Tessmann A. et. al. (2020): E-band Balanced Broadband Driver Amplifier MMIC with 1.8THz Gain-Bandwidth Product. In: GeMIC 2020 - Proceedings of the 2020 German Microwave Conference (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084969641&partnerID=40&md5=413a40adf93cd801bbf5c6a968b093cd>
 - Schrape O., Andjelic M. et. al. (2020): Design Concept for Radiation-Hardening of Triple Modular Redundancy TSPC Flip-Flops. In: Proceedings - Euromicro Conference on Digital System Design, DSD 2020 (,Conference Paper,Scopus). DOI:10.1109/DSD51259.2020.00101. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096364521&doi=10.1109%2fDSD51259.2020.00101&partnerID=40&md5=4719c5d86fda5183b99bdaec00316b06>
 - Schulz M., Schleippmann N. et. al. (2020): Four switch buck/boost converter to handle bidirectional power flow in dc subgrids. In: PCIM Europe Conference Proceedings (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089691882&partnerID=40&md5=71377226d974feea04648e855c68a356>
 - Schulz M., Schleippmann N. et. al. (2020): Four Switch Buck/Boost Converter for DC Microgrid Applications. In: 2020 22nd European Conference on Power Electronics and Applications, EPE

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

2020 ECCE Europe (,Conference Paper,Scopus).

DOI:10.23919/EPE20ECCEEurope43536.2020.9215754. Link:

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094909822&doi=10.23919%2fEPE20ECCEEurope43536.2020.9215754&partnerID=40&md5=376ab9b804a58aa18ae158fa585c879e>

- Schwietering J., Herbst C. et. al. (2020): Integrated optical single-mode waveguide structures in thin glass for flip-chip PIC assembly and fiber coupling. In: Proceedings - Electronic Components and Technology Conference (,Conference Paper,Scopus). DOI:10.1109/ECTC32862.2020.00036. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090270101&doi=10.1109%2fECTC32862.2020.00036&partnerID=40&md5=d70058f767abc0366b9618aefaa9d52>
- Sciuto A., Deretzis I. et. al. (2020): Advanced simulations on laser annealing: Explosive crystallization and phonon transport corrections. In: International Conference on Simulation of Semiconductor Processes and Devices, SISPAD (,Conference Paper,Scopus). DOI:10.23919/SISPAD49475.2020.9241660. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096244270&doi=10.23919%2fSISPAD49475.2020.9241660&partnerID=40&md5=9662d52d9acb80bea7ca4833d10e8021>
- Seidel, Konrad (2020): Ultra-Low Power Technologies and Memory architectures for IoT. In: (Bericht).
- Selbmann F., Baum M. et. al. (2020): Parylene C based adhesive bonding on 6" and 8" wafer level for the realization of highly reliable and fully biocompatible microsystems. In: ECS Transactions (,Conference Paper,Scopus). DOI:10.1149/09804.0055ecst. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092728769&doi=10.1149%2f09804.0055ecst&partnerID=40&md5=4874ac924dca7d21a472d629191441d0>
- Sewergin, Alexander (2020): Highly Integrated Switching Cell Design based on Copper Diamond Heat Spreader, 3D Printed Heat Sink and HTCC Logic Board. In: CIPS 2020, 11th International Conference on Integrated Power Electronics Systems. Proceedings (Konferenzbeitrag).
