Publication List 2018/2019

Journal Papers 2018-2019

J1	T. Baldauf, A. Heinzig, T. Mikolajick, and W. M. Weber, 'Vertically Integrated Reconfigurable Nanowire Arrays', IEEE Electron Device Letters, vol. 39, no. 8, pp. 1242–1245, Aug. 2018
J2	P. Buragohain et al., 'Nanoscopic studies of domain structure dynamics in ferroelectric La:HfO2 capacitors', Appl. Phys. Lett., vol. 112, no. 22, p. 222901, May 2018
J3	S. Doering, A. Wachowiak, H. Roetz, S. Eckl, and T. Mikolajick, 'SDVSRM - a new SSRM based technique featuring dynamically adjusted, scanner synchronized sample voltages for measurement of actively operated devices', Ultramicroscopy, vol. 193, pp. 24–32, Oct. 2018
J4	F. P. G. Fengler, M. Hoffmann, S. Slesazeck, T. Mikolajick, and U. Schroeder, 'On the relationship between field cycling and imprint in ferroelectric Hf0.5Zr0.5O2', Journal of Applied Physics, vol. 123, no. 20, p. 204101, May 2018
J5	F. P. G. Fengler et al., 'Analysis of Performance Instabilities of Hafnia-Based Ferroelectrics Using Modulus Spectroscopy and Thermally Stimulated Depolarization Currents', Advanced Electronic Materials, vol. 4, no. 3, p. 1700547, 2018
J6	E. D. Grimley et al., 'Insights into Texture and Phase Coexistence in Polycrystalline and Polyphasic Ferroelectric HfO2 Thin Films using 4D-STEM', Microscopy and Microanalysis, vol. 24, no. S1, pp. 184–185, Aug. 2018
J7	E. D. Grimley, T. Schenk, T. Mikolajick, U. Schroeder, and J. M. LeBeau, 'Atomic Structure of Domain and Interphase Boundaries in Ferroelectric HfO2', Advanced Materials Interfaces, vol. 5, no. 5, p. 1701258, 2018
J8	R. Hentschel, J. Gärtner, A. Wachowiak, A. Großer, T. Mikolajick, and S. Schmult, 'Surface morphology of AlGaN/GaN heterostructures grown on bulk GaN by MBE', Journal of Crystal Growth, vol. 500, pp. 1–4, Oct. 2018
J9	R. Hentschel, S. Schmult, A. Wachowiak, A. Großer, J. Gärtner, and T. Mikolajick, 'Normally-off operating GaN-based pseudovertical MOSFETs with MBE grown source region', Journal of Vacuum Science & Technology B, vol. NACMBE2018, no. 1, p. 02D109, Mar. 2018
J10	M. Hoffmann et al., 'Ferroelectric negative capacitance domain dynamics', Journal of Applied Physics, vol. 123, no. 18, p. 184101, May 2018
J11	M. Hoffmann, M. Pešić, S. Slesazeck, U. Schroeder, and T. Mikolajick, 'On the stabilization of ferroelectric negative capacitance in nanoscale devices', Nanoscale, vol. 10, no. 23, pp. 10891–10899, Jun. 2018
J12	B. Ibarlucea et al., 'Gating Hysteresis as an Indicator for Silicon Nanowire FET Biosensors', Applied Sciences, vol. 8, no. 6, p. 950, Jun. 2018
J13	S. Jachalke et al., 'Pyroelectricity of silicon-doped hafnium oxide thin films', Appl. Phys. Lett., vol. 112, no. 14, p. 142901, Apr. 2018
J14	R. Materlik, C. Künneth, M. Falkowski, T. Mikolajick, and A. Kersch, 'Al-, Y-, and La-doping effects favoring intrinsic and field induced ferroelectricity in HfO2: A first principles study', Journal of Applied Physics, vol. 123, no. 16, p. 164101, Apr. 2018
J15	B. Max, M. Pešić, S. Slesazeck, and T. Mikolajick, 'Interplay between ferroelectric and resistive switching in doped crystalline HfO2', Journal of Applied Physics, vol. 123, no. 13, p. 134102, Apr. 2018
J16	T. Mikolajick, S. Slesazeck, M. H. Park, and U. Schroeder, 'Ferroelectric hafnium oxide for ferroelectric random-access memories and ferroelectric field-effect transistors', MRS Bulletin, vol. 43, no. 5, pp. 340–346, May 2018
