Thomas Mikolajick

List of Publications by Year
in descending order

528 papers	24,697 citations	8159 76 h-index	11288 136 g-index
536 all docs	536 docs citations	536 times ranked	9443 citing authors

#	ARTICLE	IF	CITATIONS
1	Ferroelectricity in Simple Binary ZrO₂ and HfO₂. Nano Letters, 2012, 12, 4318-4323.	4.5	1,261
2	Ferroelectricity and Antiferroelectricity of Doped Thin HfO₂â€Based Films. Advanced Materials, 2015, 27, 1811-1831.	11.1	777
3	Incipient Ferroelectricity in Alâ€Doped HfO₂ Thin Films. Advanced Functional Materials, 2012, 22, 2412-2417.	7.8	640
4	Physical Mechanisms behind the Fieldâ€Cycling Behavior of HfO₂â€Based Ferroelectric Capacitors. Advanced Functional Materials, 2016, 26, 4601-4612.	7.8	586
5	Ferroelectricity in yttrium-doped hafnium oxide. Journal of Applied Physics, 2011, 110, .	1.1	522
6	Ferroelectric Zr0.5Hf0.5O2 thin films for nonvolatile memory applications. Applied Physics Letters, 2011, 99, .	1.5	437
7	Stabilizing the ferroelectric phase in doped hafnium oxide. Journal of Applied Physics, 2015, 118, .	1.1	424
8	Review and perspective on ferroelectric HfO2-based thin films for memory applications. MRS Communications, 2018, 8, 795-808.	0.8	360
9	Reconfigurable Silicon Nanowire Transistors. Nano Letters, 2012, 12, 119-124.	4.5	343
10	Ferroelectric Hafnium Oxide Based Materials and Devices: Assessment of Current Status and Future Prospects. ECS Journal of Solid State Science and Technology, 2015, 4, N30-N35.	0.9	326
11	Impact of different dopants on the switching properties of ferroelectric hafniumoxide. Japanese Journal of Applied Physics, 2014, 53, 08LE02.	0.8	318
12	Structural Changes Underlying Fieldâ€Cycling Phenomena in Ferroelectric HfO₂ Thin Films. Advanced Electronic Materials, 2016, 2, 1600173.	2.6	301
13	Unveiling the double-well energy landscape in a ferroelectric layer. Nature, 2019, 565, 464-467.	13.7	286
14	Phase transitions in ferroelectric silicon doped hafnium oxide. Applied Physics Letters, 2011, 99, .	1.5	278
15	Ferroelectric hafnium oxide: A CMOS-compatible and highly scalable approach to future ferroelectric memories. , 2013, , .		271
16	Switching Kinetics in Nanoscale Hafnium Oxide Based Ferroelectric Field-Effect Transistors. ACS Applied Materials & Interfaces, 2017, 9, 3792-3798.	4.0	252
17	A comprehensive study on the structural evolution of HfO₂thin films doped with various dopants. Journal of Materials Chemistry C, 2017, 5, 4677-4690.	2.7	250
18	Surface and grain boundary energy as the key enabler of ferroelectricity in nanoscale hafnia-zirconia: a comparison of model and experiment. Nanoscale, 2017, 9, 9973-9986.	2.8	249

#	Article	IF	Citations
19	Lanthanum-Doped Hafnium Oxide: A Robust Ferroelectric Material. Inorganic Chemistry, 2018, 57, 2752-2765.	1.9	241
20	Towards Oxide Electronics: a Roadmap. Applied Surface Science, 2019, 482, 1-93.	3.1	236
21	Direct Observation of Negative Capacitance in Polycrystalline Ferroelectric HfO₂. Advanced Functional Materials, 2016, 26, 8643-8649.	7.8	234
22	Charge-Trapping Phenomena in HfO₂-Based FeFET-Type Nonvolatile Memories. IEEE Transactions on Electron Devices, 2016, 63, 3501-3507.	1.6	233
23	A FeFET based super-low-power ultra-fast embedded NVM technology for 22nm FDSOI and beyond. , 2017, , .		228
