Guido Groeseneken

List of Publications by Year
in descending order

904	24,217	18436 62	24915 109
papers	citations	h-index	g-index

914	914	914	9060
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A reliable approach to charge-pumping measurements in MOS transistors. IEEE Transactions on Electron Devices, 1984, 31, 42-53.	1.6	1,267
2	New insights in the relation between electron trap generation and the statistical properties of oxide breakdown. IEEE Transactions on Electron Devices, 1998, 45, 904-911.	1.6	570
3	Analysis of the charge pumping technique and its application for the evaluation of MOSFET degradation. IEEE Transactions on Electron Devices, 1989, 36, 1318-1335.	1.6	412
4	Consistent model for the hot-carrier degradation in n-channel and p-channel MOSFETs. IEEE Transactions on Electron Devices, 1988, 35, 2194-2209.	1.6	400
5	Tunnel field-effect transistor without gate-drain overlap. Applied Physics Letters, 2007, 91, .	1.5	384
6	Direct and Indirect Band-to-Band Tunneling in Germanium-Based TFETs. IEEE Transactions on Electron Devices, 2012, 59, 292-301.	1.6	370
7	On the Correct Extraction of Interface Trap Density of MOS Devices With High-Mobility Semiconductor Substrates. IEEE Transactions on Electron Devices, 2008, 55, 547-556.	1.6	339
8	Origin of the threshold voltage instability in SiO2/HfO2 dual layer gate dielectrics. IEEE Electron Device Letters, 2003, 24, 87-89.	2.2	330
9	Electrical properties of high-Î° gate dielectrics: Challenges, current issues, and possible solutions. Materials Science and Engineering Reports, 2006, 51, 37-85.	14.8	241
10	A consistent model for the thickness dependence of intrinsic breakdown in ultra-thin oxides. , 0, , .		231
11	Origin of NBTI variability in deeply scaled pFETs. , 2010, , .		227
12	Endurance/Retention Trade-off on $hbox{HfO}_{2}/hbox{Metal}$ Cap 1T1R Bipolar RRAM. IEEE Transactions on Electron Devices, 2013, 60, 1114-1121.	1.6	225
13	Modeling the single-gate, double-gate, and gate-all-around tunnel field-effect transistor. Journal of Applied Physics, 2010, 107, .	1.1	217
14	Impact of MOSFET gate oxide breakdown on digital circuit operation and reliability. IEEE Transactions on Electron Devices, 2002, 49, 500-506.	1.6	199
15	Ubiquitous relaxation in BTI stressingâ€"New evaluation and insights. , 2008, , .		179
16	Balancing SET/RESET Pulse for $>hbox{10}^{10}$ Endurance in $hbox{HfO}_{2}hbox{/Hf}$ 1T1R Bipolar RRAM. IEEE Transactions on Electron Devices, 2012, 59, 3243-3249.	1.6	166
17	Complementary Silicon-Based Heterostructure Tunnel-FETs With High Tunnel Rates. IEEE Electron Device Letters, 2008, 29, 1398-1401.	2.2	161
18	Forward Bias Gate Breakdown Mechanism in Enhancement-Mode p-GaN Gate AlGaN/GaN High-Electron Mobility Transistors. IEEE Electron Device Letters, 2015, 36, 1001-1003.	2.2	158

#	Article	IF	Citations
19	Consistent model for short-channel nMOSFET after hard gate oxide breakdown. IEEE Transactions on Electron Devices, 2002, 49, 507-513.	1.6	155
20	Degradation and breakdown in thin oxide layers: mechanisms, models and reliability prediction. Microelectronics Reliability, 1999, 39, 1445-1460.	0.9	142
21	Temperature dependence of threshold voltage in thin-film SOI MOSFETs. IEEE Electron Device Letters, 1990, 11, 329-331.	2.2	138
22	Performance Optimization of Au-Free Lateral AlGaN/GaN Schottky Barrier Diode With Gated Edge Termination on 200-mm Silicon Substrate. IEEE Transactions on Electron Devices, 2016, 63, 997-1004.	1.6	132