- Sharma A., Hoffmann M.A. et. al. (2020): Crystallization of optically thick films of CoFe_{80-x}B₂₀: Evolution of optical, magneto-optical, and structural properties. In: Physical Review B (,Article,Scopus). DOI:10.1103/PhysRevB.101.054438. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082713477&doi=10.1103%2fPhysRevB.101.054438&partnerID=40&md5=6a55b8b246c3f4942db573f2009d7bac>
- Sharma A., Matthes P. et. al. (2020): Control of magneto-optical properties of cobalt-layers by adsorption of α -helical polyaniline self-assembled monolayers. In: Journal of Materials Chemistry C (,Article,Scopus). DOI:10.1039/d0tc02734k. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090587363&doi=10.1039%2fd0tc02734k&partnerID=40&md5=ad89e8de95578fe779f238e81d75c65>
- Simevski A., Schrape O. et. al. (2020): PISA: Power-robust Multiprocessor Design for Space Applications. In: Proceedings - 2020 26th IEEE International Symposium on On-Line Testing and Robust System Design, IOLTS 2020 (,Conference Paper,Scopus). DOI:10.1109/IOLTS50870.2020.9159716. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091592666&doi=10.1109%2fIOLTS50870.2020.9159716&partnerID=40&md5=fbecd7dfb35ed8b84237e1209efac278>
- Sinterhauf A., Bode S. et. al. (2020): A comprehensive study of charge transport in Au-contacted graphene on Ge/Si(001). In: Applied Physics Letters (,Article,Scopus). DOI:10.1063/5.0013802. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088110967&doi=10.1063%2f5.0013802&partnerID=40&md5=7e2e1b06f6aef2a8d6d096ce079b10a>
- Skibitzki O., Zoellner M.H. et. al. (2020): Reduction of threading dislocation density beyond the saturation limit by optimized reverse grading. In: Physical Review Materials (,Article,Scopus). DOI:10.1103/PhysRevMaterials.4.103403. Link:

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095450179&doi=10.1103%2fPhysRevMaterials.4.103403&partnerID=40&md5=5c8c2051249c4bb47dadf386d3b10a9f>
- Śledziwski T., Erlbacher T., (2020): Sic mosfet with a self-aligned channel defined by shallow source-jfet implantation: A simulation study. In: Materials Science Forum (,Conference Paper,Scopus). DOI:10.4028/www.scientific.net/MSF.1004.850. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089822196&doi=10.4028%2fwww.scientific.net%2fMSF.1004.850&partnerID=40&md5=aa240160f6575d429749673ac5edad9>
 - Soliman T., Olivo R. et. al. (2020): Efficient FeFET crossbar accelerator for binary neural networks. In: Proceedings of the International Conference on Application-Specific Systems, Architectures and Processors (,Conference Paper,Scopus). DOI:10.1109/ASAP49362.2020.00027. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090824710&doi=10.1109%2fASAP49362.2020.00027&partnerID=40&md5=898db52c9af74b329b7242d563ec3de5>
 - Solonenko D., Lan C. et. al. (2020): Co-sputtering of Al 1-xSc xN thin films on Pt(111): a characterization by Raman and IR spectroscopies. In: Journal of Materials Science (,Article,Scopus). DOI:10.1007/s10853-020-05244-8. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091191087&doi=10.1007%2fs10853-020-05244-8&partnerID=40&md5=5b17df87f2355633614332abcd130999>
 - Solonenko D., Schmidt C. et. al. (2020): The Limits of the Post-Growth Optimization of AlN Thin Films Grown on Si(111) via Magnetron Sputtering. In: Physica Status Solidi (B) Basic Research (,Article,Scopus). DOI:10.1002/pssb.201900400. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076750151&doi=10.1002%2fpssb.201900400&partnerID=40&md5=493c3e2fa4bfeed2398abbba4621dccc>
 - Song Y., Xu Z. et. al. (2020): Photoluminescence and Raman Spectroscopy Study on Color Centers of Helium Ion-Implanted 4H–SiC. In: Nanomanufacturing and Metrology (,Article,Scopus). DOI:10.1007/s41871-020-00061-8. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091889000&doi=10.1007%2fs41871-020-00061-8&partnerID=40&md5=2f6f252f0b582f0ee62cc2f0a4f120bd>
 - Song Y., Xu Z. et. al. (2020): Depth profiling of ion-implanted 4H–SiC using confocal raman spectroscopy. In: Crystals (,Article,Scopus). DOI:10.3390/cryst10020131. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080897350&doi=10.3390%2fcryst10020131&partnerID=40&md5=6c98233c267afb663c3b4fbc283bae12>
