

# Maximilian Lederer

## List of Publications by Year in descending order

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51  
papers

959  
citations

623734

14  
h-index

580821

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g-index

52  
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52  
docs citations

52  
times ranked

504  
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimizing Ferroelectric and Interface Layers in HZO-Based FTJs for Neuromorphic Applications. IEEE Transactions on Electron Devices, 2022, 69, 808-815.	3.0	19
2	Tuning Hybrid Ferroelectric and Antiferroelectric Stacks for Low Power FeFET and FeRAM Applications by Using Laminated HSO and HZO films. Advanced Electronic Materials, 2022, 8, 2100837.	5.1	11
3	Random and Systematic Variation in Nanoscale Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> Ferroelectric FinFETs: Physical Origin and Neuromorphic Circuit Implications. Frontiers in Nanotechnology, 2022, 3, .	4.8	20
4	Determination of site occupancy of boron in 6H-4SiC by multiple-wavelength neutron holography. Applied Physics Letters, 2022, 120, 132101.	3.3	1
5	Endurance improvements and defect characterization in ferroelectric FETs through interface fluorination. , 2022, , .		8
6	Study of Nanosecond Laser Annealing on Silicon Doped Hafnium Oxide Film Crystallization and Capacitor Reliability. , 2022, , .		7
7	Integration of BEoL Compatible 1T1C FeFET Memory Into an Established CMOS Technology. , 2022, , .		9
8	Demonstration of Fatigue and Recovery Phenomena in Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> -based 1T1C FeRAM Memory Arrays. , 2022, , .		4
9	Reliability Study of 1T1C FeRAM Arrays With Hf <sub>0.5</sub> Zr <sub>0.5</sub> O <sub>2</sub> , Thickness Scaling. IEEE Journal of the Electron Devices Society, 2022, 10, 778-783.	2.1	9
10	Doping concentration dependent piezoelectric behavior of Si:HfO <sub>2</sub> thin-films. Applied Physics Letters, 2021, 118, .	3.3	41
11	Impact of the SiO <sub>2</sub> interface layer on the crystallographic texture of ferroelectric hafnium oxide. Applied Physics Letters, 2021, 118, .	3.3	25
12	Current percolation path impacting switching behavior of ferroelectric FETs. , 2021, , .		16
13	A Fully Integrated Ferroelectric Thin-Film Transistor – Influence of Device Scaling on Threshold Voltage Compensation in Displays. Advanced Electronic Materials, 2021, 7, 2100082.	5.1	27
14	Process influences on the microstructure of BEoL integrated ferroelectric hafnium zirconium oxide. , 2021, , .		3
15	Ferroelectric Field Effect Transistors as a Synapse for Neuromorphic Application. IEEE Transactions on Electron Devices, 2021, 68, 2295-2300.	3.0	55
16	On the Origin of Wake-Up and Antiferroelectric-Like Behavior in Ferroelectric Hafnium Oxide. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100086.	2.4	54
17	Microstructural implications for neuromorphic synapses based on ferroelectric hafnium oxide. , 2021, , .		2
18	High-Endurance and Low-Voltage operation of 1T1C FeRAM Arrays for Nonvolatile Memory Application. , 2021, , .		24