23	Planar Bulk MOSFETs Versus FinFETs: An Analog/RF Perspective. IEEE Transactions on Electron Devices, 2006, 53, 3071-3079.	1.6	128
24	Hole Traps in Silicon Dioxidesâ€"Part I: Properties. IEEE Transactions on Electron Devices, 2004, 51, 1267-1273.	1.6	126
25	Optimization of Gate-on-Source-Only Tunnel FETs With Counter-Doped Pockets. IEEE Transactions on Electron Devices, 2012, 59, 2070-2077.	1.6	126
26	Boosting the on-current of a n-channel nanowire tunnel field-effect transistor by source material optimization. Journal of Applied Physics, 2008, 104, .	1.1	125
27	Fabrication and Analysis of a ${m Si}/{m Si}_{0.55}{m Ge}_{0.45}$ Heterojunction Line Tunnel FET. IEEE Transactions on Electron Devices, 2014, 61, 707-715.	1.6	123
28	Hot-Carrier Degradation Phenomena in Lateral and Vertical DMOS Transistors. IEEE Transactions on Electron Devices, 2004, 51, 623-628.	1.6	120
29	A new model for the field dependence of intrinsic and extrinsic time-dependent dielectric breakdown. IEEE Transactions on Electron Devices, 1998, 45, 472-481.	1.6	118
30	Analysis of trap-assisted tunneling in vertical Si homo-junction and SiGe hetero-junction Tunnel-FETs. Solid-State Electronics, 2013, 83, 50-55.	0.8	117
31	Spectroscopic charge pumping: A new procedure for measuring interface trap distributions on MOS transistors. IEEE Transactions on Electron Devices, 1991, 38, 1820-1831.	1.6	114
32	AC NBTI studied in the 1 Hz -- 2 GHz range on dedicated on-chip CMOS circuits. , 2006, , .		114
33	Drain voltage dependent analytical model of tunnel field-effect transistors. Journal of Applied Physics, 2011, 110, .	1.1	114
34	Statistics of Multiple Trapped Charges in the Gate Oxide of Deeply Scaled MOSFET Devicesâ€"Application to NBTI. IEEE Electron Device Letters, 2010, 31, 411-413.	2.2	113
35	Disorder-controlled-kinetics model for negative bias temperature instability and its experimental verification. , 0, , .		111
36	Analysis and modeling of on-chip high-voltage generator circuits for use in EEPROM circuits. IEEE Journal of Solid-State Circuits, 1989, 24, 1372-1380.	3.5	109

#	Article	IF	Citations
37	On the Gradual Unipolar and Bipolar Resistive Switching of TiNHfO[sub 2]Pt Memory Systems. Electrochemical and Solid-State Letters, 2010, 13, G54.	2.2	109
38	200 V Enhancement-Mode p-GaN HEMTs Fabricated on 200 mm GaN-on-SOI With Trench Isolation for Monolithic Integration. IEEE Electron Device Letters, 2017, 38, 918-921.	2.2	106
39	Temperature dependence of the negative bias temperature instability in the framework of dispersive transport. Applied Physics Letters, 2005, 86, 143506.	1.5	105
40	Atomistic approach to variability of bias-temperature instability in circuit simulations. , 2011, , .		102
41	Measuring the electrical resistivity and contact resistance of vertical carbon nanotube bundles for application as interconnects. Nanotechnology, 2011, 22, 085302.	1.3	101
42	SiGe Channel Technology: Superior Reliability Toward Ultrathin EOT Devicesâ€”Part I: NBTI. IEEE Transactions on Electron Devices, 2013, 60, 396-404.	1.6	100
43	Impact of field-induced quantum confinement in tunneling field-effect devices. Applied Physics Letters, 2011, 98, .	1.5	99
44	Comparative study of drain and gate low-frequency noise in nMOSFETs with hafnium-based gate dielectrics. IEEE Transactions on Electron Devices, 2006, 53, 823-828.	1.6	97
45	On the thermal stability of atomic layer deposited TiN as gate electrode in MOS devices. IEEE Electron Device Letters, 2003, 24, 550-552.	2.2	96