 - Speulmanns J., Kia A.M. et. al. (2020): Surface-Dependent Performance of Ultrathin TiN Films as an Electrically Conducting Li Diffusion Barrier for Li-Ion-Based Devices. In: ACS Applied Materials and Interfaces (,Article,Scopus). DOI:10.1021/acsmi.0c10950. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090282066&doi=10.1021%2facsmi.0c10950&partnerID=40&md5=ebabb53745c185e30777ee7003c09d62>
 - Steglich P., Bondarenko S. et. al. (2020): CMOS-Compatible Silicon Photonic Sensor for Refractive Index Sensing Using Local Back-Side Release. In: IEEE Photonics Technology Letters (,Article,Scopus). DOI:10.1109/LPT.2020.3019114. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091082766&doi=10.1109%2fLPT.2020.3019114&partnerID=40&md5=149ad06717bbdb815c46719635888c98>
 - Steglich P., Mai C. et. al. (2020): Direct observation and simultaneous use of linear and quadratic electro-optical effects. In: Journal of Physics D: Applied Physics (,Article,Scopus). DOI:10.1088/1361-6463/ab6059. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079546027&doi=10.1088%2f1361-6463%2fab6059&partnerID=40&md5=5accd94bfc802bdbc2ce70cb88c477a4>
 - Steglich P., Villringer C. et. al. (2020): Electric Field-Induced Linear Electro-Optic Effect Observed in Silicon-Organic Hybrid Ring Resonator. In: IEEE Photonics Technology Letters (,Article,Scopus). DOI:10.1109/LPT.2020.2983034. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85083332460&doi=10.1109%2fLPT.2020.2983034&partnerID=40&md5=711adb8246d52dea6f6dd279edcebaed](https://doi.org/10.1109/LPT.2020.2983034&partnerID=40&md5=711adb8246d52dea6f6dd279edcebaed)
- Stern M.L., Schellenberger M., (2020): Fully convolutional networks for chip-wise defect detection employing photoluminescence images: Efficient quality control in LED manufacturing. In: Journal of Intelligent Manufacturing (,Article,Scopus). DOI:10.1007/s10845-020-01563-4. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083259742&doi=10.1007%2fs10845-020-01563-4&partnerID=40&md5=a378e69b720699baa46bb7f53bccf92f>
 - Stieglauer H., Riepe K.J. et. al. (2020): Wafer-level packaging for electronic RF systems using GaN technologies. In: CS MANTECH 2020 - 2020 International Conference on Compound Semiconductor Manufacturing Technology; Digest of Papers (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096573252&partnerID=40&md5=e1075201ba173e69ceaf4d35441451cf>
 - Stocchi M., Wietstruck M. et. al. (2020): Full-wave RF modeling of a fan-out wafer-level packaging technology based on Al-Al wafer bonding. In: 2020 IEEE 20th Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, SiRF 2020 (,Conference Paper,Scopus). DOI:10.1109/SIRF46766.2020.9040180. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083196622&doi=10.1109%2fSIRF46766.2020.9040180&partnerID=40&md5=aac36209142d937248533c2cd408fcca>
 - Stock T.J.Z., Warschkow O. et. al. (2020): Atomic-Scale Patterning of Arsenic in Silicon by Scanning Tunneling Microscopy. In: ACS Nano (,Article,Scopus). DOI:10.1021/acsnano.9b08943. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082342535&doi=10.1021%2facsnano.9b08943&partnerID=40&md5=357890a76a653a7f1d172684be874d30>
 - Stolzke T., Ehrlich S. et. al. (2020): Comprehensive accuracy examination of electrical power loss measurements of inductive components for frequencies up to 1 MHz. In: Journal of Magnetism and Magnetic Materials (,Article,Scopus). DOI:10.1016/j.jmmm.2019.166022. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85074171902&doi=10.1016%2fj.jmmm.2019.166022&partnerID=40&md5=d9252a6182afff16cf345f826a717ce1>
 - Sturm F., Trempa M. et. al. (2020): Solid state diffusion of metallic impurities from crucible and coating materials into crystalline silicon ingots for PV application. In: Journal of Crystal Growth (,Article,Scopus). DOI:10.1016/j.jcrysgro.2020.125636. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082924404&doi=10.1016%2fj.jcrysgro.2020.125636&partnerID=40&md5=21e518597cf76e8cb54ada9ee4a734e3>
 - Suhir E., Stamenkovic Z. (2020): Using yield to predict long-term reliability of integrated circuits: Application of Boltzmann-Arrhenius-Zhurkov model. In: Solid-State Electronics (,Article,Scopus). DOI:10.1016/j.sse.2019.107746. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076269302&doi=10.1016%2fj.sse.2019.107746&partnerID=40&md5=d1dd01f1eefad55ae90c8000c8f7beb0>