#	ARTICLE	IF	CITATIONS
19	On the Origin of Wake-Up and Antiferroelectric-Like Behavior in Ferroelectric Hafnium Oxide. <i>Physica Status Solidi - Rapid Research Letters</i> , 2021, 15, 2170022.	2.4	3
20	The effect of temperature on the ferroelectric properties of Hafnium Zirconium Oxide MFM thin-film varactors. , 2021, , .		2
21	Influence of antiferroelectric-like behavior on tuning properties of ferroelectric HZO-based varactors. <i>MRS Advances</i> , 2021, 6, 530-534.	0.9	4
22	Impact of the interface layer on the cycling behaviour and retention of ferroelectric hafnium oxide. <i>MRS Advances</i> , 2021, 6, 525-529.	0.9	5
23	Enabling Ferroelectric Memories in BEoL - towards advanced neuromorphic computing architectures. , 2021, , .		5
24	RF-Characterization of HZO Thin Film Varactors. <i>Crystals</i> , 2021, 11, 980.	2.2	5
25	Room temperature PVD TiN to improve the ferroelectric properties of HZO films in the BEoL. <i>MRS Advances</i> , 2021, 6, 535-539.	0.9	3
26	Impact of the Ferroelectric Stack Lamination in Si Doped Hafnium Oxide (HSO) and Hafnium Zirconium Oxide (HZO) Based FeFETs: Toward High-Density Multi-Level Cell and Synaptic Storage. <i>Electronic Materials</i> , 2021, 2, 344-369.	1.9	7
27	Influence of Annealing Temperature on the Structural and Electrical Properties of Si-Doped Ferroelectric Hafnium Oxide. <i>ACS Applied Electronic Materials</i> , 2021, 3, 4115-4120.	4.3	23
28	Tunability of Ferroelectric Hafnium Zirconium Oxide for Varactor Applications. <i>IEEE Transactions on Electron Devices</i> , 2021, 68, 5269-5276.	3.0	10
29	Substrate-dependent differences in ferroelectric behavior and phase diagram of Si-doped hafnium oxide. <i>Journal of Materials Research</i> , 2021, 36, 4370.	2.6	11
30	Electric field-induced crystallization of ferroelectric hafnium zirconium oxide. <i>Scientific Reports</i> , 2021, 11, 22266.	3.3	19
31	Intentional Incorporation and Tailoring of Point Defects during Sublimation Growth of Cubic Silicon Carbide by Variation of Process Parameters. <i>Physica Status Solidi (B): Basic Research</i> , 2020, 257, 1900286.	1.5	6
32	Efficient FeFET Crossbar Accelerator for Binary Neural Networks. , 2020, , .		5
33	Integration of Hafnium Oxide on Epitaxial SiGe for p-type Ferroelectric FET Application. <i>IEEE Electron Device Letters</i> , 2020, 41, 1762-1765.	3.9	18
34	A Study on the Temperature-Dependent Operation of Fluorite-Structure-Based Ferroelectric HfO <sub>2</sub> Memory FeFET: Pyroelectricity and Reliability. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 2981-2987.	3.0	12
35	FeFET: A versatile CMOS compatible device with game-changing potential. , 2020, , .		72
36	A Study on the Temperature-Dependent Operation of Fluorite-Structure-Based Ferroelectric HfO <sub>2</sub> Memory FeFET: A Temperature-Modulated Operation. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 2793-2799.	3.0	13

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37	Interplay Between Switching and Retention in HfO <sub>2</sub> -Based Ferroelectric FETs. IEEE Transactions on Electron Devices, 2020, 67, 3466-3471.	3.0	35
38	Impact of Ferroelectric Wakeup on Reliability of Laminate based Si-doped Hafnium Oxide (HSO) FeFET Memory Cells. , 2020, , .		7
39	Structural and Electrical Comparison of Si and Zr Doped Hafnium Oxide Thin Films and Integrated FeFETs Utilizing Transmission Kikuchi Diffraction. Nanomaterials, 2020, 10, 384.	4.1	50
40	Back-End-of-Line Compatible Low-Temperature Furnace Anneal for Ferroelectric Hafnium Zirconium Oxide Formation. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 1900840.	1.8	76
41	A Novel Hybrid High-Speed and Low Power Antiferroelectric HSO Boosted Charge Trap Memory for High-Density Storage. , 2020, , .		8
42	Furnace annealed HfO <sub>2</sub> -Films for the Integration of Ferroelectric Functionalities into the BEoL. , 2020, , .		11
43	Ultra-Low Power Flexible Precision FeFET Based Analog In-Memory Computing. , 2020, , .		44
44	Heavy Ion Irradiation Effects on Structural and Ferroelectric Properties of HfO <sub>2</sub> Films. , 2020, , .		3
45	A Ferroelectric FET Based In-memory Architecture for Multi-Precision Neural Networks. , 2020, , .		6
46	Charge Pumping and Flicker Noise-based Defect Characterization in Ferroelectric FETs. , 2020, , .		8
47	A Multilevel FeFET Memory Device based on Laminated HSO and HZO Ferroelectric Layers for High-Density Storage. , 2019, , .		65
48	Local crystallographic phase detection and texture mapping in ferroelectric Zr doped HfO <sub>2</sub> films by transmission-EBSD. Applied Physics Letters, 2019, 115, .	3.3	84
49	Enhancement of accuracy of neutron atomic resolution holography. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, e405-e405.	0.1	0
50	Local structure observation of Sm-doped RB6 (R: rare earth) by white-neutron atomic resolution holography. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, e404-e404.	0.1	0
51	Deep Electronic Levels in n-Type and p-Type 3C-SiC. Materials Science Forum, 0, 963, 297-300.	0.3	2