

Simone Gerardin

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Influence of Fin and Finger Number on TID Degradation of 16-nm Bulk FinFETs Irradiated to Ultrahigh Doses. IEEE Transactions on Nuclear Science, 2022, 69, 307-313.	1.2	7
2	TID Effects in Highly Scaled Gate-All-Around Si Nanowire CMOS Transistors Irradiated to Ultrahigh Doses. IEEE Transactions on Nuclear Science, 2022, 69, 1444-1452.	1.2	11
3	Energy Deposition by Ultrahigh Energy Ions in Large and Small Sensitive Volumes. IEEE Transactions on Nuclear Science, 2022, 69, 241-247.	1.2	1
4	Radiation Tolerant Multi-Bit Flip-Flop System With Embedded Timing Pre-Error Sensing. IEEE Journal of Solid-State Circuits, 2022, 57, 2878-2890.	3.5	6
5	DC response, low-frequency noise, and TID-induced mechanisms in 16-nm FinFETs for high-energy physics experiments. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2022, 1033, 166727.	0.7	9
6	Secondary Particles Generated by Protons in 3-D nand Flash Memories. IEEE Transactions on Nuclear Science, 2022, 69, 1461-1466.	1.2	1
7	Increased Device Variability Induced by Total Ionizing Dose in 16-nm Bulk nFinFETs. IEEE Transactions on Nuclear Science, 2022, 69, 1437-1443.	1.2	3
8	First Tests of a New Facility for Device-Level, Board-Level and System-Level Neutron Irradiation of Microelectronics. IEEE Transactions on Emerging Topics in Computing, 2021, 9, 104-108.	3.2	15
9	Depth Dependence of Threshold Voltage Shift in 3-D Flash Memories Exposed to X-Rays. IEEE Transactions on Nuclear Science, 2021, 68, 659-664.	1.2	2
10	A Heavy-Ion Beam Monitor Based on 3-D NAND Flash Memories. IEEE Transactions on Nuclear Science, 2021, 68, 884-889.	1.2	5
11	TID Degradation Mechanisms in 16-nm Bulk FinFETs Irradiated to Ultrahigh Doses. IEEE Transactions on Nuclear Science, 2021, 68, 1571-1578.	1.2	21
12	Total-Ionizing-Dose Effects on InGaAs FinFETs With Modified Gate-stack. IEEE Transactions on Nuclear Science, 2020, 67, 253-259.	1.2	13
13	Total-Ionizing-Dose Effects and Low-Frequency Noise in 16-nm InGaAs FinFETs With $\text{HfO}_2/\text{Al}_2\text{O}_3$ Dielectrics. IEEE Transactions on Nuclear Science, 2020, 67, 210-220.	1.2	26
14	A Heavy-Ion Detector Based on 3-D NAND Flash Memories. IEEE Transactions on Nuclear Science, 2020, 67, 154-160.	1.2	17
15	Thermal Neutron-Induced SEUs in the LHC Accelerator Environment. IEEE Transactions on Nuclear Science, 2020, 67, 1412-1420.	1.2	14
16	Total-Ionizing-Dose Effects in InGaAs MOSFETs With High- k Gate Dielectrics and InP Substrates. IEEE Transactions on Nuclear Science, 2020, 67, 1312-1319.	1.2	4
17	Characterizing High-Energy Ion Beams With PIPS Detectors. IEEE Transactions on Nuclear Science, 2020, 67, 1421-1427.	1.2	5
18	Ionizing-Radiation Response and Low-Frequency Noise of 28-nm MOSFETs at Ultrahigh Doses. IEEE Transactions on Nuclear Science, 2020, 67, 1302-1311.	1.2	35