46	Figure of merit for and identification of sub-60â€‰mV/decade devices. Applied Physics Letters, 2013, 102, .	1.5	95
47	On the properties of the gate and substrate current after soft breakdown in ultrathin oxide layers. IEEE Transactions on Electron Devices, 1998, 45, 2329-2334.	1.6	94
48	Direct Measurement of Top and Sidewall Interface Trap Density in SOI FinFETs. IEEE Electron Device Letters, 2007, 28, 232-234.	2.2	91
49	Performance Enhancement in Multi Gate Tunneling Field Effect Transistors by Scaling the Fin-Width. Japanese Journal of Applied Physics, 2010, 49, 04DC10.	0.8	90
50	Filament observation in metal-oxide resistive switching devices. Applied Physics Letters, 2013, 102, .	1.5	88
51	NBTI from the perspective of defect states with widely distributed time scales. Reliability Physics Symposium, 2009 IEEE International, 2009, , .	0.0	86
52	Relation between breakdown mode and breakdown location in short channel NMOSFETs and its impact on reliability specifications. , 0, , .		84
53	Reliability: a possible showstopper for oxide thickness scaling?. Semiconductor Science and Technology, 2000, 15, 436-444.	1.0	82
54	Insight Into N/PBTI Mechanisms in Sub-1-nm-EOT Devices. IEEE Transactions on Electron Devices, 2012, 59, 2042-2048.	1.6	82

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55	Low Weibull slope of breakdown distributions in high-k layers. IEEE Electron Device Letters, 2002, 23, 215-217.	2.2	81
56	Impact of fin width on digital and analog performances of n-FinFETs. Solid-State Electronics, 2007, 51, 551-559.	0.8	81
57	Impact of Wire Geometry on Interconnect <italic>RC</italic> and Circuit Delay. IEEE Transactions on Electron Devices, 2016, 63, 2488-2496.	1.6	80
58	Temperature dependence of the channel hot-carrier degradation of n-channel MOSFET's. IEEE Transactions on Electron Devices, 1990, 37, 980-993.	1.6	79
59	On the geometric component of charge-pumping current in MOSFETs. IEEE Electron Device Letters, 1993, 14, 107-109.	2.2	78
60	SILC-related effects in flash E/sup 2/PROM's-Part I: A quantitative model for steady-state SILC. IEEE Transactions on Electron Devices, 1998, 45, 1745-1750.	1.6	78
61	Channel Hot Carrier Degradation Mechanism in Long/Short Channel n-FinFETs. IEEE Transactions on Electron Devices, 2013, 60, 4002-4007.	1.6	78
62	Analytical model for a tunnel field-effect transistor. , 2008, , .		77
63	Influence of absorbed water components on SiOCH low-k reliability. Journal of Applied Physics, 2008, 104, .	1.1	77
64	Trap Spectroscopy by Charge Injection and Sensing (TSCIS): A quantitative electrical technique for studying defects in dielectric stacks. , 2008, , .		76
65	The influence of elevated temperature on degradation and lifetime prediction of thin silicon-dioxide films. IEEE Transactions on Electron Devices, 2000, 47, 1514-1521.	1.6	75
66	Analytical Percolation Model for Predicting Anomalous Charge Loss in Flash Memories. IEEE Transactions on Electron Devices, 2004, 51, 1392-1400.	1.6	75
67	Analysis of the enhanced hot-electron injection in split-gate transistors useful for EEPROM applications. IEEE Transactions on Electron Devices, 1992, 39, 1150-1156.	1.6	74
68	Relation between breakdown mode and location in short-channel nMOSFETs and its impact on reliability specifications. IEEE Transactions on Device and Materials Reliability, 2001, 1, 163-169.	1.5	74
