

# Guido Groeseneken

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/8982579/guido-groeseneken-publications-by-citations.pdf>

**Version:** 2024-04-26

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

838  
papers

18,822  
citations

62  
h-index

104  
g-index

914  
ext. papers

21,940  
ext. citations

2.6  
avg, IF

6.3  
L-index

#	Paper	IF	Citations
838	A reliable approach to charge-pumping measurements in MOS transistors. <i>IEEE Transactions on Electron Devices</i> , <b>1984</b> , 31, 42-53	2.9	1038
837	New insights in the relation between electron trap generation and the statistical properties of oxide breakdown. <i>IEEE Transactions on Electron Devices</i> , <b>1998</b> , 45, 904-911	2.9	479
836	. <i>IEEE Transactions on Electron Devices</i> , <b>1989</b> , 36, 1318-1335	2.9	345
835	. <i>IEEE Transactions on Electron Devices</i> , <b>1988</b> , 35, 2194-2209	2.9	323
834	Tunnel field-effect transistor without gate-drain overlap. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 053102	3.4	319
833	. <i>IEEE Transactions on Electron Devices</i> , <b>2008</b> , 55, 547-556	2.9	314
832	. <i>IEEE Transactions on Electron Devices</i> , <b>2012</b> , 59, 292-301	2.9	294
831	Origin of the threshold voltage instability in SiO <sub>2</sub> /HfO <sub>2</sub> dual layer gate dielectrics. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 87-89	4.4	280
830	Electrical properties of high- $\epsilon_r$ gate dielectrics: Challenges, current issues, and possible solutions. <i>Materials Science and Engineering Reports</i> , <b>2006</b> , 51, 37-85	30.9	209
829	Modeling the single-gate, double-gate, and gate-all-around tunnel field-effect transistor. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 024518	2.5	179
828	A consistent model for the thickness dependence of intrinsic breakdown in ultra-thin oxides		176
827	Endurance/Retention Trade-off on $\text{HfO}_2/\text{Metal}$ Cap 1T1R Bipolar RRAM. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 1114-1121	2.9	175
826	Origin of NBTI variability in deeply scaled pFETs <b>2010</b> ,		173
825	Complementary Silicon-Based Heterostructure Tunnel-FETs With High Tunnel Rates. <i>IEEE Electron Device Letters</i> , <b>2008</b> , 29, 1398-1401	4.4	133
824	. <i>IEEE Transactions on Electron Devices</i> , <b>2012</b> , 59, 3243-3249	2.9	132
823	Consistent model for short-channel nMOSFET after hard gate oxide breakdown. <i>IEEE Transactions on Electron Devices</i> , <b>2002</b> , 49, 507-513	2.9	127
822	Ubiquitous relaxation in BTI stressing: New evaluation and insights <b>2008</b> ,		126

821	Degradation and breakdown in thin oxide layers: mechanisms, models and reliability prediction. <i>Microelectronics Reliability</i> , <b>1999</b> , 39, 1445-1460	1.2	123
820	Impact of MOSFET gate oxide breakdown on digital circuit operation and reliability. <i>IEEE Transactions on Electron Devices</i> , <b>2002</b> , 49, 500-506	2.9	117
819	Forward Bias Gate Breakdown Mechanism in Enhancement-Mode p-GaN Gate AlGaN/GaN High-Electron Mobility Transistors. <i>IEEE Electron Device Letters</i> , <b>2015</b> , 36, 1001-1003	4.4	116
818	Boosting the on-current of a n-channel nanowire tunnel field-effect transistor by source material optimization. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 064514	2.5	107
817	. <i>IEEE Electron Device Letters</i> , <b>1990</b> , 11, 329-331	4.4	107
816	A new model for the field dependence of intrinsic and extrinsic time-dependent dielectric breakdown. <i>IEEE Transactions on Electron Devices</i> , <b>1998</b> , 45, 472-481	2.9	104
815	. <i>IEEE Transactions on Electron Devices</i> , <b>1991</b> , 38, 1820-1831	2.9	104
814	Hot-carrier degradation phenomena in lateral and vertical DMOS transistors. <i>IEEE Transactions on Electron Devices</i> , <b>2004</b> , 51, 623-628	2.9	103
813	Drain voltage dependent analytical model of tunnel field-effect transistors. <i>Journal of Applied Physics</i> , <b>2011</b> , 110, 024510	2.5	98
812	On the Gradual Unipolar and Bipolar Resistive Switching of TiN/HfO <sub>2</sub> /Pt Memory Systems. <i>Electrochemical and Solid-State Letters</i> , <b>2010</b> , 13, G54		97
811	Analysis of trap-assisted tunneling in vertical Si homo-junction and SiGe hetero-junction Tunnel-FETs. <i>Solid-State Electronics</i> , <b>2013</b> , 83, 50-55	1.7	96
810	Optimization of Gate-on-Source-Only Tunnel FETs With Counter-Doped Pockets. <i>IEEE Transactions on Electron Devices</i> , <b>2012</b> , 59, 2070-2077	2.9	94
809	Statistics of Multiple Trapped Charges in the Gate Oxide of Deeply Scaled MOSFET Devices Application to NBTI. <i>IEEE Electron Device Letters</i> , <b>2010</b> , 31, 411-413	4.4	94
808	. <i>IEEE Transactions on Electron Devices</i> , <b>2004</b> , 51, 1267-1273	2.9	93
807	Planar Bulk MOSFETs Versus FinFETs: An Analog/RF Perspective. <i>IEEE Transactions on Electron Devices</i> , <b>2006</b> , 53, 3071-3079	2.9	91
806	AC NBTI studied in the 1 Hz -- 2 GHz range on dedicated on-chip CMOS circuits <b>2006</b> ,		90
805	Impact of field-induced quantum confinement in tunneling field-effect devices. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 143503	3.4	89
804	On the thermal stability of atomic layer deposited TiN as gate electrode in MOS devices. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 550-552	4.4	89

803	Measuring the electrical resistivity and contact resistance of vertical carbon nanotube bundles for application as interconnects. <i>Nanotechnology</i> , <b>2011</b> , 22, 085302	3.4	88
802	Disorder-controlled-kinetics model for negative bias temperature instability and its experimental verification		84
801	. <i>IEEE Journal of Solid-State Circuits</i> , <b>1989</b> , 24, 1372-1380	5.5	84
800	Performance Optimization of Au-Free Lateral AlGaIn/GaN Schottky Barrier Diode With Gated Edge Termination on 200-mm Silicon Substrate. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 997-1004	2.9	82
799	SiGe Channel Technology: Superior Reliability Toward Ultrathin EOT Devices Part I: NBTI. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 396-404	2.9	81
798	Atomistic approach to variability of bias-temperature instability in circuit simulations <b>2011</b> ,		81
797	Direct Measurement of Top and Sidewall Interface Trap Density in SOI FinFETs. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 232-234	4.4	79
796	On the properties of the gate and substrate current after soft breakdown in ultrathin oxide layers. <i>IEEE Transactions on Electron Devices</i> , <b>1998</b> , 45, 2329-2334	2.9	78
795	Performance Enhancement in Multi Gate Tunneling Field Effect Transistors by Scaling the Fin-Width. <i>Japanese Journal of Applied Physics</i> , <b>2010</b> , 49, 04DC10	1.4	77
794	Fabrication and Analysis of a $\text{Si}/\text{Si}_{0.55}\text{Ge}_{0.45}$ Heterojunction Line Tunnel FET. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 707-715	2.9	76
793	Filament observation in metal-oxide resistive switching devices. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 121602	3.4	76
792	NBTI from the perspective of defect states with widely distributed time scales. <i>Reliability Physics Symposium, 2009 IEEE International</i> , <b>2009</b> ,		75
791	Temperature dependence of the negative bias temperature instability in the framework of dispersive transport. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 143506	3.4	74
790	Figure of merit for and identification of sub-60 mV/decade devices. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 013510	3.4	72
789	Comparative study of drain and gate low-frequency noise in nMOSFETs with hafnium-based gate dielectrics. <i>IEEE Transactions on Electron Devices</i> , <b>2006</b> , 53, 823-828	2.9	72
788	Reliability: a possible showstopper for oxide thickness scaling?. <i>Semiconductor Science and Technology</i> , <b>2000</b> , 15, 436-444	1.8	71
787	Insight Into N/PBTI Mechanisms in Sub-1-nm-EOT Devices. <i>IEEE Transactions on Electron Devices</i> , <b>2012</b> , 59, 2042-2048	2.9	69
786	Influence of absorbed water components on SiOCH low-k reliability. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 034113	2.5	69

785	Impact of fin width on digital and analog performances of n-FinFETs. <i>Solid-State Electronics</i> , <b>2007</b> , 51, 551-559	1.7	66
784	SILC-related effects in flash E/sup 2/PROM's-Part I: A quantitative model for steady-state SILC. <i>IEEE Transactions on Electron Devices</i> , <b>1998</b> , 45, 1745-1750	2.9	65
783	Low Weibull slope of breakdown distributions in high-k layers. <i>IEEE Electron Device Letters</i> , <b>2002</b> , 23, 215-217	4.4	65
782	. <i>IEEE Electron Device Letters</i> , <b>1993</b> , 14, 107-109	4.4	65
781	The influence of elevated temperature on degradation and lifetime prediction of thin silicon-dioxide films. <i>IEEE Transactions on Electron Devices</i> , <b>2000</b> , 47, 1514-1521	2.9	63
780	. <i>IEEE Transactions on Electron Devices</i> , <b>1990</b> , 37, 310-313	2.9	63
779	. <i>IEEE Transactions on Electron Devices</i> , <b>1990</b> , 37, 980-993	2.9	63
778	200 V Enhancement-Mode p-GaN HEMTs Fabricated on 200 mm GaN-on-SOI With Trench Isolation for Monolithic Integration. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 918-921	4.4	62
777	New interface state density extraction method applicable to peaked and high-density distributions for Ge MOSFET development. <i>IEEE Electron Device Letters</i> , <b>2006</b> , 27, 405-408	4.4	62
776	Channel Hot Carrier Degradation Mechanism in Long/Short Channel $n$ -FinFETs. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 4002-4007	2.9	61
775	Analytical model for a tunnel field-effect transistor <b>2008</b> ,		61
774	Impact of MOSFET oxide breakdown on digital circuit operation and reliability		61
773	Analytical percolation model for predicting anomalous charge loss in flash memories. <i>IEEE Transactions on Electron Devices</i> , <b>2004</b> , 51, 1392-1400	2.9	60
772	Trap Spectroscopy by Charge Injection and Sensing (TSCIS): A quantitative electrical technique for studying defects in dielectric stacks <b>2008</b> ,		59
771	Impact of single charged gate oxide defects on the performance and scaling of nanoscaled FETs <b>2012</b> ,		58
770	Hot hole degradation effects in lateral nDMOS transistors. <i>IEEE Transactions on Electron Devices</i> , <b>2004</b> , 51, 1704-1710	2.9	58
769	. <i>IEEE Transactions on Electron Devices</i> , <b>1992</b> , 39, 1150-1156	2.9	58
768	Charge trapping and dielectric reliability of SiO/sub 2/-Al/sub 2/O/sub 3/ gate stacks with TiN electrodes. <i>IEEE Transactions on Electron Devices</i> , <b>2003</b> , 50, 1261-1269	2.9	57

767	Reliability screening of high-k dielectrics based on voltage ramp stress. <i>Microelectronics Reliability</i> , <b>2007</b> , 47, 513-517	1.2	56
766	Relation between breakdown mode and location in short-channel nMOSFETs and its impact on reliability specifications. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2001</b> , 1, 163-169	1.6	56
765	Hot-carrier degradation in submicrometre MOSFETs: from uniform injection towards the real operating conditions. <i>Semiconductor Science and Technology</i> , <b>1995</b> , 10, 1208-1220	1.8	55
764	Impact of Wire Geometry on Interconnect RC and Circuit Delay. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 2488-2496	2.9	54
763	Analytical model for point and line tunneling in a tunnel field-effect transistor <b>2008</b> ,		54
762	Characterization of the V/sub T/-instability in SiO/sub 2//HfO/sub 2/ gate dielectrics		54
761	Microscopic origin of random telegraph noise fluctuations in aggressively scaled RRAM and its impact on read disturb variability <b>2013</b> ,		53
760	Integration and electrical characterization of carbon nanotube via interconnects. <i>Microelectronic Engineering</i> , <b>2011</b> , 88, 837-843	2.5	53
759	Correlation between number of walls and diameter in multiwall carbon nanotubes grown by chemical vapor deposition. <i>Carbon</i> , <b>2012</b> , 50, 1748-1752	10.4	52
758	Impact of weak Fermi-level pinning on the correct interpretation of III-V MOS C-V and G-V characteristics. <i>Microelectronic Engineering</i> , <b>2007</b> , 84, 2146-2149	2.5	52
757	. <i>IEEE Transactions on Electron Devices</i> , <b>1989</b> , 36, 1746-1750	2.9	52
756	Hole trapping and trap generation in the gate silicon dioxide. <i>IEEE Transactions on Electron Devices</i> , <b>2001</b> , 48, 1127-1135	2.9	51
755	. <i>IEEE Transactions on Electron Devices</i> , <b>1989</b> , 36, 1663-1682	2.9	51
754	Analysis of Complementary RRAM Switching. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 1186-1188	4.4	50
753	. <i>IEEE Electron Device Letters</i> , <b>1988</b> , 9, 232-234	4.4	50
752	Understanding ferroelectric Al:HfO2 thin films with Si-based electrodes for 3D applications. <i>Journal of Applied Physics</i> , <b>2017</b> , 121, 204103	2.5	49
751	. <i>IEEE Transactions on Electron Devices</i> , <b>1993</b> , 40, 2255-2263	2.9	49
750	Quantum Mechanical Performance Predictions of p-n-i-n Versus Pocketed Line Tunnel Field-Effect Transistors. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 2128-2134	2.9	48

749	A study of relaxation current in high- $\kappa$ /dielectric stacks. <i>IEEE Transactions on Electron Devices</i> , <b>2004</b> , 51, 402-408	2.9	48
748	Correlation between 1/f noise and interface state density at the Fermi level in field-effect transistors. <i>Journal of Applied Physics</i> , <b>1985</b> , 57, 4811-4813	2.5	48
747	Part I: Impact of Field-Induced Quantum Confinement on the Subthreshold Swing Behavior of Line TFETs. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 4057-4064	2.9	47
746	Reliability Study of Ferroelectric Al:HfO <sub>2</sub> Thin Films for DRAM and NAND Applications. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 4091-4098	2.9	46
745	Digital-circuit analysis of short-gate tunnel FETs for low-voltage applications. <i>Semiconductor Science and Technology</i> , <b>2011</b> , 26, 085001	1.8	46
744	Reaction-dispersive proton transport model for negative bias temperature instabilities. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 093506	3.4	46
743	Toward Understanding Positive Bias Temperature Instability in Fully Recessed-Gate GaN MISFETs. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 1853-1860	2.9	45
742	Impact of process and geometrical parameters on the electrical characteristics of vertical nanowire silicon n-TFETs. <i>Solid-State Electronics</i> , <b>2012</b> , 72, 82-87	1.7	44
741	Constant current charge-to-breakdown: Still a valid tool to study the reliability of MOS structures? <b>1998</b> ,		44
740	Reliability Comparison of Triple-Gate Versus Planar SOI FETs. <i>IEEE Transactions on Electron Devices</i> , <b>2006</b> , 53, 2351-2357	2.9	43
739	Review of reliability issues in high-k/metal gate stacks <b>2008</b> ,		42
738	Hot carrier degradation and time-dependent dielectric breakdown in oxides. <i>Microelectronic Engineering</i> , <b>1999</b> , 49, 27-40	2.5	42
737	Response of a single trap to AC negative Bias Temperature stress <b>2011</b> ,		41
736	Drive current enhancement in p-tunnel FETs by optimization of the process conditions. <i>Solid-State Electronics</i> , <b>2011</b> , 65-66, 28-32	1.7	40
735	One-Selector One-Resistor Cross-Point Array With Threshold Switching Selector. <i>IEEE Transactions on Electron Devices</i> , <b>2015</b> , 62, 3250-3257	2.9	39
734	Correlation of interface states/border traps and threshold voltage shift on AlGaN/GaN metal-insulator-semiconductor high-electron-mobility transistors. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 093507	3.4	39
733	Probabilistic defect occupancy model for NBTI <b>2011</b> ,		39
732	. <i>IBM Journal of Research and Development</i> , <b>1999</b> , 43, 339-350	2.5	39