24	The Past, the Present, and the Future of Ferroelectric Memories. IEEE Transactions on Electron Devices, 2020, 67, 1434-1443.	1.6	226
25	Ferroelectricity in Gd-Doped HfO₂Thin Films. ECS Journal of Solid State Science and Technology, 2012, 1, N123-N126.	0.9	224
26	Ferroelectric hafnium oxide for ferroelectric random-access memories and ferroelectric field-effect transistors. MRS Bulletin, 2018, 43, 340-346.	1.7	222
27	2022 roadmap on neuromorphic computing and engineering. Neuromorphic Computing and Engineering, 2022, 2, 022501.	2.8	217
28	A 28nm HKMG super low power embedded NVM technology based on ferroelectric FETs. , 2016, , .		204
29	Complex Internal Bias Fields in Ferroelectric Hafnium Oxide. ACS Applied Materials & Interfaces, 2015, 7, 20224-20233.	4.0	200
30	Next generation ferroelectric materials for semiconductor process integration and their applications. Journal of Applied Physics, 2021, 129, .	1.1	181
31	Novel ferroelectric FET based synapse for neuromorphic systems. , 2017, , .		180
32	Reliability Characteristics of Ferroelectric $ hbox{Si:HfO}_{2}$ Thin Films for Memory Applications. IEEE Transactions on Device and Materials Reliability, 2013, 13, 93-97.	1.5	176
33	Ferroelectric phase transitions in nanoscale HfO 2 films enable giant pyroelectric energy conversion and highly efficient supercapacitors. Nano Energy, 2015, 18, 154-164.	8.2	175
34	The fundamentals and applications of ferroelectric HfO2. Nature Reviews Materials, 2022, 7, 653-669.	23.3	162
35	Ferroelectricity in HfO₂ enables nonvolatile data storage in 28 nm HKMG. , 2012, , .		161
36	Nonvolatile Random Access Memory and Energy Storage Based on Antiferroelectric Like Hysteresis in ZrO₂. Advanced Functional Materials, 2016, 26, 7486-7494.	7.8	161

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37	Mimicking biological neurons with a nanoscale ferroelectric transistor. Nanoscale, 2018, 10, 21755-21763.	2.8	160
38	About the deformation of ferroelectric hystereses. Applied Physics Reviews, 2014, 1, 041103.	5.5	159
39	Understanding the formation of the metastable ferroelectric phase in hafniaâ€"zirconia solid solution thin films. Nanoscale, 2018, 10, 716-725.	2.8	159
40	Nanosecond Polarization Switching and Long Retention in a Novel MFIS-FET Based on Ferroelectric $hbox{HfO}_{2}$. IEEE Electron Device Letters, 2012, 33, 185-187.	2.2	157
41	Impact of layer thickness on the ferroelectric behaviour of silicon doped hafnium oxide thin films. Thin Solid Films, 2013, 533, 88-92.	0.8	155
42	Electric Field Cycling Behavior of Ferroelectric Hafnium Oxide. ACS Applied Materials & Interfaces, 2014, 6, 19744-19751.	4.0	154
43	Nanoscale resistive switching memory devices: a review. Nanotechnology, 2019, 30, 352003.	1.3	151
44	Ferroelectricity in Siâ€Doped HfO₂ Revealed: A Binary Leadâ€Free Ferroelectric. Advanced Materials, 2014, 26, 8198-8202.	11.1	147
45	Dually Active Silicon Nanowire Transistors and Circuits with Equal Electron and Hole Transport. Nano Letters, 2013, 13, 4176-4181.	4.5	146
46	Ferroelectric field-effect transistors based on HfO₂: a review. Nanotechnology, 2021, 32, 502002.	1.3	140
47	Co-sputtering yttrium into hafnium oxide thin films to produce ferroelectric properties. Applied Physics Letters, 2012, 101, 082905.	1.5	139
