Ronald D Schrimpf

List of Publications by Year
in descending order

676	19,823	13865 67	33894 99
papers	citations	h-index	g-index

678	678	678	5484
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Charge Collection and Charge Sharing in a 130 nm CMOS Technology. IEEE Transactions on Nuclear Science, 2006, 53, 3253-3258.	2.0	336
2	Response of advanced bipolar processes to ionizing radiation. IEEE Transactions on Nuclear Science, 1991, 38, 1342-1351.	2.0	287
3	Physical mechanisms contributing to enhanced bipolar gain degradation at low dose rates. IEEE Transactions on Nuclear Science, 1994, 41, 1871-1883.	2.0	251
4	Impact of Low-Energy Proton Induced Upsets on Test Methods and Rate Predictions. IEEE Transactions on Nuclear Science, 2009, 56, 3085-3092.	2.0	223
5	Reactions of hydrogen with Si-SiO/sub 2/ interfaces. IEEE Transactions on Nuclear Science, 2000, 47, 2262-2268.	2.0	184
6	Unified model of hole trapping, 1/f noise, and thermally stimulated current in MOS devices. IEEE Transactions on Nuclear Science, 2002, 49, 2674-2683.	2.0	182
7	Charge separation for bipolar transistors. IEEE Transactions on Nuclear Science, 1993, 40, 1276-1285.	2.0	179
8	Monte Carlo Simulation of Single Event Effects. IEEE Transactions on Nuclear Science, 2010, 57, 1726-1746.	2.0	178
9	Physical model for enhanced interface-trap formation at low dose rates. IEEE Transactions on Nuclear Science, 2002, 49, 2650-2655.	2.0	169
10	Structure, Properties, and Dynamics of Oxygen Vacancies in AmorphousSiO2. Physical Review Letters, 2002, 89, 285505.	7.8	167
11	The structure, properties, and dynamics of oxygen vacancies in amorphous SiO/sub 2/. IEEE Transactions on Nuclear Science, 2002, 49, 2667-2673.	2.0	163
12	Defect Generation by Hydrogen at the Si-SiO2Interface. Physical Review Letters, 2001, 87, 165506.	7.8	159
13	Radiation effects at low electric fields in thermal, SIMOX, and bipolar-base oxides. IEEE Transactions on Nuclear Science, 1996, 43, 2537-2546.	2.0	154
14	Trends in the total-dose response of modern bipolar transistors. IEEE Transactions on Nuclear Science, 1992, 39, 2026-2035.	2.0	152
15	Space charge limited degradation of bipolar oxides at low electric fields. IEEE Transactions on Nuclear Science, 1998, 45, 2339-2351.	2.0	151
16	The contribution of nuclear reactions to heavy ion single event upset cross-section measurements in a high-density SEU hardened SRAM. IEEE Transactions on Nuclear Science, 2005, 52, 2125-2131.	2.0	142
17	Characterization of Digital Single Event Transient Pulse-Widths in 130-nm and 90-nm CMOS Technologies. IEEE Transactions on Nuclear Science, 2007, 54, 2506-2511.	2.0	141
18	Proton-Induced Dehydrogenation of Defects in AlGaN/GaN HEMTs. IEEE Transactions on Nuclear Science, 2013, 60, 4080-4086.	2.0	136

#	Article	IF	Citations
19	ELDRS in Bipolar Linear Circuits: A Review. IEEE Transactions on Nuclear Science, 2009, 56, 1894-1908.	2.0	128
20	On-Chip Characterization of Single-Event Transient Pulsewidths. IEEE Transactions on Device and Materials Reliability, 2006, 6, 542-549.	2.0	127
21	Proton-irradiation effects on AlGaN/AlN/GaN high electron mobility transistors. IEEE Transactions on Nuclear Science, 2003, 50, 1791-1796.	2.0	126
22	Analysis of single-event transients in analog circuits. IEEE Transactions on Nuclear Science, 2000, 47, 2616-2623.	2.0	125
