



**Forschungsfabrik
Mikroelektronik**
Deutschland



**Technology Platform
"Power Electronics"**

Publications from the Technology Platform "Power Electronics" of the Research Fab Microelectronics Germany (2020)

- Abid I., Kabouche R. et. al. (2020): Remarkable Breakdown Voltage on AlN/Al-GaN/AlN double heterostructure. In: Proceedings of the International Symposium on Power Semiconductor Devices and ICs (,Conference Paper,Scopus). DOI:10.1109/ISPSD46842.2020.9170170. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090592621&doi=10.1109%2fISPSD46842.2020.9170170&partnerID=40&md5=89d6a2ffc0fe7990bcdf146eebf1e0a>
- Albahrani S.A., Heuken L. et. al. (2020): Consistent Surface-Potential-Based Modeling of Drain and Gate Currents in AlGaIn/GaN HEMTs. In: IEEE Transactions on Electron Devices (,Article,Scopus). DOI:10.1109/TED.2019.2961773. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078892902&doi=10.1109%2fTED.2019.2961773&partnerID=40&md5=379b5342eb3a1683d6eb2d5264a33127>
- Albahrani S.A., Hodges J. et. al. (2020): Validation of the Industry-Standard ASM-GaN Model for Gate-Length Scaling. In: 2020 4th Australian Microwave Symposium; AMS 2020 (,Conference Paper,Scopus). DOI:10.1109/AMS48904.2020.9059542. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084187186&doi=10.1109%2fAMS48904.2020.9059542&partnerID=40&md5=030ce9629d2b42baa2256c7274782a7b>
- Albahrani S.A., Mahajan D. et. al. (2020): Extreme Temperature Modeling of AlGaIn/GaN HEMTs. In: IEEE Transactions on Electron Devices (,Article,Scopus). DOI:10.1109/TED.2019.2960573. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078948352&doi=10.1109%2fTED.2019.2960573&partnerID=40&md5=f1de808ab2697e83b5d80a504e52c374>
- Albrecht M., Klupfel F.J., Erlbacher T., (2020): An Iterative Surface Potential Algorithm including Interface Traps for Compact Modeling of SiC-MOSFETs. In: IEEE Transactions on Electron Devices (,Article,Scopus). DOI:10.1109/TED.2020.2967507. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080957158&doi=10.1109%2fTED.2020.2967507&partnerID=40&md5=33e045aa18ad1f0c8ffda98d7126c309>
- Albrecht M., Pérez D. et. al. (2020): Impact of channel implantation on a 4h-sic cmos operational amplifier for high temperature applications. In: Materials Science Forum (,Conference Paper,Scopus). DOI:10.4028/www.scientific.net/MSF.1004.1123. Link: <https://www.scopus.com/inward/rec->

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- [ord.uri?eid=2-s2.0-85089815153&doi=10.4028%2fwww.scientific.net%2fMSF.1004.1123&part-nerID=40&md5=466a34989c3cea17b41da4a5e42e1e05](https://doi.org/10.4028/www.scientific.net/MSF.1004.1123)
- Basler M., Moench S. et. al. (2020): A GaN-based Current Sense Amplifier for GaN HEMTs with Integrated Current Shunts. In: Proceedings of the International Symposium on Power Semiconductor Devices and ICs (,Conference Paper,Scopus). DOI:10.1109/ISPSD46842.2020.9170047. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090561760&doi=10.1109%2fISPSD46842.2020.9170047&part-nerID=40&md5=8c4ba9415bf91c45f9410a45a4786430>
 - Basler M., Reiner R. et. al. (2020): Large-Area Lateral AlGaIn/GaN-on-Si Field-Effect Rectifier with Low Turn-On Voltage. In: IEEE Electron Device Letters (,Article,Scopus). DOI:10.1109/LED.2020.2994656. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087770324&doi=10.1109%2fLED.2020.2994656&part-nerID=40&md5=c84af0f9885c70c15d97e3ade289be2a>
 - 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).
 - 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&part-nerID=40&md5=52c85294e190c1f867b2f841de85e62e>
 - Bayer B., Groccia M. et. al. (2020): LTCC Embedding of SiC Power Devices for High Temperature Applications over 400 °C. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229859. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096520382&doi=10.1109%2fESTC48849.2020.9229859&part-nerID=40&md5=73bd2a8605fce3fc660ac6c3957109a1>
 - Bayer B., Groccia M. et. al. (2020): LTCC Embedding of SiC Power Devices for High Temperature Applications over 400 °C. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229859. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096520382&doi=10.1109%2fESTC48849.2020.9229859&part-nerID=40&md5=73bd2a8605fce3fc660ac6c3957109a1>
 - 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&part-nerID=40&md5=730f871ace1d5be5e42bf8fd9c48319e>
 - 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&part-nerID=40&md5=a353bcc46e85c9bfb4c24e28a6c50368>
 - Besendörfer S., Meissner E. et. al. (2020): Interplay between C-doping, threading dislocations, breakdown, and leakage in GaN on Si HEMT structures. In:

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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&part-nerID=40&md5=981e513b07820d7c49d8491181f90c8e>
- Besendörfer S., Meissner E. et. al. (2020): The impact of dislocations on Al-GaN/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&part-nerID=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&part-nerID=40&md5=1e12c20369a700a87c52fc1da2129300>
 - 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&part-nerID=40&md5=dbcaf6416e9dfa9b8402e331235c5889>
 - 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&part-nerID=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&part-nerID=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&part-nerID=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&part-nerID=40&md5=af060177b8928a763cfcfcffebdfae23>
 - 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&part-nerID=40&md5=129ad7c31c95e0c250f29b27dd73291a>
 - Curreli N., Serri M. et. al. (2020): Liquid Phase Exfoliated Indium Selenide Based Highly Sensitive Photodetectors. In: Advanced Functional Materials (,Ar-

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- title,Scopus). DOI:10.1002/adfm.201908427. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079733924&doi=10.1002%2fadfm.201908427&part-nerID=40&md5=17a68502e1c788d8bb4930068e397c2e>
- Cwiklinski M.; Bruckner P. et. al. (2020): First demonstration of G-Band Broad-band 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&part-nerID=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&part-nerID=40&md5=f6f17092fe3aaf8afeeb82952d6a3c5>
 - 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, ElConRus 2020 (,Conference Paper,Scopus). DOI:10.1109/ElConRus49466.2020.9038937. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082985831&doi=10.1109%2fElConRus49466.2020.9038937&part-nerID=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&part-nerID=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-s2.0-85097914458&doi=10.1109%2fIUS46767.2020.9251391&part-nerID=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}N 11 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&part-nerID=40&md5=4b139c5648c3903b9ca0ae5bbf3aedde>
 - 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&part-nerID=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->

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- [85096357518&doi=10.1016%2fj.microrel.2020.113784&part-nerID=40&md5=93ecb8cd2d4797bbc23ee07b9f3d8e2f](https://doi.org/10.1016/j.microrel.2020.113784)
- 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&part-nerID=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&part-nerID=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-s2.0-85094209283&doi=10.1109%2fIMS30576.2020.9224101&part-nerID=40&md5=2af663357c54497e75fc2459ce827bcf>
 - Ettehad H.M., Zarrin P.S. et. al. (2020): Dielectrophoretic immobilization of yeast cells using CMOS integrated microfluidics. In: Micromachines (,Article,Scopus). DOI:10.3390/M11050501. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085738885&doi=10.3390%2fM11050501&part-nerID=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&part-nerID=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&part-nerID=40&md5=e8c67f6018ffbf85be89cd71bae93301>
 - 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&part-nerID=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&part-nerID=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

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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&part-nerID=40&md5=d56332e186a04aee70e6efd1253b9b1b>
- 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&part-nerID=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&part-nerID=40&md5=62a3f694c17662c3366c8e604a17a026>
 - 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&part-nerID=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&part-nerID=40&md5=87b756cf1841504dddb14e815c69ce0a>
 - 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&part-nerID=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&part-nerID=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&part-nerID=40&md5=afe241b8347ad993013ec45d2abe8367
 - 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->

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- [85093835892&doi=10.1557%2fadv.2020.147&part-nerID=40&md5=8a966466b9f9c88a2ebbcd362a89da36](https://doi.org/10.1557%2fadv.2020.147&part-nerID=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&part-nerID=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&part-nerID=40&md5=553c3d131df66b05e612189bdc4ebac9>
 - 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&part-nerID=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&part-nerID=40&md5=ee45eb4c3894638345baae3196088a53>
 - 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&part-nerID=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-s2.0-85083756205&doi=10.1117%2f12.2543553&part-nerID=40&md5=d786594112bb7d88f67b07a3cf7ff01c>
 - 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&part-nerID=40&md5=68ea6ff033ae44b071d3d96f1b5be8f0>

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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&part-nerID=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/MWS-CAS48704.2020.9184517. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090564445&doi=10.1109%2fMWS-CAS48704.2020.9184517&part-nerID=40&md5=431c9be7c7960c6e90e36a1d8978d6c1>
- Gu-Stoppel S., Lisec 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&part-nerID=40&md5=baa96f289e52aa76dfa45ff09828eb9a>
- Gu-Stoppel S., Lisec 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&part-nerID=40&md5=95a1147bf091bcb49b64e0cce34c033e>
- 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&part-nerID=40&md5=4854b227bd0715991f6cd50aad1ba394>
- 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&part-nerID=40&md5=08be99822097a85887cfeb2037b1cd2a>
- 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&part-nerID=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&part-nerID=40&md5=00147d9113ca45a9acc7a77d6e13eaa5>