J17	H. Mulaosmanovic, E. Chicca, M. Bertele, T. Mikolajick, and S. Slesazeck, 'Mimicking biological neurons with a nanoscale ferroelectric transistor', Nanoscale, vol. 10, no. 46, pp. 21755–21763, Nov. 2018
J18	M. H. Park et al., 'Effect of Annealing Ferroelectric HfO2 Thin Films: In Situ, High Temperature X-Ray Diffraction', Advanced Electronic Materials, vol. 4, no. 7, p. 1800091, 2018
J19	M. H. Park et al., 'Origin of Temperature-Dependent Ferroelectricity in Si-Doped HfO2', Advanced Electronic Materials, vol. 4, no. 4, p. 1700489, 2018
J20	M. H. Park et al., 'Understanding the formation of the metastable ferroelectric phase in hafnia–zirconia solid solution thin films', Nanoscale, vol. 10, no. 2, pp. 716–725, Jan. 2018
J21	M. H. Park, Y. H. Lee, T. Mikolajick, U. Schroeder, and C. S. Hwang, 'Review and perspective on ferroelectric HfO2-based thin films for memory applications', MRS Communications, vol. 8, no. 3, pp. 795–808, Sep. 2018
J22	S. J. Park et al., 'Reconfigurable Si Nanowire Nonvolatile Transistors', Advanced Electronic Materials, vol. 4, no. 1, p. 1700399, 2018
J23	M. Pešić et al., 'Built-In Bias Generation in Anti-Ferroelectric Stacks: Methods and Device Applications', IEEE Journal of the Electron Devices Society, vol. 6, pp. 1019–1025, 2018
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J27	U. Schroeder et al., 'Lanthanum-Doped Hafnium Oxide: A Robust Ferroelectric Material', Inorg. Chem., vol. 57, no. 5, pp. 2752–2765, Mar. 2018
J28	A. V. Shchepetilnikov et al., 'Electron spin resonance in a 2D system at a GaN/AlGaN heterojunction', Appl. Phys. Lett., vol. 113, no. 5, p. 052102, Jul. 2018
J29	I. Stolichnov et al., 'Genuinely Ferroelectric Sub-1-Volt-Switchable Nanodomains in HfxZr(1–x)O2 Ultrathin Capacitors', ACS Appl. Mater. Interfaces, vol. 10, no. 36, pp. 30514–30521, Sep. 2018
J30	P. Buragohain et al., 'Fluid Imprint and Inertial Switching in Ferroelectric La:HfO2 Capacitors', ACS Appl. Mater. Interfaces, Aug. 2019
J31	M. Coll et al., 'Towards Oxide Electronics : a Roadmap', Applied Surface Science, vol. 482, pp. 1–93, 2019.
J32	R. Hentschel et al., 'Extraction of the active acceptor concentration in (pseudo-) vertical GaN MOSFETs using the body-bias effect', Microelectronics Journal, vol. 91, pp. 42–45, Sep. 2019
J33	M. Herzig, M. Weiher, A. Ascoli, R. Tetzlaff, T. Mikolajick, and S. Slesazeck, 'Improvement of NbOx-based threshold switching devices by implementing multilayer stacks', Semicond. Sci. Technol., 2019
J34	M. Herzig, M. Weiher, A. Ascoli, R. Tetzlaff, T. Mikolajick, and S. Slesazeck, 'Multiple slopes in the negative differential resistance region of NbOx-based threshold switches', J. Phys. D: Appl. Phys., 2019
J35	D. Hiller, P. M. Jordan, K. Ding, M. Pomaska, T. Mikolajick, and D. König, 'Deactivation of silicon surface states by Al-induced acceptor states from Al–O monolayers in SiO2', Journal of Applied Physics, vol. 125, no. 1, p. 015301, Jan. 2019
J36	M. Hoffmann et al., 'Unveiling the double-well energy landscape in a ferroelectric layer', Nature, vol. 565, no. 7740, p. 464, Jan. 2019
J37	M. Hoffmann, F. P. G. Fengler, B. Max, U. Schroeder, S. Slesazeck, and T. Mikolajick, 'Negative Capacitance for Electrostatic Supercapacitors', Advanced Energy Materials, vol. 9, no. 40, p. 1901154, 2019
J38	D. R. Islamov et al., 'Identification of the nature of traps involved in the field cycling of Hf0.5Zr0.5O2-based ferroelectric thin films', Acta Materialia, vol. 166, pp. 47–55, Mar. 2019
