



**Forschungsfabrik
Mikroelektronik**
Deutschland



**Technology Platform
"MEMS Actuators"**

Publications from the Technology Platform "MEMS Actuators" of the Research Fab Microelectronics Germany (2020)

- Bartunik M., Thalsofer T. et. al. (2020): Amplitude modulation in a molecular communication testbed with superparamagnetic iron oxide nanoparticles and a micropump. In: Lecture Notes of the Institute for Computer Sciences, Social-Informatics and Telecommunications Engineering, LNICST (,Conference Paper,Scopus). DOI:10.1007/978-3-030-64991-3_7. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098241783&doi=10.1007%2f978-3-030-64991-3_7&partnerID=40&md5=f12c3549eef15dfec60f16eb3ade5480
- Burkard R., Viga R. et. al. (2020): Eye safety considerations and performance comparison of flash- And MEMS-based lidar systems. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2554726. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092712432&doi=10.1117%2f12.2554726&partnerID=40&md5=518fe1f8cf67f6d4fadae2c1c9dfb377>
- Chen, Gongbo (2020): Data processing approaches on SPAD-based flash LiDAR systems. A review. In: IEEE Sensors Journal (Zeitschriftenaufsatz). DOI: 10.1109/JSEN.2020.3038487. Link: <https://doi.org/10.1109/JSEN.2020.3038487>
- Ciocoveanu R., Weigel R. et. al. (2020): Design of a 60 GHz 32% PAE Class-AB PA with 2ndHarmonic Control in 45-nm PD-SOI CMOS. In: IEEE Transactions on Circuits and Systems I: Regular Papers (,Conference Paper,Scopus). DOI:10.1109/TCSI.2020.2984042. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089889757&doi=10.1109%2fTCSI.2020.2984042&partnerID=40&md5=437894017363d67cacc72f3b40ad065a>
- Clauß, B. (2020): Process monitoring and impulse detection in face milling using capacitive acceleration sensors based on MEMS. In: Procedia CIRP (Zeitschriftenaufsatz). DOI: 10.1016/j.procir.2020.03.037. Link: <https://doi.org/10.1016/j.procir.2020.03.037>
- Dahiya A.S., Thireau J. et. al. (2020): Review - Energy Autonomous Wearable Sensors for Smart Healthcare: A Review. In: Journal of the Electrochemical Society (,Review,Scopus). DOI:10.1149/2.0162003JES. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081134710&doi=10.1149%2f2.0162003JES&partnerID=40&md5=12001a09b43d7cabc6218510f6c9ffe0>
- Dlugosch J.M., Devendra D. et. al. (2020): Metallic top contacts to self-assembled monolayers of aliphatic phosphonic acids on titanium nitride. In: Proceedings of the IEEE Conference on Nanotechnology (,Conference Paper,Scopus). DOI:10.1109/NANO47656.2020.9183521. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091015555&doi=10.1109%2fNANO47656.2020.9183521&partnerID=40&md5=5485e6202349bb285a9abdc7968e5adc>

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

- Dudek R., Mathew A. et. al. (2020): Reliability modelling for different wire bonding technologies based on FEA and nano-indentation. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 2020 (,Conference Paper,Scopus). DOI:10.1109/ESTC48849.2020.9229761. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096510947&doi=10.1109%2fESTC48849.2020.9229761&partnerID=40&md5=87ebc5c087ff5d99d02e2ea03a128860>
- Engst C.R., Eisele I., Kutter C., (2020): Defect characterization of unannealed neutron transmutation doped silicon by means of deep temperature microwave detected photo induced current transient spectroscopy. In: Journal of Applied Physics (,Article,Scopus). DOI:10.1063/1.5134663. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078295563&doi=10.1063%2f1.5134663&partnerID=40&md5=9003c345b177439a6df442af4e6c3c41>
- Fröhlich A., Hofmann C. et. al. (2020): Selective induction heating of metallic microstructures for wafer-level MEMS packaging. In: International Journal of Applied Electromagnetics and Mechanics (,Conference Paper,Scopus). DOI:10.3233/JAE-209121. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85088009051&doi=10.3233%2fJAE-209121&partnerID=40&md5=d9296cf2ceb8a99656c21337d86b5ec8>
- Fu Q., Stein M. et. al. (2020): Conductive films prepared from inks based on copper nanoparticles synthesized by transferred arc discharge. In: Nanotechnology (,Article,Scopus). DOI:10.1088/1361-6528/ab4524. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85073182864&doi=10.1088%2f1361-6528%2fab4524&partnerID=40&md5=c88a15e692480b56b5eaf983a3ef9650>
- Gehner A., Döring S. et. al. (2020): Novel CMOS-integrated 512x320 tip-tilt micro mirror array and related technology platform. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2543052. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084174391&doi=10.1117%2f12.2543052&partnerID=40&md5=b946eb0fa439f333cbe58c878d4732c5>
- Grahmann J., Schroedter R. et. al. (2020): Vibration analysis of micro mirrors for LIDAR using on-chip piezo-resistive sensor. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2551600. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084182147&doi=10.1117%2f12.2551600&partnerID=40&md5=9f67ace93437a053d3fd9da798749143>
- Grasböck, Lukas (2020): A Summary of Piezoelectric Energy Harvesting for Autonomous Smart Structures. In: TMCE 2020, Thirteenth International Tools and Methods of Competitive Engineering Symposium. Proceedings (Konferenzbeitrag).
- Guaracao J.M.M., Kircher M. et. al. (2020): First time of nanoscopic electrostatic drives pushing for ultrasonic transmission for gesture recognition. In: IEEE International Ultrasonics Symposium, IUS (,Conference Paper,Scopus). DOI:10.1109/IUS46767.2020.9251316. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097888854&doi=10.1109%2fIUS46767.2020.9251316&partnerID=40&md5=12f77bda8ca08161dac215af0fdc214d>
- 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&partnerID=40&md5=baa96f289e52aa76dfa45ff09828eb9a>