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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>
- 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=2b1b9bcac428ad95823f5efbbef7460>
- 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>
- 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>
- 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>
- Ihle, Martin (2020): Aufbaukonzept für HF-Systeme (Patent). Link: <https://worldwide.espacenet.com/publicationDetails/biblio?DB=worldwide.espacenet&FT=D&CC=DE&NR=102018214126A1> |t Frontpage
- Ildfonso A., Tzintzarov G.N. et. al. (2020): Tradeoffs between RF Performance and SET Robustness in Low-Noise Amplifiers in a Complementary SiGe BiC-MOS 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

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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., Neining 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>
 - 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
 - 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>

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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>
- 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=a8f8e3366e9eb8a266c5ba91788514e3>
- Kemmer T., Dammann M. et. al. (2020): Failure Analysis of 100 nm Al-GaN/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>
- 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>
- Kissinger G., Kot D. et. al. (2020): Editors' Choice - Precipitation of Suboxides in Silicon, their Role in Gettering of Copper Impurities and Carrier Recombination. In: ECS Journal of Solid State Science and Technology (,Article,Scopus). DOI:10.1149/2162-8777/aba0ce. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088317310&doi=10.1149%2f2162-8777%2fab0ce&partnerID=40&md5=f9426e4c79b4748b946c6dc9ef9877f0>

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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&part-nerID=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&part-nerID=40&md5=5c4e817cec4534c62edb3b6989a08cc0>
- Klein K., Rämmer O. et. al. (2020): Low inductive full ceramic sic power module for high-temperature automotive applications. In: PCIM Europe Conference Proceedings (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089655616&part-nerID=40&md5=8079cf910c813b6b5d1b9129822bf8e1>
- 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&part-nerID=40&md5=ada09ca36b3b8c65ba94b19c5c33a5a2>
- Kobylinski 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&part-nerID=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&part-nerID=40&md5=e5d5e17e08864e19adb2e183e00c8ab6>
- Koch U., Uhl C. et. al. (2020): A monolithic bipolar CMOS electronic–plasmasonic 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&part-nerID=40&md5=0b1df019c2aee62f254702b976673bb8>
- Kolbinger E., Kuttler S. et. al. (2020): Investigation of the mechanical properties of corroded sintered silver layers by using Nanoindentation. In: Microelectronics Reliability (,Article,Scopus). DOI:10.1016/j.microrel.2020.113889. Link:

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096701274&doi=10.1016%2fj.microrel.2020.113889&partnerID=40&md5=01ca8a0a60f49d9f3d9053d499235314>
- Korsá 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>
 - Kossifos K.M., Petrou L. et. al. (2020): Toward the Realization of a Programmable Metasurface Absorber Enabled by Custom Integrated Circuit Technology. In: IEEE Access (,Article,Scopus). DOI:10.1109/ACCESS.2020.2994469. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086042141&doi=10.1109%2fACCESS.2020.2994469&partnerID=40&md5=0ca1d6efe7758675ca8bad6673b078ea>
 - Krohnert K., Friedrich G. et. al. (2020): Reliability of through glass vias and hermetically sealing for a versatile sensor platform. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229834. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096555448&doi=10.1109%2fESTC48849.2020.9229834&partnerID=40&md5=24dbd8393fb6f991c35588e92cac6763>
 - Kucharski M., Ahmad W.A. et. al. (2020): Monostatic and Bistatic G-Band Bi-CMOS 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>
 - Kühne T., Song X. et. al. (2020): Performance simulation of a 5G hybrid beam-forming millimeter-wave system. In: WSA 2020 - 24th International ITG Workshop on Smart Antennas (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096777879&partnerID=40&md5=3dd89b67576f12ce15bf92c725ae5ffb>
 - 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=4da859fcffd211dc70e8ce8c5126adf3>
 - 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 T.H., Kanitkar A. et. al. (2020): Dual-Band 5G Antenna Array in Fan-Out Wafer-Level Packaging (FOWLP) Technology. In: 2020 23rd International Microwave and Radar Conference, MIKON 2020 (,Conference Paper,Scopus).