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19	Gate Bias and Length Dependences of Total Ionizing Dose Effects in InGaAs FinFETs on Bulk Si. IEEE Transactions on Nuclear Science, 2019, 66, 1599-1605.	1.2	17
20	Low-Power, Subthreshold Reference Circuits for the Space Environment: Evaluated with $\hat{\text{I}}^3$ -rays, X-rays, Protons and Heavy Ions. Electronics (Switzerland), 2019, 8, 562.	1.8	9
21	Charge Buildup and Spatial Distribution of Interface Traps in 65-nm pMOSFETs Irradiated to Ultrahigh Doses. IEEE Transactions on Nuclear Science, 2019, 66, 1574-1583.	1.2	26
22	Total Ionizing Dose Effects in 3-D NAND Flash Memories. IEEE Transactions on Nuclear Science, 2019, 66, 48-53.	1.2	29
23	Influence of Halo Implantations on the Total Ionizing Dose Response of 28-nm pMOSFETs Irradiated to Ultrahigh Doses. IEEE Transactions on Nuclear Science, 2019, 66, 82-90.	1.2	29
24	Atmospheric Neutron Soft Errors in 3-D NAND Flash Memories. IEEE Transactions on Nuclear Science, 2019, 66, 1361-1367.	1.2	12
25	The Effect of Proton Irradiation in Suppressing Current Collapse in AlGaN/GaN High-Electron-Mobility Transistors. IEEE Transactions on Electron Devices, 2019, 66, 372-377.	1.6	19
26	Special NSREC 2017 Issue of the IEEE Transactions on Nuclear Science Comments by the Editors. IEEE Transactions on Nuclear Science, 2018, 65, 9-9.	1.2	0
27	Effects of Heavy-Ion Irradiation on Vertical 3-D NAND Flash Memories. IEEE Transactions on Nuclear Science, 2018, 65, 318-325.	1.2	38
28	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.	1.2	73
29	Dose-Rate Sensitivity of 65-nm MOSFETs Exposed to Ultrahigh Doses. IEEE Transactions on Nuclear Science, 2018, 65, 1482-1487.	1.2	28
30	Atmospheric-Like Neutron Attenuation During Accelerated Neutron Testing With Multiple Printed Circuit Boards. IEEE Transactions on Nuclear Science, 2018, 65, 1830-1834.	1.2	8
31	Impact of Thermal and Intermediate Energy Neutrons on SRAM SEE Rates in the LHC Accelerator. IEEE Transactions on Nuclear Science, 2018, 65, 1800-1806.	1.2	19
32	Comments by the Editors. IEEE Transactions on Nuclear Science, 2018, 65, 1437-1437.	1.2	0
33	Upsets in Erased Floating Gate Cells With High-Energy Protons. IEEE Transactions on Nuclear Science, 2017, 64, 421-426.	1.2	1
34	Single Event Upsets Induced by Direct Ionization from Low-Energy Protons in Floating Gate Cells. IEEE Transactions on Nuclear Science, 2017, 64, 464-470.	1.2	16
35	Space Environment Effects on Flexible, Low-Voltage Organic Thin-Film Transistors. ACS Applied Materials & Interfaces, 2017, 9, 35150-35158.	4.0	18
36	1GigaRad TID impact on 28nm HEP analog circuits. , 2017, , .		0

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37	Total Ionizing Dose effects on a 28 nm Hi-K metal-gate CMOS technology up to 1 Grad. Journal of Instrumentation, 2017, 12, C02003-C02003.	0.5	22
38	Experimental and Simulation Study of the Effects of Heavy-ion Irradiation on HfO ₂ -based RRAM Cells. IEEE Transactions on Nuclear Science, 2017, , 1-1.	1.2	11
39	A low cost robust radiation hardened flip-flop circuit. , 2017, , .		3
40	Comments by the Editors. IEEE Transactions on Nuclear Science, 2017, 64, 2004-2004.	1.2	0
41	Total suppression of dynamic-ron in AlGaIn/GaN-HEMTs through proton irradiation. , 2017, , .		14
42	Special NSREC 2016 Issue of the IEEE Transactions on Nuclear Science Comments by the Editors. IEEE Transactions on Nuclear Science, 2017, 64, 9-9.	1.2	2
43	Simulation and Experiment in Neutron Induced Single Event Effects in SRAM. , 2017, , .		0
44	Recent progress of RD53 Collaboration towards next generation Pixel Read-Out Chip for HL-LHC. Journal of Instrumentation, 2016, 11, C12058-C12058.	0.5	17
45	Single Event Transients and Pulse Quenching Effects in Bandgap Reference Topologies for Space Applications. IEEE Transactions on Nuclear Science, 2016, 63, 2950-2961.	1.2	15
46	Muon-induced soft errors in 16-nm NAND flash memories. , 2016, , .		2
47	Comments by the Editors. IEEE Transactions on Nuclear Science, 2016, 63, 1983-1983.	1.2	0
48	Impact of bias conditions on electrical stress and ionizing radiation effects in Si-based TFETs. Solid-State Electronics, 2016, 115, 146-151.	0.8	6
49	Radiation Vulnerability in 65 nm CMOS I/O Transistors after Exposure to Grad Dose. , 2015, , .		1
50	2015 Special Issue of IEEE Transactions on Nuclear Science Modeling and Simulation of Radiation Effects Editor Comments. IEEE Transactions on Nuclear Science, 2015, 62, 1439-1439.	1.2	1
51	Drain Current Collapse in 65Ånm pMOS Transistors After Exposure to Grad Dose. IEEE Transactions on Nuclear Science, 2015, 62, 2899-2905.	1.2	21
52	2015 Special NSREC Issue of the IEEE Transactions on Nuclear Science Comments by the Editors. IEEE Transactions on Nuclear Science, 2015, 62, 2378-2378.	1.2	0
53	Proton Irradiation Effects on Commercial Laser Diodes. , 2015, , .		4
54	Sample-to-Sample Variability of Floating Gate Errors Due to Total Ionizing Dose. IEEE Transactions on Nuclear Science, 2015, 62, 2511-2516.	1.2	12