23	Proton-induced defect generation at the Si-SiO/sub 2/ interface. IEEE Transactions on Nuclear Science, 2001, 48, 2086-2092.	2.0	125
24	Nonuniform total-dose-induced charge distribution in shallow-trench isolation oxides. IEEE Transactions on Nuclear Science, 2004, 51, 3166-3171.	2.0	121
25	Electron-Induced Single-Event Upsets in Static Random Access Memory. IEEE Transactions on Nuclear Science, 2013, 60, 4122-4129.	2.0	121
26	Single event transient pulse widths in digital microcircuits. IEEE Transactions on Nuclear Science, 2004, 51, 3285-3290.	2.0	116
27	Hardness assurance testing of bipolar junction transistors at elevated irradiation temperatures. IEEE Transactions on Nuclear Science, 1997, 44, 1989-2000.	2.0	114
28	The Energy Dependence of Proton-Induced Degradation in AlGaN/GaN High Electron Mobility Transistors. IEEE Transactions on Nuclear Science, 2004, 51, 293-297.	2.0	114
29	Dehydrogenation of defects and hot-electron degradation in GaN high-electron-mobility transistors. Journal of Applied Physics, 2011, 109, .	2.5	114
30	Radiation Effects in Advanced Multiple Gate and Silicon-on-Insulator Transistors. IEEE Transactions on Nuclear Science, 2013, 60, 1970-1991.	2.0	114
31	Physical mechanisms of negative-bias temperature instability. Applied Physics Letters, 2005, 86, 142103.	3.3	113
32	Total ionizing dose effects in shallow trench isolation oxides. Microelectronics Reliability, 2008, 48, 1000-1007.	1.7	110
33	Impact of Heavy Ion Energy and Nuclear Interactions on Single-Event Upset and Latchup in Integrated Circuits. IEEE Transactions on Nuclear Science, 2007, 54, 2303-2311.	2.0	104
34	Comparison of ionizing-radiation-induced gain degradation in lateral, substrate, and vertical PNP BJTs. IEEE Transactions on Nuclear Science, 1995, 42, 1541-1549.	2.0	103
35	Evaluating average and atypical response in radiation effects simulations. IEEE Transactions on Nuclear Science, 2003, 50, 2265-2271.	2.0	103
36	Proton irradiation effects on GaN-based high electron-mobility transistors with Si-doped Al/sub x/Ga/sub 1-x/N and thick GaN cap Layers. IEEE Transactions on Nuclear Science, 2004, 51, 3801-3806.	2.0	101

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37	Physically based comparison of hot-carrier-induced and ionizing-radiation-induced degradation in BJTs. IEEE Transactions on Electron Devices, 1995, 42, 436-444.	3.0	99
38	Modeling ionizing radiation induced gain degradation of the lateral PNP bipolar junction transistor. IEEE Transactions on Nuclear Science, 1996, 43, 3032-3039.	2.0	98
39	Impact of Ion Energy and Species on Single Event Effects Analysis. IEEE Transactions on Nuclear Science, 2007, 54, 2312-2321.	2.0	98
40	Effects of hydrogen motion on interface trap formation and annealing. IEEE Transactions on Nuclear Science, 2004, 51, 3158-3165.	2.0	96
41	Charge Generation by Secondary Particles From Nuclear Reactions in BEOL Materials. IEEE Transactions on Nuclear Science, 2009, 56, 3172-3179.	2.0	94
42	Single-Event Burnout Mechanisms in SiC Power MOSFETs. IEEE Transactions on Nuclear Science, 2018, 65, 1951-1955.	2.0	94
43	Total-dose radiation response of hafnium-silicate capacitors. IEEE Transactions on Nuclear Science, 2002, 49, 3191-3196.	2.0	91
44	Hardness-assurance and testing issues for bipolar/BiCMOS devices. IEEE Transactions on Nuclear Science, 1993, 40, 1686-1693.	2.0	90