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

DOI:10.23919/MIKON48703.2020.9253926. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097527099&doi=10.23919%2fMIKON48703.2020.9253926&partnerID=40&md5=bacca14a96621adc51102fd69b88d470>

- 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>
- 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>
- 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>
- Lesiak P., Bednarska K. et. al. (2020): Uv sensor based on fiber bragg grating covered with graphene oxide embedded in composite materials. In: Sensors (Switzerland) (,Letter,Scopus). DOI:10.3390/s20195468. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091450186&doi=10.3390%2fs20195468&partnerID=40&md5=a6339bd5b00a98f695766a994220b960>
- Leverenz E., Becker K.-F. et. al. (2020): Energy autarkic wireless sensor node for reliable long-term exposure to domestic waste water in a sewage system. In: Sensoren und Messsysteme - Beitrage der 19. ITG/GMA-Fachtagung (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082497467&partnerID=40&md5=f72b6a7c2ba21dea6dcc74c958f40e73>

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- Lgl, Jana (2020): Metalorganic chemical vapor phase deposition of AlScN/GaN heterostructures. In: Journal of applied physics (Zeitschriftenaufsatz). DOI: 10.1063/5.0003095.
- Li Y., Breitenreiter A. et. al. (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&part-nerID=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&part-nerID=40&md5=a937e189af3e5e7ff6fdc97e4813db24>
- 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&part-nerID=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&part-nerID=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&part-nerID=40&md5=ac4fd6dd5ddc74ef44cc24adb771613f>
- Liu Y., Urso A. et. al. (2020): Bidirectional Bioelectronic Interfaces: System Design and Circuit Implications. In: IEEE Solid-State Circuits Magazine (,Article,Scopus). DOI:10.1109/MSSC.2020.2987506. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087498463&doi=10.1109%2fMSSC.2020.2987506&part-nerID=40&md5=9e2267004d2761394876291778f0a13b>
- 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&part-nerID=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.jcrysgro.2020.125887. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- [85091800186&doi=10.1016%2fj.jcrysgro.2020.125887&part-nerID=40&md5=628510b21062876e1978d00a36affb1f](https://doi.org/10.1016/j.jcrysgro.2020.125887&part-nerID=40&md5=628510b21062876e1978d00a36affb1f)
- Mackowiak P., Erbacher K. et. al. (2020): Investigation of etching sic vias for high power electronics and harsh environment mems. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229659. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096514801&doi=10.1109%2fESTC48849.2020.9229659&part-nerID=40&md5=069de9f5123a33a4896bbbeb557affd75>
 - 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-s2.0-85077233129&doi=10.1116%2f1.5126936&part-nerID=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&part-nerID=40&md5=bdc5fca96d547068767af6d56daacf48>
 - Mai C., Steglich P. et. al. (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&part-nerID=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&part-nerID=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&part-nerID=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&part-nerID=40&md5=4160f6746ac65e627313e273fb0a388e>
 - Manassis D., Seckel M. et. al. (2020): Manufacturing of high frequency substrates as software programmable metasurfaces on PCBs with integrated controller nodes. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229660. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- [85096541402&doi=10.1109%2fESTC48849.2020.9229660&part-nerID=40&md5=2e3a5f902502d9fcec3192551caf5e36](https://doi.org/10.1109/ESTC48849.2020.9229660&part-nerID=40&md5=2e3a5f902502d9fcec3192551caf5e36)
- 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&part-nerID=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&part-nerID=40&md5=4878f62ae06409f731677b58bae1c085>
 - 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&part-nerID=40&md5=3d64b277cb8a171360a5a9b0832fcf5>
 - 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&part-nerID=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&part-nerID=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&part-nerID=40&md5=19f57967b5f7b77d454e3036d60597ad>
 - Menrath T., Roskopf 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&part-nerID=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&part-nerID=40&md5=c0f85c1230f4b4f441644723f771f8cc>
 - Moench S., Müller S. et. al. (2020): Monolithic Integrated AlGaIn/GaN Power Converter Topologies on High-Voltage AlN/GaN Superlattice Buffer. In: Physica

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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>
 - Mojena-Medina D., Hubl M. et. al. (2020): Real-time impedance monitoring of epithelial cultures with inkjet-printed interdigitated-electrode sensors. In: Sensors (Switzerland) (,Article,Scopus). DOI:10.3390/s20195711. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092420338&doi=10.3390%2fs20195711&partnerID=40&md5=362b3515f58a5cc62a451cd7f3008a2c>
 - 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). Link: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9097658>
 - Mueller M., Panchenko I. et. al. (2020): Morphologies of primary Cu₆Sn₅ and Ag₃Sn intermetallics in Sn-Ag-Cu solder balls. In: IEEE Transactions on Components, Packaging and Manufacturing Technology (,Article,Scopus).
DOI:10.1109/TCPMT.2019.2952093. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078339711&doi=10.1109%2fTCPMT.2019.2952093&partnerID=40&md5=f3b8923939ecb204033354d7b1c0cff1>
 - 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>
 - 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/mi1121124. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098126059&doi=10.3390%2fmi1121124&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/in->

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

[ward/record.uri?eid=2-s2.0-85078145184&doi=10.1016%2fj.diamond.2020.107713&partnerID=40&md5=f261a0031b589c9d8edb37eddda4d196](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.; Schneidereit 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: <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>
- Ndip I., Andersson K. et. al. (2020): A Novel Packaging and System-Integration Platform with Integrated Antennas for Scalable, Low-Cost and High-Performance 5G mmWave Systems. In: Proceedings - Electronic Components and Technology Conference (,Conference Paper,Scopus). DOI:10.1109/ECTC32862.2020.00029. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090265841&doi=10.1109%2fECTC32862.2020.00029&partnerID=40&md5=39b3839dc9025d1d0e7f4f1756f52a1f>
- 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): Chiplets - 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).