731	Observation of single interface traps in submicron MOSFET's by charge pumping. <i>IEEE Transactions on Electron Devices</i> , <b>1996</b> , 43, 940-945	2.9	39
730	Determination of spatial surface state density distribution in MOS and SIMOS transistors after channel hot electron injection. <i>Electronics Letters</i> , <b>1982</b> , 18, 372	1.1	39
729	InGaAs tunnel diodes for the calibration of semi-classical and quantum mechanical band-to-band tunneling models. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 184503	2.5	38
728	Improvement in NBTI reliability of Si-passivated Ge/high-k/metal-gate pFETs. <i>Microelectronic Engineering</i> , <b>2009</b> , 86, 1582-1584	2.5	38
727	Insights into Ni-filament formation in unipolar-switching Ni/HfO <sub>2</sub> /TiN resistive random access memory device. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 113513	3.4	38
726	Generic learning of TDDDB applied to RRAM for improved understanding of conduction and switching mechanism through multiple filaments <b>2010</b> ,		38
725	. <i>IEEE Transactions on Electron Devices</i> , <b>2010</b> , 57, 228-237	2.9	38
724	Scaling CMOS: Finding the gate stack with the lowest leakage current. <i>Solid-State Electronics</i> , <b>2005</b> , 49, 695-701	1.7	38
723	Postcycling LRS Retention Analysis in HfO <sub>2</sub> /Hf RRAM 1T1R Device. <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 626-628	4.4	37
722	Temperature and voltage dependences of the capture and emission times of individual traps in high-k dielectrics. <i>Microelectronic Engineering</i> , <b>2011</b> , 88, 1243-1246	2.5	37
721	Internal photoemission of electrons at interfaces of metals with low- $\epsilon$ insulators. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 202909	3.4	37
720	. <i>IEEE Transactions on Electron Devices</i> , <b>1994</b> , 41, 413-419	2.9	37
719	Ultrathin Metal/Amorphous-Silicon/Metal Diode for Bipolar RRAM Selector Applications. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 199-201	4.4	36
718	Advancing CMOS beyond the Si roadmap with Ge and III/V devices <b>2011</b> ,		36
717	Stress-Induced Positive Charge in Hf-Based Gate Dielectrics: Impact on Device Performance and a Framework for the Defect. <i>IEEE Transactions on Electron Devices</i> , <b>2008</b> , 55, 1647-1656	2.9	36
716	Emerging Yield and Reliability Challenges in Nanometer CMOS Technologies <b>2008</b> ,		36
715	Determination of capture cross sections for as-grown electron traps in HfO <sub>2</sub> /SiO <sub>2</sub> stacks. <i>Journal of Applied Physics</i> , <b>2006</b> , 100, 093716	2.5	36
714	A novel hot-hole injection degradation model for lateral nDMOS transistors		36



713	Characterization of individual interface traps with charge pumping. <i>Applied Physics Letters</i> , <b>1996</b> , 68, 1383-1385	3.4	36
712	Photoresistance switching of plasmonic nanopores. <i>Nano Letters</i> , <b>2015</b> , 15, 776-82	11.5	35
711	Channel Hot-Carrier Degradation in Short-Channel Transistors With High- $\kappa$ /Metal Gate Stacks. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2009</b> , 9, 425-430	1.6	35
710	. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2009</b> , 9, 454-458	1.6	35
709	Negative bias temperature instability (NBTI) in SiO <sub>2</sub> and SiON gate dielectrics understood through disorder-controlled kinetics. <i>Microelectronic Engineering</i> , <b>2005</b> , 80, 122-125	2.5	35
708	Endurance degradation mechanisms in TiNTa <sub>2</sub> O <sub>5</sub> Ta resistive random-access memory cells. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 053501	3.4	34
707	. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2014</b> , 14, 182-193	1.6	34
706	Defect-based methodology for workload-dependent circuit lifetime projections - Application to SRAM <b>2013</b> ,		34
705	A study of Joule heating-induced breakdown of carbon nanotube interconnects. <i>Nanotechnology</i> , <b>2011</b> , 22, 395202	3.4	34
704	SILC-related effects in flash E/sup 2/PROM's-Part II: Prediction of steady-state SILC-related disturb characteristics. <i>IEEE Transactions on Electron Devices</i> , <b>1998</b> , 45, 1751-1760	2.9	34
703	Demonstration of GaN Integrated Half-Bridge With On-Chip Drivers on 200-mm Engineered Substrates. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 1499-1502	4.4	33
702	A Single Pulse Charge Pumping Technique for Fast Measurements of Interface States. <i>IEEE Transactions on Electron Devices</i> , <b>2011</b> , 58, 1490-1498	2.9	33
701	Silicide Engineering to Boost Si Tunnel Transistor Drive Current. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 04DC05	1.4	33
700	Real V <sub>th</sub> instability of pMOSFETs under practical operation conditions <b>2007</b> ,		33
699	Hole-traps in silicon dioxides. Part II. Generation mechanism. <i>IEEE Transactions on Electron Devices</i> , <b>2004</b> , 51, 1274-1280	2.9	33
698	Hot carrier degradation and ESD in submicrometer CMOS technologies: how do they interact?. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2001</b> , 1, 23-32	1.6	33
697	Temperature acceleration of oxide breakdown and its impact on ultra-thin gate oxide reliability		33
696	Oxide and interface degradation and breakdown under medium and high field injection conditions: A correlation study. <i>Microelectronic Engineering</i> , <b>1995</b> , 28, 313-316	2.5	33

695	. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 3451-3458	2.9	32
694	Implications of BTI-Induced Time-Dependent Statistics on Yield Estimation of Digital Circuits. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 666-673	2.9	32
693	Stochastic variability of vacancy filament configuration in ultra-thin dielectric RRAM and its impact on OFF-state reliability <b>2013</b> ,		32
692	A model determining optimal doping concentration and material's band gap of tunnel field-effect transistors. <i>Applied Physics Letters</i> , <b>2012</b> , 100, 193509	3.4	32
691	Electrical and reliability characterization of metal-gate/HfO <sub>2</sub> /Ge FET's with Si passivation. <i>Microelectronic Engineering</i> , <b>2007</b> , 84, 2067-2070	2.5	32
690	An Assessment of the Location of As-Grown Electron Traps in $\text{HfO}_2/\text{HfSiO}$ Stacks. <i>IEEE Electron Device Letters</i> , <b>2006</b> , 27, 817-820	4.4	32
689	Positive Bias Temperature Instability in nMOSFETs with ultra-thin Hf-silicate gate dielectrics. <i>Microelectronic Engineering</i> , <b>2005</b> , 80, 130-133	2.5	32
688	Suppression of the Backgating Effect of Enhancement-Mode p-GaN HEMTs on 200-mm GaN-on-SOI for Monolithic Integration. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 39, 999-1002	4.4	31
687	Energy Distribution of Positive Charges in Gate Dielectric: Probing Technique and Impacts of Different Defects. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 1745-1753	2.9	31
686	Analysis of vertical cross-point resistive memory (VRRAM) for 3D RRAM design <b>2013</b> ,		31
685	. <i>IEEE Transactions on Electron Devices</i> , <b>2006</b> , 53, 1657-1668	2.9	31
684	Charge trapping in SiO <sub>2</sub> /HfO <sub>2</sub> gate dielectrics: Comparison between charge-pumping and pulsed IDVG. <i>Microelectronic Engineering</i> , <b>2004</b> , 72, 267-272	2.5	31
683	An Investigation on Border Traps in III-V MOSFETs With an In <sub>0.53</sub> Ga <sub>0.47</sub> As Channel. <i>IEEE Transactions on Electron Devices</i> , <b>2015</b> , 62, 3633-3639	2.9	30
682	Statistical insight into controlled forming and forming free stacks for HfO <sub>x</sub> RRAM. <i>Microelectronic Engineering</i> , <b>2013</b> , 109, 177-181	2.5	30
681	Role of hydrogen on negative bias temperature instability in HfO <sub>2</sub> -based hole channel field-effect transistors. <i>Applied Physics Letters</i> , <b>2004</b> , 85, 2101-2103	3.4	30
680	Analysis and modeling of a digital CMOS circuit operation and reliability after gate oxide breakdown: a case study. <i>Microelectronics Reliability</i> , <b>2002</b> , 42, 555-564	1.2	30
679	Oxide and interface degradation resulting from substrate hot-hole injection in metal-oxide-semiconductor field-effect transistors at 295 and 77 K. <i>Journal of Applied Physics</i> , <b>1994</b> , 75, 2073-2080	2.5	30
678	Hourglass concept for RRAM: A dynamic and statistical device model <b>2014</b> ,		29

677	Improvements of NBTI reliability in SiGe p-FETs <b>2010</b> ,		29
676	An Analysis of the NBTI-Induced Threshold Voltage Shift Evaluated by Different Techniques. <i>IEEE Transactions on Electron Devices</i> , <b>2009</b> , 56, 1086-1093	2.9	29
675	Reliability of Ultra-Thin Gate Oxide Below 3 nm in the Direct Tunneling Regime. <i>Japanese Journal of Applied Physics</i> , <b>1997</b> , 36, 1602-1608	1.4	29
674	Hydrogen-Induced Resistive Switching in TiN/ALD $\text{HfO}_2$ /PEALD TiN RRAM Device. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 483-485	4.4	28
673	Neutron-Induced Failure in Silicon IGBTs, Silicon Super-Junction and SiC MOSFETs. <i>IEEE Transactions on Nuclear Science</i> , <b>2012</b> , 59, 866-871	1.7	28
672	Carbon nanotube-carbon nanotube contacts as an alternative towards low resistance horizontal interconnects. <i>Carbon</i> , <b>2011</b> , 49, 4004-4012	10.4	28
671	Continuing degradation of the SiO <sub>2</sub> /Si interface after hot hole stress. <i>Journal of Applied Physics</i> , <b>1997</b> , 81, 2686-2692	2.5	28
670	Device and circuit-level analog performance trade-offs: a comparative study of planar bulk FETs versus FinFETs		28
669	Two types of neutral electron traps generated in the gate silicon dioxide. <i>IEEE Transactions on Electron Devices</i> , <b>2002</b> , 49, 1868-1875	2.9	28
668	Mechanism for the generation of interface state precursors. <i>Journal of Applied Physics</i> , <b>2000</b> , 87, 2967-2977		28
667	High performance a-IGZO thin-film transistors with mf-PVD SiO <sub>2</sub> as an etch-stop-layer. <i>Journal of the Society for Information Display</i> , <b>2014</b> , 22, 23-28	2.1	27
666	Correlation of single trapping and detrapping effects in drain and gate currents of nanoscaled nFETs and pFETs <b>2012</b> ,		27
665	Properties and dynamic behavior of electron traps in HfO <sub>2</sub> /SiO <sub>2</sub> stacks. <i>Microelectronic Engineering</i> , <b>2005</b> , 80, 366-369	2.5	27
664	Hydrogen induced positive charge generation in gate oxides. <i>Journal of Applied Physics</i> , <b>2001</b> , 90, 1911-1919		27
663	Observation of hot-carrier-induced nFET gate-oxide breakdown in dynamically stressed CMOS circuits		27
662	On the field dependence of intrinsic and extrinsic time-dependent dielectric breakdown <b>1996</b> ,		27
661	A quantitative model for the conduction in oxides thermally grown from polycrystalline silicon. <i>IEEE Transactions on Electron Devices</i> , <b>1986</b> , 33, 1028-1042	2.9	27
660	GaN-on-SOI: Monolithically Integrated All-GaN ICs for Power Conversion <b>2019</b> ,		27

659	Tunneling Transistors Based on MoS <sub>2</sub> /MoTe <sub>2</sub> Van der Waals Heterostructures. <i>IEEE Journal of the Electron Devices Society</i> , <b>2018</b> , 6, 1048-1055	2.3	26
658	Novel back-channel-etch process flow based a-IGZO TFTs for circuit and display applications on PEN foil. <i>Journal of the Society for Information Display</i> , <b>2013</b> , 21, 369-375	2.1	26
657	Identifying the Bottlenecks to the RF Performance of FinFETs <b>2010</b> ,		26
656	Effects of Measurement Temperature on NBTI. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 298-300	4.4	26
655	Abrupt breakdown in dielectric/metal gate stacks: a potential reliability limitation?. <i>IEEE Electron Device Letters</i> , <b>2005</b> , 26, 773-775	4.4	26
654	Analytical model for failure rate prediction due to anomalous charge loss of flash memories		26
653	Ultra-thin oxide reliability: searching for the thickness scaling limit. <i>Microelectronics Reliability</i> , <b>2000</b> , 40, 697-701	1.2	26
652	Behavior of hot hole stressed SiO <sub>2</sub> /Si interface at elevated temperature. <i>Journal of Applied Physics</i> , <b>1998</b> , 83, 843-850	2.5	26
651	Plasma doping and reduced crystalline damage for conformally doped fin field effect transistors. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 223508	3.4	25
650	<b>2013</b> ,		25
649	Integration of Vertical Carbon Nanotube Bundles for Interconnects. <i>Journal of the Electrochemical Society</i> , <b>2010</b> , 157, K211	3.9	25
648	Zener tunneling in semiconductors under nonuniform electric fields. <i>Journal of Applied Physics</i> , <b>2010</b> , 107, 054520	2.5	25
647	Dominant Layer for Stress-Induced Positive Charges in Hf-Based Gate Stacks. <i>IEEE Electron Device Letters</i> , <b>2008</b> , 29, 1360-1363	4.4	25
646	Relation between breakdown mode and breakdown location in short channel NMOSFETs and its impact on reliability specifications		25
645	. <i>IEEE Electron Device Letters</i> , <b>1993</b> , 14, 326-328	4.4	25
644	. <i>IEEE Transactions on Electron Devices</i> , <b>1995</b> , 42, 1992-1998	2.9	25
643	Reliable Time Exponents for Long Term Prediction of Negative Bias Temperature Instability by Extrapolation. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 1467-1473	2.9	24
642	Observation of Dynamic V <sub>TH</sub> of p-GaN Gate HEMTs by Fast Sweeping Characterization. <i>IEEE Electron Device Letters</i> , <b>2020</b> , 41, 577-580	4.4	24

641	RTN and PBTI-induced time-dependent variability of replacement metal-gate high-k InGaAs FinFETs <b>2014,</b>		24
640	<b>2012,</b>		24
639	Superior NBTI reliability of SiGe channel pMOSFETs: Replacement gate, FinFETs, and impact of Body Bias <b>2011,</b>		24
638	The relevance of deeply-scaled FET threshold voltage shifts for operation lifetimes <b>2012,</b>		24
637	Effective work function modulation by controlled dielectric monolayer deposition. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 113505	3-4	24
636	Area scaling and voltage dependence of time-to-breakdown in magnetic tunnel junctions. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 7712	2.5	24
635	Vertical Ferroelectric HfO <sub>2</sub> FET based on 3-D NAND Architecture: Towards Dense Low-Power Memory <b>2018,</b>		24
634	Investigation on Carrier Transport Through AlN Nucleation Layer From Differently Doped Si(111) Substrates. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 1721-1727	2.9	23
633	Self-heating on bulk FinFET from 14nm down to 7nm node <b>2015,</b>		23
632	Experimental validation of self-heating simulations and projections for transistors in deeply scaled nodes <b>2014,</b>		23
631	Understanding the Basic Advantages of Bulk FinFETs for Sub- and Near-Threshold Logic Circuits From Device Measurements. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , <b>2012</b> , 59, 439-442	2.5	23
630	Temperature dependence of the emission and capture times of SiON individual traps after positive bias temperature stress. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2011</b> , 29, 01AA04	1.3	23
629	Degradation of oxides and oxynitrides under hot hole stress. <i>IEEE Transactions on Electron Devices</i> , <b>2000</b> , 47, 378-386	2.9	23
628	Investigation of temperature acceleration of thin oxide time-to-breakdown. <i>Microelectronic Engineering</i> , <b>1999</b> , 48, 47-50	2.5	23
627	Direct and post-injection oxide and interface trap generation resulting from low-temperature hot-electron injection. <i>Journal of Applied Physics</i> , <b>1993</b> , 74, 5582-5586	2.5	23
626	. <i>IEEE Transactions on Electron Devices</i> , <b>1994</b> , 41, 1421-1428	2.9	23
625	. <i>IEEE Transactions on Electron Devices</i> , <b>1992</b> , 39, 458-464	2.9	23
624	Low-temperature formation of source-drain contacts in self-aligned amorphous oxide thin-film transistors. <i>Journal of Information Display</i> , <b>2015</b> , 16, 111-117	4.1	22