48	Nonlinear Dynamics of a Locally-Active Memristor. IEEE Transactions on Circuits and Systems I: Regular Papers, 2015, 62, 1165-1174.	3.5	139
49	FeRAM technology for high density applications. Microelectronics Reliability, 2001, 41, 947-950.	0.9	138
50	Ten-Nanometer Ferroelectric $hbox{Si:HfO}_{2}$ Films for Next-Generation FRAM Capacitors. IEEE Electron Device Letters, 2012, 33, 1300-1302.	2.2	136
51	Si Doped Hafnium Oxideâ€"A â€œFragileâ€•Ferroelectric System. Advanced Electronic Materials, 2017, 3, 1700131.	2.6	136
52	Impact of Scaling on the Performance of HfO₂-Based Ferroelectric Field Effect Transistors. IEEE Transactions on Electron Devices, 2014, 61, 3699-3706.	1.6	132
53	Thermodynamic and Kinetic Origins of Ferroelectricity in Fluorite Structure Oxides. Advanced Electronic Materials, 2019, 5, 1800522.	2.6	128
54	Physical model of threshold switching in NbO₂ based memristors. RSC Advances, 2015, 5, 102318-102322.	1.7	125

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55	Origin of Ferroelectric Phase in Undoped HfO₂ Films Deposited by Sputtering. Advanced Materials Interfaces, 2019, 6, 1900042.	1.9	118
56	From MFM Capacitors Toward Ferroelectric Transistors: Endurance and Disturb Characteristics of ${m HfO}_{2}$-Based FeFET Devices. IEEE Transactions on Electron Devices, 2013, 60, 4199-4205.	1.6	117
57	Exploiting Memristive BiFeO₃ Bilayer Structures for Compact Sequential Logics. Advanced Functional Materials, 2014, 24, 3357-3365.	7.8	116
58	Metal oxide memories based on thermochemical and valence change mechanisms. MRS Bulletin, 2012, 37, 131-137.	1.7	114
59	Atomic Structure of Domain and Interphase Boundaries in Ferroelectric HfO₂. Advanced Materials Interfaces, 2018, 5, 1701258.	1.9	114
60	Ferroelectric FETs With 20-nm-Thick HfO₂Layer for Large Memory Window and High Performance. IEEE Transactions on Electron Devices, 2019, 66, 3828-3833.	1.6	111
61	On the stabilization of ferroelectric negative capacitance in nanoscale devices. Nanoscale, 2018, 10, 10891-10899.	2.8	110
62	On the Control of the Fixed Charge Densities in Al₂O₃-Based Silicon Surface Passivation Schemes. ACS Applied Materials & Interfaces, 2015, 7, 28215-28222.	4.0	108
63	Roadmap on emerging hardware and technology for machine learning. Nanotechnology, 2021, 32, 012002.	1.3	104
64	Hafnium Oxide Based CMOS Compatible Ferroelectric Materials. ECS Journal of Solid State Science and Technology, 2013, 2, N69-N72.	0.9	101
65	Physical chemistry of the TiN/Hf0.5Zr0.5O2 interface. Journal of Applied Physics, 2020, 127, .	1.1	101
66	Domain Pinning: Comparison of Hafnia and PZT Based Ferroelectrics. Advanced Electronic Materials, 2017, 3, 1600505.	2.6	99
67	Elementary Aspects for Circuit Implementation of Reconfigurable Nanowire Transistors. IEEE Electron Device Letters, 2014, 35, 141-143.	2.2	96
68	Al-, Y-, and La-doping effects favoring intrinsic and field induced ferroelectricity in HfO2: A first principles study. Journal of Applied Physics, 2018, 123, .	1.1	94
69	Review of defect chemistry in fluorite-structure ferroelectrics for future electronic devices. Journal of Materials Chemistry C, 2020, 8, 10526-10550.	2.7	94
70	Evidence of single domain switching in hafnium oxide based FeFETs: Enabler for multi-level FeFET memory cells. , 2015, , .		93