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

- Gu-Stoppel S., Lisek T. et. al. (2020): AlScN based MEMS quasi-static mirror matrix with large tilting angle and high linearity. In: Sensors and Actuators, A: Physical (,Article,Scopus). DOI:10.1016/j.sna.2020.112107. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086502829&doi=10.1016%2fj.sna.2020.112107&partnerID=40&md5=95a1147bf091bc49b64e0cce34c033e>
- Haase J.F., Buchner A. et. al. (2020): Measurement concept to reduce environmental impact in direct time-of-flight LiDAR sensors. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2546021. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083302982&doi=10.1117%2f12.2546021&partnerID=40&md5=8d1507b94e9e87c094d8b9ea1334adf0>
- Hahn R., Ferch M. et. al. (2020): Characteristics of Li-ion micro batteries fully batch fabricated by micro-fluidic MEMS packaging. In: Microsystem Technologies (,Article,Scopus). DOI:10.1007/s00542-018-3933-z. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85068583948&doi=10.1007%2fs00542-018-3933-z&partnerID=40&md5=ec934854a3b1607eeae57a86244a867d>
- Harutyunyan A., Heinig A. et. al. (2020): 5 mm Range 61 GHz System on Chip EPC Gen2 RFID tag in 22nm FD-SOI Technology. In: 2020 IEEE International Conference on RFID, RFID 2020 (,Conference Paper,Scopus). DOI:10.1109/RFID49298.2020.9244879. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097267931&doi=10.1109%2fRFID49298.2020.9244879&partnerID=40&md5=367e57137a3897863f4f276bd6effd6b>
- Hempel, Martin (2020): Bondfolie, elektronisches Bauelement und Verfahren zur Herstellung eines elektronischen Bauelements. In: (Patent). Link: <https://worldwide.espacenet.com/publicationDetails/biblio?DB=worldwide.espacenet.com&FT=D&CC=DE&NR=102018215638A1>
- Hoffmann M.A., Sharma A. et. al. (2020): Spectroscopic ellipsometry and magneto-optical Kerr effect spectroscopy study of thermally treated Co60Fe20B20 thin films. In: Journal of Physics Condensed Matter (,Article,Scopus). DOI:10.1088/1361-648X/ab4d2f. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85075812590&doi=10.1088%2f1361-648X%2fab4d2f&partnerID=40&md5=ff80e4f62f954410c42edfe3ec5efe1f>
- Hoppe M., Rohling H. et. al. (2020): Wide and fast mode-hop free MEMS tunable ECDL concept and realization in the NIR and MIR spectral regime. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2546213. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084178732&doi=10.1117%2f12.2546213&partnerID=40&md5=c051940e4cdc9da6dd7d99b9e2509ebe>
- Hoppe M., Rohling H. et. al. (2020): Innovative Concept of Tunable ECDLs Based on MEMS in the NIR and MIR Spectral Regime. In: Conference Proceedings - Lasers and Electro-Optics Society Annual Meeting-LEOS (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091663915&partnerID=40&md5=802f72aeacee9d4e9fd94dc86ea86a2f>
- Hoppe M., Rohling H. et. al. (2020): Innovative concept of tunable ECDLs based on MEMS in the NIR and MIR spectral regime. In: Optics InfoBase Conference Papers (,Conference Paper,Scopus). DOI:10.1364/CLEO_AT.2020.JTh2D.2. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85095125299&doi=10.1364%2fCLEO_AT.2020.JTh2D.2&partnerID=40&md5=832282819bd04a958ea44be2337112ef
- Huber F., Etschmaier H. et. al. (2020): Validation and Optimization of Calculated Stress Fields in Double-Mold Optoelectronics Sensor Packaging. In: IEEE Transactions on Components, Packaging and Manufacturing Technology (,Article,Scopus).