623	On the Identification of Buffer Trapping for Bias-Dependent Dynamic $R_{ON}$ of AlGaIn/GaN Schottky Barrier Diode With AlGaIn:C Back Barrier. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 310-313	4.4	22
622	Determination of energy and spatial distribution of oxide border traps in In <sub>0.53</sub> Ga <sub>0.47</sub> As MOS capacitors from capacitance-voltage characteristics measured at various temperatures. <i>Microelectronics Reliability</i> , <b>2014</b> , 54, 746-754	1.2	22
621	Leakage-current reduction and improved on-state performance of Au-free AlGaIn/GaN-on-Si Schottky diode by embedding the edge terminations in the anode region. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , <b>2014</b> , 11, 862-865		22
620	Modeling the Impact of Reset Depth on Vacancy-Induced Filament Perturbations in $(\text{HfO}_2)_2$ RRAM. <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 614-616	4.4	22
619	First demonstration of vertically stacked ferroelectric Al doped HfO <sub>2</sub> devices for NAND applications <b>2017</b> ,		22
618	Dynamic four glass model for SET and RESET in HfO <sub>2</sub> RRAM <b>2012</b> ,		22
617	Gate oxide breakdown in FET devices and circuits: From nanoscale physics to system-level reliability. <i>Microelectronics Reliability</i> , <b>2007</b> , 47, 559-566	1.2	22
616	Evidence for source side injection hot carrier effects on lateral DMOS transistors. <i>Microelectronics Reliability</i> , <b>2004</b> , 44, 1621-1624	1.2	22
615	Competing hot carrier degradation mechanisms in lateral n-type DMOS transistors		22
614	Circuits and AMOLED display with self-aligned a-IGZO TFTs on polyimide foil. <i>Journal of the Society for Information Display</i> , <b>2014</b> , 22, 509-517	2.1	21
613	BTI reliability of advanced gate stacks for Beyond-Silicon devices: Challenges and opportunities <b>2014</b> ,		21
612	Quantitative and predictive model of reading current variability in deeply scaled vertical poly-Si channel for 3D memories <b>2012</b> ,		21
611	New Analysis Method for Time-Dependent Device-To-Device Variation Accounting for Within-Device Fluctuation. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 2505-2511	2.9	21
610	Trends and perspectives for electrical characterization and reliability assessment in advanced CMOS technologies <b>2010</b> ,		21
609	. <i>IEEE Transactions on Electron Devices</i> , <b>2009</b> , 56, 1424-1432	2.9	21
608	Emerging yield and reliability challenges in nanometer CMOS technologies <b>2008</b> ,		21
607	A fast and simple methodology for lifetime prediction of ultra-thin oxides		21
606	A compact model for the grounded-gate nMOS behaviour under CDM ESD stress		21

605	A new analytic model for the description of the intrinsic oxide breakdown statistics of ultra-thin oxides. <i>Microelectronics Reliability</i> , <b>1996</b> , 36, 1639-1642	1.2	21
604	. <i>IEEE Transactions on Electron Devices</i> , <b>1995</b> , 42, 1314-1320	2.9	21
603	MoS <sub>2</sub> /MoTe <sub>2</sub> Heterostructure Tunnel FETs Using Gated Schottky Contacts. <i>Advanced Functional Materials</i> , <b>2020</b> , 30, 1905970	15.6	21
602	Time-Dependent Breakdown Mechanisms and Reliability Improvement in Edge Terminated AlGa <sub>N</sub> /Ga <sub>N</sub> Schottky Diodes Under HTRB Tests. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 371-374	4.4	20
601	Time dependent dielectric breakdown (TDDB) evaluation of PE-ALD Si <sub>3</sub> N <sub>4</sub> gate dielectrics on AlGa <sub>N</sub> /Ga <sub>N</sub> recessed gate D-mode MIS-HEMTs and E-mode MIS-FETs <b>2015</b> ,		20
600	Reliability of MOL local interconnects <b>2013</b> ,		20
599	Part II: Investigation of Subthreshold Swing in Line Tunnel FETs Using Bias Stress Measurements. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 4065-4072	2.9	20
598	Harnessing plasmon-induced ionic noise in metallic nanopores. <i>Nano Letters</i> , <b>2013</b> , 13, 1724-9	11.5	20
597	. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2011</b> , 11, 278-289	1.6	20
596	Matching Performance of FinFET Devices With Fin Widths Down to 10 nm. <i>IEEE Electron Device Letters</i> , <b>2009</b> , 30, 1374-1376	4.4	20
595	On the impact of the Si passivation layer thickness on the NBTI of nanoscaled Si <sub>0.45</sub> Ge <sub>0.55</sub> pMOSFETs. <i>Microelectronic Engineering</i> , <b>2011</b> , 88, 1388-1391	2.5	20
594	Time and workload dependent device variability in circuit simulations <b>2011</b> ,		20
593	Channel hot-carrier degradation in pMOS and nMOS short channel transistors with high-k dielectric stack. <i>Microelectronic Engineering</i> , <b>2010</b> , 87, 47-50	2.5	20
592	Threshold voltage shifts in Si passivated (100)Ge p-channel field effect transistors: Insights from first-principles modeling. <i>Applied Physics Letters</i> , <b>2007</b> , 91, 023506	3.4	20
591	On the interface states generated under different stress conditions. <i>Applied Physics Letters</i> , <b>2001</b> , 79, 3092-3094	3.4	20
590	Critical analysis of the substrate hot-hole injection technique. <i>Solid-State Electronics</i> , <b>1994</b> , 37, 393-399	1.7	20
589	Extraction of the Random Component of Time-Dependent Variability Using Matched Pairs. <i>IEEE Electron Device Letters</i> , <b>2015</b> , 36, 300-302	4.4	19
588	Current transient spectroscopy for trapping analysis on Au-free AlGa <sub>N</sub> /Ga <sub>N</sub> Schottky barrier diode. <i>Applied Physics Letters</i> , <b>2015</b> , 106, 083502	3.4	19

587	Characterization of time-dependent variability using 32k transistor arrays in an advanced HK/MG technology <b>2015</b> ,		19
586	Quantum mechanical solver for confined heterostructure tunnel field-effect transistors. <i>Journal of Applied Physics</i> , <b>2014</b> , 115, 053706	2.5	19
585	Back-channel-etch amorphous indium-gallium-zinc oxide thin-film transistors: The impact of source/drain metal etch and final passivation. <i>Japanese Journal of Applied Physics</i> , <b>2014</b> , 53, 111401	1.4	19
584	Two-dimensional quantum mechanical modeling of band-to-band tunneling in indirect semiconductors <b>2011</b> ,		19
583	Positive and negative bias temperature instability on sub-nanometer eot high-K MOSFETs <b>2010</b> ,		19
582	A consistent model for oxide trap profiling with the Trap Spectroscopy by Charge Injection and Sensing (TSCIS) technique. <i>Solid-State Electronics</i> , <b>2010</b> , 54, 1384-1391	1.7	19
581	Grounded-gate nMOS transistor behavior under CDM ESD stress conditions. <i>IEEE Transactions on Electron Devices</i> , <b>1997</b> , 44, 1972-1980	2.9	19
580	On the Optimal ON/OFF Resistance Ratio for Resistive Switching Element in One-Selector One-Resistor Crosspoint Arrays. <i>IEEE Electron Device Letters</i> , <b>2015</b> , 36, 570-572	4.4	18
579	Junction Field Effect on the Retention Time for One-Transistor Floating-Body RAM. <i>IEEE Transactions on Electron Devices</i> , <b>2012</b> , 59, 2167-2172	2.9	18
578	Limitations on Lateral Nanowire Scaling Beyond 7-nm Node. <i>IEEE Electron Device Letters</i> , <b>2017</b> , 38, 9-11	4.4	18
577	Programming-conditions solutions towards suppression of retention tails of scaled oxide-based RRAM <b>2015</b> ,		18
576	Statistical characterization of current paths in narrow poly-Si channels <b>2011</b> ,		18
575	Depth localization of positive charge trapped in silicon oxynitride field effect transistors after positive and negative gate bias temperature stress. <i>Applied Physics Letters</i> , <b>2011</b> , 98, 183506	3.4	18
574	Reliability issues in MuGFET nanodevices <b>2008</b> ,		18
573	Insights on the physical mechanism behind negative bias temperature instabilities. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 043505	3.4	18
572	Direct measurement of the inversion charge in MOSFETs: application to mobility extraction in alternative gate dielectrics		18
571			18
570	Defect Loss: A New Concept for Reliability of MOSFETs. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 480-482	4.4	17



569	Reduction of the BTI time-dependent variability in nanoscaled MOSFETs by body bias <b>2013</b> ,		17
568	NBTI Reliability of SiGe and Ge Channel pMOSFETs With $\frac{\text{SiO}_2}{\text{HfO}_2}$ Dielectric Stack. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2013</b> , 13, 497-506	1.6	17
567	Statistical spectroscopy of switching traps in deeply scaled vertical poly-Si channel for 3D memories <b>2013</b> ,		17
566	RF Split Capacitance-Voltage Measurements of Short-Channel and Leaky MOSFET Devices. <i>IEEE Electron Device Letters</i> , <b>2006</b> , 27, 772-774	4.4	17
565	Analysis of the kinetics for interface state generation following hole injection. <i>Journal of Applied Physics</i> , <b>2003</b> , 93, 6107-6116	2.5	17
564	Stress induced charge trapping effects in SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> gate stacks with TiN electrodes. <i>Journal of Applied Physics</i> , <b>2003</b> , 94, 6627-6630	2.5	17
563	Effect of bulk trap density on HfO <sub>2</sub> /reliability and yield		17
562	On the Electrical Characterization of High- $\kappa$ Dielectrics. <i>MRS Bulletin</i> , <b>2002</b> , 27, 222-225	3.2	17
561	Statistical model for stress-induced leakage current and pre-breakdown current jumps in ultra-thin oxide layers		17
560	Characteristics improvement of top-gate self-aligned amorphous indium gallium zinc oxide thin-film transistors using a dual-gate control. <i>Journal of the Society for Information Display</i> , <b>2017</b> , 25, 349-355	2.1	16
559	NBTI in Replacement Metal Gate SiGe core FinFETs: Impact of Ge concentration, fin width, fin rotation and interface passivation by high pressure anneals <b>2016</b> ,		16
558	Physical origin of current collapse in Au-free AlGaN/GaN Schottky Barrier Diodes. <i>Microelectronics Reliability</i> , <b>2014</b> , 54, 2196-2199	1.2	16
557	SiGe Channel Technology: Superior Reliability Toward Ultra-Thin EOT Devices Part II: Time-Dependent Variability in Nanoscaled Devices and Other Reliability Issues. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 405-412	2.9	16
556	Process-Dependent N/PBTI Characteristics of TiN Gate FinFETs. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 937-939	4.4	16
555	BJT-Mode Endurance on a 1T-RAM Bulk FinFET Device. <i>IEEE Electron Device Letters</i> , <b>2010</b> , 31, 1380-1382	4.4	16
554	The effect of externally imposed mechanical stress on the hot-carrier-induced degradation of deep-sub micron nMOSFET's. <i>IEEE Transactions on Electron Devices</i> , <b>1997</b> , 44, 943-950	2.9	16
553	Real-Time Investigation of Conduction Mechanism With Bias Stress in Silica-Based Intermetal Dielectrics. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2007</b> , 7, 252-258	1.6	16
552	Study of the Reliability Impact of Chlorine Precursor Residues in Thin Atomic-Layer-Deposited $\frac{\text{HfO}_2}{\text{HfO}_2}$ Layers. <i>IEEE Transactions on Electron Devices</i> , <b>2007</b> , 54, 752-758	2.9	16

551	Determining weak Fermi-level pinning in MOS devices by conductance and capacitance analysis and application to GaAs MOS devices. <i>Solid-State Electronics</i> , <b>2007</b> , 51, 1101-1108	1.7	16
550	Experimental verification of SRAM cell functionality after hard and soft gate oxide breakdowns		16
549	A new degradation model and lifetime extrapolation technique for lightly doped drain nMOSFETs under hot-carrier degradation. <i>Microelectronics Reliability</i> , <b>2001</b> , 41, 437-443	1.2	16
548	Photo-carrier generation as the origin of Fowler-Nordheim-induced substrate hole current in thin oxides		16
547	A new quantitative model to predict SILC-related disturb characteristics in flash E/sup 2/PROM devices		16
546	Self-heating in FinFET and GAA-NW using Si, Ge and III/V channels <b>2016</b> ,		16
545	Cell Variability Impact on the One-Selector One-Resistor Cross-Point Array Performance. <i>IEEE Transactions on Electron Devices</i> , <b>2015</b> , 62, 3490-3497	2.9	15
544	Maximizing reliable performance of advanced CMOS circuitsA case study <b>2014</b> ,		15
543	Statistical poly-Si grain boundary model with discrete charging defects and its 2D and 3D implementation for vertical 3D NAND channels <b>2015</b> ,		15
542	Characterization of self-heating in high-mobility Ge FinFET pMOS devices <b>2015</b> ,		15
541	Development of a Technique for Characterizing Bias Temperature Instability-Induced Device-to-Device Variation at SRAM-Relevant Conditions. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 3081-3089	2.9	15
540	Perspective of tunnel-FET for future low-power technology nodes <b>2014</b> ,		15
539	Quantum ballistic transport in the junctionless nanowire pinch-off field effect transistor. <i>Journal of Computational Electronics</i> , <b>2011</b> , 10, 216-221	1.8	15
538	Optimization of tunnel FETs: Impact of gate oxide thickness, implantation and annealing conditions <b>2010</b> ,		15
537	Significant reduction of Positive Bias Temperature Instability in high-k/metal-gate nFETs by incorporation of rare earth metals. <i>Microelectronic Engineering</i> , <b>2009</b> , 86, 1894-1896	2.5	15
536	Impact of Si-thickness on interface and device properties for Si-passivated Ge pMOSFETs <b>2008</b> ,		15
535	Impact of gate materials on positive charge formation in HfO <sub>2</sub> /BiO <sub>2</sub> stacks. <i>Applied Physics Letters</i> , <b>2006</b> , 89, 023507	3.4	15
534	Electrical signature of the defect associated with gate oxide breakdown. <i>IEEE Electron Device Letters</i> , <b>2006</b> , 27, 393-395	4.4	15