71	Functionality-Enhanced Logic Gate Design Enabled by Symmetrical Reconfigurable Silicon Nanowire Transistors. IEEE Nanotechnology Magazine, 2015, 14, 689-698.	1.1	93
72	Optimizing process conditions for improved Hf1âˆ'xZrxO2 ferroelectric capacitor performance. Microelectronic Engineering, 2017, 178, 48-51.	1.1	88

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73	The RFETâ€”a reconfigurable nanowire transistor and its application to novel electronic circuits and systems. Semiconductor Science and Technology, 2017, 32, 043001.	1.0	88
74	Nanoscopic studies of domain structure dynamics in ferroelectric La:HfO2 capacitors. Applied Physics Letters, 2018, 112, .	1.5	85
75	On the Origin of the Large Remanent Polarization in La:HfO₂. Advanced Electronic Materials, 2019, 5, 1900303.	2.6	85
76	Strontium doped hafnium oxide thin films: Wide process window for ferroelectric memories. , 2013, , .		84
77	Bipolar Electric-Field Enhanced Trapping and Detrapping of Mobile Donors in BiFeO₃ Memristors. ACS Applied Materials & Interfaces, 2014, 6, 19758-19765.	4.0	84
78	Enabling Energy Efficiency and Polarity Control in Germanium Nanowire Transistors by Individually Gated Nanojunctions. ACS Nano, 2017, 11, 1704-1711.	7.3	84
79	Material Aspects in Emerging Nonvolatile Memories. Journal of the Electrochemical Society, 2004, 151, K13.	1.3	83
80	Reconfigurable nanowire electronics â€“ A review. Solid-State Electronics, 2014, 102, 12-24.	0.8	83
81	Hafnia-Based Double-Layer Ferroelectric Tunnel Junctions as Artificial Synapses for Neuromorphic Computing. ACS Applied Electronic Materials, 2020, 2, 4023-4033.	2.0	83
82	Effect of Annealing Ferroelectric HfO₂ Thin Films: In Situ, High Temperature Xâ€Ray Diffraction. Advanced Electronic Materials, 2018, 4, 1800091.	2.6	81
83	Direct Correlation of Ferroelectric Properties and Memory Characteristics in Ferroelectric Tunnel Junctions. IEEE Journal of the Electron Devices Society, 2019, 7, 1175-1181.	1.2	80
84	Progress and future prospects of negative capacitance electronics: A materials perspective. APL Materials, 2021, 9, .	2.2	79
85	Accumulative Polarization Reversal in Nanoscale Ferroelectric Transistors. ACS Applied Materials & Interfaces, 2018, 10, 23997-24002.	4.0	76
86	Identification of the nature of traps involved in the field cycling of Hf0.5Zr0.5O2-based ferroelectric thin films. Acta Materialia, 2019, 166, 47-55.	3.8	76
87	On the relationship between field cycling and imprint in ferroelectric Hf0.5Zr0.5O2. Journal of Applied Physics, 2018, 123, .	1.1	75
88	Depolarization as Driving Force in Antiferroelectric Hafnia and Ferroelectric Wake-Up. ACS Applied Electronic Materials, 2020, 2, 1583-1595.	2.0	73
89	High endurance strategies for hafnium oxide based ferroelectric field effect transistor. , 2016, , .		72
90	Ferroelectric negative capacitance domain dynamics. Journal of Applied Physics, 2018, 123, .	1.1	72

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91	FeFET: A versatile CMOS compatible device with game-changing potential. , 2020, , .		72
92	High Area Capacity Lithium-Sulfur Full-cell Battery with Prelitiathed Silicon Nanowire-Carbon Anodes for Long Cycling Stability. Scientific Reports, 2016, 6, 27982.	1.6	69
93	Nonvolatile Memory Concepts Based on Resistive Switching in Inorganic Materials. Advanced Engineering Materials, 2009, 11, 235-240.	1.6	67