45	A review of the techniques used for modeling single-event effects in power MOSFETs. IEEE Transactions on Nuclear Science, 1996, 43, 546-560.	2.0	89
46	Modeling of Ionizing Radiation-Induced Degradation in Multiple Gate Field Effect Transistors. IEEE Transactions on Nuclear Science, 2011, 58, 499-505.	2.0	88
47	Annealing behavior of a proton irradiated Al/sub x/Ga/sub 1-x/N/GaN high electron mobility transistor grown by MBE. IEEE Transactions on Electron Devices, 2000, 47, 304-307.	3.0	86
48	Effects of Applied Bias and High Field Stress on the Radiation Response of GaN/AlGaN HEMTs. IEEE Transactions on Nuclear Science, 2015, 62, 2423-2430.	2.0	84
49	SEGR and SEB in n-channel power MOSFETs. IEEE Transactions on Nuclear Science, 1996, 43, 2927-2931.	2.0	83
50	Analytical model for proton radiation effects in bipolar devices. IEEE Transactions on Nuclear Science, 2002, 49, 2643-2649.	2.0	83
51	Multiple-Bit Upset in 130 nm CMOS Technology. IEEE Transactions on Nuclear Science, 2006, 53, 3259-3264.	2.0	83
52	Simulating single-event burnout of n-channel power MOSFET's. IEEE Transactions on Electron Devices, 1993, 40, 1001-1008.	3.0	82
53	Single Particle Displacement Damage in Silicon. IEEE Transactions on Nuclear Science, 2012, 59, 3054-3061.	2.0	81
54	A conceptual model of a single-event gate-rupture in power MOSFETs. IEEE Transactions on Nuclear Science, 1993, 40, 1959-1966.	2.0	80

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55	Electrical, spectral, and chemical properties of 1.8 MeV proton irradiated AlGaN/GaN HEMT structures as a function of proton fluence. IEEE Transactions on Nuclear Science, 2003, 50, 1934-1941.	2.0	79
56	Moderated degradation enhancement of lateral pnp transistors due to measurement bias. IEEE Transactions on Nuclear Science, 1998, 45, 2644-2648.	2.0	78
57	Characterization of enhanced low dose rate sensitivity (ELDRS) effects using Gated Lateral PNP transistor structures. IEEE Transactions on Nuclear Science, 2004, 51, 3773-3780.	2.0	77
58	Bounding the total-dose response of modern bipolar transistors. IEEE Transactions on Nuclear Science, 1994, 41, 1864-1870.	2.0	76
59	Charge separation techniques for irradiated pseudo-MOS SOI transistors. IEEE Transactions on Nuclear Science, 2003, 50, 1891-1895.	2.0	76
60	Fin-Width Dependence of Ionizing Radiation-Induced Subthreshold-Swing Degradation in 100-nm-Gate-Length FinFETs. IEEE Transactions on Nuclear Science, 2009, 56, 3250-3255.	2.0	76
61	Muon-Induced Single Event Upsets in Deep-Submicron Technology. IEEE Transactions on Nuclear Science, 2010, , .	2.0	75
62	Radiation Induced Charge Trapping in Ultrathin ${m HfO}_{2}$-Based MOSFETs. IEEE Transactions on Nuclear Science, 2007, 54, 1883-1890.	2.0	74
63	Impact of Technology Scaling on SRAM Soft Error Rates. IEEE Transactions on Nuclear Science, 2014, 61, 3512-3518.	2.0	74
64	Enhanced TID Susceptibility in Sub-100 nm Bulk CMOS I/O Transistors and Circuits. IEEE Transactions on Nuclear Science, 2007, 54, 2210-2217.	2.0	73
65	Effects of High Electric Fields on the Magnitudes of Current Steps Produced by Single Particle Displacement Damage. IEEE Transactions on Nuclear Science, 2013, 60, 4094-4102.	2.0	73
66	Influence of LDD Spacers and H⁺Transport on the Total-Ionizing-Dose Response of 65-nm MOSFETs Irradiated to Ultrahigh Doses. IEEE Transactions on Nuclear Science, 2018, 65, 164-174.	2.0	73