533	Statistical model for prebreakdown current jumps and breakdown caused by single traps in magnetic tunnel junctions. <i>Journal of Applied Physics</i> , <b>2003</b> , 94, 2749-2751	2.5	15
532	. <i>IEEE Transactions on Components and Packaging Technologies</i> , <b>1995</b> , 18, 284-294		15
531	Analysis of Snapback in SoI nMOSFETs and its Use for an SoI ESD Protection Circuit		15
530	Impact of the Low Temperature Gate Dielectrics on Device Performance and Bias-Stress Stabilities of a-IGZO Thin-Film Transistors. <i>ECS Journal of Solid State Science and Technology</i> , <b>2015</b> , 4, N99-N102	2	14
529	The impact of the gate dielectric quality in developing Au-free D-mode and E-mode recessed gate AlGaIn/GaN transistors on a 200mm Si substrate <b>2015</b> ,		14
528	Thermal stability analysis and modelling of advanced perpendicular magnetic tunnel junctions. <i>AIP Advances</i> , <b>2018</b> , 8, 055909	1.5	14
527	RTN-based defect tracking technique: Experimentally probing the spatial and energy profile of the critical filament region and its correlation with HfO <sub>2</sub> RRAM switching operation and failure mechanism <b>2016</b> ,		14
526	Reliability of High Mobility SiGe Channel MOSFETs for Future CMOS Applications. <i>Springer Series in Advanced Microelectronics</i> , <b>2014</b> ,	1	14
525	Degradation analysis of datapath logic subblocks under NBTI aging in FinFET technology <b>2014</b> ,		14
524	Sidewall crystalline orientation effect of post-treatments for a replacement metal gate bulk fin field effect transistor. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2013</b> , 5, 8865-8	9.5	14
523	Physically unclonable function using CMOS breakdown position <b>2017</b> ,		14
522	Impact of the Substrate Orientation on CHC Reliability in n-FinFETs Separation of the Various Contributions. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2014</b> , 14, 52-56	1.6	14
521	ESD On-Wafer Characterization: Is TLP Still the Right Measurement Tool?. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2009</b> , 58, 3418-3426	5.2	14
520	Basics and applications of charge pumping in submicron MOSFETs 1997 IEEE. Reprinted, with permission, from Proc. 1997 21st International Conference on Microelectronics, Nis, Yugoslavia, 14-17 September 1997, Vol. 2, pp. 581-589. <i>Microelectronics Reliability</i> , <b>1998</b> , 38, 1379-1389	1.2	14
519	Mobility and Dielectric Quality of 1-nm EOT HfSiON on Si(110) and (100). <i>IEEE Transactions on Electron Devices</i> , <b>2008</b> , 55, 3414-3420	2.9	14
518	FinFET technology for analog and RF circuits <b>2007</b> ,		14
517	Degradation and breakdown of 0.9 nm EOT SiO <sub>2</sub> /ALD HfO <sub>2</sub> /metal gate stacks under positive constant voltage stress		14
516	Implications of progressive wear-out for lifetime extrapolation of ultra-thin (EOT /spl sim/ 1 nm) SiON films		14

515	Influence of gate length on ESD-performance for deep sub micron CMOS technology		14
514	Elements of the leakage current of high- $\kappa$ ferroelectric PZT films. <i>Integrated Ferroelectrics</i> , <b>1995</b> , 7, 173-184		14
513	. <i>IEEE Electron Device Letters</i> , <b>1989</b> , 10, 553-555	4.4	14
512	Origins and implications of increased channel hot carrier variability in nFinFETs <b>2015</b> ,		13
511	Analysis of slow de-trapping phenomena after a positive gate bias on AlGaN/GaN MIS-HEMTs with in-situ Si <sub>3</sub> N <sub>4</sub> /Al <sub>2</sub> O <sub>3</sub> bilayer gate dielectrics. <i>Solid-State Electronics</i> , <b>2015</b> , 103, 127-130	1.7	13
510	Uniform Strain in Heterostructure Tunnel Field-Effect Transistors. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 337-340	4.4	13
509	Considerations for further scaling of metal-insulator-metal DRAM capacitors. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2013</b> , 31, 01A105	1.3	13
508	Negative bias temperature instability lifetime prediction: Problems and solutions <b>2013</b> ,		13
507	Low-frequency noise assessment of border traps in Al <sub>2</sub> O <sub>3</sub> capped DRAM peripheral MOSFETs. <i>Semiconductor Science and Technology</i> , <b>2014</b> , 29, 115015	1.8	13
506	. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2012</b> , 12, 589-598	1.6	13
505	Impact of Individual Charged Gate-Oxide Defects on the Entire $I_{D} \sim V_{G}^3$ Characteristic of Nanoscaled FETs. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 779-781	4.4	13
504	Defect-centric perspective of time-dependent BTI variability. <i>Microelectronics Reliability</i> , <b>2012</b> , 52, 1883-1890		13
503	Gate voltage and geometry dependence of the series resistance and of the carrier mobility in FinFET devices. <i>Microelectronic Engineering</i> , <b>2008</b> , 85, 1728-1731	2.5	13
502	Ultrafast progressive breakdown associated with metal-like filament formation of a breakdown path in a HfO <sub>2</sub> /a-NiN transistor. <i>Applied Physics Letters</i> , <b>2006</b> , 88, 122907	3.4	13
501	Effects of detrapping on electron traps generated in gate oxides. <i>Semiconductor Science and Technology</i> , <b>2003</b> , 18, 174-182	1.8	13
500	Relation between hole traps and hydrogenous species in silicon dioxides. <i>Solid-State Electronics</i> , <b>2002</b> , 46, 1839-1847	1.7	13
499	Stress polarity dependence of degradation and breakdown of SiO <sub>2</sub> /high-k stacks		13
498	Potential vulnerability of dynamic CMOS logic to soft gate oxide breakdown. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 742-744	4.4	13

497	Trends in semiconductor memories. <i>Microelectronics Journal</i> , <b>1989</b> , 20, 9-58	1.8	13
496	BTI Reliability Improvement Strategies in Low Thermal Budget Gate Stacks for 3D Sequential Integration <b>2018</b> ,		13
495	The Mechanisms of Hot-Carrier Degradation <b>1992</b> , 1-119		13
494	Suitability of high-k gate oxides for III-V devices: A PBTI study in In <sub>0.53</sub> Ga <sub>0.47</sub> As devices with Al <sub>2</sub> O <sub>3</sub> <b>2014</b> ,		12
493	ESD in FinFET technologies: Past learning and emerging challenges <b>2013</b> ,		12
492	Low Frequency Noise Analysis for Post-Treatment of Replacement Metal Gate. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 2960-2962	2.9	12
491	A comprehensive study of channel hot-carrier degradation in short channel MOSFETs with high-k dielectrics. <i>Microelectronic Engineering</i> , <b>2013</b> , 103, 144-149	2.5	12
490	New Insights Into Defect Loss, Slowdown, and Device Lifetime Enhancement. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 413-419	2.9	12
489	Hot carrier aging and its variation under use-bias: Kinetics, prediction, impact on V <sub>dd</sub> and SRAM <b>2015</b> ,		12
488	Improved source design for p-type tunnel field-effect transistors: Towards truly complementary logic. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 243506	3.4	12
487	Role of the Ta scavenger electrode in the excellent switching control and reliability of a scalable low-current operated TiNTa <sub>2</sub> O <sub>5</sub> Ta RRAM device <b>2014</b> ,		12
486	Endurance of One Transistor Floating Body RAM on UTBOX SOI. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 801-805	2.9	12
485	Novel, Effective and Cost-Efficient Method of Introducing Fluorine into Metal/Hf-based Gate Stack in MuGFET and Planar SOI Devices with Significant BTI Improvement <b>2007</b> ,		12
484	TDDDB Reliability Prediction Based on the Statistical Analysis of Hard Breakdown Including Multiple Soft Breakdown and Wear-out <b>2007</b> ,		12
483	Calibrated wafer-level HBM measurements for quasi-static and transient device analysis <b>2007</b> ,		12
482	A consistent model for the hard breakdown distribution including digital soft breakdown: the noble art of area scaling. <i>Microelectronic Engineering</i> , <b>2007</b> , 84, 1925-1928	2.5	12
481	Threshold voltage instability of p-channel metal-oxide-semiconductor field effect transistors with hafnium based dielectrics. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 143502	3.4	12
480	A comparative study of the oxide breakdown in short-channel nMOSFETs and pMOSFETs stressed in inversion and in accumulation regimes. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2003</b> , 3, 8-13	1.6	12

479	New insights into the relation between channel hot carrier degradation and oxide breakdown short channel nMOSFETs. <i>IEEE Electron Device Letters</i> , <b>2003</b> , 24, 278-280	4.4	12
478	Contribution of fast and slow states to Negative Bias Temperature Instabilities in Hf <sub>x</sub> Si <sub>(1-x)</sub> ON/TaN based pMOSFETs. <i>Microelectronic Engineering</i> , <b>2005</b> , 80, 134-137	2.5	12
477	A novel methodology for sensing the breakdown location and its application to the reliability study of ultrathin Hf-silicate gate dielectrics. <i>IEEE Transactions on Electron Devices</i> , <b>2005</b> , 52, 1759-1765	2.9	12
476	Layout dependency induced deviation from Poisson area scaling in BEOL dielectric reliability. <i>Microelectronics Reliability</i> , <b>2005</b> , 45, 1299-1304	1.2	12
475	Analysis of HBM ESD testers and specifications using a fourth-order lumped element model. <i>Quality and Reliability Engineering International</i> , <b>1994</b> , 10, 325-334	2.6	12
474	. <i>IEEE Transactions on Components and Packaging Technologies</i> , <b>1994</b> , 17, 380-389		12
473	Energy Distribution of Positive Charges in $\text{Al}_2\text{O}_3/\text{GeO}_2/\text{Ge}$ pMOSFETs. <i>IEEE Electron Device Letters</i> , <b>2014</b> , 35, 160-162	4.4	11
472	Non-Monte-Carlo methodology for high-sigma simulations of circuits under workload-dependent BTI degradationApplication to 6T SRAM <b>2014</b> ,		11
471	Poly-Si heaters for ultra-fast local temperature control of on-wafer test structures. <i>Microelectronic Engineering</i> , <b>2014</b> , 114, 47-51	2.5	11
470	Gate current random telegraph noise and single defect conduction. <i>Microelectronic Engineering</i> , <b>2013</b> , 109, 123-125	2.5	11
469	. <i>IEEE Transactions on Electron Devices</i> , <b>2017</b> , 64, 4011-4017	2.9	11
468	Full-zone spectral envelope function formalism for the optimization of line and point tunnel field-effect transistors. <i>Journal of Applied Physics</i> , <b>2015</b> , 118, 134502	2.5	11
467	Time-dependent variation: A new defect-based prediction methodology <b>2014</b> ,		11
466	Impact of Back-Gate Bias and Device Geometry on the Total Ionizing Dose Response of 1-Transistor Floating Body RAMs. <i>IEEE Transactions on Nuclear Science</i> , <b>2012</b> , 59, 2966-2973	1.7	11
465	Characterization of Electron Traps in Si-Capped Ge MOSFETs With $\text{HfO}_2/\text{SiO}_2$ Gate Stack. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 1681-1683	4.4	11
464	Toward a streamlined projection of small device bias temperature instability lifetime distributions. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2013</b> , 31, 01A114	1.3	11
463	. <i>IEEE Transactions on Electron Devices</i> , <b>2011</b> , 58, 3342-3349	2.9	11
462	Novel Device Concepts for Nanotechnology: The Nanowire Pinch-Off FET and Graphene TunnelFET. <i>ECS Transactions</i> , <b>2010</b> , 28, 15-26	1	11

461	Ion-implantation-based low-cost Hk/MG process for CMOS low-power application <b>2010</b> ,		11
460	Growth and characterization of horizontally suspended CNTs across TiN electrode gaps. <i>Nanotechnology</i> , <b>2010</b> , 21, 245604	3-4	11
459	Recent trends in bias temperature instability. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2011</b> , 29, 01AB01	1-3	11
458	Basics and applications of charge pumping in submicron MOSFET's		11
457	SILC defect generation spectroscopy in HfSiON using constant voltage stress and substrate hot electron injection <b>2008</b> ,		11
456	T-diodes - a novel plug-and-play wideband RF circuit ESD protection methodology <b>2007</b> ,		11
455	Measurement and statistical analysis of single trap current-voltage characteristics in ultrathin SiON		11
454	Impact of Nitrogen Incorporation in SiO <sub>x</sub> /HfSiO Gate Stacks on Negative Bias Temperature Instabilities <b>2006</b> ,		11
453	Weibull slope and voltage acceleration of ultra-thin (1.1-1.45 nm EOT) oxynitrides. <i>Microelectronic Engineering</i> , <b>2004</b> , 72, 61-65	2-5	11
452	Characterization and modeling of transient device behavior under CDM ESD stress. <i>Journal of Electrostatics</i> , <b>2004</b> , 62, 133-153	1-7	11
451	Photo-carrier generation as the origin of Fowler-Nordheim-induced substrate hole current in thin oxides. <i>IEEE Transactions on Electron Devices</i> , <b>2001</b> , 48, 231-238	2-9	11
450	. <i>IEEE Transactions on Electron Devices</i> , <b>1992</b> , 39, 851-857	2-9	11
449	Predictive As-grown-Generation (A-G) model for BTI-induced device/circuit level variations in nanoscale technology nodes <b>2016</b> ,		11
448	Buffer Vertical Leakage Mechanism and Reliability of 200-mm GaN-on-SOI. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 553-560	2-9	11
447	Band-Tails Tunneling Resolving the Theory-Experiment Discrepancy in Esaki Diodes. <i>IEEE Journal of the Electron Devices Society</i> , <b>2018</b> , 6, 633-641	2-3	11
446	Medium Frequency Physical Vapor Deposited Al <sub>2</sub> O <sub>3</sub> and SiO <sub>2</sub> as Etch-Stop-Layers for Amorphous Indium-Gallium-Zinc-Oxide Thin-Film-Transistors. <i>ECS Journal of Solid State Science and Technology</i> , <b>2015</b> , 4, Q38-Q42	2	10
445	The defect-centric perspective of device and circuit reliability From gate oxide defects to circuits. <i>Solid-State Electronics</i> , <b>2016</b> , 125, 52-62	1-7	10
444	Understanding charge traps for optimizing Si-passivated Ge nMOSFETs <b>2016</b> ,		10

443	Conduction mechanism in amorphous InGaZnO thin film transistors. <i>Japanese Journal of Applied Physics</i> , <b>2016</b> , 55, 014301	1.4	10
442	Can p-channel tunnel field-effect transistors perform as good as n-channel?. <i>Applied Physics Letters</i> , <b>2014</b> , 105, 043103	3.4	10
441	1/f noise analysis of replacement metal gate bulk p-type fin field effect transistor. <i>Applied Physics Letters</i> , <b>2013</b> , 102, 073503	3.4	10
440	On the Bipolar Resistive Switching Memory Using TiN/Hf/HfO <sub>2</sub> /Si MIS Structure. <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 414-416	4.4	10
439	Negative Bias Temperature Instability in p-FinFETs With 45 $\mu\text{m}$ Substrate Rotation. <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 1211-1213	4.4	10
438	Understanding the suppressed charge trapping in relaxed- and strained-Ge/SiO <sub>2</sub> /HfO <sub>2</sub> pMOSFETs and implications for the screening of alternative high-mobility substrate/dielectric CMOS gate stacks <b>2013</b> ,		10
437	The defect-centric perspective of device and circuit reliability [From individual defects to circuits <b>2015</b> ,		10
436	Analysis of frequency dispersion in amorphous InGaZnO thin-film transistors. <i>Journal of Information Display</i> , <b>2015</b> , 16, 31-36	4.1	10
435	Understanding the impact of programming pulses and electrode materials on the endurance properties of scaled Ta <sub>2</sub> O <sub>5</sub> RRAM cells <b>2014</b> ,		10
434	Key issues and techniques for characterizing time-dependent device-to-device variation of SRAM <b>2013</b> ,		10
433	. <i>IEEE Transactions on Electron Devices</i> , <b>2011</b> , 58, 2061-2071	2.9	10
432	Correlation Between the $V_{\text{th}}$ Adjustment of nMOSFETs With HfSiO Gate Oxide and the Energy Profile of the Bulk Trap Density. <i>IEEE Electron Device Letters</i> , <b>2010</b> , 31, 272-274	4.4	10
431	Study of leakage mechanism and trap density in porous low-k materials <b>2010</b> ,		10
430	Field induced quantum confinement in Indirect Semiconductors: Quantum mechanical and modified semiclassical model <b>2011</b> ,		10
429	. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2011</b> , 11, 92-97	1.6	10
428	Influence of well profile and gate length on the ESD performance of a fully silicided 0.25 $\mu\text{m}$ CMOS technology. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology Part C Manufacturing</i> , <b>1998</b> , 21, 286-294		10
427	Reliability study of La <sub>2</sub> O <sub>3</sub> capped HfSiON high-permittivity n-type metal-oxide-semiconductor field-effect transistor devices with tantalum-rich electrodes. <i>Journal of Applied Physics</i> , <b>2008</b> , 104, 044512	2.5	10
426	Impact of process conditions on interface and high-trap density studied by variable Tcharge-Tdischarge charge pumping (VT2CP). <i>Microelectronic Engineering</i> , <b>2007</b> , 84, 1951-1955	2.5	10