J39	M. B. Khan et al., 'Towards Reconfigurable Electronics: Silicidation of Top-Down Fabricated Silicon Nanowires', Applied Sciences, vol. 9, no. 17, Art. no. 17, Jan. 2019
J40	A. Krause et al., 'In Situ Raman Spectroscopy on Silicon Nanowire Anodes Integrated in Lithium Ion Batteries', J. Electrochem. Soc., vol. 166, no. 3, pp. A5378–A5385, Jan. 2019
J41	B. Max, M. Hoffmann, S. Slesazeck, and T. Mikolajick, 'Direct Correlation of Ferroelectric Properties and Memory Characteristics in Ferroelectric Tunnel Junctions', IEEE Journal of the Electron Devices Society, pp. 1–1, 2019
J42	F. Mehmood et al., 'Bulk Depolarization Fields as a Major Contributor to the Ferroelectric Reliability Performance in Lanthanum Doped Hf0.5Zr0.5O2 Capacitors', Advanced Materials Interfaces, vol. 0, no. 0, p. 1901180, 2019
J43	T. Mittmann et al., 'Origin of Ferroelectric Phase in Undoped HfO2 Films Deposited by Sputtering', Advanced Materials Interfaces, vol. 6, no. 11, p. 1900042, 2019
J44	H. Mulaosmanovic, E. T. Breyer, T. Mikolajick, and S. Slesazeck, 'Ferroelectric FETs With 20-nm-Thick HfO2 Layer for Large Memory Window and High Performance', IEEE Transactions on Electron Devices, vol. 66, no. 9, pp. 3828–3833, Sep. 2019
J45	H. Mulaosmanovic, E. T. Breyer, T. Mikolajick, and S. Slesazeck, 'Recovery of Cycling Endurance Failure in Ferroelectric FETs by Self-Heating', IEEE Electron Device Letters, vol. 40, no. 2, pp. 216–219, Feb. 2019
J46	M. Neuber, O. Storbeck, M. Langner, K. Stahrenberg, and T. Mikolajick, 'Multi-staged deposition of trench-gate oxides for power MOSFETs', Journal of Vacuum Science & Technology B, vol. 37, no. 3, p. 032202, May 2019
J47	M. H. Park, Y. H. Lee, T. Mikolajick, U. Schroeder, and C. S. Hwang, 'Thermodynamic and Kinetic Origins of Ferroelectricity in Fluorite Structure Oxides', Advanced Electronic Materials, vol. 5, no. 3, p. 1800522, 2019
J48	M. H. Park, T. Mikolajick, U. Schroeder, and C. S. Hwang, 'Broad Phase Transition of Fluorite-Structured Ferroelectrics for Large Electrocaloric Effect', physica status solidi (RRL) – Rapid Research Letters, vol. 0, no. 0, p. 1900177, 2019
J49	D. Pohl et al., 'Carbon-doped MBE GaN: Spectroscopic insights', Journal of Crystal Growth, vol. 514, pp. 29–35, May 2019
J50	S. Rai, J. Trommer, M. Raitza, T. Mikolajick, W. M. Weber, and A. Kumar, 'Designing Efficient Circuits Based on Runtime-Reconfigurable Field-Effect Transistors', IEEE Transactions on Very Large Scale Integration (VLSI) Systems, vol. 27, no. 3, pp. 560–572, Mar. 2019

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J53	T. Schenk et al., 'On the Origin of the Large Remanent Polarization in La:HfO2', Advanced Electronic Materials, vol. 5, no. 12, p. 1900303, 2019
J54	S. Schmult, V. V. Solovyev, S. Wirth, A. Großer, T. Mikolajick, and I. V. Kukushkin, 'Magneto-optical confirmation of Landau level splitting in a GaN/AlGaN 2DEG grown on bulk GaN', Journal of Vacuum Science & Technology B, vol. 37, no. 2, p. 021210, Mar. 2019
J55	U. Schroeder, M. Materano, T. Mittmann, P. D. Lomenzo, T. Mikolajick, and A. Toriumi, 'Recent progress for obtaining the ferroelectric phase in hafnium oxide based films: impact of oxygen and zirconium', Jpn. J. Appl. Phys., vol. 58, no. SL, p. SL0801, Oct. 2019
J56	S. Slesazeck and T. Mikolajick, 'Nanoscale resistive switching memory devices: a review', Nanotechnology, 2019
J57	M. Weiher, M. Herzig, R. Tetzlaff, A. Ascoli, T. Mikolajick, and S. Slesazeck, 'Pattern Formation With Locally Active S-Type NbOx Memristors', IEEE Transactions on Circuits and Systems I: Regular Papers, vol. 66, no. 7, pp. 2627–2638, Jul. 2019