94	Origin of Temperatureâ€Dependent Ferroelectricity in Siâ€Doped HfO₂. Advanced Electronic Materials, 2018, 4, 1700489.	2.6	67
95	Thickness dependent barrier performance of permeation barriers made from atomic layer deposited alumina for organic devices. Organic Electronics, 2015, 17, 138-143.	1.4	66
96	Influence of Oxygen Content on the Structure and Reliability of Ferroelectric Hf_{<i>x</i>}Zr_{1â€"<i>x</i>}O₂ Layers. ACS Applied Electronic Materials, 2020, 2, 3618-3626.	2.0	65
97	Doped Hafnium Oxide â€" An Enabler for Ferroelectric Field Effect Transistors. Advances in Science and Technology, 0, , .	0.2	64
98	Effect of acceptor doping on phase transitions of HfO2 thin films for energy-related applications. Nano Energy, 2017, 36, 381-389.	8.2	64
99	Designing Efficient Circuits Based on Runtime-Reconfigurable Field-Effect Transistors. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2019, 27, 560-572.	2.1	64
100	Memory technologyâ€"a primer for material scientists. Reports on Progress in Physics, 2020, 83, 086501.	8.1	64
101	The pH-sensing properties of tantalum pentoxide films fabricated by metal organic low pressure chemical vapor deposition. Sensors and Actuators B: Chemical, 1997, 44, 262-267.	4.0	63
102	Reconfigurable Nanowire Electronics-Enabling a Single CMOS Circuit Technology. IEEE Nanotechnology Magazine, 2014, 13, 1020-1028.	1.1	63
103	On Local Activity and Edge of Chaos in a NaMLab Memristor. Frontiers in Neuroscience, 2021, 15, 651452.	1.4	63
104	Recent progress for obtaining the ferroelectric phase in hafnium oxide based films: impact of oxygen and zirconium. Japanese Journal of Applied Physics, 2019, 58, SL0801.	0.8	62
105	Interplay between oxygen defects and dopants: effect on structure and performance of HfO₂-based ferroelectrics. Inorganic Chemistry Frontiers, 2021, 8, 2650-2672.	3.0	62
106	Silicon nanowires â€" a versatile technology platform. Physica Status Solidi - Rapid Research Letters, 2013, 7, 793-799.	1.2	61
107	Many routes to ferroelectric HfO2: A review of current deposition methods. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, .	0.9	60
108	Experimental study of domain wall motion in long nanostrips under the influence of a transverse field. Applied Physics Letters, 2008, 93, .	1.5	59

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109	Silicon and germanium nanowire electronics: physics of conventional and unconventional transistors. Reports on Progress in Physics, 2017, 80, 066502.	8.1	59
110	Random Number Generation Based on Ferroelectric Switching. IEEE Electron Device Letters, 2018, 39, 135-138.	2.2	59
111	Bulk Depolarization Fields as a Major Contributor to the Ferroelectric Reliability Performance in Lanthanum Doped Hf_{0.5}Zr_{0.5}O₂ Capacitors. Advanced Materials Interfaces, 2019, 6, 1901180.	1.9	59
112	SoC Compatible 1T1C FeRAM Memory Array Based on Ferroelectric Hf0.5Zr0.5O2. , 2020, , .		59
113	Light Weight and Flexible Highâ€Performance Diagnostic Platform. Advanced Healthcare Materials, 2015, 4, 1517-1525.	3.9	58
114	Fluid Imprint and Inertial Switching in Ferroelectric La:HfO₂ Capacitors. ACS Applied Materials & Interfaces, 2019, 11, 35115-35121.	4.0	58