67	Recent advances in understanding total-dose effects in bipolar transistors. IEEE Transactions on Nuclear Science, 1996, 43, 787-796.	2.0	72
68	Effect of Well and Substrate Potential Modulation on Single Event Pulse Shape in Deep Submicron CMOS. IEEE Transactions on Nuclear Science, 2007, 54, 2407-2412.	2.0	71
69	Impact of oxide thickness on SEGR failure in vertical power MOSFETs; development of a semi-empirical expression. IEEE Transactions on Nuclear Science, 1995, 42, 1928-1934.	2.0	69
70	Radiation-Induced Defect Evolution and Electrical Degradation of AlGaN/GaN High-Electron-Mobility Transistors. IEEE Transactions on Nuclear Science, 2011, 58, 2918-2924.	2.0	69
71	Temperature Dependence and Postirradiation Annealing Response of the $1/f$ Noise of 4H-SiC MOSFETs. IEEE Transactions on Electron Devices, 2013, 60, 2361-2367.	3.0	69
72	Introduction of Interfacial Charges to Black Phosphorus for a Family of Planar Devices. Nano Letters, 2016, 16, 6870-6878.	9.1	69

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73	The determination of Si-SiO/sub 2/ interface trap density in irradiated four-terminal VDMOSFETs using charge pumping. IEEE Transactions on Nuclear Science, 1996, 43, 2558-2564.	2.0	68
74	Heavy-ion-induced breakdown in ultra-thin gate oxides and high-k dielectrics. IEEE Transactions on Nuclear Science, 2001, 48, 1904-1912.	2.0	67
75	Characterizing SRAM Single Event Upset in Terms of Single and Multiple Node Charge Collection. IEEE Transactions on Nuclear Science, 2008, 55, 2943-2947.	2.0	67
76	Ion-Induced Energy Pulse Mechanism for Single-Event Burnout in High-Voltage SiC Power MOSFETs and Junction Barrier Schottky Diodes. IEEE Transactions on Nuclear Science, 2020, 67, 22-28.	2.0	67
77	Application of RADSAFE to Model the Single Event Upset Response of a 0.25 mum CMOS SRAM. IEEE Transactions on Nuclear Science, 2007, 54, 898-903.	2.0	66
78	Role of heavy-ion nuclear reactions in determining on-orbit single event error rates. IEEE Transactions on Nuclear Science, 2005, 52, 2182-2188.	2.0	65
79	Common origin for enhanced low-dose-rate sensitivity and bias temperature instability under negative bias. IEEE Transactions on Nuclear Science, 2005, 52, 2265-2271.	2.0	65
80	Gain degradation of lateral and substrate pnp bipolar junction transistors. IEEE Transactions on Nuclear Science, 1996, 43, 3151-3160.	2.0	64
81	Proton radiation response mechanisms in bipolar analog circuits. IEEE Transactions on Nuclear Science, 2001, 48, 2074-2080.	2.0	64
82	Physical Model for the Low-Dose-Rate Effect in Bipolar Devices. IEEE Transactions on Nuclear Science, 2006, 53, 3655-3660.	2.0	63
83	Monte-Carlo Based On-Orbit Single Event Upset Rate Prediction for a Radiation Hardened by Design Latch. IEEE Transactions on Nuclear Science, 2007, 54, 2419-2425.	2.0	63
84	SEU Prediction From SET Modeling Using Multi-Node Collection in Bulk Transistors and SRAMs Down to the 65 nm Technology Node. IEEE Transactions on Nuclear Science, 2011, 58, 1338-1346.	2.0	63
85	Heavy Ion Induced Degradation in SiC Schottky Diodes: Bias and Energy Deposition Dependence. IEEE Transactions on Nuclear Science, 2017, 64, 415-420.	2.0	63
86	Single-Event Burnout of SiC Junction Barrier Schottky Diode High-Voltage Power Devices. IEEE Transactions on Nuclear Science, 2018, 65, 256-261.	2.0	63