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

DOI:10.1109/TCPMT.2020.2986714. Link:

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086070382&doi=10.1109%2fTCPMT.2020.2986714&partnerID=40&md5=53604cddb8fcb3719f7ffb667ea89f6d>

- Huber F., Etschmaier H. et. al. (2020): A time–temperature–moisture concentration superposition principle that describes the relaxation behavior of epoxide molding compounds for microelectronics packaging. In: International Journal of Polymer Analysis and Characterization (,Article,Scopus). DOI:10.1080/1023666X.2020.1807680. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089957426&doi=10.1080%2f1023666X.2020.1807680&partnerID=40&md5=248fcfe418e978f802fae8ee8fbc88cc>
- Huynh D.K., Le Q.H. et. al. (2020): Analysis of Hot-Carrier Degradation in 22nm FDSOI Transistors Using RF Small-Signal Characteristics. In: GeMIC 2020 - Proceedings of the 2020 German Microwave Conference (,Conference Paper,Scopus). Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085003044&partnerID=40&md5=317d1e5a94927eebd87e5d4665c7c370>
- Jimenez-Saez A., Schusler M. et. al. (2020): Temperature Characterization of High-Q Resonators of Different Materials for mm-Wave Indoor Localization Tag Landmarks. In: 14th European Conference on Antennas and Propagation, EuCAP 2020 (,Conference Paper,Scopus). DOI:10.23919/EuCAP48036.2020.9135861. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087051174&doi=10.23919%2fEuCAP48036.2020.9135861&partnerID=40&md5=b44e7ce3d2cadb2fba2fdbcd9f746de2>
- Kampfe T., Vogel T. et. al. (2020): Heavy Ion Irradiation Effects on Structural and Ferroelectric Properties of HfO₂ Films. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234942. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096979900&doi=10.1109%2fIFCS-ISAF41089.2020.9234942&partnerID=40&md5=07d5d296caf9769859464ddd60f64d70>
- Kampfe T., Wang B. et. al. (2020): Tuning Domain Wall Conductance in Lithium Niobate Thin-Films. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234905. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096950021&doi=10.1109%2fIFCS-ISAF41089.2020.9234905&partnerID=40&md5=f01ed8db194ad23133d95cf8cb67d353>
- Kämpfe T., Wang B. et. al. (2020): Tunable non-volatile memory by conductive ferroelectric domain walls in lithium niobate thin films. In: Crystals (,Article,Scopus). DOI:10.3390/cryst10090804. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090823837&doi=10.3390%2fcryst10090804&partnerID=40&md5=c8594041f5326d3c50ad2da8a6b252e9>
- Kanitkar A., Chernobryvko M. et. al. (2020): Fork-Coupled Resonators for Characterization of Mold Material for 5G Applications. In: 2020 23rd International Microwave and Radar Conference, MIKON 2020 (,Conference Paper,Scopus). DOI:10.23919/MIKON48703.2020.9253857. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097535255&doi=10.23919%2fMIKON48703.2020.9253857&partnerID=40&md5=2680562ab162cb2e627f901df28552d1>
- 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:

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

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097518778&doi=10.1109%2fPEDG48541.2020.9244458&partnerID=40&md5=57387f9bdfca49fc92dab0063f19ae94>
- Khomenkova L., Lehninger D. et. al. (2020): Whether Ge-Rich ZrO₂ and Ge-Rich HfO₂ Materials Have Similar Reaction on Annealing Treatment?. In: ECS Transactions (,Conference Paper,Scopus). DOI:10.1149/09701.0049ecst. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085740170&doi=10.1149%2f09701.0049ecst&partnerID=40&md5=9005c611f56ec999f79ea60c823f1054>
 - Kia A.M., Bönhardt S. et. al. (2020): Development of Rutile Titanium Oxide Thin Films as Battery Material Component Using Atomic Layer Deposition. In: Physica Status Solidi (A) Applications and Materials Science (,Article,Scopus). DOI:10.1002/pssa.201800769. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85071023480&doi=10.1002%2fpssa.201800769&partnerID=40&md5=1ebd0d2d02a564032a74492fff0172e5>
 - Kirrbach R., Faulwaßer M. et. al. (2020): Monolithic hybrid transmitter-receiver lens for rotary on-axis communications. In: Applied Sciences (Switzerland) (,Article,Scopus). DOI:10.3390/app10041540. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85080909824&doi=10.3390%2fapp10041540&partnerID=40&md5=a7529fd6d13065de5a5f798c08e3e599>
 - Kittmann A., Müller C. et. al. (2020): Sensitivity and noise analysis of SAW magnetic field sensors with varied magnetostrictive layer thicknesses. In: Sensors and Actuators, A: Physical (,Article,Scopus). DOI:10.1016/j.sna.2020.111998. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85085550563&doi=10.1016%2fj.sna.2020.111998&partnerID=40&md5=b2802372b097de9451cc8193d34def9b>
 - Klein K., Rämer O. et. al. (2020): Low inductive full ceramic sic power module for high-temperature automotive applications. In: PCIM Europe Conference Proceedings (,Conference Paper,Scopus). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089655616&partnerID=40&md5=8079cf910c813b6b5d1b9129822bf8e1>
 - Kokozinski, Rainer (2020): Elektronik für skalierbare Quantencomputer. In: NMWP - Magazin für Nanotechnologie, Mikrosystemtechnik, Neue Werkstoffe und Photonik (Zeitschriftenaufsatz).
 - 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: <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>
 - Kosiba K., Rothkirch A. et. al. (2020): Phase formation of a biocompatible Ti-based alloy under kinetic constraints studied via in-situ high-energy X-ray diffraction. In: Progress in Natural Science: Materials International (,Article,Scopus). DOI:10.1016/j.pnsc.2020.06.004. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087302709&doi=10.1016%2fj.pnsc.2020.06.004&partnerID=40&md5=d3071333e20bb64181ab9bacfdbd9fd4>
 - 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:

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

- <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086042141&doi=10.1109%2fACCESS.2020.2994469&partnerID=40&md5=0ca1d6efe7758675ca8bad6673b078ea>
- Krasikova M., Baloshin Y. et. al. (2020): Noise reduction using structures based on coupled Helmholtz resonators. In: AIP Conference Proceedings (,Conference Paper,Scopus). DOI:10.1063/5.0032103. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098073169&doi=10.1063%2f5.0032103&partnerID=40&md5=1cdf3cd278a11fa69c724d0346074d87>
 - Krenkel M., Lange N. et. al. (2020): Modeling and validation of CMUTs with mechanically coupled plate actuators. In: IEEE International Ultrasonics Symposium, IUS (,Conference Paper,Scopus). DOI:10.1109/IUS46767.2020.9251313. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097906311&doi=10.1109%2fIUS46767.2020.9251313&partnerID=40&md5=a2b866ce5181660f8fb3c30832d2d2a5>
 - Krishna Nichenametla C., Calvo J. et. al. (2020): Doping Effects in CMOS-compatible CoSi Thin Films for Thermoelectric and Sensor Applications. In: Zeitschrift für Anorganische und Allgemeine Chemie (,Article,Scopus). DOI:10.1002/zaac.202000084. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85086177694&doi=10.1002%2fzaac.202000084&partnerID=40&md5=88b6f05b4ca4933eb13b587092f3cd50>
 - 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>
 - Kühne T., Song X. et. al. (2020): Performance simulation of a 5G hybrid beamforming 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>
 - Lakey A., Ali Z. et. al. (2020): Corrigendum to “Impedimetric array in polymer microfluidic cartridge for low cost point-of-care diagnostics” (Biosensors and Bioelectronics (2019) 129 (147–154), (S0956566319300223), (10.1016/j.bios.2018.12.054)). In: Biosensors and Bioelectronics (,Erratum,Scopus). DOI:10.1016/j.bios.2019.111956. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076171578&doi=10.1016%2fj.bios.2019.111956&partnerID=40&md5=f253c825285d0282c10d05ce89c298b2>
 - Le Q.H., Huynh D.K. et. al. (2020): W-Band Noise Characterization with Back-Gate Effects for Advanced 22nm FDSOI mm-Wave MOSFETs. In: Digest of Papers - IEEE Radio Frequency Integrated Circuits Symposium (,Conference Paper,Scopus). DOI:10.1109/RFIC49505.2020.9218369. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093919693&doi=10.1109%2fRFIC49505.2020.9218369&partnerID=40&md5=3241c09d201c967c390db75121a6e7a7>
 - 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). 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=bacc a14a96621adc51102fd69b88d470>