425	Accurate Gate Impedance Determination on Ultraleaky MOSFETs by Fitting to a Three-Lumped-Parameter Model at Frequencies From DC to RF. <i>IEEE Transactions on Electron Devices</i> , <b>2007</b> , 54, 1705-1712	2.9	10
424	Electrical Characterization of Leaky Charge-Trapping High- $\kappa$ MOS Devices Using Pulsed $\text{Q}^2\text{V}^2$ . <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 436-439	4.4	10
423	A low-cost 90nm RF-CMOS platform for record RF circuit performance		10
422	Hole trap generation in gate dielectric during substrate hole injection. <i>Semiconductor Science and Technology</i> , <b>2004</b> , 19, L1-L3	1.8	10
421	ESD protection for a 5.5 GHz LNA in 90 nm RF CMOS – Implementation concepts, constraints and solutions <b>2004</b> ,		10
420	Accurate reliability evaluation of non-uniform ultrathin oxynitride and high-k layers		10
419	Deposition of 60 nm thin $\text{Sr}_{0.8}\text{Bi}_{2.2}\text{Ta}_2\text{O}_9$ layers for application in scaled 1T1C and 1T FeRAM devices. <i>Microelectronic Engineering</i> , <b>2005</b> , 80, 162-165	2.5	10
418	Impact of Hf content on negative bias temperature instabilities in $\text{HfSiON}$ -based gate stacks. <i>Applied Physics Letters</i> , <b>2005</b> , 86, 173509	3.4	10
417	Characterization of soft breakdown in thin oxide NMOSFETs based on the analysis of the substrate current. <i>IEEE Transactions on Electron Devices</i> , <b>2001</b> , 48, 1109-1113	2.9	10
416	Degradation and time dependent breakdown of stressed ferromagnetic tunnel junctions. <i>Journal of Applied Physics</i> , <b>2001</b> , 89, 7350-7352	2.5	10
415	Accurate and robust noise-based trigger algorithm for soft breakdown detection in ultrathin gate dielectrics. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2001</b> , 1, 120-127	1.6	10
414	Probing Local Potentials inside Metallic Nanopores with SERS and Bipolar Electrochemistry. <i>Advanced Optical Materials</i> , <b>2017</b> , 5, 1600907	8.1	9
413	Study of (correlated) trap sites in SILC, BTI and RTN in $\text{SiON}$ and HKMG devices <b>2014</b> ,		9
412	Low-power DRAM-compatible Replacement Gate High-k/Metal Gate Stacks. <i>Solid-State Electronics</i> , <b>2013</b> , 84, 22-27	1.7	9
411	Interaction between hot carrier aging and PBTI degradation in nMOSFETs: Characterization, modelling and lifetime prediction <b>2017</b> ,		9
410	Latchup in bulk FinFET technology <b>2017</b> ,		9
409	Advanced MOSFET variability and reliability characterization array <b>2015</b> ,		9
408	Selector design considerations and requirements for 1 SIR RRAM crossbar array <b>2014</b> ,		9

407	BTI reliability of ultra-thin EOT MOSFETs for sub-threshold logic. <i>Microelectronics Reliability</i> , <b>2012</b> , 52, 1932-1935	1.2	9
406	. <i>IEEE Transactions on Electron Devices</i> , <b>2011</b> , 58, 631-640	2.9	9
405	<b>2011</b> ,		9
404	Channel Hot-Carrier degradation under static stress in short channel transistors with high-k/metal gate stacks <b>2008</b> ,		9
403	Postdeposition-Anneal Effect on Negative Bias Temperature Instability in HfSiON Gate Stacks. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2007</b> , 7, 146-151	1.6	9
402	Defects Generation in SiO <sub>2</sub> /HfO <sub>2</sub> Studied with Variable TCHARGE-TDIScharge Charge Pumping (VT2CP) <b>2007</b> ,		9
401	Analysis of the FinFET parasitics for improved RF performances. <i>SOI Conference, Proceedings of the IEEE International</i> , <b>2007</b> ,		9
400	RFCMOS ESD protection and reliability		9
399	Achievements and challenges for the electrical performance of MOSFETs with high-k gate dielectrics		9
398	Charge trapping in metal-ferroelectric-insulator-semiconductor structure with SrBi <sub>2</sub> Ta <sub>2</sub> O <sub>9</sub> /Al <sub>2</sub> O <sub>3</sub> /BiO <sub>2</sub> stack. <i>Journal of Applied Physics</i> , <b>2004</b> , 96, 1614-1619	2.5	9
397	Negative bias temperature instabilities in HfSiON/TaN-based pMOSFETs		9
396	High performing 8 A EOT HfO/sub 2//TaN low thermal-budget n-channel FETs with solid-phase epitaxially regrown (SPER) junctions		9
395	Interface state generation after hole injection. <i>Journal of Applied Physics</i> , <b>2001</b> , 90, 328-336	2.5	9
394	Accurate and robust noise-based trigger algorithm for soft breakdown detection in ultra thin oxides		9
393	A new analytic model for the description of the intrinsic oxide breakdown statistics of ultra-thin oxides		9
392	Silicide Engineering to Boost Si Tunnel Transistor Drive Current. <i>Japanese Journal of Applied Physics</i> , <b>2011</b> , 50, 04DC05	1.4	9
391	<b>2016</b> ,		9
390	The impact of process variation and stochastic aging in nanoscale VLSI <b>2016</b> ,		9

389	On the Impact of the Gate Work-Function Metal on the Charge Trapping Component of NBTI and PBTI. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2019</b> , 19, 268-274	1.6	8
388	On the Apparent Non-Arrhenius Temperature Dependence of Charge Trapping in IIIV/High- $\kappa$ MOS Stack. <i>IEEE Transactions on Electron Devices</i> , <b>2018</b> , 65, 3689-3696	2.9	8
387	System-Level ESD Protection Design Using On-Wafer Characterization and Transient Simulations. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2014</b> , 14, 104-111	1.6	8
386	Hf Cap Thickness Dependence in Bipolar-Switching TiNHfO <sub>2</sub> HfTiN RRAM Device. <i>ECS Transactions</i> , <b>2013</b> , 50, 3-9	1	8
385	Comprehensive investigation of on-state stress on D-mode AlGa <sub>N</sub> /Ga <sub>N</sub> MIS-HEMTs <b>2013</b> ,		8
384	Analytical model for anomalous Positive Bias Temperature Instability in La-based HfO <sub>2</sub> nFETs based on independent characterization of charging components. <i>Microelectronic Engineering</i> , <b>2013</b> , 109, 314-317	2.5	8
383	High-drive current (>1MA/cm <sup>2</sup> ) and highly nonlinear (>10 <sup>3</sup> ) TiN/amorphous-Silicon/TiN scalable bidirectional selector with excellent reliability and its variability impact on the 1S1R array performance <b>2014</b> ,		8
382	. <i>IEEE Transactions on Electron Devices</i> , <b>2014</b> , 61, 1307-1315	2.9	8
381	Design and simulation of on-chip circuits for parallel characterization of ultrascaled transistors for BTI reliability <b>2014</b> ,		8
380	Dielectrophoretic assembly of suspended single-walled carbon nanotubes. <i>Microelectronic Engineering</i> , <b>2012</b> , 98, 218-221	2.5	8
379	Characterizing grain size and defect energy distribution in vertical SONOS poly-Si channels by means of a resistive network model <b>2013</b> ,		8
378	On-chip circuit for massively parallel BTI characterization <b>2011</b> ,		8
377	Velocity and Mobility Investigation in 1-nm-EOT HfSiON on Si (110) and (100) Does the Dielectric Quality Matter?. <i>IEEE Transactions on Electron Devices</i> , <b>2009</b> , 56, 3009-3017	2.9	8
376	A compact model for the grounded-gate nMOS transistor behaviour under CDM ESD stress. <i>Journal of Electrostatics</i> , <b>1998</b> , 42, 351-381	1.7	8
375	New Developments in Charge Pumping Measurements on Thin Stacked Dielectrics. <i>IEEE Transactions on Electron Devices</i> , <b>2008</b> , 55, 3184-3191	2.9	8
374	Characterization and Optimization of Sub-32-nm FinFET Devices for ESD Applications. <i>IEEE Transactions on Electron Devices</i> , <b>2008</b> , 55, 3507-3516	2.9	8
373	Process-induced positive charges in Hf-based gate stacks. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 014507	2.5	8
372	Negligible Effect of Process-Induced Strain on Intrinsic NBTI Behavior. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 242-244	4.4	8

371	Relevance of the pulsed capacitance-voltage measurement technique for the optimization of SrBi <sub>2</sub> Ta <sub>2</sub> O <sub>9</sub> /high-k stack combination to be used in FeFET devices. <i>Microelectronic Engineering</i> , <b>2006</b> , 83, 2564-2569	2.5	8
370	Analysis and application of energy capability characterization methods in power MOSFETs		8
369	On the mechanism of electron trap generation in gate oxides. <i>Microelectronic Engineering</i> , <b>2001</b> , 59, 89-94	2.5	8
368	Substrate hole current origin after oxide breakdown		8
367	Modelling hot-carrier degradation of LDD NMOSFETs by using a high-resolution measurement technique. <i>Microelectronics Reliability</i> , <b>1999</b> , 39, 785-790	1.2	8
366	. <i>IEEE Electron Device Letters</i> , <b>1995</b> , 16, 181-183	4.4	8
365	Recommendations to further improvements of HBM ESD component level test specifications		8
364	Novel Flexible and Cost-Effective Retention Assessment Method for TMO-Based RRAM. <i>IEEE Electron Device Letters</i> , <b>2016</b> , 37, 1112-1115	4.4	8
363	Demonstration of an InGaAs gate stack with sufficient PBTI reliability by thermal budget optimization, nitridation, high-k material choice, and interface dipole <b>2016</b> ,		8
362	Investigating the Current Collapse Mechanisms of p-GaN Gate HEMTs by Different Passivation Dielectrics. <i>IEEE Transactions on Power Electronics</i> , <b>2021</b> , 36, 4927-4930	7.2	8
361	Hot-carrier analysis on nMOS Si FinFETs with solid source doped junction <b>2016</b> ,		7
360	Asymmetric plasmonic induced ionic noise in metallic nanopores. <i>Nanoscale</i> , <b>2016</b> , 8, 12324-9	7.7	7
359	Modeling the impact of junction angles in tunnel field-effect transistors. <i>Solid-State Electronics</i> , <b>2012</b> , 69, 31-37	1.7	7
358	A test-proven As-grown-Generation (A-G) model for predicting NBTI under use-bias <b>2015</b> ,		7
357	NBTI Aging on 32-Bit Adders in the Downscaling Planar FET Technology Nodes <b>2014</b> ,		7
356	Use of SSTA Tools for Evaluating BTI Impact on Combinational Circuits. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2014</b> , 22, 280-285	2.6	7
355	Modeling and tuning the filament properties in RRAM metal oxide stacks for optimized stable cycling <b>2012</b> ,		7
354	Circuit Design-Oriented Stochastic Piecewise Modeling of the Postbreakdown Gate Current in MOSFETs: Application to Ring Oscillators. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2012</b> , 12, 78-85	1.6	7

353	Time-Dependent Dielectric Breakdown on Subnanometer EOT nMOS FinFETs. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2012</b> , 12, 166-170	1.6	7
352	Impact of High-Mobility Materials on the Performance of Near- and Sub-Threshold CMOS Logic Circuits. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 972-977	2.9	7
351	Methodologies for sub-1nm EOT TDDDB evaluation <b>2011</b> ,		7
350	Novel architecture to boost the vertical tunneling in Tunnel Field Effect Transistors <b>2011</b> ,		7
349	A compact NBTI model for accurate analog integrated circuit reliability simulation <b>2011</b> ,		7
348	An assessment of the mobility degradation induced by remote charge scattering. <i>Applied Physics Letters</i> , <b>2009</b> , 95, 263502	3.4	7
347	Investigation of Bias-Temperature Instability in work-function-tuned high-k/metal-gate stacks. <i>Journal of Vacuum Science &amp; Technology B</i> , <b>2009</b> , 27, 459		7
346	ALD of Al <sub>2</sub> O <sub>3</sub> for Carbon Nanotube vertical interconnect and its impact on the electrical properties. <i>Materials Research Society Symposia Proceedings</i> , <b>2011</b> , 1283, 1		7
345	Growth Mechanism of a Hybrid Structure Consisting of a Graphite Layer on Top of Vertical Carbon Nanotubes. <i>Journal of Nanomaterials</i> , <b>2012</b> , 2012, 1-10	3.2	7
344	A reliability study of titanium silicide lines using micro-Raman spectroscopy and emission microscopy. <i>Microelectronics Reliability</i> , <b>1997</b> , 37, 1591-1594	1.2	7
343	Read-disturb and endurance of SSI-flash E/sup 2/PROM devices at high operating temperatures. <i>IEEE Transactions on Electron Devices</i> , <b>1998</b> , 45, 2466-2474	2.9	7
342	Assessment of oxide reliability and hot carrier degradation in CMOS technology. <i>Microelectronic Engineering</i> , <b>1998</b> , 40, 147-166	2.5	7
341	Impact of different defects on the kinetics of negative bias temperature instability of hafnium stacks. <i>Applied Physics Letters</i> , <b>2008</b> , 92, 013501	3.4	7
340	H <sub>2</sub> D <sub>2</sub> Isotopic Effect on Negative Bias Temperature Instabilities in SiO <sub>x</sub> /HfSiON/aN Gate Stacks. <i>Electrochemical and Solid-State Letters</i> , <b>2006</b> , 9, G10		7
339	ESDBF co-design methodology for the state of the art RF-CMOS blocks. <i>Microelectronics Reliability</i> , <b>2005</b> , 45, 255-268	1.2	7
338	Spectroscopic identification of light emitted from defects in silicon devices. <i>Journal of Applied Physics</i> , <b>2001</b> , 89, 249-258	2.5	7
337	Investigation and Comparison of the Noise in the Gate and Substrate Current after Soft-Breakdown. <i>Japanese Journal of Applied Physics</i> , <b>1999</b> , 38, 2219-2222	1.4	7
336	A new statistical model for fitting bimodal oxide breakdown distributions at different field conditions. <i>Microelectronics Reliability</i> , <b>1996</b> , 36, 1651-1654	1.2	7

335	. <i>IEEE Transactions on Nuclear Science</i> , <b>1993</b> , 40, 1619-1627	1.7	7
334	<b>1994</b> ,		7
333	. <i>IEEE Electron Device Letters</i> , <b>1992</b> , 13, 357-359	4.4	7
332	Electric-field induced quantum broadening of the characteristic energy level of traps in semiconductors and oxides. <i>Journal of Applied Physics</i> , <b>2016</b> , 120, 245704	2.5	7
331	Perpendicular magnetic anisotropy of CoPt bilayers on ALD HfO <sub>2</sub> . <i>Journal of Applied Physics</i> , <b>2016</b> , 120, 163903	2.5	7
330	Statistical investigation of the impact of program history and oxide-metal interface on OxRRAM retention <b>2016</b> ,		7
329	Stack optimization of oxide-based RRAM for fast write speed (. <i>Solid-State Electronics</i> , <b>2016</b> , 125, 198-203.	3.7	7
328	A multi-bit/cell PUF using analog breakdown positions in CMOS <b>2018</b> ,		7
327	Ferroelectric Control of Magnetism in Ultrathin HfOCoPt Layers. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 34385-34393	9.5	6
326	Semi-empirical interconnect resistance model for advanced technology nodes: A model apt for materials selection based upon test line resistance measurements <b>2016</b> ,		6
325	Scaling of BTI reliability in presence of time-zero variability <b>2014</b> ,		6
324	Scaled X-bar TiN/HfO <sub>2</sub> /TiN RRAM cells processed with optimized plasma enhanced atomic layer deposition (PEALD) for TiN electrode. <i>Microelectronic Engineering</i> , <b>2013</b> , 112, 92-96	2.5	6
323	Perpendicular magnetic anisotropy of CoFeBTa bilayers on ALD HfO <sub>2</sub> . <i>AIP Advances</i> , <b>2017</b> , 7, 055933	1.5	6
322	Characterization of oxide defects in InGaAs MOS gate stacks for high-mobility n-channel MOSFETs (invited) <b>2017</b> ,		6
321	Defect-centric perspective of combined BTI and RTN time-dependent variability <b>2015</b> ,		6
320	Four point probe ramped voltage stress as an efficient method to understand breakdown of STT-MRAM MgO tunnel junctions <b>2015</b> ,		6
319	Quantifying the Aggregation Factor in Carbon Nanotube Dispersions by Absorption Spectroscopy. <i>Journal of Nanoscience</i> , <b>2014</b> , 2014, 1-13		6
318	Gated and STI defined ESD diodes in advanced bulk FinFET technologies <b>2014</b> ,		6