 - Sundarapandian B., Kessel M. et. al. (2020): In-Plane Oriented Stacks of c-AlScN/Mo (110) for BAW Resonators Grown by Magnetron Sputter Epitaxy. In: IEEE International Ultrasonics Symposium; IUS (,Conference Paper,Scopus). DOI:10.1109/IUS46767.2020.9251791. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097874463&doi=10.1109%2fIUS46767.2020.9251791&partnerID=40&md5=0a97490da6ecc389179246acaa00aac4>
 - Syed R.T., Ulbricht M. et. al. (2020): Fault Tolerant Platform for Communication and Distance Measurement in Highly Automated Driving. In: 2020 9th Mediterranean Conference on Embedded Computing, MECO 2020 (,Conference Paper,Scopus). DOI:10.1109/MECO49872.2020.9134189. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088535372&doi=10.1109%2fMECO49872.2020.9134189&partnerID=40&md5=ec68918bc02eda74dba1df6b5e5b9ca8>
 - Tajalli A., Borga M. et. al. (2020): Vertical leakage in GaN-on-Si stacks investigated by a buffer decomposition experiment. In: Micromachines (,Article,Scopus). DOI:10.3390/mi11010101. Link:

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079121232&doi=10.3390%2fmi11010101&partnerID=40&md5=fba3e6ca1430054db2ef0bd6a44899ce>
- Tajalli A., Meneghini M. et. al. (2020): High breakdown voltage and low buffer trapping in superlattice gan-on-silicon heterostructures for high voltage applications. In: Materials (,Article,Scopus). DOI:10.3390/MA13194271. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092427028&doi=10.3390%2fMA13194271&partnerID=40&md5=4d823df98e8e371d3d12ced5674d236a>
 - Tamminen P., Fung R. et. al. (2020): Discharge current analysis with charged connector pins. In: Microelectronics Reliability (,Article,Scopus). DOI:10.1016/j.microrel.2020.113977. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094148241&doi=10.1016%2fj.microrel.2020.113977&partnerID=40&md5=572877169cb79e3b26514bdcbbb07b4a>
 - Tetzner H., Sana P. et. al. (2020): Carbon related hillock formation and its impact on the optoelectronic properties of GaN/AlGaIn heterostructures grown on Si(111). In: Applied Physics Letters (,Article,Scopus). DOI:10.1063/5.0005484. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087549067&doi=10.1063%2f5.0005484&partnerID=40&md5=f5a3f7e95a3a8e791bc878b2ee7394b2>
 - Thome F., Heinz F., Leuther A. (2020): InGaAs MOSHEMT W-Band LNAs on Silicon and Gallium Arsenide Substrates. In: IEEE Microwave and Wireless Components Letters (,Article,Scopus). DOI:10.1109/LMWC.2020.3025674. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096181798&doi=10.1109%2fLMWC.2020.3025674&partnerID=40&md5=c910761178dca731a3ad7cd001da28b2>
 - Thome F., Leuther A., Ambacher O., (2020): Low-Loss Millimeter-Wave SPDT Switch MMICs in a Metamorphic HEMT Technology. In: IEEE Microwave and Wireless Components Letters (,Article,Scopus). DOI:10.1109/LMWC.2019.2958209. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079800560&doi=10.1109%2fLMWC.2019.2958209&partnerID=40&md5=7ec6674942ecca2d9e44d3fbdae927b2>
 - Thome F., Ture E. et. al. (2020): Frequency Multiplier and Mixer MMICs Based on a Metamorphic HEMT Technology including Schottky Diodes. In: IEEE Access (,Article,Scopus). DOI:10.1109/ACCESS.2020.2965823. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078813666&doi=10.1109%2fACCESS.2020.2965823&partnerID=40&md5=0e810ad935c8052eaf50466db102fd86>
 - Thome F., Ture E. et. al. (2020): A fully-integrated W-Band I/Q-Down-conversion MMIC for use in radio astronomical multi-pixel receivers. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9223856. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094197421&doi=10.1109%2fIMS30576.2020.9223856&partnerID=40&md5=c823e0b423bc0d22a2249989169d85da>
 - Timoneda X., Abadal S. et. al. (2020): Engineer the Channel and Adapt to it: Enabling Wireless Intra-Chip Communication. In: IEEE Transactions on Communications (,Article,Scopus). DOI:10.1109/TCOMM.2020.2973988. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085149483&doi=10.1109%2fTCOMM.2020.2973988&partnerID=40&md5=79d7a7972d17d3b0642e92362315a490>