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

- Lederer M., Kämpfe T. et. al. (2020): Structural and electrical comparison of si and zr doped hafnium oxide thin films and integrated fefets utilizing transmission kikuchi diffraction. In: Nanomaterials (,Article,Scopus). DOI:10.3390/nano10020384. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079869711&doi=10.3390%2fnano10020384&partnerID=40&md5=5ff2ef8a976abe331e6129927f37affa>
- Lederer M., Muller F. et. al. (2020): Integration of Hafnium Oxide on Epitaxial SiGe for p-type Ferroelectric FET Application. In: IEEE Electron Device Letters (,Article,Scopus). DOI:10.1109/LED.2020.3031308. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85097354340&doi=10.1109%2fLED.2020.3031308&partnerID=40&md5=dda2bf874343f4e408cea441a493a537>
- Lehninger D., Ali T. et. al. (2020): Furnace annealed HfO₂-Films for the Integration of Ferroelectric Functionalities into the BEoL. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234879. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096993636&doi=10.1109%2fIFCS-ISAF41089.2020.9234879&partnerID=40&md5=55417a0a71cd07afc44f49833a07a673>
- Lehninger D., Olivo R. et. al. (2020): Back-End-of-Line Compatible Low-Temperature Furnace Anneal for Ferroelectric Hafnium Zirconium Oxide Formation. In: Physica Status Solidi (A) Applications and Materials Science (,Article,Scopus). DOI:10.1002/pssa.201900840. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079845785&doi=10.1002%2fpssa.201900840&partnerID=40&md5=720e3c1c65c3e7bfebcc26e0deab6dc9>
- 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=a6339bd5b00a98f695f66a994220b960>
- 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>
- Lippmann B., Unverricht N. et. al. (2020): Verification of physical designs using an integrated reverse engineering flow for nanoscale technologies. In: Integration (,Article,Scopus). DOI:10.1016/j.vlsi.2019.11.005. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076542769&doi=10.1016%2fj.vlsi.2019.11.005&partnerID=40&md5=497f27afdd4ef7988c711baad2ddef8b>
- 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&partnerID=40&md5=9e2267004d2761394876291778f0a13b>
- Lv H., Fidalgo J. et. al. (2020): Multi-Level Switching and Reversible Current Driven Domain-Wall Motion in Single CoFeB/MgO/CoFeB-Based Perpendicular Magnetic Tunnel Junctions. In: Advanced Electronic Materials (,Article,Scopus). DOI:10.1002/aem.202000976. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

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

- [85098224560&doi=10.1002%2faelm.202000976&partnerID=40&md5=a807d885b0cb0bf5503a93612968c608](https://doi.org/10.1002%2faelm.202000976&partnerID=40&md5=a807d885b0cb0bf5503a93612968c608)
- 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&partnerID=40&md5=069de9f5123a33a4896bbeb557affd75>
 - 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-s2.0-85096541402&doi=10.1109%2fESTC48849.2020.9229660&partnerID=40&md5=2e3a5f902502d9fcec3192551caf5e36>
 - Mart C., Kämpfe T. et. al. (2020): The electrocaloric effect in doped hafnium oxide: Comparison of direct and indirect measurements. In: Applied Physics Letters (,Article,Scopus). DOI:10.1063/5.0012746. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85089495304&doi=10.1063%2f5.0012746&partnerID=40&md5=4533de169bb90decdb86eec9838db1c6>
 - Mart C., Viegas A. et. al. (2020): Pyroelectric CMOS Compatible Sensor Element Based on Hafnium Oxide Thin Films. In: IFCS-ISAF 2020 - Joint Conference of the IEEE International Frequency Control Symposium and IEEE International Symposium on Applications of Ferroelectrics, Proceedings (,Conference Paper,Scopus). DOI:10.1109/IFCS-ISAF41089.2020.9234892. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096960911&doi=10.1109%2fIFCS-ISAF41089.2020.9234892&partnerID=40&md5=639d4888400e26f888b59bfa90851abb>
 - Martin, Devin (2020): Dicing of MEMS devices. In: Handbook of silicon based MEMS materials and technologies (Aufsatz in Buch).
 - Meinel, K. (2020): Piezoelectric scanning micromirror with built-in sensors based on thin film aluminum nitride. In: IEEE Sensors Journal (Zeitschriftenaufsatz). DOI:. Link:
 - Melnikov A., Schenk H.A.G. et. al. (2020): Minimization of nonlinearities in nano electrostatic drive actuators using validated coupled-field simulation. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2551271. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084178761&doi=10.1117%2f12.2551271&partnerID=40&md5=be7ae53f38469e13e3fe17dbca87e9c2>
 - Michel M., Weyers S. et. al. (2020): Scalable nanotube-microbolometer technology with pixel pitches from 12 down to 6 µm. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2573895. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093659667&doi=10.1117%2f12.2573895&partnerID=40&md5=7a7dd6b3ef39bc29f34ce5a13239720e>
 - Michel, Marvin D. (2020): Development of a scalable nanotube-microbolometer technology. In: SMSI 2020 - Sensor and Measurement Science International (Konferenzbeitrag).
 - 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>

Research Fab Microelectronics Germany – MEMS Actuators
**Publications from the Technology Platform "MEMS Actuators" of the Research Fab
Microelectronics Germany (2020)**