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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&part-nerID=40&md5=3ec944a3805e99e78e1c297088922c94>
- 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&part-nerID=40&md5=d2a71196f1507a6c5ca6ac49f187fcd>
 - 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&part-nerID=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:10.1088/1748-0221/15/1/P11025. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096705244&doi=10.1088%2f1748-0221%2f15%2f11%2fP11025&part-nerID=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&part-nerID=40&md5=d7ac3e539d0a1b6f14d6fcd889e90907>
 - Peczek A., Mai C., Winzer G., Zimmermann L., (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&part-nerID=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&part-nerID=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).

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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=4353d6d6bcb4fb0ed3eb3188a67f3653>
- 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%2fEW-DTs50664.2020.9225092&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>
 - Piro E., Lonsky M. et. al. (2020): Role of oxygen defects in conductive-filament formation in Y2 O3-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>
 - Piro 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>
 - 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>

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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 |t Volltext |s PDF |n Gesamter Tagungsband
- 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 |t Volltext |s PDF |n Gesamter Tagungsband
- Raddo T.R., Cimoli B. et. al. (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>
- 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=ab-fcf2932bf11757374149b039a96269>
- Rehm R., Driad R. et. al. (2020): Toward AlGaN 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 AlGaN/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>
- Reinert W., (2020): A miniaturized RGB-laser light engine. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229809.
Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096537386&doi=10.1109%2fESTC48849.2020.9229809&part-nerID=40&md5=40100440e1336591e5ff7ffa42ef5f1f>
- Reinert W., Malaurie P., (2020): Development of a small RGB-laser light engine. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2551877. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083735915&doi=10.1117%2f12.2551877&part-nerID=40&md5=f984f3d6d27c1b87ec5096a9588cbf4d>
 - 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&part-nerID=40&md5=db39320f319de96cde32dd858492711a>
 - 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). Link: <https://www.vde-verlag.de/proceedings-en/455225026.html>
 - Roben F., Meissner A.C., (2020): Market Response for Real-Time Energy Balancing with Fuzzy Logic. In: International Conference on the European Energy Market, EEM (,Conference Paper,Scopus). DOI:10.1109/EEM49802.2020.9221945. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85094808910&doi=10.1109%2fEEM49802.2020.9221945&part-nerID=40&md5=9f44b6f23d875f6596ec61f0062ebf36>
 - 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&part-nerID=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&part-nerID=40&md5=7851d941ccc56fc1c2f3c1c06e9d4c24>
 - 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&part-nerID=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 (,Arti-

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- cle,Scopus). DOI:10.3390/M111060564. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087525868&doi=10.3390%2fM111060564&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>
 - Roy S., Niu G. 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>
 - 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>
 - 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-s2.0-85078284583&doi=10.1109%2fTCPMT.2019.2956325&partnerID=40&md5=92f655c9616fca418dc5a433c5b08c6e>
 - Schell V., Müller C. et. al. (2020): Magnetic anisotropy controlled FeCoSiB thin films for surface acoustic wave magnetic field sensors. In: Applied Physics Letters (,Article,Scopus). DOI:10.1063/1.5140562. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- [85080119632&doi=10.1063%2f1.5140562&part-nerID=40&md5=84de396c119ab7dfecb5598642a9f6dc](https://doi.org/10.1063%2f1.5140562&part-nerID=40&md5=84de396c119ab7dfecb5598642a9f6dc)
- 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&part-nerID=40&md5=fe48cb1e6e7f2b8f8f8e6423afc7b3a81
 - 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&part-nerID=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&part-nerID=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&part-nerID=40&md5=81b7bc897815b7f0b505ba03be7ca69e>
 - 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&part-nerID=40&md5=b3f6d0750e4bd4eca65229a9ed6e37c5>
 - Schrape O., Andjelkovic 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&part-nerID=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). DOI: . Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089691882&part-nerID=40&md5=71377226d974f8ea04648e855c68a356>
 - 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 2020 ECCE Europe (,Conference Paper,Scopus). DOI:10.23919/EPE20ECCEurope43536.2020.9215754. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