317	A single device based voltage step stress (VSS) technique for fast reliability screening <b>2014,</b>		6
316	Buried Silicon-Germanium pMOSFETs: Experimental Analysis in VLSI Logic Circuits Under Aggressive Voltage Scaling. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2012,</b> 20, 1487-1495	2.6	6
315	Towards CMOS-compatible single-walled carbon nanotube resonators. <i>Microelectronic Engineering</i> , <b>2013,</b> 107, 219-222	2.5	6
314	. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2013,</b> 13, 213-222	1.6	6
313	Spectroscopic study of polysilicon traps by means of fast capacitance transients. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2013,</b> 31, 01A110	1.3	6
312	Reliability in gate first and gate last ultra-thin-EOT gate stacks assessed with CV-eMSM BTI characterization <b>2013,</b>		6
311	Effect of TSV presence on FEOL yield and reliability <b>2013,</b>		6
310	(Invited) Boosting the On-Current of Si-Based Tunnel Field-Effect Transistors. <i>ECS Transactions</i> , <b>2010,</b> 33, 363-372	1	6
309	6EOT Si <sub>0.45</sub> Ge <sub>0.55</sub> pMOSFET with optimized reliability (VDD=1V): Meeting the NBTI lifetime target at ultra-thin EOT <b>2010,</b>		6
308	Degradation and failure analysis of copper and tungsten contacts under high fluence stress <b>2010,</b>		6
307	Tunnel Field-Effect Transistors for Future Low-Power Nano-Electronics. <i>ECS Transactions</i> , <b>2009,</b> 25, 455-462		6
306	Advanced PBTI reliability with 0.69 nm EOT GdHfO gate dielectric. <i>Solid-State Electronics</i> , <b>2011,</b> 63, 5-7	1.7	6
305	Impact of tunnel-oxide nitridation on endurance and read-disturb characteristics of Flash E2PROM devices. <i>Microelectronic Engineering</i> , <b>1997,</b> 36, 301-304	2.5	6
304	. <i>IEEE Transactions on Electron Devices</i> , <b>2008,</b> 55, 3432-3441	2.9	6
303	Applicability of Charge Pumping on Germanium MOSFETs. <i>IEEE Electron Device Letters</i> , <b>2008,</b> 29, 1364-1366		6
302	Anomalous positive-bias temperature instability of high- $\gamma$ metal gate devices with Dy <sub>2</sub> O <sub>3</sub> capping. <i>Applied Physics Letters</i> , <b>2008,</b> 93, 053506	3.4	6
301	Moisture Related Low-K Dielectric Reliability Before and After Thermal Annealing <b>2007,</b>		6
300	Formation of Porous Alumina Patterns on Silicon. <i>ECS Transactions</i> , <b>2006,</b> 3, 85-93	1	6

299	FinFET and MOSFET preliminary comparison of gate oxide reliability. <i>Microelectronics Reliability</i> , <b>2006</b> , 46, 1608-1611	1.2	6
298	ESD circuit model based protection network optimisation for extended-voltage NMOS drivers. <i>Microelectronics Reliability</i> , <b>2005</b> , 45, 1430-1435	1.2	6
297	Design and analysis of new protection structures for smart power technology with controlled trigger and holding voltage		6
296	Understanding of the hot carrier degradation behaviour of MOSFET's by means of the charge pumping technique. <i>Applied Surface Science</i> , <b>1989</b> , 39, 523-534	6.7	6
295	Programming mode dependent degradation of tunnel oxide floating gate devices <b>1987</b> ,		6
294			6
293	Integration of 650 V GaN Power ICs on 200 mm Engineered Substrates. <i>IEEE Transactions on Semiconductor Manufacturing</i> , <b>2020</b> , 33, 534-538	2.6	6
292	Comparative experimental analysis of time-dependent variability using a transistor test array <b>2016</b> ,		6
291	Physical Insights on Steep Slope FEFETs including Nucleation-Propagation and Charge Trapping <b>2019</b> ,		6
290	Large Variation in Temperature Dependence of Band-to-Band Tunneling Current in Tunnel Devices. <i>IEEE Electron Device Letters</i> , <b>2019</b> , 40, 1864-1867	4.4	5
289	Investigation of constant voltage off-state stress on Au-free AlGaIn/GaN Schottky barrier diodes. <i>Japanese Journal of Applied Physics</i> , <b>2015</b> , 54, 04DF07	1.4	5
288	RF/High-Speed I/O ESD Protection: Co-optimizing Strategy Between BEOL Capacitance and HBM Immunity in Advanced CMOS Process. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 2752-2759	2.9	5
287	Impact of Hot Carrier Aging on Random Telegraph Noise and Within a Device Fluctuation. <i>IEEE Journal of the Electron Devices Society</i> , <b>2016</b> , 4, 15-21	2.3	5
286	Improved Channel Hot-Carrier Reliability in $\text{SiO}_2$ -FinFETs With Replacement Metal Gate by a Nitrogen Postdeposition Anneal Process. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2014</b> , 14, 408-412	1.6	5
285	Stability evaluation of Au-free Ohmic contacts on AlGaIn/GaN HEMTs under a constant current stress. <i>Microelectronics Reliability</i> , <b>2014</b> , 54, 2232-2236	1.2	5
284	. <i>IEEE Transactions on Electron Devices</i> , <b>2012</b> , 59, 783-790	2.9	5
283	Split pocket p-n-i-n tunnel field-effect transistors <b>2013</b> ,		5
282	Characterization and simulation methodology for time-dependent variability in advanced technologies <b>2015</b> ,		5



281	Smart-array for pipelined BTI characterization <b>2015</b> ,		5
280	Origin of wide retention distribution in 1T Floating Body RAM <b>2012</b> ,		5
279	Analysis of the effect of cell parameters on the maximum RRAM array size considering both read and write <b>2012</b> ,		5
278	Charged device model (CDM) ESD challenges for laterally diffused nMOS (nLDMOS) silicon controlled rectifier (SCR) devices for high-voltage applications in standard low-voltage CMOS technology <b>2010</b> ,		5
277	Investigating ESD sensitivity in electrostatic SiGe MEMS. <i>Journal of Micromechanics and Microengineering</i> , <b>2010</b> , 20, 055005	2	5
276	Unexpected failure during HBM ESD stress in nanometer-scale nLDMOS-SCR devices <b>2011</b> ,		5
275	Si-based tunnel field-effect transistors for low-power nano-electronics <b>2011</b> ,		5
274	A DC-to-22 GHz 8.4mW compact dual-feedback wideband LNA in 90 nm digital CMOS <b>2009</b> ,		5
273	Impact of halo implant on the hot carrier reliability of germanium p-channel metal-oxide-semiconductor field-effect transistors. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , <b>2011</b> , 29, 01A804	1.3	5
272	Impact of process variability on the radiation-induced soft error of nanometer-scale srams in hold and read conditions <b>2011</b> ,		5
271	Trends and Challenges in Si and Hetero-Junction Tunnel Field Effect Transistors. <i>ECS Transactions</i> , <b>2011</b> , 35, 15-26	1	5
270	Detailed analysis of charge pumping and IdVg hysteresis for profiling traps in SiO <sub>2</sub> /HfSiO(N). <i>Microelectronic Engineering</i> , <b>2010</b> , 87, 2614-2619	2.5	5
269	Nitrogen Incorporation in HfSiO(N)/TaN Gate Stacks: Impact on Performances and NBTI. <i>IEEE Electron Device Letters</i> , <b>2007</b> , 28, 613-615	4.4	5
268	Dielectric quality and reliability of FUSI/HfSiON devices with process induced strain. <i>Microelectronic Engineering</i> , <b>2007</b> , 84, 1906-1909	2.5	5
267	Mobility extraction using RFCV for 80 nm MOSFET with 1 nm EOT HfSiON/TiN. <i>Microelectronic Engineering</i> , <b>2007</b> , 84, 1878-1881	2.5	5
266	Charge pumping spectroscopy: HfSiON defect study after substrate hot electron injection. <i>Microelectronic Engineering</i> , <b>2007</b> , 84, 1943-1946	2.5	5
265	Impact of copper contacts on CMOS front-end yield and reliability <b>2006</b> ,		5
264	Faster ESD device characterization with wafer-level HBM <b>2007</b> ,		5

263	Hot carrier degradation on n-channel HfSiON MOSFETs: effects on the device performance and lifetime		5
262	Trap generation and progressive wearout in thin HfSiON		5
261	Explaining 'Voltage-Driven' Breakdown Statistics by Accurately Modeling Leakage Current Increase in Thin SiON and SiO <sub>2</sub> /High-K Stacks <b>2006</b> ,		5
260	Impact of band structure on charge trapping in thin SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> /poly-Si gate stacks. <i>IEEE Electron Device Letters</i> , <b>2004</b> , 25, 320-322	4.4	5
259	A comprehensive model for breakdown mechanism in HfO <sub>2</sub> /high-k gate stacks		5
258	Design-driven optimisation of a 90 nm RF CMOS process by use of elevated source/drain		5
257	On the trap generation rate in ultrathin SiON under Constant Voltage Stress. <i>Microelectronic Engineering</i> , <b>2005</b> , 80, 440-443	2.5	5
256	Effect of the dielectric thickness and the metal deposition technique on the mobility for HfO <sub>2</sub> /TaN NMOS devices. <i>Microelectronic Engineering</i> , <b>2005</b> , 80, 86-89	2.5	5
255	Geometry Dependence of 1/f Noise in n- and p-channel MuGFETs. <i>AIP Conference Proceedings</i> , <b>2005</b>	0	5
254	Explanation of nMOSFET substrate current after hard gate oxide breakdown. <i>Microelectronic Engineering</i> , <b>2001</b> , 59, 155-160	2.5	5
253	Consistent model for short-channel nMOSFET post-hard-breakdown characteristics		5
252	Origin of substrate hole current after gate oxide breakdown. <i>Journal of Applied Physics</i> , <b>2002</b> , 91, 2155-2160		5
251	Evaluation procedure for fast and realistic assessment of plasma charging damage in thin oxides		5
250	Understanding nMOSFET Characteristics after Soft Breakdown and Their Dependence on the Breakdown Location <b>2002</b> ,		5
249	Strong correlation between dielectric reliability and charge trapping in SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> /gate stacks with TiN electrodes		5
248	Novel level-identifying circuit for flash multilevel memories. <i>IEEE Journal of Solid-State Circuits</i> , <b>1998</b> , 33, 1090-1095	5.5	5
247	On the hot hole induced post-stress interface trap generation in MOSFET's <b>1996</b> ,		5
246	Performance and reliability aspects of FOND: a new deep submicron CMOS device concept. <i>IEEE Transactions on Electron Devices</i> , <b>1996</b> , 43, 1407-1415	2.9	5

245	On the different time dependence of interface trap generation and charge trapping during hot carrier degradation in CMOS. <i>Microelectronic Engineering</i> , <b>1992</b> , 19, 465-468	2.5	5
244	Evaluation of channel hot carrier effects in n-MOS transistors at 77 K with the charge pumping technique. <i>Applied Surface Science</i> , <b>1987</b> , 30, 313-318	6.7	5
243	Impact of processing and stack optimization on the reliability of perpendicular STT-MRAM <b>2017</b> ,		5
242	Doped Gd-O Based RRAM for Embedded Application <b>2016</b> ,		5
241	Voltage acceleration and pulse dependence of barrier breakdown in MgO based magnetic tunnel junctions <b>2016</b> ,		5
240	A physics-aware compact modeling framework for transistor aging in the entire bias space <b>2019</b> ,		5
239	Integration of GaN analog building blocks on p-GaN wafers for GaN ICs. <i>Journal of Semiconductors</i> , <b>2021</b> , 42, 024103	2.3	5
238	BTI reliability of InGaAs nMOS gate-stack: On the impact of shallow and deep defect bands on the operating voltage range of III-V technology <b>2017</b> ,		4
237	Investigation of the endurance of FE-HfO <sub>2</sub> devices by means of TDDDB studies <b>2018</b> ,		4
236	A Simulation Study on Process Sensitivity of a Line Tunnel Field-Effect Transistor. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 1019-1027	2.9	4
235	P-6: Impact of Buffer Layers on the Self-Aligned Top-Gate a-IGZO TFT Characteristics. <i>Digest of Technical Papers SID International Symposium</i> , <b>2015</b> , 46, 1139-1142	0.5	4
234	Comparative study of source-drain contact metals for amorphous InGaZnO thin-film transistors. <i>Journal of the Society for Information Display</i> , <b>2014</b> , 22, 310-315	2.1	4
233	Local CDM ESD Protection Circuits for Cross-Power Domains in 3D IC Applications. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2014</b> , 14, 781-783	1.6	4
232	Trap-Assisted Tunneling in Vertical Si and SiGe Hetero-Tunnel-FETs <b>2012</b> ,		4
231	Interface/Bulk Trap Recovery After Submelt Laser Anneal and the Impact to NBTI Reliability. <i>IEEE Electron Device Letters</i> , <b>2010</b> , 31, 606-608	4.4	4
230	. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2010</b> , 10, 130-141	1.6	4
229	Channel Hot-Carrier degradation in short channel devices with high-k/metal gate stacks <b>2009</b> ,		4
228	Hot hole induced damage in 1T-FBRAM on bulk FinFET <b>2011</b> ,		4

227	<b>2011,</b>		4
226	Carbon nanotube interconnects: Electrical characterization of 150 nm CNT contacts with Cu damascene top contact <b>2011,</b>		4
225	Challenges for introducing Ge and III/V devices into CMOS technologies <b>2012,</b>		4
224	Toward Understanding the Wide Distribution of Time Scales in Negative Bias Temperature Instability. <i>ECS Transactions</i> , <b>2007</b> , 6, 265-281	1	4
223	Challenges in Reliability Assessment of Advanced CMOS Technologies <b>2007,</b>		4
222	Performance assessment of (1 1 0) p-FET high- $\gamma$ MG: is it mobility or series resistance limited?. <i>Microelectronic Engineering</i> , <b>2007</b> , 84, 2058-2062	2.5	4
221	Hydrogen induced positive charge in Hf-based dielectrics. <i>Microelectronic Engineering</i> , <b>2007</b> , 84, 2354-2357		4
220	Negative bias temperature instabilities in HfSiO(N)-based MOSFETs: Electrical characterization and modeling. <i>Microelectronics Reliability</i> , <b>2007</b> , 47, 880-889	1.2	4
219	High- $\kappa$ Metal Gate MOSFETs: Impact of Extrinsic Process Condition on the Gate-Stack Quality & Mobility Study. <i>IEEE Transactions on Electron Devices</i> , <b>2007</b> , 54, 497-503	2.9	4
218	Transient voltage overshoot in TLP testing [Real or artifact?]. <i>Microelectronics Reliability</i> , <b>2007</b> , 47, 1016-1024	1.2	4
217	MOSFET ESD Breakdown Modeling and Parameter Extraction in Advanced CMOS Technologies. <i>IEEE Transactions on Electron Devices</i> , <b>2006</b> , 53, 2108-2117	2.9	4
216	Interface Trap Characterization and Fermi Level Pinning in Si-Passivated Ge/HfO <sub>2</sub> Capacitors. <i>ECS Transactions</i> , <b>2006</b> , 1, 27-32	1	4
215	NBTI Study on PMOS Devices with TiN/HfO <sub>2</sub> Gate Stack and Process Induced Strain. <i>ECS Transactions</i> , <b>2006</b> , 3, 253-261	1	4
214	Nucleation and Growth Study of Nickel Nanoparticles on Silicon.. <i>ECS Transactions</i> , <b>2006</b> , 2, 409-416	1	4
213	Understanding the optimization of sub-45nm FinFET devices for ESD applications <b>2007,</b>		4
212	RF ESD protection strategies - the design and performance trade-off challenges		4
211	A new breakdown failure mechanism in HfO <sub>2</sub> /sub 2/ gate dielectric		4
210	Correlation between Stress-Induced Leakage Current (SILC) and the HfO <sub>2</sub> /sub 2/ bulk trap density in a SiO <sub>2</sub> /sub 2//HfO <sub>2</sub> /sub 2/ stack		4