69	Analytical model for point and line tunneling in a tunnel field-effect transistor. , 2008, , .		74
70	The influence of the measurement setup on enhanced AC hot carrier degradation of MOSFETs. IEEE Transactions on Electron Devices, 1990, 37, 310-313.	1.6	73
71	Impact of single charged gate oxide defects on the performance and scaling of nanoscaled FETs. , 2012, , .		72
72	Reliability screening of high-k dielectrics based on voltage ramp stress. Microelectronics Reliability, 2007, 47, 513-517.	0.9	71

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73	Impact of MOSFET oxide breakdown on digital circuit operation and reliability. , 0, , .		70
74	New interface state density extraction method applicable to peaked and high-density distributions for Ge MOSFET development. IEEE Electron Device Letters, 2006, 27, 405-408.	2.2	69
75	Characterization of the V/sub T/-instability in SiO/sub 2//HfO/sub 2/ gate dielectrics. , 0, , .		68
76	Hot Hole Degradation Effects in Lateral nDMOS Transistors. IEEE Transactions on Electron Devices, 2004, 51, 1704-1710.	1.6	68
77	Charge trapping and dielectric reliability of SiO/sub 2/-Al/sub 2/O/sub 3/ gate stacks with TiN electrodes. IEEE Transactions on Electron Devices, 2003, 50, 1261-1269.	1.6	65
78	Understanding ferroelectric Al:HfO2 thin films with Si-based electrodes for 3D applications. Journal of Applied Physics, 2017, 121, .	1.1	64
79	Hole trapping and trap generation in the gate silicon dioxide. IEEE Transactions on Electron Devices, 2001, 48, 1127-1135.	1.6	63
80	Probabilistic defect occupancy model for NBTI. , 2011, , .		63
81	Toward Understanding Positive Bias Temperature Instability in Fully Recessed-Gate GaN MISFETs. IEEE Transactions on Electron Devices, 2016, 63, 1853-1860.	1.6	63
82	Degradation of tunnel-oxide floating-gate EEPROM devices and the correlation with high field-current-induced degradation of thin gate oxides. IEEE Transactions on Electron Devices, 1989, 36, 1663-1682.	1.6	62
83	Hot-carrier degradation in submicrometre MOSFETs: from uniform injection towards the real operating conditions. Semiconductor Science and Technology, 1995, 10, 1208-1220.	1.0	62
84	Vertical Ferroelectric HfO<inf>2</inf> FET based on 3-D NAND Architecture: Towards Dense Low-Power Memory. , 2018, , .		62
85	Characterization of front and back Si-SiO/sub 2/ interfaces in thick- and thin-film silicon-on-insulator MOS structures by the charge-pumping technique. IEEE Transactions on Electron Devices, 1989, 36, 1746-1750.	1.6	60
86	Analysis of Complementary RRAM Switching. IEEE Electron Device Letters, 2012, 33, 1186-1188.	2.2	60
87	Correlation between number of walls and diameter in multiwall carbon nanotubes grown by chemical vapor deposition. Carbon, 2012, 50, 1748-1752.	5.4	60
88	Constant current charge-to-breakdown: Still a valid tool to study the reliability of MOS structures?. , 1998, , .		58
89	Hot carrier degradation and time-dependent dielectric breakdown in oxides. Microelectronic Engineering, 1999, 49, 27-40.	1.1	58
90	Integration and electrical characterization of carbon nanotube via interconnects. Microelectronic Engineering, 2011, 88, 837-843.	1.1	58

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91	Microscopic origin of random telegraph noise fluctuations in aggressively scaled RRAM and its impact on read disturb variability. , 2013, , .		58
92	HIMOS-a high efficiency flash E/sup 2/PROM cell for embedded memory applications. IEEE Transactions on Electron Devices, 1993, 40, 2255-2263.	1.6	57