87	High-Speed Light Modulation in Avalanche Breakdown Mode for Si Diodes. IEEE Electron Device Letters, 2004, 25, 628-630.	3.9	62
88	Effects of ionizing radiation on the noise properties of DMOS power transistors. IEEE Transactions on Nuclear Science, 1991, 38, 1304-1309.	2.0	60
89	Single-event gate-rupture in power MOSFETs: prediction of breakdown biases and evaluation of oxide thickness dependence. IEEE Transactions on Nuclear Science, 1995, 42, 1922-1927.	2.0	60
90	Hardness-assurance issues for lateral PNP bipolar junction transistors. IEEE Transactions on Nuclear Science, 1995, 42, 1641-1649.	2.0	60

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91	Electron Capture, Hydrogen Release, and Enhanced Gain Degradation in Linear Bipolar Devices. IEEE Transactions on Nuclear Science, 2008, 55, 2986-2991.	2.0	59
92	Impact of proton irradiation on deep level states in n-GaN. Applied Physics Letters, 2013, 103, .	3.3	59
93	Temperature dependence of single-event burnout in n-channel power MOSFETs (for space application). IEEE Transactions on Nuclear Science, 1992, 39, 1605-1612.	2.0	58
94	Evaluation of SEGR threshold in power MOSFETs. IEEE Transactions on Nuclear Science, 1994, 41, 2160-2166.	2.0	58
95	Effects of Guard Bands and Well Contacts in Mitigating Long SETs in Advanced CMOS Processes. IEEE Transactions on Nuclear Science, 2008, 55, 1708-1713.	2.0	58
96	Laser- and Heavy Ion-Induced Charge Collection in Bulk FinFETs. IEEE Transactions on Nuclear Science, 2011, 58, 2563-2569.	2.0	58
97	A Quantitative Model for ELDRS and ${m H}_{2}$ Degradation Effects in Irradiated Oxides Based on First Principles Calculations. IEEE Transactions on Nuclear Science, 2011, 58, 2937-2944.	2.0	58
98	1/f Noise in GaN HEMTs grown under Ga-rich, N-rich, and NH3-rich conditions. Microelectronics Reliability, 2011, 51, 212-216.	1.7	58
99	Effects of scaling on muon-induced soft errors. , 2011, , .		58
100	The Impact of X-Ray and Proton Irradiation on ${m HfO}_2/{m Hf}$-Based Bipolar Resistive Memories. IEEE Transactions on Nuclear Science, 2013, 60, 4540-4546.	2.0	58
101	Separation of ionization and displacement damage using gate-controlled lateral PNP bipolar transistors. IEEE Transactions on Nuclear Science, 2002, 49, 3185-3190.	2.0	57
102	Radiation-induced charge trapping in thin Al/sub 2/O/sub 3//SiO/sub x/N/sub y//Si(100) gate dielectric stacks. IEEE Transactions on Nuclear Science, 2003, 50, 1910-1918.	2.0	57
103	Statistical modeling of radiation-induced proton transport in silicon: deactivation of dopant acceptors in bipolar devices. IEEE Transactions on Nuclear Science, 2003, 50, 1896-1900.	2.0	57
104	Implications of Nuclear Reactions for Single Event Effects Test Methods and Analysis. IEEE Transactions on Nuclear Science, 2006, 53, 3356-3362.	2.0	57
105	Electrostatic Mechanisms Responsible for Device Degradation in Proton Irradiated AlGaN/AlN/GaN HEMTs. IEEE Transactions on Nuclear Science, 2008, 55, 2106-2112.	2.0	57
106	Bias Dependence of Total Ionizing Dose Effects in SiGe-MOS FinFETs<formula formulatype="inline"> <tex Notation="TeX"/> </formula>. IEEE Transactions on Nuclear Science, 2014, 61, 2834-2838.	2.0	57
107	General Framework for Single Event Effects Rate Prediction in Microelectronics. IEEE Transactions on Nuclear Science, 2009, 56, 3098-3108.	2.0	56
108	Low-Energy X-ray and Ozone-Exposure Induced Defect Formation in Graphene Materials and Devices. IEEE Transactions on Nuclear Science, 2011, 58, 2961-2967.	2.0	56