115	Comparative Study of Reliability of Ferroelectric and Anti-Ferroelectric Memories. IEEE Transactions on Device and Materials Reliability, 2018, 18, 154-162.	1.5	57
116	Reconfigurable NAND/NOR logic gates in 28 nm HKMG and 22 nm FD-SOI FeFET technology. , 2017, , .		56
117	Involvement of Unsaturated Switching in the Endurance Cycling of Siâ€doped HfO₂ Ferroelectric Thin Films. Advanced Electronic Materials, 2020, 6, 2000264.	2.6	56
118	Parallel arrays of Schottky barrier nanowire field effect transistors: Nanoscopic effects for macroscopic current output. Nano Research, 2013, 6, 381-388.	5.8	55
119	Recovery of Cycling Endurance Failure in Ferroelectric FETs by Self-Heating. IEEE Electron Device Letters, 2019, 40, 216-219.	2.2	54
120	Impact of Read Operation on the Performance of HfO₂-Based Ferroelectric FETs. IEEE Electron Device Letters, 2020, 41, 1420-1423.	2.2	52
121	Analysis of Performance Instabilities of Hafniaâ€Based Ferroelectrics Using Modulus Spectroscopy and Thermally Stimulated Depolarization Currents. Advanced Electronic Materials, 2018, 4, 1700547.	2.6	51
122	Forming-Free Resistive Switching in Multiferroic BiFeO₃ thin Films with Enhanced Nanoscale Shunts. ACS Applied Materials & Interfaces, 2013, 5, 12764-12771.	4.0	50
123	Local Ion Irradiation-Induced Resistive Threshold and Memory Switching in Nb₂O₅/NbO_{<i>x</i>} Films. ACS Applied Materials & Interfaces, 2014, 6, 17474-17480.	4.0	50
124	Negative Capacitance for Electrostatic Supercapacitors. Advanced Energy Materials, 2019, 9, 1901154.	10.2	50
125	Domains and domain dynamics in fluorite-structured ferroelectrics. Applied Physics Reviews, 2021, 8, .	5.5	50
126	Key concepts behind forming-free resistive switching incorporated with rectifying transport properties. Scientific Reports, 2013, 3, 2208.	1.6	48

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127	Computing with ferroelectric FETs: Devices, models, systems, and applications. , 2018, , .		48
128	Interplay between ferroelectric and resistive switching in doped crystalline HfO2. Journal of Applied Physics, 2018, 123, .	1.1	47
129	Filamentary resistive switching in amorphous and polycrystalline Nb2O5 thin films. Solid-State Electronics, 2012, 72, 73-77.	0.8	46
130	Breakdown and Protection of ALD Moisture Barrier Thin Films. ACS Applied Materials & Interfaces, 2015, 7, 22121-22127.	4.0	46
131	Direct Probing of Schottky Barriers in Si Nanowire Schottky Barrier Field Effect Transistors. Physical Review Letters, 2011, 107, 216807.	2.9	45
132	Schottky barrier-based silicon nanowire pH sensor with live sensitivity control. Nano Research, 2014, 7, 263-271.	5.8	45
133	Built-In Bias Generation in Anti-Ferroelectric Stacks: Methods and Device Applications. IEEE Journal of the Electron Devices Society, 2018, 6, 1019-1025.	1.2	45
134	Demonstration of High-speed Hysteresis-free Negative Capacitance in Ferroelectric Hf<inf>0.5</inf>Zr<inf>0.5</inf>O<inf>2</inf>. , 2018, , .		45
135	Polarization switching in thin doped HfO2 ferroelectric layers. Applied Physics Letters, 2020, 117, .	1.5	45
136	Impact of vacancies and impurities on ferroelectricity in PVD- and ALD-grown HfO2 films. Applied Physics Letters, 2021, 118, .	1.5	44
137	Symmetrical Al2O3-based passivation layers for p- and n-type silicon. Solar Energy Materials and Solar Cells, 2014, 131, 72-76.	3.0	43