93	A Study of Relaxation Current in High-<tex>$kappa$</tex>Dielectric Stacks. IEEE Transactions on Electron Devices, 2004, 51, 402-408.	1.6	57
94	Quantum Mechanical Performance Predictions of p-n-i-n Versus Pocketed Line Tunnel Field-Effect Transistors. IEEE Transactions on Electron Devices, 2013, 60, 2128-2134.	1.6	57
95	Impact of process and geometrical parameters on the electrical characteristics of vertical nanowire silicon n-TFETs. Solid-State Electronics, 2012, 72, 82-87.	0.8	56
96	Correlation of interface states/border traps and threshold voltage shift on AlGaN/GaN metal-insulator-semiconductor high-electron-mobility transistors. Applied Physics Letters, 2015, 107, .	1.5	56
97	Reliability Study of Ferroelectric Al:HfO₂Thin Films for DRAM and NAND Applications. IEEE Transactions on Electron Devices, 2017, 64, 4091-4098.	1.6	56
98	Correlation between 1/fnoise and interface state density at the Fermi level in fieldâ€effect transistors. Journal of Applied Physics, 1985, 57, 4811-4813.	1.1	55
99	Impact of weak Fermi-level pinning on the correct interpretation of III-V MOS C-V and G-V characteristics. Microelectronic Engineering, 2007, 84, 2146-2149.	1.1	55
100	NBTI Lifetime Prediction and Kinetics at Operation Bias Based on Ultrafast Pulse Measurement. IEEE Transactions on Electron Devices, 2010, 57, 228-237.	1.6	55
101	Part I: Impact of Field-Induced Quantum Confinement on the Subthreshold Swing Behavior of Line TFETs. IEEE Transactions on Electron Devices, 2013, 60, 4057-4064.	1.6	55
102	Digital-circuit analysis of short-gate tunnel FETs for low-voltage applications. Semiconductor Science and Technology, 2011, 26, 085001.	1.0	54
103	Demonstration of GaN Integrated Half-Bridge With On-Chip Drivers on 200-mm Engineered Substrates. IEEE Electron Device Letters, 2019, 40, 1499-1502.	2.2	54
104	Hot-carrier effects in n-channel MOS transistors under alternating stress conditions. IEEE Electron Device Letters, 1988, 9, 232-234.	2.2	52
105	Emerging yield and reliability challenges in nanometer CMOS technologies. , 2008, , .		52
106	Reaction-dispersive proton transport model for negative bias temperature instabilities. Applied Physics Letters, 2005, 86, 093506.	1.5	51
107	Review of reliability issues in high-k/metal gate stacks. , 2008, , .		51
108	Response of a single trap to AC negative Bias Temperature stress. , 2011, , .		50

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109	Energy Distribution of Positive Charges in Gate Dielectric: Probing Technique and Impacts of Different Defects. IEEE Transactions on Electron Devices, 2013, 60, 1745-1753.	1.6	50
110	GaN-on-SOI: Monolithically Integrated All-GaN ICs for Power Conversion. , 2019, , .		50
111	MoS₂/MoTe₂ Heterostructure Tunnel FETs Using Gated Schottky Contacts. Advanced Functional Materials, 2020, 30, 1905970.	7.8	50
112	Observation of Dynamic V _{TH} of p-GaN Gate HEMTs by Fast Sweeping Characterization. IEEE Electron Device Letters, 2020, 41, 577-580.	2.2	50
113	A Single Pulse Charge Pumping Technique for Fast Measurements of Interface States. IEEE Transactions on Electron Devices, 2011, 58, 1490-1498.	1.6	48
114	Insights into Ni-filament formation in unipolar-switching Ni/HfO2/TiN resistive random access memory device. Applied Physics Letters, 2012, 100, .	1.5	48
115	Scaling CMOS: Finding the gate stack with the lowest leakage current. Solid-State Electronics, 2005, 49, 695-701.	0.8	47