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109	Hydrogen in MOSFETs â€“ A primary agent of reliability issues. Microelectronics Reliability, 2007, 47, 903-911.	1.7	54
110	Geometry Dependence of Total-Dose Effects in Bulk FinFETs. IEEE Transactions on Nuclear Science, 2014, 61, 2951-2958.	2.0	54
111	Separation of effects of oxide-trapped charge and interface-trapped charge on mobility in irradiated power MOSFETs. IEEE Transactions on Nuclear Science, 1993, 40, 1307-1315.	2.0	53
112	Radiation-induced gain degradation in lateral PNP BJTs with lightly and heavily doped emitters. IEEE Transactions on Nuclear Science, 1997, 44, 1914-1921.	2.0	53
113	Effects of Proton-Induced Displacement Damage on Gallium Nitride HEMTs in RF Power Amplifier Applications. IEEE Transactions on Nuclear Science, 2015, 62, 2417-2422.	2.0	53
114	The Eâ€² center and oxygen vacancies in SiO2. Journal of Non-Crystalline Solids, 2008, 354, 217-223.	3.1	52
115	The Impact of Delta-Rays on Single-Event Upsets in Highly Scaled SOI SRAMs. IEEE Transactions on Nuclear Science, 2010, , .	2.0	52
116	Identification of degradation mechanisms in a bipolar linear voltage comparator through correlation of transistor and circuit response. IEEE Transactions on Nuclear Science, 1999, 46, 1666-1673.	2.0	51
117	Dose rate effects in bipolar oxides: Competition between trap filling and recombination. Applied Physics Letters, 2006, 88, 232113.	3.3	51
118	Relaxation of Si-SiO/sub 2/ interfacial stress in bipolar screen oxides due to ionizing radiation. IEEE Transactions on Nuclear Science, 1995, 42, 1689-1697.	2.0	50
119	Band-to-Band Tunneling (BBT) Induced Leakage Current Enhancement in Irradiated Fully Depleted SOI Devices. IEEE Transactions on Nuclear Science, 2007, 54, 2174-2180.	2.0	50
120	Electrical-stress-induced degradation in AlGaN/GaN high electron mobility transistors grown under gallium-rich, nitrogen-rich, and ammonia-rich conditions. Applied Physics Letters, 2010, 96, .	3.3	50
121	Scaling Trends in SET Pulse Widths in Sub-100 nm Bulk CMOS Processes. IEEE Transactions on Nuclear Science, 2010, , .	2.0	50
122	Physical Processes and Applications of the Monte Carlo Radiative Energy Deposition (MRED) Code. IEEE Transactions on Nuclear Science, 2015, 62, 1441-1461.	2.0	50
123	Single Event Mechanisms in 90 nm Triple-Well CMOS Devices. IEEE Transactions on Nuclear Science, 2008, 55, 2948-2956.	2.0	49
124	Process Dependence of Proton-Induced Degradation in GaN HEMTs. IEEE Transactions on Nuclear Science, 2010, , .	2.0	49
125	Multiple Defects Cause Degradation After High Field Stress in AlGaN/GaN HEMTs. IEEE Transactions on Device and Materials Reliability, 2018, 18, 364-376.	2.0	49
126	Modeling low-dose-rate effects in irradiated bipolar-base oxides. IEEE Transactions on Nuclear Science, 1998, 45, 2352-2360.	2.0	48

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127	Hydrogen-related defects in irradiated SiO/sub 2/. IEEE Transactions on Nuclear Science, 2000, 47, 2289-2296.	2.0	48
128	Long-term reliability degradation of ultrathin dielectric films due to heavy-ion irradiation. IEEE Transactions on Nuclear Science, 2002, 49, 3045-3050.	2.0	48
129	Device-Orientation Effects on Multiple-Bit Upset in 65 nm SRAMs. IEEE Transactions on Nuclear Science, 2008, 55, 2880-2885.	2.0	48