- 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>
- Müller H.-C., Hennig A. et. al. (2020): Wireless sensors for industry 4.0 [Drahtlose Sensoren für Industrie 4.0]. In: Sensoren und Messsysteme - Beiträge der 19. ITG/GMA-Fachtagung (,Conference Paper,Scopus). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85082466418&partnerID=40&md5=a1cc7a8791d784f85f4ea2e4816e4561>
- Muller K.-U., Stanitzki A., Kokozinski R., (2020): A 47 F2/bit Charge-Sharing based Sequence-dependent PUF with a Permutative Challenge. In: 2020 International Conference on Omni-Layer Intelligent Systems, COINS 2020 (,Conference Paper,Scopus). DOI:10.1109/COINS49042.2020.9191427. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092248754&doi=10.1109%2fCOINS49042.2020.9191427&partnerID=40&md5=69d8697a009c6b1eba518fa84ccc5315>
- Münchenberger, Finja M. (2020): Development of a 3D-integrated thermocatalytic sensor for combustible gas detection. In: SMSI 2020 - Sensor and Measurement Science International (Konferenzbeitrag).
- Naumann, Falk (2020): Mechanical and microstructural characterization of LTCC and HTCC ceramics for high temperature and harsh environment application. In: CIPS 2020, 11th International Conference on Integrated Power Electronics Systems. Proceedings (Konferenzbeitrag).
- 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>
- Netaev, Alexander (2020): Single-Photon Avalanche Diode (SPAD)-basiertes Sensorsystem zur Messung der Fluoreszenzlebensdauer von funktionalisierten Silica-Nanopartikeln. In: Mikro-Nano-Integration (Konferenzbeitrag).
- Neubieser, Rahel-Manuela (2020): Concept for two-dimensional TMDs as functional layer for gas sensing applications. In: Mikro-Nano-Integration (Konferenzbeitrag). DOI:. Link:
- 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
- Nißler R., Bader O. et. al. (2020): Remote near infrared identification of pathogens with multiplexed nanosensors. In: Nature Communications (,Article,Scopus). DOI:10.1038/s41467-020-19718-5. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85096529854&doi=10.1038%2fs41467-020-19718-5&partnerID=40&md5=75727ee0b982db63c1f9d15e5f2d4ceb>
- Okuno J., Kunihiro T. et. al. (2020): SoC compatible 1 T1 C FeRAM memory array based on ferroelectric Hf_{0.5}Zr_{0.5}O₂. In: Digest of Technical Papers - Symposium on VLSI Technology (,Conference Paper,Scopus). DOI:10.1109/VLSITechnology18217.2020.9265063. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85098178156&doi=10.1109%2fVLSITechnology18217.2020.9265063&partnerID=40&md5=33c626f8e95fe3e2f862675d19c8dc3e>
- Paesler M., Lisec T., Kapels H., (2020): Novel Integrated BEOL Compatible Inductances for Power Converter Applications. In: Conference Proceedings - IEEE Applied Power Electronics

Research Fab Microelectronics Germany – MEMS Actuators
**Publications from the Technology Platform "MEMS Actuators" of the Research Fab
Microelectronics Germany (2020)**

Conference and Exposition - APEC (,Conference Paper,Scopus).

DOI:10.1109/APEC39645.2020.9124474. Link:

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087783781&doi=10.1109%2fAPEC39645.2020.9124474&partnerID=40&md5=d2a71196f1507a6c5ca6ac49f187fcda>