116	Reliability Comparison of Triple-Gate Versus Planar SOI FETs. IEEE Transactions on Electron Devices, 2006, 53, 2351-2357.	1.6	47
117	Observation of single interface traps in submicron MOSFET's by charge pumping. IEEE Transactions on Electron Devices, 1996, 43, 940-945.	1.6	46
118	A novel hot-hole injection degradation model for lateral nDMOS transistors. , 0, , .		46
119	Emerging Yield and Reliability Challenges in Nanometer CMOS Technologies. , 2008, , .		46
120	Drive current enhancement in p-tunnel FETs by optimization of the process conditions. Solid-State Electronics, 2011, 65-66, 28-32.	0.8	46
121	Improvement of data retention in HfO<inf>2</inf>/Hf 1T1R RRAM cell under low operating current. , 2013, , .		46
122	Suppression of the Backgating Effect of Enhancement-Mode p-GaN HEMTs on 200-mm GaN-on-SOI for Monolithic Integration. IEEE Electron Device Letters, 2018, 39, 999-1002.	2.2	46
123	Internal photoemission of electrons at interfaces of metals with low-Î¤ insulators. Applied Physics Letters, 2006, 89, 202909.	1.5	45
124	Improvement in NBTI reliability of Si-passivated Ge/high-k/metal-gate pFETs. Microelectronic Engineering, 2009, 86, 1582-1584.	1.1	45
125	Generic learning of TDDB applied to RRAM for improved understanding of conduction and switching mechanism through multiple filaments. , 2010, , .		45
126	InGaAs tunnel diodes for the calibration of semi-classical and quantum mechanical band-to-band tunneling models. Journal of Applied Physics, 2014, 115, .	1.1	45

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127	Comparison of Reaction-Diffusion and Atomistic Trap-Based BTI Models for Logic Gates. IEEE Transactions on Device and Materials Reliability, 2014, 14, 182-193.	1.5	45
128	Stress-Induced Positive Charge in Hf-Based Gate Dielectrics: Impact on Device Performance and a Framework for the Defect. IEEE Transactions on Electron Devices, 2008, 55, 1647-1656.	1.6	44
129	Temperature and voltage dependences of the capture and emission times of individual traps in high-k dielectrics. Microelectronic Engineering, 2011, 88, 1243-1246.	1.1	44
130	An Investigation on Border Traps in IIIâ€“V MOSFETs With an In_{0.53}Ga_{0.47}As Channel. IEEE Transactions on Electron Devices, 2015, 62, 3633-3639.	1.6	44
131	One-Selector One-Resistor Cross-Point Array With Threshold Switching Selector. IEEE Transactions on Electron Devices, 2015, 62, 3250-3257.	1.6	44
132	Determination of spatial surface state density distribution in MOS and SIMOS transistors after channel hot electron injection. Electronics Letters, 1982, 18, 372.	0.5	43
133	On the field dependence of intrinsic and extrinsic time-dependent dielectric breakdown. , 1996, , .		43
134	Cost-effective cleaning and high-quality thin gate oxides. IBM Journal of Research and Development, 1999, 43, 339-350.	3.2	43
135	Hot carrier degradation and ESD in submicrometer CMOS technologies: how do they interact?. IEEE Transactions on Device and Materials Reliability, 2001, 1, 23-32.	1.5	43
136	Device and circuit-level analog performance trade-offs: a comparative study of planar bulk FETs versus FinFETs. , 0, , .		43
137	Competing Degradation Mechanisms in Short-Channel Transistors Under Channel Hot-Carrier Stress at Elevated Temperatures. IEEE Transactions on Device and Materials Reliability, 2009, 9, 454-458.	1.5	43
138	Advancing CMOS beyond the Si roadmap with Ge and III/V devices. , 2011, , .		43