130	Total-dose radiation effects on sol-gel derived PZT thin films. IEEE Transactions on Nuclear Science, 1992, 39, 2036-2043.	2.0	47
131	Ab initio calculations of H/sup +/ energetics in SiO/sub 2/: Implications for transport. IEEE Transactions on Nuclear Science, 1999, 46, 1568-1573.	2.0	47
132	Comparison of Charge Pumping and <formula formulatype="inline"> <tex Notation="TeX">$1/f$</tex> </formula> Noise in Irradiated Ge pMOSFETs. IEEE Transactions on Nuclear Science, 2012, 59, 735-741.	2.0	47
133	Doseâ€rate effects on radiationâ€induced bipolar junction transistor gain degradation. Applied Physics Letters, 1994, 65, 1918-1920.	3.3	46
134	Negative bias-temperature instabilities in metalâ€“oxideâ€“silicon devices with SiO2 and SiOxNy/HfO2 gate dielectrics. Applied Physics Letters, 2004, 84, 4394-4396.	3.3	46
135	An Investigation of Dose Rate and Source Dependent Effects in 200 GHz SiGe HBTs. IEEE Transactions on Nuclear Science, 2006, 53, 3166-3174.	2.0	46
136	Integrating Circuit Level Simulation and Monte-Carlo Radiation Transport Code for Single Event Upset Analysis in SEU Hardened Circuitry. IEEE Transactions on Nuclear Science, 2008, 55, 2886-2894.	2.0	46
137	Worst-Case Bias for Proton and 10-keV X-Ray Irradiation of AlGaN/GaN HEMTs. IEEE Transactions on Nuclear Science, 2017, 64, 218-225.	2.0	46
138	Critical charge for single-event transients (SETs) in bipolar linear circuits. IEEE Transactions on Nuclear Science, 2001, 48, 1966-1972.	2.0	45
139	Theory of hot-carrier-induced phenomena in GaN high-electron-mobility transistors. Applied Physics Letters, 2010, 96, .	3.3	45
140	Role of Fe impurity complexes in the degradation of GaN/AlGaN high-electron-mobility transistors. Applied Physics Letters, 2015, 106, .	3.3	45
141	Heavy Ion Testing and Single Event Upset Rate Prediction Considerations for a DICE Flip-Flop. IEEE Transactions on Nuclear Science, 2009, 56, 3130-3137.	2.0	44
142	Temperature-dependence and microscopic origin of low frequency 1/f noise in GaN/AlGaN high electron mobility transistors. Applied Physics Letters, 2011, 99, .	3.3	44
143	200 MeV proton damage effects on multi-quantum well laser diodes. IEEE Transactions on Nuclear Science, 1997, 44, 1898-1905.	2.0	43
144	Heavy-Ion-Induced Current Transients in Bulk and SOI FinFETs. IEEE Transactions on Nuclear Science, 2012, 59, 2674-2681.	2.0	43

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145	Bias Dependence of Single-Event Upsets in 16Ânm FinFET D-Flip-Flops. IEEE Transactions on Nuclear Science, 2015, 62, 2578-2584.	2.0	43
146	Radiationâ€induced mobility degradation inpâ€channel doubleâ€diffused metalâ€oxideâ€semiconductor power transistors at 300 and 77 K. Journal of Applied Physics, 1993, 73, 2910-2915.	2.5	42
147	Saturation of the dose-rate response of bipolar transistors below 10 rad(SiO/sub 2/)/s: implications for hardness assurance. IEEE Transactions on Nuclear Science, 1994, 41, 2637-2641.	2.0	42
148	Domain switching and spatial dependence of permittivity in ferroelectric thin films. Journal of Applied Physics, 1997, 82, 2505-2516.	2.5	42
149	Radiation-enhanced short channel effects due to multi-dimensional influence from charge at trench isolation oxides. IEEE Transactions on Nuclear Science, 1999, 46, 1830-1835.	2.0	42