J58	F. Zimmermann et al., 'Green coloring of GaN single crystals introduced by Cr impurity', Journal of Luminescence, vol. 207, pp. 507–511, Mar. 2019

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C1	A. Aziz et al., 'Computing with ferroelectric FETs: Devices, models, systems, and applications', in 2018 Design, Automation Test in Europe Conference Exhibition (DATE), Mar. 2018, pp. 1289–1298
C2	T. Baldauf et al., 'Scaling Aspects of Nanowire Schottky Junction based Reconfigurable Field Effect Transistors. ' 2019 Joint International EUROSOI Workshop and International Conference on Ultimate Integration on Silicon (EUROSOI-ULIS). IEEE, 2019
C3	E. T. Breyer, H. Mulaosmanovic, S. Slesazeck, T. Mikolajick, and T. Mikolajick, 'Demonstration of versatile nonvolatile logic gates in 28nm HKMG FeFET technology', in 2018 IEEE International Symposium on Circuits and Systems (ISCAS), May 2018, pp. 1–5
C4	M. Hoffmann, B. Max, T. Mittmann, U. Schroeder, S. Slesazeck, and T. Mikolajick, 'Demonstration of High-speed Hysteresis-free Negative Capacitance in Ferroelectric Hf0.5Zr0.502', in 2018 IEEE International Electron Devices Meeting (IEDM), Dec. 2018, pp. 31.6.1-31.6.4
C5	M. Hoffmann, S. Slesazeck, and T. Mikolajick, 'Domain Formation in Ferroelectric Negative Capacitance Devices', in 2018 76th Device Research Conference (DRC), Jun. 2018, pp. 1–2
C6	B. Max, M. Hoffmann, S. Slesazeck, and T. Mikolajick, 'Ferroelectric Tunnel Junctions based on Ferroelectric-Dielectric Hf0.5Zr0.5.02/ A1203Capacitor Stacks', in 2018 48th European Solid-State Device Research Conference (ESSDERC), Sep. 2018, pp. 142–145
C7	T. Mikolajick, U. Schroeder, and S. Slesazeck, 'Hafnium oxide based ferroelectric devices for memories and beyond', in 2018 International Symposium on VLSI Technology, Systems and Application (VLSI-TSA), Apr. 2018, pp. 1–2
C8	I. O'Connor et al., 'Prospects for energy-efficient edge computing with integrated HfO2-based ferroelectric devices', in 2018 IFIP/IEEE International Conference on Very Large Scale Integration (VLSI-SoC), Oct. 2018, pp. 180–183
C9	M. Pesic, A. Padovani, S. Slcsazeck, T. Mikolajick, and L. Larcher, 'Deconvoluting charge trapping and nucleation interplay in FeFETs: Kinetics and Reliability', in 2018 IEEE International Electron Devices Meeting (IEDM), Dec. 2018, pp. 25.1.1-25.1.4
C10	S. Rai et al., 'A physical synthesis flow for early technology evaluation of silicon nanowire based reconfigurable FETs', in 2018 Design, Automation Test in Europe Conference Exhibition (DATE), Mar. 2018, pp. 605–608
C11	V. Sessi, H. Mulaosmanovic, R. Hentschel, S. Pregl, T. Mikolajick, and W. M. Weber, 'Junction Tuning by Ferroelectric Switching in Silicon Nanowire Schottky-Barrier Field Effect Transistors', in 2018 IEEE 18th International Conference on Nanotechnology (IEEE-NANO), Jul. 2018, pp. 1–4
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C13	S. Slesazeck, U. Schroeder, and T. Mikolajick, 'Embedding hafnium oxide based FeFETs in the memory landscape', in 2018 International Conference on IC Design Technology (ICICDT), Jun. 2018, pp. 121–124
C14	D. Tröger, M. Grube, M. Knaut, J. Reif, J. W. Bartha, and T. Mikolajick, 'Towards Full-area Passivating Contacts for Silicon Surfaces based on Al2O3-TiOxDouble Layers', in 2018 IEEE 7th World Conference on Photovoltaic Energy Conversion (WCPEC) (A Joint Conference of 45th IEEE PVSC, 28th PVSEC 34th EU PVSEC), Jun. 2018, pp. 2176–2179