139	Characterization of individual interface traps with charge pumping. Applied Physics Letters, 1996, 68, 1383-1385.	1.5	42
140	An Analysis of the NBTI-Induced Threshold Voltage Shift Evaluated by Different Techniques. IEEE Transactions on Electron Devices, 2009, 56, 1086-1093.	1.6	42
141	Channel Hot-Carrier Degradation in Short-Channel Transistors With High- k/Metal Gate Stacks. IEEE Transactions on Device and Materials Reliability, 2009, 9, 425-430.	1.5	42
142	Postcycling LRS Retention Analysis in HfO₂/Hf RRAM 1T1R Device. IEEE Electron Device Letters, 2013, 34, 626-628.	2.2	42
143	Implications of BTI-Induced Time-Dependent Statistics on Yield Estimation of Digital Circuits. IEEE Transactions on Electron Devices, 2014, 61, 666-673.	1.6	42
144	On the hot-carrier-induced post-stress interface trap generation in n-channel MOS transistors. IEEE Transactions on Electron Devices, 1994, 41, 413-419.	1.6	41

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145	SILC-related effects in flash E/sup 2/PROM's-Part II: Prediction of steady-state SILC-related disturb characteristics. IEEE Transactions on Electron Devices, 1998, 45, 1751-1760.	1.6	41
146	Temperature acceleration of oxide breakdown and its impact on ultra-thin gate oxide reliability. , 0, , .		41
147	Determination of capture cross sections for as-grown electron traps in HfO2âˆ•HfSiO stacks. Journal of Applied Physics, 2006, 100, 093716.	1.1	41
148	Stochastic variability of vacancy filament configuration in ultra-thin dielectric RRAM and its impact on OFF-state reliability. , 2013, , .		41
149	Endurance degradation mechanisms in TiNTa2O5Ta resistive random-access memory cells. Applied Physics Letters, 2015, 106, .	1.5	41
150	Statistical Analysis of the Impact of Anode Recess on the Electrical Characteristics of AlGaN/GaN Schottky Diodes With Gated Edge Termination. IEEE Transactions on Electron Devices, 2016, 63, 3451-3458.	1.6	41
151	Real Vth instability of pMOSFETs under practical operation conditions. , 2007, , .		40
152	Neutron-Induced Failure in Silicon IGBTs, Silicon Super-Junction and SiC MOSFETs. IEEE Transactions on Nuclear Science, 2012, 59, 866-871.	1.2	40
153	Defect-based methodology for workload-dependent circuit lifetime projections - Application to SRAM. , 2013, , .		40
154	Self-heating on bulk FinFET from 14nm down to 7nm node. , 2015, , .		40
155	A compact model for the grounded-gate nMOS behaviour under CDM ESD stress. , 0, , .		39
156	Negative bias temperature instability (NBTI) in SiO2 and SiON gate dielectrics understood through disorder-controlled kinetics. Microelectronic Engineering, 2005, 80, 122-125.	1.1	39
157	A study of Joule heating-induced breakdown of carbon nanotube interconnects. Nanotechnology, 2011, 22, 395202.	1.3	39
158	Statistical insight into controlled forming and forming free stacks for HfOx RRAM. Microelectronic Engineering, 2013, 109, 177-181.	1.1	39
159	Ultrathin Metal/Amorphous-Silicon/Metal Diode for Bipolar RRAM Selector Applications. IEEE Electron Device Letters, 2014, 35, 199-201.	2.2	39
160	First demonstration of vertically stacked ferroelectric Al doped HfO<inf>2</inf> devices for NAND applications. , 2017, , .		39
161	Design and analysis of new protection structures for smart power technology with controlled trigger and holding voltage. , 0, , .		38
162	Photoresistance Switching of Plasmonic Nanopores. Nano Letters, 2015, 15, 776-782.	4.5	38