 - Tiwari K.K., Grass E., Thompson J.S., (2020): Memory-assisted Statistically-ranked RF Beam Training Algorithms for Sparse MIMO. In: IEEE Vehicular Technology Conference (,Conference Paper,Scopus). DOI:10.1109/VTC2020-Spring48590.2020.9129037. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088321076&doi=10.1109%2fVTC2020-Spring48590.2020.9129037&partnerID=40&md5=0ddd066289c1dd880fd447fd40d16e83>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Tiwari K.K., Grass E., Thompson J.S., (2020): Memory-assisted Statistically-ranked RF Beam Training Algorithms for Sparse MIMO. In: IEEE Vehicular Technology Conference (,Conference Paper,Scopus). DOI:10.1109/VTC2020-Spring48590.2020.9129037. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088321076&doi=10.1109%2fVTC2020-Spring48590.2020.9129037&partnerID=40&md5=0ddd066289c1dd880fd447fd40d16e83>
- Tiwari K.K., Sark V. et. al. (2020): Monopulse-based THz beam tracking for indoor virtual reality applications. In: 24. ITG-Symposium on Mobile Communication - Technologies and Applications (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075234504&partnerID=40&md5=bf73f73d521f0b835681593e37d23254>
- Trempa M., Sturm F. et. al. (2020): Impact of different SiO₂ diffusion barrier layers on lifetime distribution in multi-crystalline silicon ingots. In: Journal of Crystal Growth (,Article,Scopus). DOI:10.1016/j.jcrysgro.2019.125378. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076050629&doi=10.1016%2fj.jcrysgro.2019.125378&partnerID=40&md5=042b4d48229e72fb37d40c1be74f444d>
- Tzintzarov G.N., Buchner S.P. et. al. (2020): Electronic-to-Photonic Single-Event Transient Propagation in a Segmented Mach-Zehnder Modulator in a Si/SiGe Integrated Photonics Platform. In: IEEE Transactions on Nuclear Science (,Article,Scopus). DOI:10.1109/TNS.2019.2945860. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078920594&doi=10.1109%2fTNS.2019.2945860&partnerID=40&md5=dbdd88bdeadf02c5f7641a15451ac63f>
- Uhlig, Sebastian (2020): Silicon-based microfluid control and switching valves using lateral electrostatic bending actuators. (Bericht).
- Vagionas C., Ruggeri E. et. al. (2020): An end-to-end 5G fiber wireless A-RoF/IFoF link based on a 60 GHz beamsteering antenna and an InP EML. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2544866. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081171499&doi=10.1117%2f12.2544866&partnerID=40&md5=c2f8d68a6595bb57a176efb234c52889>
- Vagner M., Plausinaitiene V. et. al. (2020): PI-MOCVD technology of (La, Sr)(Mn, Co)O₃: From epitaxial to nanostructured films. In: Surface and Coatings Technology (,Article,Scopus). DOI:10.1016/j.surfcoat.2019.125287. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077980785&doi=10.1016%2fj.surfcoat.2019.125287&partnerID=40&md5=cea22658aa5ae5799c92c9298815c3ce>
- Vegesna S.V., Bhat V.J. et. al. (2020): Increased static dielectric constant in ZnMnO and ZnCoO thin films with bound magnetic polarons. In: Scientific Reports (,Article,Scopus). DOI:10.1038/s41598-020-63195-1. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083776337&doi=10.1038%2fs41598-020-63195-1&partnerID=40&md5=8c9867af9de8fac53067cbcc98f1691c>
- Velea A.I., Vollebregt S. et. al. (2020): Wafer-Scale Graphene-Based Soft Electrode Array with Optogenetic Compatibility. In: Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS) (,Conference Paper,Scopus). DOI:10.1109/MEMS46641.2020.9056367. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083214664&doi=10.1109%2fMEMS46641.2020.9056367&partnerID=40&md5=2660bc351fc082db139e15587d70d266>
- Veleski M., Hubner M. et. al. (2020): Highly Configurable Framework for Adaptive Low Power and Error-Resilient System-On-Chip. In: Proceedings - Euromicro Conference on Digital System Design, DSD 2020 (,Conference Paper,Scopus). DOI:10.1109/DSD51259.2020.00015. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096360461&doi=10.1109%2fDSD51259.2020.00015&partnerID=40&md5=7f1bb3b5c802c994e5bd7082afcc95e1>
- Verani A., Fieramosca G. et. al. (2020): FPGA Accelerator for Battery Management Systems in Safety-Critical Applications. In: Proceedings - 2020 2nd IEEE International Conference on

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

Industrial Electronics for Sustainable Energy Systems, IESES 2020 (,Conference Paper,Scopus).