[85094909822&doi=10.23919%2fEPE20ECCEu-
rope43536.2020.9215754&part-
nerID=40&md5=376ab9b804a58aa18ae158fa585c879e](https://doi.org/10.23919/2020.9215754&part-nerID=40&md5=376ab9b804a58aa18ae158fa585c879e)

- Schwarz F., Senger F. et. al. (2020): Resonant 1D MEMS mirror with a total optical scan angle of 180° for automotive LiDAR. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2546035. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084177624&doi=10.1117%2f12.2546035&part-nerID=40&md5=dbeff2d6bc79d917d46fa2d0941c0dd6>
- 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&part-nerID=40&md5=d70058f767abec0366b9618aefaa9d52>
- 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&part-nerID=40&md5=9662d52d9acb80bea7ca4833d10e8021>
- Senger F., Albers J. et. al. (2020): A bi-axial vacuum-packaged piezoelectric MEMS mirror for smart headlights. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2542802. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084185323&doi=10.1117%2f12.2542802&part-nerID=40&md5=f9dc613bdc7e808405be13ea622f11cc>
- 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). Link: <https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=9097716>
- 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&part-nerID=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&part-nerID=40&md5=7e2e1b06f6faef2a8d6d096ce079b10a>
- 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: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095450179&doi=10.1103%2fPhysRevMaterials.4.103403&part-nerID=40&md5=5c8c2051249c4bb47dadf386d3b10a9f>

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- Śledziewski 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&part-nerID=40&md5=aa240160f6575d429749673ac5edad9>
- 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&part-nerID=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&part-nerID=40&md5=6c98233c267afb663c3b4fbc283bae12>
- 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&part-nerID=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&part-nerID=40&md5=5acc94bfc802bdbc2ce70cb88c477a4>
- 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-s2.0-85083332460&doi=10.1109%2fLPT.2020.2983034&part-nerID=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&part-nerID=40&md5=a378e69b720699baa46bb7f53bccf92f>
- 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&part-nerID=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).

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- DOI:10.1021/acsnano.9b08943. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082342535&doi=10.1021%2facsnano.9b08943&part-nerID=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&part-nerID=40&md5=d9252a6182aff16cf345f826a717ce1>
 - 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&part-nerID=40&md5=21e518597cf76e8cb54ada9ee4a734e3>
 - Su J., Niekil F. et. al. (2020): Frequency tunable resonant magnetoelectric sensors for the detection of weak magnetic field. In: Journal of Micromechanics and Microengineering (,Article,Scopus). DOI:10.1088/1361-6439/ab8dd0. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085603910&doi=10.1088%2f1361-6439%2fab8dd0&part-nerID=40&md5=0f41299fc5ee4cb803e331230db192b3>
 - Su J., Niekil F. et. al. (2020): AlScN-based MEMS magnetoelectric sensor. In: Applied Physics Letters (,Article,Scopus). DOI:10.1063/5.0022636. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092516542&doi=10.1063%2f5.0022636&part-nerID=40&md5=9ddfd1611cc0ac10a4c1164395af65cf>
 - 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&part-nerID=40&md5=d1dd01f1eefad55ae90c8000c8f7beb0>
 - 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&part-nerID=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: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079121232&doi=10.3390%2fmi11010101&part-nerID=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&part-nerID=40&md5=4d823df98e8e371d3d12ced5674d236a>
 - Tetzner H., Sana P. et. al. (2020): Carbon related hillock formation and its impact on the optoelectronic properties of GaN/AlGaN heterostructures grown

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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=f5a3f7e95a3a8e791bc878b22e7394b2>
- Tetzner K., Hilt O. et. al. (2020): Challenges to overcome breakdown limitations in lateral β -Ga₂O₃ MOSFET devices. In: Microelectronics Reliability (,Article,Scopus). DOI:10.1016/j.microrel.2020.113951. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096495508&doi=10.1016%2fj.microrel.2020.113951&partnerID=40&md5=71279ecea727422410be181c1a2ae08e>
 - 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>
 - Trager-Cowan C., Alasamari A. et. al. (2020): Structural and luminescence imaging and characterisation of semiconductors in the scanning electron microscope. In: Semiconductor Science and Technology (,Article,Scopus). DOI:10.1088/1361-6641/ab75a5. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083289951&doi=10.1088%2f1361-6641%2fab75a5&partnerID=40&md5=d0da751e3d7e8167c9f5be9ac721feeb>
 - Trager-Cowan C., Alasmari A. et. al. (2020): Advances in electron channelling contrast imaging and electron backscatter diffraction for imaging and analysis of structural defects in the scanning electron microscope. In: IOP Conference Series: Materials Science and Engineering (,Conference Paper,Scopus). DOI:10.1088/1757-899X/891/1/012023. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093863358&doi=10.1088%2f1757-899X%2f891%2f1%2f012023&partnerID=40&md5=5e088099a092528e96b84c512016db38>
 - Treidel E.B., Hilt O. et. al. (2020): The influence of the gate trench orientation to the crystal plane on the conduction properties of vertical GaN MISFETs for laser driving applications. In: Device Research Conference - Conference Digest, DRC (,Conference Paper,Scopus). DOI:10.1109/DRC50226.2020.9135182. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091335248&doi=10.1109%2fDRC50226.2020.9135182&partnerID=40&md5=0b10eac17766d7aedd1113531b96859>
 - Treidel E.B., Hilt O. et. al. (2020): The influence of the GaN substrate types and active area scaling design on the conduction properties of vertical GaN MISFETs for laser driving applications. 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-s2.0-85092581749&partnerID=40&md5=c7867b0d7ca9e59a763d16bf4973eff8>
 - 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:

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076050629&doi=10.1016%2fj.jcrysgro.2019.125378&part-nerID=40&md5=042b4d48229e72fb37d40c1be74f444d>
- Tronciu V., Arar B., Wenzel H., (2020): Travelling-wave analysis of extended cavity diode lasers. In: Romanian Reports in Physics (,Article,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093885646&part-nerID=40&md5=47ebd5b2a1cfae23bd63f2b5f9762934>
 - Tronciu V., Wenzel H., Knigge A., (2020): Theoretical studies of the generation of picoseconds pulses with two-section blue-violet semiconductor lasers. In: Semiconductor Science and Technology (,Article,Scopus). DOI:10.1088/1361-6641/ab74f0. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083176361&doi=10.1088%2f1361-6641%2fab74f0&part-nerID=40&md5=404c2533cb4c845cf6308e6d99ab9495>
 - Tsao Y., Hsu H., (2020): A 52-58 GHz Power Amplifier with 18.6-dBm Saturated Output Power for Space Applications. In: IEEE Transactions on Circuits and Systems II: Express Briefs (,Article,Scopus). DOI:10.1109/TCSII.2020.3043343. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097923153&doi=10.1109%2fTCSII.2020.3043343&part-nerID=40&md5=7d3dc8e9913089f232ab2673e58af3b6>
 - Tsao Y.-F., Würfl J., Hsu H.-T., (2020): Bandwidth improvement of mmic single-pole-double-throw passive hemt switches with radial stubs in impedance-transformation networks. In: Electronics (Switzerland) (,Article,Scopus). DOI:10.3390/electronics9020270. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079172043&doi=10.3390%2felectronics9020270&part-nerID=40&md5=ad2a496c9a3c0bb19d87ab9a1ce8f1c3>
 - 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&part-nerID=40&md5=c2f8d68a6595bb57a176efb234c52889>
 - 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&part-nerID=40&md5=2660bc351fc082db139e15587d70d266>
 - 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 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&part-nerID=40&md5=212a4d5c165c2b374a3153113e279365>
 - Wachholz P., Wolf J. et. al. (2020): Novel technology for dispensing liquid polymers of a wide viscosity range on a picoliter scale for photonic applications. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2550566. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- [85082645252&doi=10.1117%2f12.2550566&part-nerID=40&md5=23a9833f547e1527c8a0396b2f59f817](https://doi.org/10.1117/12.2550566&part-nerID=40&md5=23a9833f547e1527c8a0396b2f59f817)
- Wagner, Stefan (2020): Condition monitoring of power electronic modules for predictive maintenance. 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
 - Walde S., Hagedorn S. et. al. (2020): AlN overgrowth of nano-pillar-patterned sapphire with different offcut angle by metalorganic vapor phase epitaxy. In: Journal of Crystal Growth (,Article,Scopus). DOI:10.1016/j.jcrysgro.2019.125343. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075302877&doi=10.1016%2fj.jcrysgro.2019.125343&part-nerID=40&md5=ce0b3aad65780cd7e7ef456af2d400e1>
 - 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&part-nerID=40&md5=a1a26bc9ef938d1a5764d1ab966c7d80>
 - Wang B., Baeuscher M. et. al. (2020): Development and characterization of a novel low-cost water-level and water quality monitoring sensor by using enhanced screen printing technology with peDOT: PSS. In: Micromachines (,Article,Scopus). DOI:10.3390/M111050474. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085500359&doi=10.3390%2fM111050474&part-nerID=40&md5=4ded18e19a041676bf4e1ea2f79f405d>
 - Warm S., Bunge C.A. et. al. (2020): Electronic precompensation of chromatic dispersion in fiber-optic transmission systems with exclusive use of a directly modulated laser [Elektronische Vorkompensation der chromatischen Dispersion in faseroptischen Übertragungssystemen bei alleiniger Verwendung eines direkt modulierten Lasers]. In: Photonische Netze - 8. ITG-Fachtagung (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091644717&partnerID=40&md5=77cca61f63197b3b6aa7d7e9bd38b982>
 - Weber C., Petermann K., (2020): Influence of fiber nonlinearities on dispersion predistortion in 10 and 40 Gb/s systems [Einfluss der Fasernichtlinearitäten bei Dispersionsvorverzerrung in 10 und 40 Gb/s Systemen]. In: Photonische Netze - 9. ITG-Fachtagung (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091415976&partnerID=40&md5=5fbd0e8cd1cab29993bc5bb4531abae8>
 - 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&part-nerID=40&md5=7861aad040fba4604c99c9e7e46d019a>
 - Wentzel A., Hilt O. et. al. (2020): A highly efficient GHz switching GaN-based synchronous buck converter module. In: International Journal of Microwave and Wireless Technologies (,Article,Scopus). DOI:10.1017/S1759078720000380. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084154291&doi=10.1017%2fS1759078720000380&part-nerID=40&md5=d4544ba13ef647e5cc608065fa3425df>