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163	Oxide and interface degradation and breakdown under medium and high field injection conditions: A correlation study. Microelectronic Engineering, 1995, 28, 313-316.	1.1	37
164	Silicide Engineering to Boost Si Tunnel Transistor Drive Current. Japanese Journal of Applied Physics, 2011, 50, 04DC05.	0.8	37
165	Observation of hot-carrier-induced nFET gate-oxide breakdown in dynamically stressed CMOS circuits. , 0, , .		36
166	Analysis and modeling of a digital CMOS circuit operation and reliability after gate oxide breakdown: a case study. Microelectronics Reliability, 2002, 42, 555-564.	0.9	36
167	Hole-Traps in Silicon Dioxidesâ€"Part II: Generation Mechanism. IEEE Transactions on Electron Devices, 2004, 51, 1274-1280.	1.6	36
168	Positive Bias Temperature Instability in nMOSFETs with ultra-thin Hf-silicate gate dielectrics. Microelectronic Engineering, 2005, 80, 130-133.	1.1	36
169	Effects of Measurement Temperature on NBTI. IEEE Electron Device Letters, 2007, 28, 298-300.	2.2	36
170	A model determining optimal doping concentration and materialâ€™s band gap of tunnel field-effect transistors. Applied Physics Letters, 2012, 100, .	1.5	36
171	Understanding of the endurance failure in scaled HfO<inf>2</inf>-based 1T1R RRAM through vacancy mobility degradation. , 2012, , .		36
172	Analysis of vertical cross-point resistive memory (VRRAM) for 3D RRAM design. , 2013, , .		36
173	Abrupt breakdown in dielectric/metal gate stacks: a potential reliability limitation?. IEEE Electron Device Letters, 2005, 26, 773-775.	2.2	35
174	An Assessment of the Location of As-Grown Electron Traps in$hboxHfO_2$/HfSiO Stacks. IEEE Electron Device Letters, 2006, 27, 817-820.	2.2	35
175	Electrical and reliability characterization of metal-gate/HfO2/Ge FETâ€™s with Si passivation. Microelectronic Engineering, 2007, 84, 2067-2070.	1.1	35
176	Experimental validation of self-heating simulations and projections for transistors in deeply scaled nodes. , 2014, , .		35
177	Reliable Time Exponents for Long Term Prediction of Negative Bias Temperature Instability by Extrapolation. IEEE Transactions on Electron Devices, 2017, 64, 1467-1473.	1.6	35
178	Oxide and interface degradation resulting from substrate hotâ€hole injection in metalâ€oxideâ€semiconductor fieldâ€effect transistors at 295 and 77 K. Journal of Applied Physics, 1994, 75, 2073-2080.	1.1	34
179	Role of hydrogen on negative bias temperature instability in HfO2-based hole channel field-effect transistors. Applied Physics Letters, 2004, 85, 2101-2103.	1.5	34
180	Dominant Layer for Stress-Induced Positive Charges in Hf-Based Gate Stacks. IEEE Electron Device Letters, 2008, 29, 1360-1363.	2.2	34

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181	Improvements of NBTI reliability in SiGe p-FETs. , 2010, , .		34
182	New Analysis Method for Time-Dependent Device-To-Device Variation Accounting for Within-Device Fluctuation. IEEE Transactions on Electron Devices, 2013, 60, 2505-2511.	1.6	34
183	Two types of neutral electron traps generated in the gate silicon dioxide. IEEE Transactions on Electron Devices, 2002, 49, 1868-1875.	1.6	33
184	Charge trapping in SiO2/HfO2 gate dielectrics: Comparison between charge-pumping and pulsed IDâ€“VG. Microelectronic Engineering, 2004, 72, 267-272.	1.1	33
185	Properties and dynamic behavior of electron traps in HfO2/SiO2 stacks. Microelectronic Engineering, 2005, 80, 366-369.	1.1	33
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