DOI:10.1109/IESES45645.2020.9210671. Link:

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094872872&doi=10.1109%2fIESES45645.2020.9210671&partnerID=40&md5=212a4d5c165c2b374a3153113e279365>

- Viegas A., Mart C., Czernohorsky M., (2020): Antiferroelectric Si:HfO₂ for High Energy Storage using 3D MIM Capacitors. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234899. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096991052&doi=10.1109%2fIFCS-ISAF41089.2020.9234899&partnerID=40&md5=cb926ef8beb65da804d61ec4624f8ddd>
- Vuong P., Sundaram S. et. al. (2020): Control of the Mechanical Adhesion of III-V Materials Grown on Layered h-BN. In: ACS Applied Materials and Interfaces (,Article,Scopus). DOI:10.1021/acsami.0c16850. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097850967&doi=10.1021%2facami.0c16850&partnerID=40&md5=5cd1749b4043ca203d82bde144522ed>
- Waldhör S., Bockrath S. et. al. (2020): Foxbms-free and open bms platform focused on functional safety and ai. In: PCIM Europe Conference Proceedings (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089674273&partnerID=40&md5=a1a26bc9ef938d1a5764d1ab966c7d80>
- Wang D., Eissa M.H. et. al. (2020): 480-GHz Sensor with Subharmonic Mixer and Integrated Transducer in a 130-nm SiGe BiCMOS Technology. In: IEEE Microwave and Wireless Components Letters (,Article,Scopus). DOI:10.1109/LMWC.2020.3013317. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091096327&doi=10.1109%2fLMWC.2020.3013317&partnerID=40&md5=085b24958c5082adb57b0cd793eabe>
- Wang D., Eissa M.H. et. al. (2020): 240-GHz Reflectometer-Based Dielectric Sensor With Integrated Transducers in a 130-nm SiGe BiCMOS Technology. In: IEEE Transactions on Microwave Theory and Techniques (,Article,Scopus). DOI:10.1109/TMTT.2020.3038382. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097419621&doi=10.1109%2fTMTT.2020.3038382&partnerID=40&md5=c557e1ec7d8e99cd8a844cb64ed1b718>
- Wang D., Eissa M.H. et. al. (2020): 240-GHz reflectometer with integrated transducer for dielectric spectroscopy in a 130-nm SiGe BiCMOS technology. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9223849. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094185342&doi=10.1109%2fIMS30576.2020.9223849&partnerID=40&md5=31edaa120e5ce0b292a4cb5ca9d02a77>
- Wang D., Eissa M.H. et. al. (2020): 240-GHz Reflectometer-Based Dielectric Sensor With Integrated Transducers in a 130-nm SiGe BiCMOS Technology. In: IEEE Transactions on Microwave Theory and Techniques (,Article,Scopus). DOI:10.1109/TMTT.2020.3038382. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097419621&doi=10.1109%2fTMTT.2020.3038382&partnerID=40&md5=c557e1ec7d8e99cd8a844cb64ed1b718>
- Wang D., Eissa M.H. et. al. (2020): 480-GHz Sensor with Subharmonic Mixer and Integrated Transducer in a 130-nm SiGe BiCMOS Technology. In: IEEE Microwave and Wireless Components Letters (,Article,Scopus). DOI:10.1109/LMWC.2020.3013317. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091096327&doi=10.1109%2fLMWC.2020.3013317&partnerID=40&md5=085b24958c5082adb57b0cd793eabe>
- Wehring B., Gerlich L. et. al. (2020): Analysis of the composition of tantalum nitride in CMOS metallization trenches using parallel angle-resolved XPS. In: Surface and Interface Analysis (,Conference Paper,Scopus). DOI:10.1002/sia.6887. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85092056551&doi=10.1002%2fsia.6887&partnerID=40&md5=c99320246bb2fced34cb833aa60d57ac](https://doi.org/10.1002/fsia.6887&partnerID=40&md5=c99320246bb2fced34cb833aa60d57ac)
- Wehring B., Hoffmann R. et. al. (2020): BEoL Reliability, XPS and REELS Study on low-k Dielectrics to understand Breakdown Mechanisms. In: IEEE International Reliability Physics Symposium Proceedings (,Conference Paper,Scopus). DOI:10.1109/IRPS45951.2020.9129285. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088402032&doi=10.1109%2fIRPS45951.2020.9129285&partnerID=40&md5=b4dfc23c973ac836ff40bdc8e2a2c2ae>
 - Weibe J., Matthus C. et. al. (2020): RESURF n-LDMOS Transistor for Advanced Integrated Circuits in 4H-SiC. In: IEEE Transactions on Electron Devices (,Article,Scopus). DOI:10.1109/TED.2020.3002730. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089338127&doi=10.1109%2fTED.2020.3002730&partnerID=40&md5=7861aad040fba4604c99c9e7e46d019a>