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- 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&part-nerID=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&part-nerID=40&md5=5203834be0c21a8f6d7d20133fc9d0de>
- Woehrmann M., Keller A. et. al. (2020): Reliability Investigation of Ultra Fine Line, Multi-Layer Copper Routing for Fan-Out Packaging Using a Newly Designed Micro Tensile Test Method. In: Proceedings - Electronic Components and Technology Conference (,Conference Paper,Scopus). DOI:10.1109/ECTC32862.2020.00146. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090276258&doi=10.1109%2fECTC32862.2020.00146&part-nerID=40&md5=0d99ba55144c484ac43facfa11a2ed0a>
- 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-s2.0-85096591672&doi=10.1117%2f12.2572114&part-nerID=40&md5=b5c1557b9c3ec544e6a6da394995ec73>
- Wuest F., Wittler O., Schneider-Ramelow M., (2020): Influence of temperature and humidity on power cycling capability of power modules. In: Microelectronics Reliability (,Article,Scopus). DOI:10.1016/j.microrel.2020.113880. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096199112&doi=10.1016%2fj.microrel.2020.113880&part-nerID=40&md5=4647e3538bb7dbdc79726a3418a753fa>
- 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&part-nerID=40&md5=d20725d5d55b2b9f776553c496acc8f8>
- Yáñez C.C., Pangalos G., Lichtenberg G., (2020): Model predictive load compensation in distribution grids. In: NEIS 2017 - Conference on Sustainable Energy Supply and Energy Storage Systems (,Conference Paper,Scopus). DOI: . Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082521486&partnerID=40&md5=1150f4b53eb9ce2684de5eb906092f2a>
- Yu Z., Zeng W. et. al. (2020): Reliability of silver direct bonding in thermal cycling tests. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229753. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096519065&doi=10.1109%2fESTC48849.2020.9229753&part-nerID=40&md5=13f5dbc8fb5b3629bafde7ff72101465>

Research Fab Microelectronics Germany – Optoelectronic Systems
**Publications from the Technology Platform “Power Electronics” of the
Research Fab Microelectronics Germany (2020)**

- Yu, Zechun (2020): Application of response surface methodology for optimization of Ag-Ag Direct Bonding for Wafer-Level Power Electronics Packaging. In: CIPS 2020, 11th International Conference on Integrated Power Electronics Systems. Proceedings (Konferenzbeitrag). Link: <https://ieeexplore.ieee.org/document/9097747>
- Yu, Zechung (2020): Reliability of Silver Direct Bonding in Thermal Cycling Tests. In: IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020. Proceedings (Konferenzbeitrag). Link: <https://ieeexplore.ieee.org/document/9229753>
- Zeltner S., Seliger B. et. al. (2020): Advantages and challenges of using sic mosfets in a high power density insulated hv/lv dc/dc converter. In: PCIM Europe Conference Proceedings (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089694181&partnerID=40&md5=06c417280a57be826f79d331ab294775>
- Zhao, Dawei (2020): A Method for the Characterization of Adhesion Strength Degradation of Thin Films on Si-Substrate under Thermal Cycling Test. In: CIPS 2020, 11th International Conference on Integrated Power Electronics Systems. Proceedings (Konferenzbeitrag). Link: <https://ieeexplore.ieee.org/document/9097731>
- Zhao, Dawei (2020): Combined experimental and numerical approach for investigating the mechanical degradation of the interface between thin film metallization and Si-substrate after temperature cycling test. In: Microelectronics reliability (Zeitschriftenaufsatz). DOI:.10.1016/j.microrel.2020.113785
- Zimmermann, Victoria (2020): Integration of Printed Electronics in Potted Power Electronic Modules. In: CIPS 2020, 11th International Conference on Integrated Power Electronics Systems. Proceedings (Konferenzbeitrag). Link: <https://ieeexplore.ieee.org/document/9097671>