138	Exploiting transistor-level reconfiguration to optimize combinational circuits. , 2017, , .		43
139	Mesoscopic analysis of leakage current suppression in ZrO2/Al2O3/ZrO2 nano-laminates. Journal of Applied Physics, 2013, 113, .	1.1	42
140	Pyroelectricity of silicon-doped hafnium oxide thin films. Applied Physics Letters, 2018, 112, 142901.	1.5	42
141	In Situ Raman Spectroscopy on Silicon Nanowire Anodes Integrated in Lithium Ion Batteries. Journal of the Electrochemical Society, 2019, 166, A5378-A5385.	1.3	42
142	Whatâ€™s next for negative capacitance electronics?. Nature Electronics, 2020, 3, 504-506.	13.1	42
143	Impact of Oxygen Vacancy Content in Ferroelectric HZO films on the Device Performance. , 2020, , .		42
144	How to make DRAM non-volatile? Anti-ferroelectrics: A new paradigm for universal memories. , 2016, , .		40

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145	Reduced leakage current in BiFeO3 thin films with rectifying contacts. Applied Physics Letters, 2011, 98, .	1.5	39
146	Origin of the endurance degradation in the novel HfO<inf>2</inf>-based 1T ferroelectric non-volatile memories. , 2014, , .		39
147	Stabilizing the ferroelectric phase in HfO₂-based films sputtered from ceramic targets under ambient oxygen. Nanoscale, 2021, 13, 912-921.	2.8	39
148	Top-Down Fabricated Reconfigurable FET With Two Symmetric and High-Current On-States. IEEE Electron Device Letters, 2020, 41, 1110-1113.	2.2	38
149	Reconfigurable Nanowire Transistors with Multiple Independent Gates for Efficient and Programmable Combinational Circuits. , 2016, , .		38
150	Downscaling ferroelectric field effect transistors by using ferroelectric Si-doped HfO2. Solid-State Electronics, 2013, 88, 65-68.	0.8	37
151	Compact Nanowire Sensors Probe Microdroplets. Nano Letters, 2016, 16, 4991-5000.	4.5	37
152	Top-Down Technology for Reconfigurable Nanowire FETs With Symmetric On-Currents. IEEE Nanotechnology Magazine, 2017, 16, 812-819.	1.1	37
153	Pattern Formation With Locally Active S-Type NbO_x Memristors. IEEE Transactions on Circuits and Systems I: Regular Papers, 2019, 66, 2627-2638.	3.5	37
154	Reconfigurable frequency multiplication with a ferroelectric transistor. Nature Electronics, 2020, 3, 391-397.	13.1	37
155	Genuinely Ferroelectric Sub-1-Volt-Switchable Nanodomains in Hf_{<i>x</i>}Zr_(1â€“<i>x</i>)O₂ Ultrathin Capacitors. ACS Applied Materials & Interfaces, 2018, 10, 30514-30521.	4.0	36
156	Perspective on ferroelectric, hafnium oxide based transistors for digital beyond von-Neumann computing. Applied Physics Letters, 2021, 118, .	1.5	36
157	Ferroelectric-based synapses and neurons for neuromorphic computing. Neuromorphic Computing and Engineering, 2022, 2, 012002.	2.8	36
158	Conduction barrier offset engineering for DRAM capacitor scaling. Solid-State Electronics, 2016, 115, 133-139.	0.8	35
159	Ferroelectric Tunnel Junctions based on Ferroelectric-Dielectric Hf<inf>0.5</inf>Zr<inf>0.5</inf>.O<inf>2</inf>/A1<inf>2</inf>O<inf>3</inf>Capacitor Stacks. , 2018, , .		35
160	Interplay Between Switching and Retention in HfO₂-Based Ferroelectric FETs. IEEE Transactions on Electron Devices, 2020, 67, 3466-3471.	1.6	35
161	Interface chemistry of pristine TiN/La:Hf0.5Zr0.5O2 capacitors. Applied Physics Letters, 2020, 116, .	1.5	35