 - Weigel P., Schüller M. et. al. (2020): Design of a synthetic jet actuator for flow separation control. In: CEAS Aeronautical Journal (,Article,Scopus). DOI:10.1007/s13272-020-00479-2. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092714024&doi=10.1007%2fs13272-020-00479-2&partnerID=40&md5=31603b558b4e560ef5be41bf9d39772a>
 - Weiß M.; Friesicke C. et. al. (2020): A novel 32-Gb/s 5.6-Vpp digital-to-analog converter in 100 nm GaN technology for 5G signal generation. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9224080. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094192685&doi=10.1109%2fIMS30576.2020.9224080&partnerID=40&md5=02c8b0f97c71e641b301fcc39ada41a3>
 - Wessel J., Schmalz K. et. al. (2020): Microwave and Millimeter Wave Sensors for Industrial, Scientific and Medical Applications in BiCMOS Technology. In: 2020 IEEE International Symposium on Radio-Frequency Integration Technology, RFIT 2020 (,Conference Paper,Scopus). DOI:10.1109/RFIT49453.2020.9226229. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096549338&doi=10.1109%2fRFIT49453.2020.9226229&partnerID=40&md5=41c83abe8360f4f7e3df789e50d1b8f5>
 - Wicht T., Muller S. et. al. (2020): X-ray characterization of physical-vapor-transport-grown bulk AlN single crystals. In: Journal of Applied Crystallography (,Article,Scopus). DOI:10.1107/S1600576720008961. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092331690&doi=10.1107%2fS1600576720008961&partnerID=40&md5=5203834be0c21a8f6d7d20133fc9d0de>
 - Wiemer M., Hofmann C., Vogel K., (2020): Selective heat input for low temperature metallic wafer level bonding. In: ECS Transactions (,Conference Paper,Scopus). DOI:10.1149/09804.0183ecst. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092727188&doi=10.1149%2f09804.0183ecst&partnerID=40&md5=3170f4a130d56d3e25a8aca891cc1204>
 - Wolansky D., Blaschke J.-P. et. al. (2020): Nickel and nickel-platinum silicide for BiCMOS devices. In: ECS Transactions (,Conference Paper,Scopus). DOI:10.1149/09805.0351ecst. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092619858&doi=10.1149%2f09805.0351ecst&partnerID=40&md5=d195ca65a6aebc04a0cef31c87d76979>
 - Wong W.-T., Hosseini M. et. al. (2020): A 1 mW cryogenic LNA exploiting optimized SiGe HBTs to achieve an average noise temperature of 3.2 K from 4-8 GHz. In: IEEE MTT-S International Microwave Symposium Digest (,Conference Paper,Scopus). DOI:10.1109/IMS30576.2020.9224049. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094190443&doi=10.1109%2fIMS30576.2020.9224049&partnerID=40&md5=1850c8f8586bfef15a161660e7d9f59>
 - Wu M., Thakare D. et. al. (2020): Mask absorber for next generation EUV lithography. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2572114. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- [85096591672&doi=10.1117%2f12.2572114&partnerID=40&md5=b5c1557b9c3ec544e6a6da394995ec73](https://doi.org/10.1117/12.2572114&partnerID=40&md5=b5c1557b9c3ec544e6a6da394995ec73)
- Xiong K., Hwang J.C.M. et. al. (2020): Large-Scale Fabrication of Submicrometer-Gate-Length MOSFETs with a Trilayer PtSe₂ Channel Grown by Molecular Beam Epitaxy. In: IEEE Transactions on Electron Devices (,Article,Scopus). DOI:10.1109/TED.2020.2966434. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080945381&doi=10.1109%2fTED.2020.2966434&partnerID=40&md5=d753776ca72cd6bfc034027a85d87dc5>
 - Xiong K., Zhang X. et. al. (2020): Temperature-Dependent RF Characteristics of AlO-Passivated WSe MOSFETs. In: IEEE Electron Device Letters (,Article,Scopus). DOI:10.1109/LED.2020.2999906. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087830247&doi=10.1109%2fLED.2020.2999906&partnerID=40&md5=8f8db07b423caee5f38cf1864f189c1b>
 - Xu Z., Liu L. et. al. (2020): Nanocutting mechanism of 6H-SiC investigated by scanning electron microscope online observation and stress-assisted and ion implant-assisted approaches. In: International Journal of Advanced Manufacturing Technology (,Article,Scopus). DOI:10.1007/s00170-019-04886-6. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85077685579&doi=10.1007%2fs00170-019-04886-6&partnerID=40&md5=d20725d5d55b2b9f776553c496acc8f8>