150	Estimation of low-dose-rate degradation on bipolar linear integrated circuits using switching experiments. IEEE Transactions on Nuclear Science, 2005, 52, 2616-2621.	2.0	41
151	Dose-rate effects on the total-dose threshold-voltage shift of power MOSFETs. IEEE Transactions on Nuclear Science, 1988, 35, 1536-1540.	2.0	40
152	Total-dose and single-event effects in switching DC/DC power converters. IEEE Transactions on Nuclear Science, 2002, 49, 3217-3221.	2.0	40
153	Hydrogen-Related Instabilities in MOS Devices Under Bias Temperature Stress. IEEE Transactions on Device and Materials Reliability, 2007, 7, 502-508.	2.0	40
154	Depletion-All-Around Operation of the SOI Four-Gate Transistor. IEEE Transactions on Electron Devices, 2007, 54, 323-331.	3.0	40
155	Gate Bias Dependence of Defect-Mediated Hot-Carrier Degradation in GaN HEMTs. IEEE Transactions on Electron Devices, 2014, 61, 1316-1320.	3.0	40
156	Substrate Engineering Concepts to Mitigate Charge Collection in Deep Trench Isolation Technologies. IEEE Transactions on Nuclear Science, 2006, 53, 3298-3305.	2.0	39
157	Effects of Switched-bias Annealing on Charge Trapping in HfO$_{2}$ Gate Dielectrics. IEEE Transactions on Nuclear Science, 2006, 53, 3636-3643.	2.0	39
158	Gate-Length and Drain-Bias Dependence of Band-to-Band Tunneling-Induced Drain Leakage in Irradiated Fully Depleted SOI Devices. IEEE Transactions on Nuclear Science, 2008, 55, 3259-3264.	2.0	39
159	Single-Event Charge Collection and Upset in 40-nm Dual- and Triple-Well Bulk CMOS SRAMs. IEEE Transactions on Nuclear Science, 2011, 58, 2761-2767.	2.0	39
160	Single-Event Transient Measurements in nMOS and pMOS Transistors in a 65-nm Bulk CMOS Technology at Elevated Temperatures. IEEE Transactions on Device and Materials Reliability, 2011, 11, 179-186.	2.0	39
161	Defects and Low-Frequency Noise in Irradiated Black Phosphorus MOSFETs With HfO₂ Gate Dielectrics. IEEE Transactions on Nuclear Science, 2018, 65, 1227-1238.	2.0	39
162	Single-event burnout of power bipolar junction transistors. IEEE Transactions on Nuclear Science, 1991, 38, 1315-1322.	2.0	38

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163	Defects and nanocrystals generated by Si implantation into a-SiO/sub 2/. IEEE Transactions on Nuclear Science, 2000, 47, 2269-2275.	2.0	38
164	Effect of switching from high to low dose rate on linear bipolar technology radiation response. IEEE Transactions on Nuclear Science, 2004, 51, 2896-2902.	2.0	38
165	Effects of device aging on microelectronics radiation response and reliability. Microelectronics Reliability, 2007, 47, 1075-1085.	1.7	38
166	Reactions of Water Molecules in Silica-Based Network Glasses. Physical Review Letters, 2008, 100, 105503.	7.8	38
167	Effectiveness of SEL Hardening Strategies and the Latchup Domino Effect. IEEE Transactions on Nuclear Science, 2012, 59, 2642-2650.	2.0	38
168	Ozone-exposure and annealing effects on graphene-on-SiO2 transistors. Applied Physics Letters, 2012, 101, .	3.3	38
169	Excess collector current due to an oxide-trapped-charge-induced emitter in irradiated NPN BJT's. IEEE Transactions on Electron Devices, 1995, 42, 923-927.	3.0	37
170	Effect of amplifier parameters on single-event transients in an inverting operational amplifier. IEEE Transactions on Nuclear Science, 2002, 49, 1496-1501.	2.0	37
171	Reliability and radiation effects in IC technologies. , 2008, , .		37
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