162	Influence of deposition conditions on Ir/IrO[sub 2] oxygen barrier effectiveness. Journal of Applied Physics, 2002, 91, 9591.	1.1	34

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163	Investigation of Accumulative Switching in Ferroelectric FETs: Enabling Universal Modeling of the Switching Behavior. IEEE Transactions on Electron Devices, 2020, 67, 5804-5809.	1.6	34
164	Demonstration of a p-Type Ferroelectric FET With Immediate Read-After-Write Capability. IEEE Electron Device Letters, 2021, 42, 1774-1777.	2.2	34
165	A computational study of hafnia-based ferroelectric memories: from ab initio via physical modeling to circuit models of ferroelectric device. Journal of Computational Electronics, 2017, 16, 1236-1256.	1.3	33
166	Enhanced Ferroelectric Polarization in TiN/HfO₂/TiN Capacitors by Interface Design. ACS Applied Electronic Materials, 2020, 2, 3152-3159.	2.0	33
167	Compact FeFET Circuit Building Blocks for Fast and Efficient Nonvolatile Logic-in-Memory. IEEE Journal of the Electron Devices Society, 2020, 8, 748-756.	1.2	33
168	Impact of Iridium Oxide Electrodes on the Ferroelectric Phase of Thin Hf_{0.5}Zr_{0.5}O₂ Films. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2100012.	1.2	33
169	Reliability of Al2O3-doped ZrO2 high-k dielectrics in three-dimensional stacked metal-insulator-metal capacitors. Journal of Applied Physics, 2010, 108, .	1.1	32
170	Investigation of band gap and permittivity of the perovskite CaTiO₃in ultrathin layers. Journal Physics D: Applied Physics, 2015, 48, 415304.	1.3	32
171	Optoelectronic switching of nanowire-based hybrid organic/oxide/semiconductor field-effect transistors. Nano Research, 2015, 8, 1229-1240.	5.8	32
172	Analog resistive switching behavior of Al/Nb₂O₅/Al device. Semiconductor Science and Technology, 2014, 29, 104002.	1.0	31
173	(Invited) Ferroelectric Hafnium Oxide Based Materials and Devices: Assessment of Current Status and Future Prospects. ECS Transactions, 2014, 64, 159-168.	0.3	31
174	Scaling and Graphical Transport-Map Analysis of Ambipolar Schottky-Barrier Thin-Film Transistors Based on a Parallel Array of Si Nanowires. Nano Letters, 2015, 15, 4578-4584.	4.5	31
175	Rectifying filamentary resistive switching in ion-exfoliated LiNbO3 thin films. Applied Physics Letters, 2016, 108, .	1.5	30
176	A Silicon Nanowire Ferroelectric Fieldâ€Effect Transistor. Advanced Electronic Materials, 2020, 6, 1901244.	2.6	30
177	Ferroelectric transistors with asymmetric double gate for memory window exceeding 12 V and disturb-free read. Nanoscale, 2021, 13, 16258-16266.	2.8	30
178	Intrinsic Nature of Negative Capacitance in Multidomain Hf_{0.5}Zr_{0.5}O₂â€Based Ferroelectric/Dielectric Heterostructures. Advanced Functional Materials, 2022, 32, 2108494.	7.8	30
179	Impact of postdeposition annealing upon film properties of atomic layer deposition-grown Al2O3 on GaN. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, .	0.6	28
180	Impact of charge trapping on the ferroelectric switching behavior of doped HfO₂. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 270-273.	0.8	28

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181	Retention Characteristics of Hf0.5Zr0.5O2-Based Ferroelectric Tunnel Junctions. , 2019, , .		28
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