209	Significance of the failure criterion on transmission line pulse testing. <i>Microelectronics Reliability</i> , <b>2002</b> , 42, 901-907	1.2	4
208	Snapback circuit model for cascoded NMOS ESD over-voltage protection structures		4
207	Breakdown-induced thermochemical reactions in HfO <sub>2</sub> high- $\kappa$ polycrystalline silicon gate stacks. <i>Applied Physics Letters</i> , <b>2005</b> , 87, 242907	3.4	4
206	Anomalously weak antenna ratio dependence of plasma process-induced damage		4
205	Relation between hydrogen and the generation of interface state precursors. <i>Microelectronic Engineering</i> , <b>1999</b> , 48, 135-138	2.5	4
204	Non-uniform triggering of gg-nMOS <sub>t</sub> investigated by combined emission microscopy and transmission line pulsing. <i>Microelectronics Reliability</i> , <b>1999</b> , 39, 1551-1561	1.2	4
203	Hot carrier degradation in MOSFETs in the temperature range of 77B00 K. <i>Quality and Reliability Engineering International</i> , <b>1991</b> , 7, 307-322	2.6	4
202	<b>1992</b> ,		4
201	Signature of Ballistic Band-Tail Tunneling Current in Tunnel FET. <i>IEEE Transactions on Electron Devices</i> , <b>2020</b> , 67, 3486-3491	2.9	4
200	Impact of ambient temperature on the switching of voltage-controlled perpendicular magnetic tunnel junction. <i>Applied Physics Letters</i> , <b>2021</b> , 118, 122404	3.4	4
199	Low-current operation of novel Gd <sub>2</sub> O <sub>3</sub> -based RRAM cells with large memory window. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2016</b> , 213, 320-324	1.6	4
198	Positive bias temperature instability evaluation in fully recessed gate GaN MIS-FETs <b>2016</b> ,		4
197	Impact of operating temperature on the electrical and magnetic properties of the bottom-pinned perpendicular magnetic tunnel junctions. <i>Applied Physics Letters</i> , <b>2018</b> , 113, 142405	3.4	4
196	Full ( $V_{\text{g}}$ , $V_{\text{d}}$ ) Bias Space Modeling of Hot-Carrier Degradation in Nanowire FETs <b>2019</b> ,		3
195	The relationship between border traps characterized by AC admittance and BTI in III-V MOS devices <b>2015</b> ,		3
194	Non-uniform strain in lattice-mismatched heterostructure tunnel field-effect transistors <b>2016</b> ,		3
193	Leakage and trapping characteristics in Au-free AlGa <sub>N</sub> /Ga <sub>N</sub> Schottky barrier diodes fabricated on C-doped buffer layers. <i>Physica Status Solidi (A) Applications and Materials Science</i> , <b>2016</b> , 213, 1229-1235	1.6	3
192	Modeling of Edge Scattering in Graphene Interconnects. <i>IEEE Electron Device Letters</i> , <b>2018</b> , 39, 1085-1088	3.4	3

191	Energy distribution of positive charges in high-k dielectric. <i>Microelectronics Reliability</i> , <b>2014</b> , 54, 2329-2333		3
190	ESD characterization of gate-all-around (GAA) Si nanowire devices <b>2015</b> ,		3
189	Improved NBTI reliability with sub-1-nanometer EOT ZrO <sub>2</sub> gate dielectric compared with HfO <sub>2</sub> . <i>IEEE Electron Device Letters</i> , <b>2013</b> , 34, 593-595	4.4	3
188	Channel Hot Carrier Degradation and Self-Heating Effects in FinFETs <b>2015</b> , 287-307		3
187	Performance and reliability of high-mobility Si <sub>0.55</sub> Ge <sub>0.45</sub> p-channel FinFETs based on epitaxial cladding of Si Fins <b>2014</b> ,		3
186	Effect of interface states on 1T-FBRAM cell retention <b>2012</b> ,		3
185	Superior reliability and reduced Time-Dependent variability in high-mobility SiGe channel pMOSFETs for VLSI logic applications <b>2012</b> ,		3
184	Impact of Al <sub>2</sub> O <sub>3</sub> position on performances and reliability in high-k metal gated DRAM periphery transistors <b>2013</b> ,		3
183	Neutron-induced failure in super-junction, IGBT, and SiC power devices <b>2011</b> ,		3
182	Advanced ESD power clamp design for SOI FinFET CMOS technology <b>2010</b> ,		3
181	Electrical results of vertical Si N-Tunnel FETs <b>2011</b> ,		3
180	On the activation and passivation of precursors for process-induced positive charges in HF-dielectric stacks. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 054505	2.5	3
179	Integration of Vertical Carbon Nanotube Bundles for Interconnects. <i>ECS Transactions</i> , <b>2009</b> , 19, 11-24	1	3
178	Impact of nitridation on recoverable and permanent negative bias temperature instability degradation in high-k/metal-gate p-type metal oxide semiconductor field effect transistors. <i>Journal of Vacuum Science &amp; Technology B</i> , <b>2009</b> , 27, 463		3
177	Study of nitrogen impact on VFET roll-off by varying interfacial SiO <sub>2</sub> thickness. <i>Solid-State Electronics</i> , <b>2011</b> , 62, 67-71	1.7	3
176	Reliability of low current filamentary HfO <sub>2</sub> RRAM discussed in the framework of the hourglass SET/RESET model <b>2012</b> ,		3
175	Zener tunnelling in graphene based semiconductors [the k <sub>  </sub> method]. <i>Journal of Physics: Conference Series</i> , <b>2009</b> , 193, 012111	0.3	3
174	Geometric current component in charge-pumping measurements		3

173	Modification and application of an emission microscope for continuous wavelength spectroscopy. <i>Microelectronics Reliability</i> , <b>1997</b> , 37, 1595-1598	1.2	3
172	ESD protection methodology for deep-sub-micron CMOS. <i>Microelectronics Reliability</i> , <b>1998</b> , 38, 997-1007	1.2	3
171	The effect of plasma damage and different annealing ambients on the generation of latent interface states		3
170	Negative bias temperature instability on Si-passivated Ge-interface <b>2008</b> ,		3
169	An equivalent circuit model for the recovery component of BTI <b>2008</b> ,		3
168	Electron energy dependence of defect generation in high-k gate stacks. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 064503	2.5	3
167	Substrate injection induced ultrafast degradation in HfO <sub>2</sub> /TaN/TiN gate stack MOSFET <b>2006</b> ,		3
166	Plasma ash modulation of TDDDB thermal activation energy in damascene SiOC:H. <i>Semiconductor Science and Technology</i> , <b>2007</b> , 22, 320-325	1.8	3
165	A comprehensive model to accurately calculate the gate capacitance and the leakage from DC to 100 MHz for ultra thin dielectrics <b>2006</b> ,		3
164	Interface characterization of Si-passivated HfO <sub>2</sub> germanium capacitors using DLTS measurements. <i>Materials Science in Semiconductor Processing</i> , <b>2006</b> , 9, 749-752	4.3	3
163	Influence of different deposition conditions of top and bottom electrode on the reliability of Sr <sub>0.8</sub> Bi <sub>2.2</sub> Ta <sub>2</sub> O <sub>9</sub> ferroelectric capacitors. <i>Solid-State Electronics</i> , <b>2006</b> , 50, 1227-1234	1.7	3
162	Negative Bias Temperature Instabilities in SiO <sub>2</sub> /HfO <sub>2</sub> -Based Hole Channel FETs. <i>Journal of the Electrochemical Society</i> , <b>2004</b> , 151, F288	3.9	3
161	Multilevel Transmission Line Pulse (MTLP) tester <b>2004</b> ,		3
160			3
159	Electrical Properties of Al <sub>2</sub> O <sub>3</sub> /ZrO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> Gate Stack in p-Substrate Metal Oxide Semiconductor Devices. <i>Journal of the Electrochemical Society</i> , <b>2003</b> , 150, G307	3.9	3
158	Test circuits for fast and reliable assessment of CDM robustness of I/O stages. <i>Microelectronics Reliability</i> , <b>2005</b> , 45, 269-277	1.2	3
157	Barrier Integrity Effect on Leakage Mechanism and Dielectric Reliability of Copper/OSG Interconnects. <i>Materials Research Society Symposia Proceedings</i> , <b>2005</b> , 863, B4.4-1		3
156	Generation of mobile hydrogenous ions in gate oxide and their potential applications. <i>Electronics Letters</i> , <b>2001</b> , 37, 716	1.1	3

155	Location and hardness of the oxide breakdown in short channel n- and p-MOSFETs		3
154	Plasma charging damage issues in copper single and dual damascene, oxide and low-k dielectric interconnects		3
153	Justifications for reducing HBM and MM ESD qualification test time. <i>Microelectronics Reliability</i> , <b>1996</b> , 36, 1715-1718	1.2	3
152	Simulation study for the CDM ESD behaviour of the grounded-gate nmos. <i>Microelectronics Reliability</i> , <b>1996</b> , 36, 1739-1742	1.2	3
151	An analytical model for the optimization of high injection MOS Flash E2PROM devices. <i>Microelectronic Engineering</i> , <b>1992</b> , 19, 257-260	2.5	3
150	The Influence of Gate Bias on the Anneal of Hot-Carrier Degradation <b>2020</b> ,		3
149	. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 2107-2115	2.9	3
148	Modeling of Repeated FET Hot-Carrier Stress and Anneal Cycles Using SiH <sub>4</sub> Bond Dissociation/Passivation Energy Distributions. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 1454-1460 <sup>2.9</sup>		3
147	ESD diodes in a bulk Si gate-all-around vertically stacked horizontal nanowire technology <b>2016</b> ,		3
146	Bias Temperature Instability (BTI) in high-mobility channel devices with high-k dielectric stacks: SiGe, Ge, and InGaAs. <i>MRS Advances</i> , <b>2016</b> , 1, 3329-3340	0.7	3
145	Phonon-assisted tunneling in direct-bandgap semiconductors. <i>Journal of Applied Physics</i> , <b>2019</b> , 125, 015701		3
144	Built-In Sheet Charge As an Alternative to Dopant Pockets in Tunnel Field-Effect Transistors'. <i>IEEE Journal of the Electron Devices Society</i> , <b>2018</b> , 6, 658-663	2.3	3
143	Investigation of the Impact of Hot-Carrier-Induced Interface State Generation on Carrier Mobility in nMOSFET. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 3246-3253	2.9	3
142	Improved PBTI Reliability in Junction-Less FET Fabricated at Low Thermal Budget for 3-D Sequential Integration. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2019</b> , 19, 262-267	1.6	2
141	Study of precessional switching speed control in voltage-controlled perpendicular magnetic tunnel junction. <i>AIP Advances</i> , <b>2020</b> , 10, 035123	1.5	2
140	Process Options Impact on ESD Diode Performance in Bulk FinFET Technology. <i>IEEE Transactions on Electron Devices</i> , <b>2016</b> , 63, 3424-3431	2.9	2
139	Modeling of graphene for interconnect applications <b>2016</b> ,		2
138	Guidelines for reducing NBTI based on its correlation with effective work function studied by CV-BTI on high-k first MOS capacitors with slant-etched SiO <sub>2</sub> <b>2014</b> ,		2



137	Impact of etch stop layer on negative bias illumination stress of amorphous Indium Gallium Zinc Oxide transistors <b>2014,</b>		2
136	Superior reliability of high mobility (Si)Ge channel pMOSFETs. <i>Microelectronic Engineering</i> , <b>2013</b> , 109, 250-256	2.5	2
135	Impact of duty factor, stress stimuli, gate and drive strength on gate delay degradation with an atomistic trap-based BTI model. <i>Microprocessors and Microsystems</i> , <b>2013</b> , 37, 792-800	2.4	2
134	A fully-integrated method for RTN parameter extraction <b>2017,</b>		2
133	From planar to vertical capacitors: A step towards ferroelectric V-FeFET integration <b>2017,</b>		2
132	ESD characterisation of a-IGZO TFTs on Si and foil substrates <b>2017,</b>		2
131	Towards optimal ESD diodes in next generation bulk FinFET and GAA NW technology nodes <b>2017,</b>		2
130	15-band spectral envelope function formalism applied to broken gap tunnel field-effect transistors <b>2015,</b>		2
129	<b>2015,</b>		2
128	Degradation Mechanisms. <i>Springer Series in Advanced Microelectronics</i> , <b>2014</b> , 19-66	1	2
127	NBTI of Ge pMOSFETs: Understanding defects and enabling lifetime prediction <b>2014,</b>		2
126	BTI reliability of high-mobility channel devices: SiGe, Ge and InGaAs <b>2014,</b>		2
125	Effects of gate process on NBTI characteristics of TiN gate FinFET <b>2012,</b>		2
124	Impact of Duty Factor, Stress Stimuli, and Gate Drive Strength on Gate Delay Degradation with an Atomistic Trap-Based BTI Model <b>2012,</b>		2
123	Assessing reliability of nano-scaled CMOS technologies one defect at a time <b>2012,</b>		2
122	Modeling of Charge-Trapping/Detrapping-Induced Voltage Instability in High- $\epsilon_k$ Gate Dielectrics. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2012</b> , 12, 152-157	1.6	2
121	Shaping the future of nanoelectronics beyond the Si roadmap with new materials and devices <b>2010,</b>		2
120	New insights into the wide ID range channel hot-carrier degradation in high-k based devices. <i>Reliability Physics Symposium, 2009 IEEE International</i> , <b>2009,</b>		2

119	Positive and negative bias temperature instability in La <sub>2</sub> O <sub>3</sub> and Al <sub>2</sub> O <sub>3</sub> capped high-k MOSFETs <b>2009</b> ,		2
118	Impact of design factors and environment on the ESD sensitivity of MEMS micromirrors. <i>Microelectronics Reliability</i> , <b>2010</b> , 50, 1383-1387	1.2	2
117	High-temperature reliability behavior of SSI-flash E/sup 2/PROM devices		2
116	A high resolution method for measuring hot carrier degradation in matched transistor pairs. <i>Microelectronics Reliability</i> , <b>1997</b> , 37, 1533-1536	1.2	2
115	Analysis of Iddq failures by spectral photon emission microscopy. <i>Microelectronics Reliability</i> , <b>1998</b> , 38, 877-882	1.2	2
114	Understanding and prediction of EWF modulation induced by various dopants in the gate stack for a gate-first integration scheme <b>2008</b> ,		2
113	Growth and Integration of High-Density CNT for BEOL Interconnects. <i>Materials Research Society Symposia Proceedings</i> , <b>2008</b> , 1079, 1		2
112	Perspectives of (sub-) 32nm CMOS for Analog/RF and mm-wave Applications <b>2008</b> ,		2
111	Failure Defects Observed in Post-Breakdown High- $\kappa$ Metal Gate Stack Mosfet <b>2006</b> ,		2
110	<b>2007</b> ,		2
109	Advanced electrical characterization toward (sub) 1nm EOT HfSiON - hole trapping in PFET and L-dependent effects <b>2007</b> ,		2
108	Physics of Flash Memories 129-177		2
107	A Novel Method for Guard Ring Efficiency Assessment and its Applications for ESD Protection Design and Optimization <b>2007</b> ,		2
106	Experimental analysis of a Ge-HfO <sub>2</sub> /sub 2/-TaN gate stack with a large amount of interface states		2
105	Advanced modelling and parameter extraction of the MOSFET ESD breakdown triggering in the 90nm CMOS node technologies <b>2004</b> ,		2
104	High frequency characterization and modelling of the parasitic RC performance of two terminal ESD CMOS protection devices. <i>Microelectronics Reliability</i> , <b>2003</b> , 43, 1011-1020	1.2	2
103	Scaling of high-k dielectrics towards sub-1nm EOT		2
102	Dynamic substrate resistance snapback triggering of ESD protection devices		2