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C16	D. Bimberg, T. Mikolajick, and X. Wallart, 'Novel Quantum Dot Based Memories with Many Days of Storage Time : Last Steps towards the Holy Grail?', in 2019 19th Non-Volatile Memory Technology Symposium (NVMTS), Oct. 2019, pp. 1–4
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C18	E. T. Breyer et al., 'Ultra-dense co-integration of FeFETs and CMOS logic enabling very-fine grained Logic-in-Memory', in ESSDERC 2019 - 49th European Solid-State Device Research Conference (ESSDERC), Sep. 2019, pp. 118–121
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C20	M. Hoffmann, S. Slesazeck, and T. Mikolajick, 'Dynamic modeling of hysteresis-free negative capacitance in ferroelectric/dielectric stacks under fast pulsed voltage operation', in 2019 Device Research Conference (DRC), Jun. 2019, pp. 97–98
C21	P. D. Lomenzo et al., 'Ferroelectric Hf1-xZrxO2 memories: device reliability and depolarization fields', in 2019 19th Non-Volatile Memory Technology Symposium (NVMTS), Oct. 2019, pp. 1–8
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C23	T. Mikolajick et al., 'Variants of Ferroelectric Hafnium Oxide based Nonvolatile Memories', in 2019 Device Research Conference (DRC), Jun. 2019, pp. 207–208
C24	T. Mikolajick et al., 'Next Generation Ferroelectric Memories enabled by Hafnium Oxide', in 2019 IEEE International Electron Devices Meeting (IEDM), Dec. 2019, pp. 15.5.1-15.5.4
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C27	T. Mikolajick et al., 'Basics and Device Applications of Ferroelectricity in Hafnium Oxide', Aug. 2019.
C28	T. Ravsher, H. Mulaosmanovic, E. T. Breyer, V. Havel, T. Mikolajick, and S. Slesazeck, 'Adoption of 2T2C ferroelectric memory cells for logic operation', in 2019 26th IEEE International Conference on Electronics, Circuits and Systems (ICECS), Nov. 2019, pp. 791–794
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C30	S. Slesazeck et al., 'Uniting The Trinity of Ferroelectric HfO2 Memory Devices in a Single Memory Cell', in 2019 IEEE 11th International Memory Workshop (IMW), May 2019, pp. 1–4
C31	S. Slesazeck, T. Ravsher, V. Havel, E. T. Breyer, H. Mulaosmanovic, and T. Mikolajick, 'A 2TnC ferroelectric memory gain cell suitable for compute-in-memory and neuromorphic application', in 2019 IEEE International Electron Devices Meeting (IEDM), Dec. 2019, pp. 38.6.1-38.6.4
C32	B. Suresh et al., 'Simulation of integrate-and-fire neuron circuits using HfO2-based ferroelectric field effect transistors', in 2019 26th IEEE International Conference on Electronics, Circuits and Systems (ICECS), Nov. 2019, pp. 229–232
C33	A. Toriumi et al., 'Material perspectives of HfO2-based ferroelectric films for device applications', in 2019 IEEE International Electron Devices Meeting (IEDM), Dec. 2019, pp. 15.1.1-15.1.4
C34	J. Trommer, M. Simon, S. Slesazeck, W. M. Weber, and T. Mikolajick, 'Eliminating Charge Sharing in Clocked Logic Gates on the Device Level Employing Transistors with Multiple Independent Inputs', in ESSDERC 2019 - 49th European Solid-State Device Research Conference (ESSDERC), Sep. 2019, pp. 134–137
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M1	N. Balke, T. Schenk, I. Stolichnov and A. Gruverman, 'Chapter 7.1 - Piezoresponse Force Microscopy (PFM), in Ferroelectricity in Doped Hafnium Oxide: Materials, Properties and Devices, U. Schroeder, C. S. Hwang, and H. Funakubo, Eds. Woodhead Publishing, 2019, p. 291 ff.