- Palavesam N., Hell W. et. al. (2020): Influence of flexibility of the interconnects on the dynamic bending reliability of flexible hybrid electronics. In: Electronics (Switzerland) (,Article,Scopus). DOI:10.3390/electronics9020238. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85079505510&doi=10.3390%2felectronics9020238&partnerID=40&md5=63d53b213e36b6c1771058b04e47e3c8>
- Palavesam, Nagarajan (2020): Reliability analysis of foil substrate based integration of silicon chips. In: (Dissertation). Link: <https://nbn-resolving.org/urn:nbn:de:bsz:14-gucosa2-730989> |t Volltext
- Pannek C., Vetter T. et. al. (2020): Highly sensitive reflection based colorimetric gas sensor to detect CO in realistic fire scenarios. In: Sensors and Actuators, B: Chemical (,Article,Scopus). DOI:10.1016/j.snb.2019.127572. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076625369&doi=10.1016%2fj.snb.2019.127572&partnerID=40&md5=aaa2ecd1e45d6ec9d749f2be698eb134>
- Poongodan P.K., Vanselow F., Maurer L., (2020): A two-level, high voltage driver circuit with nanosecond delay for ultrasonic transducers. In: 2020 9th International Conference on Modern Circuits and Systems Technologies, MOCAST 2020 (,Conference Paper,Scopus). DOI:10.1109/MOCAST49295.2020.9200247. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093859281&doi=10.1109%2fMOCAST49295.2020.9200247&partnerID=40&md5=1d41ec504e2e0b7cac9c0f3b1bea0195>
- Preuß A., Korb M. et. al. (2020): Synthesis of β -Ketoiminato Copper(II) Complexes and Their Use in Copper Deposition. In: Zeitschrift für Anorganische und Allgemeine Chemie (,Article,Scopus). DOI:10.1002/zaac.201900208. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078751540&doi=10.1002%2fzaac.201900208&partnerID=40&md5=39364b07c8cc5fd89d3f3c3e9919c71c>
- Preuß A., Tamuliene J. et. al. (2020): Ruthenium(II) MOCVD Precursors for Phosphorus-Doped Ruthenium Layer Formation. In: European Journal of Inorganic Chemistry (,Article,Scopus). DOI:10.1002/ejic.201901310. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084039633&doi=10.1002%2fejic.201901310&partnerID=40&md5=dd07c75cf0bbf3bfa be06965f77eb72a>
- Proske, Marina (2020): Environmental Impacts of Modular Design - Life Cycle Assessment of the Fairphone 3. In: International Congress "Electronics Goes Green 2020+". Proceedings (Konferenzbeitrag). Link: https://online.electronicsgoesgreen.org/wp-content/uploads/2020/10/Proceedings_EGG2020_v2.pdf
- Proske, Marina (2020): The smartphone evolution - an analysis of the design evolution and environmental impact of smartphones. In: International Congress "Electronics Goes Green 2020+". Proceedings (Konferenzbeitrag). Link: https://online.electronicsgoesgreen.org/wp-content/uploads/2020/10/Proceedings_EGG2020_v2.pdf |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>

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

- Rashidi S., Rashidi S. et. al. (2020): WS2 and MoS2 counter electrode materials for dye-sensitized solar cells. In: Progress in Photovoltaics: Research and Applications (,Article,Scopus). DOI:10.1002/pip.3350. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091363999&doi=10.1002%2fpip.3350&partnerID=40&md5=ac5640e54ab63ace0bc39d8f003e738c>
- Reinecke P., Putze M.-T., Georgi L., Kahle R., Kaiser D., Hüger D., Livshits P., Weidenmüller J., Weimann T., Turchanin A., Braun T., Becker K.-F., Schneider-Ramelow M., Lang K.-D., (2020): Scalable hybrid microelectronic-microfluidic integration of highly sensitive biosensors. In: Advancing Microelectronics (,Article,Scopus). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091254959&partnerID=40&md5=c9f253640358d84900faf7e4c17d39cc>
- 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>
- Reinert W., (2020): A miniaturized RGB-laser light engine. In: Proceedings - 2020 IEEE 8th Electronics System-Integration Technology Conference, ESTC 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&partnerID=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&partnerID=40&md5=f984f3d6d27c1b87ec5096a9588cbf4d>
- Reiser D., Drost A. et. al. (2020): Temperature driven memristive switching in Al/TiO₂/Al devices. In: Proceedings of the IEEE Conference on Nanotechnology (,Conference Paper,Scopus). DOI:10.1109/NANO47656.2020.9183631. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85091015790&doi=10.1109%2fNANO47656.2020.9183631&partnerID=40&md5=d85e79c0a4d93d1d7788ec368646879c>
- 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&partnerID=40&md5=9f44b6f23d875f6596ec61f0062ebf36>
- Roshanghias A., Dreissigacker M. et. al. (2020): On the feasibility of fan-out wafer-level packaging of capacitive micromachined ultrasound transducers (CMUT) by using inkjet-printed redistribution layers. In: Micromachines (,Article,Scopus). DOI:10.3390/MI11060564. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087525868&doi=10.3390%2fMI11060564&partnerID=40&md5=eee4bc1054c8ce6469749e285ee2f57b>
- 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>
- Ruffert, Christine (2020): Schöne neue Welt?. In: Tales of Science (Aufsatz in Buch).