101	Degradation and breakdown of plasma oxidized magnetic tunnel junctions: single trap creation in Al/sub 2/O/sub 3/ tunnel barriers. <i>IEEE Transactions on Magnetics</i> , <b>2003</b> , 39, 2815-2817	2	2
100	Impact of charging on breakdown in deep trench isolation structures [parasitic MOSFET example]		2
99	HfO2/spacer-interface breakdown in HfO2 high- $\kappa$ poly-silicon gate stacks. <i>Microelectronic Engineering</i> , <b>2005</b> , 80, 370-373	2.5	2
98	Polarity dependence of bias temperature instabilities in Hf/sub x/Si/sub 1-x/ON/TaN gate stacks		2
97	Influence of gate length on ESD-performance for deep submicron CMOS technology. <i>Microelectronics Reliability</i> , <b>2001</b> , 41, 375-383	1.2	2
96	ISSUES, ACHIEVEMENTS AND CHALLENGES TOWARDS INTEGRATION OF HIGH-k DIELECTRICS. <i>International Journal of High Speed Electronics and Systems</i> , <b>2002</b> , 12, 295-304	0.5	2
95	A reliability study of titanium silicide lines using micro-Raman spectroscopy and emission microscopy <b>1998</b> ,		2
94	The Tunnel Field-Effect Transistor1-24		2
93	Measurement Technique, Oxide Thickness and Area Dependence of Soft-Breakdown. <i>Materials Research Society Symposia Proceedings</i> , <b>1999</b> , 592, 335		2
92	A model study of the hot-carrier problem in LDD and overlapped LDD MOSFETs. <i>Microelectronic Engineering</i> , <b>1995</b> , 28, 285-288	2.5	2
91	Study of the hot-carrier degradation performance of 0.35- $\mu$ m fully overlapped LDD devices. <i>Microelectronic Engineering</i> , <b>1995</b> , 28, 265-268	2.5	2
90	Multi-level charge storage in source-side injection flash EEPROM		2
89	A 5v/3.3v-compatible Flash E/sup 2/PROM Cell With A 400ns/70/spl mu/m Programming Time For Embedded Memory Applications		2
88	Hot-Carrier Degradation During Dynamic Stress <b>1992</b> , 250-310		2
87	Simulation of enhanced injection split gate flash EEPROM device programming. <i>Microelectronic Engineering</i> , <b>1992</b> , 18, 253-258	2.5	2
86	Electronic voltage control of magnetic anisotropy at room temperature in high- $\kappa$ BrTiO3/Co/Pt trilayer. <i>Physical Review Materials</i> , <b>2020</b> , 4,	3.2	2
85	ANALYSIS OF HOT CARRIER DEGRADATION IN AC STRESSED N-CHANNEL MOS TRANSISTORS USING THE CHARGE PUMPING TECHNIQUE. <i>Journal De Physique Colloque</i> , <b>1988</b> , 49, C4-651-C4-655		2
84	Tunnel barrier properties of stressed ferromagnetic tunnel junctions. <i>Electronics Letters</i> , <b>2001</b> , 37, 356	1.1	2

83	<b>2016,</b>		2
82	Distribution Function Based Simulations of Hot-Carrier Degradation in Nanowire FETs <b>2018,</b>		2
81	Accelerated Capture and Emission (ACE) Measurement Pattern for Efficient BTI Characterization and Modeling <b>2019,</b>		1
80	Extensive assessment of the charge-trapping kinetics in InGaAs MOS gate-stacks for the demonstration of improved BTI reliability. <i>Microelectronics Reliability</i> , <b>2020</b> , 115, 113996	1.2	1
79	Impact of calibrated band-tails on the subthreshold swing of pocketed TFETs <b>2018,</b>		1
78	Towards understanding hole traps and NBTI of Ge/GeO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> structure. <i>Microelectronic Engineering</i> , <b>2013</b> , 109, 43-45	2.5	1
77	Will Chips of the Future Learn How to Feel Pain and Cure Themselves?. <i>IEEE Design and Test</i> , <b>2017</b> , 34, 80-87	1.4	1
76	ESD ballasting of Ge FinFET ggNMOS devices <b>2017,</b>		1
75	vFTLP characteristics of ESD diodes in bulk si gate-all-around vertically stacked horizontal nanowire technology <b>2017,</b>		1
74	Tunneling transistors based on MoS <sub>2</sub> /MoTe <sub>2</sub> Van der Waals heterostructures <b>2017,</b>		1
73	Impact of source/drain contacts formation of self-aligned amorphous-IGZO TFTs on their negative-bias-illumination-stress stabilities. <i>Journal of the Society for Information Display</i> , <b>2015</b> , 23, 397-402		1
72	Impact of time-dependent variability on the yield and performance of 6T SRAM cells in an advanced HK/MG technology <b>2015,</b>		1
71	<b>2012,</b>		1
70	On the rseries extraction techniques for sub-22nm CMOS finfet and SiGe technologies <b>2012,</b>		1
69	Experimental analysis of buried SiGe pMOSFETs from the perspective of aggressive voltage scaling <b>2011,</b>		1
68	On the recoverable and permanent components of Hot Carrier and NBTI in Si pMOSFETs and their implications in Si <sub>0.45</sub> Ge <sub>0.55</sub> pMOSFETs <b>2011,</b>		1
67	Positive bias temperature instabilities on sub-nanometer EOT FinFETs. <i>Microelectronics Reliability</i> , <b>2011</b> , 51, 1521-1524	1.2	1
66	. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2010</b> , 10, 338-346	1.6	1

65	Mechanical response of electrostatic actuators under ESD stress <b>2009</b> ,		1
64	Processing impact on the reliability of single metal dual dielectric (SMDD) gate stacks <b>2009</b> ,		1
63	A CMOS circuit for evaluating the NBTI over a wide frequency range. <i>Microelectronics Reliability</i> , <b>2009</b> , 49, 885-891	1.2	1
62	Defect profiling in the SiO <sub>2</sub> / Al <sub>2</sub> O <sub>3</sub> interface using Variable Tcharge-Tdischarge Amplitude Charge Pumping (VT2ACP) <b>2009</b> ,		1
61	Resolving fast VTH transients after program/erase of flash memory stacks and their relation to electron and hole defects <b>2009</b> ,		1
60	Simulation of the hot-carrier degradation in short channel transistors with high-K dielectric. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , <b>2010</b> , 23, 315-323	1	1
59	Generation and annealing of hot hole induced interface states. <i>Microelectronic Engineering</i> , <b>1997</b> , 36, 227-230	2.5	1
58	Impact of Strain on ESD Robustness of FinFET Devices <b>2008</b> ,		1
57	Teaching nanoscience across scientific and geographical borders A European Master programme in nanoscience and nanotechnology. <i>Journal of Physics: Conference Series</i> , <b>2008</b> , 100, 032002	0.3	1
56	Characterization and modeling of diodes in Sub-45 nm CMOS technologies under HBM stress conditions <b>2007</b> ,		1
55	On the Interaction Between Inter-Metal Dielectric Reliability and Electromigration Stress <b>2007</b> ,		1
54	IMPACT OF HIGH-DIELECTRIC PROPERTIES ON MOSFET ELECTRICAL CHARACTERISTICS <b>2006</b> , 97-108		1
53	Thermal recovery from stress-induced high-k dielectric film degradation. <i>Journal of Applied Physics</i> , <b>2007</b> , 101, 044515	2.5	1
52	High-k Characterization by RFCV. <i>ECS Transactions</i> , <b>2007</b> , 11, 363-376	1	1
51	Electrical Characterization of Advanced Gate Dielectrics 371-435		1
50	Proof-of-Concept Structure for Investigation of Successive Soft Gate Oxide Breakdowns in Two Dimensions <b>2007</b> ,		1
49	A fast and flexible thermal simulation tool validated on smart power devices		1
48	Characterization of dynamic SOA of power MOSFETs limited by electrothermal breakdown		1

47	On the Recovery of Simulated Plasma Process Induced Damage in High- $\kappa$ Dielectrics <b>2006</b> ,		1
46	Bias Stress Induced Conduction Mechanism Evolution in Silica Based Inter-Metal Dielectrics. <i>Integrated Reliability Workshop Final Report, 2009 IRW @9 IEEE International, 2006</i> ,		1
45	Implementation of 6kV ESD Protection for a 17GHz LNA in 130nm SiGeC BiCMOS <b>2006</b> ,		1
44	Reliability issues in advanced High $\kappa$ /metal gate stacks for 45 nm CMOS applications <b>2006</b> ,		1
43	Correlation between trench depth and TDDB thermal activation energy in single damascene Cu/SiOC:H. <i>Microelectronic Engineering</i> , <b>2006</b> , 83, 2179-2183	2.5	1
42	Impact of defects on the high- $\kappa$ /MG stack: The electrical characterization challenge. <i>Materials Science in Semiconductor Processing</i> , <b>2006</b> , 9, 880-884	4.3	1
41	Modeling and simulation for ESD protection circuit design and optimization <b>2004</b> ,		1
40	Dependence of energy distributions of interface states on stress conditions. <i>Microelectronic Engineering</i> , <b>2001</b> , 59, 95-99	2.5	1
39	Hydrogen induced and plasma charging enhanced positive charge generation in gate oxides		1
38			1
37	Impact of temperature and breakdown statistics on reliability predictions for ultra-thin oxides. <i>Materials Research Society Symposia Proceedings</i> , <b>1999</b> , 592, 295		1
36	The ESD protection mechanisms and the related failure modes and mechanisms observed in SOI snapback nMOSFET's. <i>Microelectronics Reliability</i> , <b>1995</b> , 35, 555-566	1.2	1
35	Write/erase degradation and disturb effects in source-side injection flash eeprom devices. <i>Quality and Reliability Engineering International</i> , <b>1995</b> , 11, 239-246	2.6	1
34	HIMOS: an attractive flash EEPROM cell for embedded memory applications. <i>Microelectronics Journal</i> , <b>1993</b> , 24, 190-194	1.8	1
33	ESD Failures of GaN-on-Si D-Mode AlGaIn/GaN MIS-HEMT and HEMT Devices for 5G Telecommunications <b>2021</b> ,		1
32	Effects of Back-Gate Bias on the Mobility and Reliability of Junction-Less FDSOI Transistors for 3-D Sequential Integration. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 464-470	2.9	1
31	Reliability of p-GaN Gate HEMTs in Reverse Conduction. <i>IEEE Transactions on Electron Devices</i> , <b>2021</b> , 68, 645-652	2.9	1
30	Self-consistent procedure including envelope function normalization for full-zone Schrödinger-Poisson problems with transmitting boundary conditions. <i>Journal of Applied Physics</i> , <b>2018</b> , 124, 204501	2.5	1

29	ESD HBM Discharge Model in RF GaN-on-Si (MIS)HEMTs <b>2021</b> ,	1
28	. <i>IEEE Transactions on Electron Devices</i> , <b>2019</b> , 66, 2802-2808	2.9 0
27	Influence of InGaP and AlGaAs Schottky Layers on ESD Robustness in GaAs pHEMTs. <i>IEEE Electron Device Letters</i> , <b>2012</b> , 33, 1252-1254	4.4 0
26	Comparison of NBTI aging on adder architectures and ring oscillators in the downscaling technology nodes. <i>Microprocessors and Microsystems</i> , <b>2015</b> , 39, 1039-1051	2.4
25	HfSiO Bulk Trap Density Controls the Initial $V_{th}$ in nMOSFETs. <i>IEEE Transactions on Device and Materials Reliability</i> , <b>2012</b> , 12, 323-334	1.6
24	Paper No 19.3: Back-Channel-Etch Process Flow for a-IGZO TFTs. <i>Digest of Technical Papers SID International Symposium</i> , <b>2013</b> , 44, 285-288	0.5
23	Corrections to Quantum Mechanical Performance Predictions of p-n-i-n Versus Pocketed Line Tunnel Field-Effect Transistors [Jul 13 2128-2134]. <i>IEEE Transactions on Electron Devices</i> , <b>2013</b> , 60, 3605-3605	2.9 0
22	Profiling Different Kinds of Generated Defects at Elevated Temperature in Both SiO <sub>2</sub> and High-k Dielectrics. <i>Materials Research Society Symposia Proceedings</i> , <b>2010</b> , 1252, 8	
21	High Mobility Channel Materials and Novel Devices for Scaling of Nanoelectronics beyond the Si Roadmap. <i>Materials Research Society Symposia Proceedings</i> , <b>2009</b> , 1194, 49	
20	Quantification of metal oxide semiconductor field effect transistor device reliability with low-Vt lanthanum-incorporated high permittivity dielectrics. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 114504	2.5
19	A plug-and-play wideband RF circuit ESD protection methodology: T-diodes. <i>Microelectronics Reliability</i> , <b>2009</b> , 49, 1440-1446	1.2
18	Reliability test methodology for MEMS and MOEMS under electrical overstress and electrostatic discharge stress. <i>Journal of Micro/ Nanolithography, MEMS, and MOEMS</i> , <b>2012</b> , 11, 021204-1	0.7
17	Voltage variant source side injection for multilevel charge storage in flash EEPROM. <i>IEEE Transactions on Components and Packaging Technologies</i> , <b>1997</b> , 20, 196-202	
16	NBTI reliability of Ni FUSI/HfSiON gates: Effect of silicide phase. <i>Microelectronics Reliability</i> , <b>2007</b> , 47, 505-507	1.2
15	Implementation of plug-and-play ESD protection in 5.5 GHz 90 nm RF CMOS LNAs Concepts, constraints and solutions. <i>Microelectronics Reliability</i> , <b>2006</b> , 46, 702-712	1.2
14	Modeling pFET currents after soft breakdown at different gate locations. <i>Microelectronic Engineering</i> , <b>2004</b> , 72, 125-129	2.5
13	Breakdown and hot carrier injection in deep trench isolation structures. <i>Solid-State Electronics</i> , <b>2005</b> , 49, 1370-1375	1.7
12	Relation between hole traps and non-reactive hydrogen-induced positive charges. <i>Microelectronic Engineering</i> , <b>2001</b> , 59, 67-72	2.5

- 11 The Influence of Mechanical Stress on Hot-Carrier Degradation in MOSFETs. *Materials Research Society Symposia Proceedings*, **1993**, 308, 349
- 10 The influence of mechanical stress on hot-carrier degradation in MOSFET's. *Materials Research Society Symposia Proceedings*, **1993**, 309, 281
- 9 The high injection MOS cell: a novel 5V-only flash EEPROM concept with a 1 $\mu$ s programming time. *Microelectronic Engineering*, **1991**, 15, 617-620 2.5
- 8 Hole trapping and hot-hole induced interface trap generation in MOSFET's at different temperatures. *Microelectronic Engineering*, **1992**, 19, 477-480 2.5
- 7 ESD HBM Discharge Model in RF GaN-on-Si (MIS)HEMTs. *IEEE Transactions on Electron Devices*, **2022**, 1-8 2.9
- 6 LaSiO<sub>x</sub>- and Al<sub>2</sub>O<sub>3</sub>-Inserted Low-Temperature Gate-Stacks for Improved BTI Reliability in 3-D Sequential Integration. *IEEE Transactions on Electron Devices*, **2022**, 1-7 2.9
- 5 Recent Trends in Bias Temperature Instability **2015**, 5-19
- 4 Channel Hot Carriers and Other Reliability Mechanisms. *Springer Series in Advanced Microelectronics*, **2014**, 161-182 1
- 3 Techniques and Devices. *Springer Series in Advanced Microelectronics*, **2014**, 67-98 1
- 2 Negative Bias Temperature Instability in Nanoscale Devices. *Springer Series in Advanced Microelectronics*, **2014**, 131-160 1
- 1 Negative Bias Temperature Instability in (Si)Ge pMOSFETs. *Springer Series in Advanced Microelectronics*, **2014**, 99-129 1