M2	E. T. Breyer and S. Slesazeck, 'Chapter 10.6 - Ferroelectric Devices for Logic in Memory, in Ferroelectricity in Doped Hafnium Oxide: Materials, Properties and Devices, U. Schroeder, C. S. Hwang, and H. Funakubo, Eds. Woodhead Publishing, 2019, p. 495 ff.
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M5	C. S. Hwang and T. Mikolajick, '11 - Ferroelectric memories', in Advances in Non-Volatile Memory and Storage Technology (Second Edition), B. Magyari-Köpe and Y. Nishi, Eds. Woodhead Publishing, 2019, pp. 393–441.
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M10	M. H. Park, T. Schenk, C. S. Hwang and U. Schroeder, 'Chapter 8 - Impact of Electrodes on the Ferroelectric Properties, in Ferroelectricity in Doped Hafnium Oxide: Materials, Properties and Devices, U. Schroeder, C. S. Hwang, and H. Funakubo, Eds. Woodhead Publishing, 2019, p. 341 ff.
M11	M. H. Park, T. Schenk, S. Starschich, C. M. Fancher, H. J. Kim, U. Bottger, C. S. Hwang, A. Toriumi, Xuan Tian and Uwe Schroeder, 'Chapter 3.5 - Effect of Surface/Interface Energy and Stress on the Ferroelectric Properties', in Ferroelectricity in Doped Hafnium Oxide: Materials, Properties and Devices, U. Schroeder, C. S. Hwang, and H. Funakubo, Eds. Woodhead Publishing, 2019, p. 145 ff.
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M17	M. Pešić, U. Schroeder, and T. Mikolajick, 'Chapter 10.1 - Ferroelectric One Transistor/One Capacitor Memory Cell', in Ferroelectricity in Doped Hafnium Oxide: Materials, Properties and Devices, U. Schroeder, C. S. Hwang, and H. Funakubo, Eds. Woodhead Publishing, 2019, pp. 413–424.
M18	U. Schroeder, C. S. Hwang, and H. Funakubo, Ferroelectricity in Doped Hafnium Oxide: Materials, Properties and Devices. Elsevier Science, 2019.
M19	W. Weber, J. Trommer, A. Heinzig, and T. Mikolajick, 'Germanium-based polarity-controllable transistors', 2019, p. https://digital-library.theiet.org/content/books/10.1049/pbcs039e_ch2.

Invited Talks 2018-2019

I1	T. Mikolajick, 'Next Generation Ferroelectric Memories enabled by Hafnium Oxide', presented at the International Electron Device Meeting (IEDM), San Francisco, USA, 2018.
I2	T. Mikolajick, B. Max, M. H. Park, M. Pešić, S. Slesazeck, and U. Schroeder, 'Capacitor and Tunnel Junction Based Memories Utilizing Ferroelectricity and Antiferroelectricity in Hafnium Oxide', presented at the NVMTS 2018, Sendai, Japan.
I3	T. Mikolajick et al., 'NVM Technologies Based on Ferroelectric Hafnium Oxide', presented at the CIMTECH, Perigia, 2018.
I4	M. H. Park, T. Schenk, T. Mikolajick, and U. Schroeder, 'Ferroelectricity in hafnia based thin films', presented at the CCMR, Incheon, Seoul, 2018.
I5	C. Richter et al., 'Robust ferroelectric performance by lanthanum doping in hafnium oxide', presented at the ISAF, Hiroshima, 2018.
I6	U. Schroeder, 'From FRAM to FeFET: Ferroelectric HfO2 based devices and their reliability', presented at the WODIM, Berlin, Germany, 2018.
I7	S. Slesazeck, 'Embedding hafnium oxide based FeFETs in the memory landscape', presented at the ICICDT, Otranto, Italy, 2018.
I8	S. Slesazeck, 'Hafnium oxide based ferroelectric devices for memories and beyond', presented at the VLSI-TSA, Hsinchu, Taiwan, 2018.
I9	P. D. Lomenzo, 'Unleashing Ferroelectricity in Hafnium and Zirconium Oxides for Next Generation Ferroelectric Devices', presented at the EM NANO, Nagano, Japan, 2019.