 - Yamamoto Y., Corley C. et. al. (2020): Threading dislocation reduction of Ge by introducing a SiGe / Ge superlattice. In: ECS Transactions (,Conference Paper,Scopus). DOI:10.1149/09805.0185ecst. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092644782&doi=10.1149%2f09805.0185ecst&partnerID=40&md5=0d4f4844c2e6b8c94184c43257db18f7>
 - Yamamoto Y., Skibitzki O. et. al. (2020): Ge/SiGe multiple quantum well fabrication by reduced-pressure chemical vapor deposition. In: Japanese Journal of Applied Physics (,Article,Scopus). DOI:10.7567/1347-4065/ab65d0. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083300936&doi=10.7567%2f1347-4065%2fab65d0&partnerID=40&md5=5e056c423b3937db87e9dab4fbee74a3>
 - Yang Q.; Passow T.; (2020): Non-ideal quarter-wavelength Bragg-reflection waveguides for nonlinear interaction: eigen equation and tolerance. In: Optics Letters (,Article,Scopus). DOI:10.1364/OL.397198. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090181711&doi=10.1364%2fOL.397198&partnerID=40&md5=b7052a30b50661c08f5b0ce33fd0363d>
 - Zahari F., Pérez E. et. al. (2020): Analogue pattern recognition with stochastic switching binary CMOS-integrated memristive devices. In: Scientific Reports (,Article,Scopus). DOI:10.1038/s41598-020-71334-x. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090155077&doi=10.1038%2fs41598-020-71334-x&partnerID=40&md5=0c73583256998fc7dc65017aa62b74c1>
 - Zambrana-Puyalto X.; Vidal X.; Molina-Terriza G.; (2020): Probing the backscattering of TiO₂ particles with vortex beams. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2555460. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094097422&doi=10.1117%2f12.2555460&partnerID=40&md5=7487fcc6838bf449f103d6d3995bf992>
 - Zanotti T., Zambelli C. et. al. (2020): Reliability of Logic-in-Memory Circuits in Resistive Memory Arrays. In: IEEE Transactions on Electron Devices (,Article,Scopus). DOI:10.1109/TED.2020.3025271. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095712608&doi=10.1109%2fTED.2020.3025271&partnerID=40&md5=6dfad2057409d91dbad9521df9162a0a>
 - Zarrin P.S., Zahari F. et. al. (2020): Neuromorphic on-chip recognition of saliva samples of COPD and healthy controls using memristive devices. In: Scientific Reports (,Article,Scopus). DOI:10.1038/s41598-020-76823-7. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095955839&doi=10.1038%2fs41598-020-76823-7&partnerID=40&md5=90a168db2562c7098efea546b6ac7322>

Research Fab Microelectronics Germany – Extended CMOS
**Publications from the Technology Platform “Extended CMOS” of the
Research Fab Microelectronics Germany (2020)**

- Zhang L., Borggreve D. et. al. (2020): Quantization Considerations of Dense Layers in Convolutional Neural Networks for Resistive Crossbar Implementation. In: 2020 9th International Conference on Modern Circuits and Systems Technologies, MOCAST 2020 (,Conference Paper,Scopus). DOI:10.1109/MOCAST49295.2020.9200280. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093828255&doi=10.1109%2fMOCAST49295.2020.9200280&partnerID=40&md5=6b46874ebee87b0c41c3ee861ac236b7>
- Zhang X.; Matsumoto T. et. al. (2020): Insight into Al₂O₃/B-doped diamond interface states with high-temperature conductance method. In: Applied Physics Letters (,Article,Scopus). DOI:10.1063/5.0021785. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090896507&doi=10.1063%2f5.0021785&partnerID=40&md5=9e2d89e248a6a8d60d306edf692b7f04>
- Zulfiqar B., Vogel H. et. al. (2020): The Impact of Wettability and Surface Roughness on Fluid Displacement and Capillary Trapping in 2-D and 3-D Porous Media: 2. Combined Effect of Wettability, Surface Roughness, and Pore Space Structure on Trapping Efficiency in Sand Packs and Micromodels. In: Water Resources Research (,Article,Scopus). DOI:10.1029/2020WR027965. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093829447&doi=10.1029%2f2020WR027965&partnerID=40&md5=82ad23ffd796a60f5c70071895223573>