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

- Ruskowski J., Thattil C. et. al. (2020): 64x48 pixel backside illuminated SPAD detector array for LiDAR applications. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2550634. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083331751&doi=10.1117%2f12.2550634&partnerID=40&md5=cb71d66e4f52a5021cc510b5cb419966>
- Sakolski O., Poongodan P.K. et. al. (2020): A Feedforward Compensated High-Voltage Linear Regulator with Fast Response, High-Current Sinking Capability. In: IEEE Solid-State Circuits Letters (,Article,Scopus). DOI:10.1109/LSSC.2020.3005787. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85087483878&doi=10.1109%2fLSSC.2020.3005787&partnerID=40&md5=ed8b79fd48b82f1fc4e466dbb9e70a46>
- Sandner T., Gaumont E. et. al. (2020): Wafer-level vacuum-packaged translatory MEMS actuator with large stroke for NIR-FT spectrometers. In: Micromachines (,Article,Scopus). DOI:10.3390/mi11100883. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092505909&doi=10.3390%2fmi11100883&partnerID=40&md5=7ec6d310ed7a7d2e1e30f1ef99e541f1>
- Sandner T., Großhoff T. et. al. (2020): System integration of hybrid large aperture micro scanner array for fast scanning LiDAR sensors. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2566185. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85084171314&doi=10.1117%2f12.2566185&partnerID=40&md5=295e63b07b74f1348d9a4acb30392962>
- 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-s2.0-85080119632&doi=10.1063%2f1.5140562&partnerID=40&md5=84de396c119ab7dfecb5598642a9f6dc>
- Schenk, Harald (2020): Chapter 49 - Micro mirrors. In: (Aufsatz in Buch). DOI:. Link:
- Schischke K., Nissen N.F., Schneider-Ramelow M., (2020): Flexible, stretchable, conformal electronics, and smart textiles: Environmental life cycle considerations for emerging applications. In: MRS Communications (,Review,Scopus). DOI:10.1557/mrc.2019.157. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85076747739&doi=10.1557%2fmrc.2019.157&partnerID=40&md5=96e2d74fb7e8bcd04e552c6201ca5a12>
- 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&partnerID=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&partnerID=40&md5=d70058f767abec0366b9618aefaa9d52>

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

- Seidel, Konrad (2020): Ultra-Low Power Technologies and Memory architectures for IoT (Bericht).
- Senger F., Albers J., Hofmann U., Piechotta G., Giese T., Heinrich F., Von Wantoch T., Gu-Stoppel S., (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&partnerID=40&md5=f9dc613bdc7e808405be13ea622f11cc>
- Soliman T., Olivo R. et. al. (2020): Efficient FeFET crossbar accelerator for binary neural networks. In: Proceedings of the International Conference on Application-Specific Systems, Architectures and Processors (,Conference Paper,Scopus). DOI:10.1109/ASAP49362.2020.00027. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090824710&doi=10.1109%2fASAP49362.2020.00027&partnerID=40&md5=898db52c9af74b329b7242d563ec3de5>
- Speulmanns J., Kia A.M. et. al. (2020): Surface-Dependent Performance of Ultrathin TiN Films as an Electrically Conducting Li Diffusion Barrier for Li-Ion-Based Devices. In: ACS Applied Materials and Interfaces (,Article,Scopus). DOI:10.1021/acsami.0c10950. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85090282066&doi=10.1021%2facami.0c10950&partnerID=40&md5=ebabb53745c185e30777ee7003c09d62>
- 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&partnerID=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&partnerID=40&md5=9ddfd1611cc0ac10a4c1164395af65cf>
- 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>
- Uhlig, Sebastian (2020): Silicon-based microfluid control and switching valves using lateral electrostatic bending actuators. In: (Bericht). DOI: . Link:
- Vagionas C., Ruggeri E. et. al. (2020): An end-to-end 5G fiber wireless A-RoF/IFoF link based on a 60 GHz beamsteering antenna and an InP EML. In: Proceedings of SPIE - The International Society for Optical Engineering (,Conference Paper,Scopus). DOI:10.1117/12.2544866. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85081171499&doi=10.1117%2f12.2544866&partnerID=40&md5=c2f8d68a6595bb57a176fb234c52889>

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

- Velea A.I., Vollebregt S. et. al. (2020): Wafer-Scale Graphene-Based Soft Electrode Array with Optogenetic Compatibility. In: Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS) (,Conference Paper,Scopus).
DOI:10.1109/MEMS46641.2020.9056367. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083214664&doi=10.1109%2fMEMS46641.2020.9056367&partnerID=40&md5=2660bc351fc082db139e15587d70d266>
- Wiemer M., Hofmann C., Vogel K., (2020): Selective heat input for low temperature metallic wafer level bonding. In: ECS Transactions (,Conference Paper,Scopus).
DOI:10.1149/09804.0183ecst. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85092727188&doi=10.1149%2f09804.0183ecst&partnerID=40&md5=3170f4a130d56d3e25a8aca891cc1204>
- Zulfiqar B., Vogel H. et. al. (2020): The Impact of Wettability and Surface Roughness on Fluid Displacement and Capillary Trapping in 2-D and 3-D Porous Media: 2. Combined Effect of Wettability, Surface Roughness, and Pore Space Structure on Trapping Efficiency in Sand Packs and Micromodels. In: Water Resources Research (,Article,Scopus).
DOI:10.1029/2020WR027965. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85093829447&doi=10.1029%2f2020WR027965&partnerID=40&md5=82ad23ffd796a60f5c70071895223573>