I10	P. D. Lomenzo, S. Slesazeck, T. Mikolajick, and U. Schroeder, 'Ferroelectric Hf1-xZrxO2 Memories: Device Reliability and Depolarization Fields', presented at the NVMTS, Durham, North Carolina, USA, 2019.
I11	T. Mikolajick et al., 'Basics and Device Applications of Ferroelectricity in Hafnium Oxide', presented at the 7th International Symposium on Integrated Functionalities (ISIF), Dublin, Ireland, 14.08 2019.
I12	T. Mikolajick et al., 'Variants of Ferroelectric Hafnium Oxide based Nonvolatile Memories', presented at the Device Research Conference, 28.06 2019.
I13	T. Mikolajick, U. Schroeder, M. Hoffmann, B. Max, and S. Slesazeck, 'Negative Capacitance in Ferroelectric Hafnium Oxide', presented at the MRS, Phoenix, USA, 26.04 2019.
I14	T. Mikolajick, 'Die Herausforderung künstliche Intelligenz - Bauelementeanforderungen und mögliche Lösungswege', presented at the Science Meets Industry, Chemnitz, Germany, Jan. 23, 2019.
I15	T. Mikolajick, 'Impact of Process Parameters on the ferroelectric properties of doped hafnia films', presented at the EMRS spring meeting 2019, Nice, France, 31.05 2019.
I16	T. Mikolajick, 'Reconfigurable nanowire field effect transistors with volatile and nonvolatile configuration modes', presented at the EMRS spring meeting 2019, Nice, France, 31.05 2019.
I17	T. Mikolajick, 'Threshold Switching and Analogue Switching in Niobium Oxide based Resistive Switches', presented at the Memrisys 2019, Dresden, Germany, 11.07 2019.
I18	H. Mulaosmanovic, 'Ferroelectric hafnium oxide: an emerging material for data storage and beyond', presented at the JSPS165 International Symposium, Nagoya, Japan, 2019.
I19	H. Mulaosmanovic, 'Ferroelectric HfO2 for Memory Applications and Unconventional Computing', presented at the SSDM, Japan, 2019.
I20	U. Schroeder, 'Ferroelectric Hafnium and Zirconium Oxide: Novel Devices and Applications', presented at the FMA, Japan, 2019.
I21	U. Schroeder, 'Ferroelectric Hafnium Oxide and its applications in non-volatile memories, negative capacitance elements, and neuromorphic networks', presented at the ISAF, Lausanne, Switzerland, 2019.
I22	U. Schroeder, 'Ferroelectric HfO2 for Memory Applications and Unconventional Computing', presented at the SSDM, Japan, 2019.
I23	U. Schroeder, 'Root causes for ferroelectricity in dioped HfO2', presented at the EMA, Orlando, 2019.
I24	S. Slesazeck, 'Switching kinetics in Hafnium oxide based ferroelectric / dielectric bilayer stacks', presented at the INFOS, Cambridge, UK, 2019.
I25	S. Slesazeck, 'The Trinity of Ferroelectric Memory Devices for Neuromorphic Computing', presented at the EMRS, Warsaw, Poland, 2019.
I26	I. Stolichnov, M. Cavalieri, T. Mittmann, U. Schroeder, and A. M. Ionescu, 'HfO2-based ferroelectrics: polarization dynamics at the nanoscale in the application-relevant geometries', presented at the ISAF, Lausanne, Switzerland, 2019.

Education

PhD thesis

T1	J. Beister 'Untersuchung des elektronischen Transports an 28nm MOSFETs und an Schottky-Barrieren FETs aus Silizium-Nanodrähten', TU Dresden, Dresden, 2018.
T2	P. Hofmann 'Hybride vapour phase epitaxy growth, crystal properties and dopant incorporation in gallium nitride', TU Dresden, Dresden, 2018.
T3	F. P. G. Fengler 'Analysis of the field cycling behavior of ferroelectric capacitor structures based on hafnia zirconia films', TU Dresden, Dresden, 2019.
T4	S. Knebel 'Ultra dünne hoch Epsilon Oxide zur Verwendung in modernen CMOS Anwendungen unter dynamischen Stressbedingungen', TU Dresden, Dresden, 2019.