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55	Enhancement of Transistor-to-Transistor Variability Due to Total Dose Effects in 65-nm MOSFETs. IEEE Transactions on Nuclear Science, 2015, 62, 2398-2403.	1.2	31
56	Sensitive Volume and Extreme Shifts in Floating Gate Cells Irradiated with Heavy Ions. IEEE Transactions on Nuclear Science, 2015, 62, 2815-2821.	1.2	5
57	Radiation-Induced Short Channel (RISCE) and Narrow Channel (RINCE) Effects in 65 and 130Ånm MOSFETs. IEEE Transactions on Nuclear Science, 2015, 62, 2933-2940.	1.2	158
58	Soft errors in floating gate memory cells: A review. Microelectronics Reliability, 2015, 55, 24-30.	0.9	8
59	Impact of proton fluence on DC and trapping characteristics in InAlN/GaN HEMTs. Solid-State Electronics, 2015, 113, 15-21.	0.8	5
60	Investigation of Hot Carrier Stress and Constant Voltage Stress in High- κ Si-Based TFETs. IEEE Transactions on Device and Materials Reliability, 2015, 15, 236-241.	1.5	14
61	Total Ionizing Dose Effects in Si-Based Tunnel FETs. IEEE Transactions on Nuclear Science, 2014, 61, 2874-2880.	1.2	15
62	Degradation of dc and pulsed characteristics of InAlN/GaN HEMTs under different proton fluences. , 2014, , .		2
63	2014 Special NSREC Issue of the IEEE Transactions on Nuclear Science Comments by the Editors. IEEE Transactions on Nuclear Science, 2014, 61, 2807-2807.	1.2	0
64	Comments by the Editors. IEEE Transactions on Nuclear Science, 2014, 61, 1507-1507.	1.2	0
65	Recoverable degradation of blue InGaN-based light emitting diodes submitted to 3â€‰MeV proton irradiation. Applied Physics Letters, 2014, 105, 213506.	1.5	10
66	Upsets in Phase Change Memories Due to High-LET Heavy Ions Impinging at an Angle. IEEE Transactions on Nuclear Science, 2014, 61, 3491-3496.	1.2	8
67	Sample-to-Sample Variability and Bit Errors Induced by Total Dose in Advanced NAND Flash Memories. IEEE Transactions on Nuclear Science, 2014, 61, 2889-2895.	1.2	23
68	Proton induced trapping effect on space compatible GaN HEMTs. Microelectronics Reliability, 2014, 54, 2213-2216.	0.9	16
69	Neutron and Alpha Single Event Upsets in Advanced NAND Flash Memories. IEEE Transactions on Nuclear Science, 2014, 61, 1799-1805.	1.2	13
70	Analysis of TID Failure Modes in SRAM-Based FPGA Under Gamma-Ray and Focused Synchrotron X-Ray Irradiation. IEEE Transactions on Nuclear Science, 2014, 61, 1777-1784.	1.2	15
71	Developments on DC/DC converters for the LHC experiment upgrades. Journal of Instrumentation, 2014, 9, C02017-C02017.	0.5	15
72	Effects of bias on the radiation responses of Si-based TFETs. , 2014, , .		1

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73	Radiation Effects in Flash Memories. IEEE Transactions on Nuclear Science, 2013, 60, 1953-1969.	1.2	116
74	Investigation of Supply Current Spikes in Flash Memories Using Ion-Electron Emission Microscopy. IEEE Transactions on Nuclear Science, 2013, 60, 4136-4141.	1.2	6
75	Proton-Induced Upsets in SLC and MLC NAND Flash Memories. IEEE Transactions on Nuclear Science, 2013, 60, 4130-4135.	1.2	9
76	Effects of high energy x ray and proton irradiation on lead zirconate titanate thin films' dielectric and piezoelectric response. Applied Physics Letters, 2013, 102, .	1.5	21
77	Single and Multiple Cell Upsets in 25-nm NAND Flash Memories. IEEE Transactions on Nuclear Science, 2013, 60, 2675-2681.	1.2	24
78	Comments by the Editors. IEEE Transactions on Nuclear Science, 2013, 60, 2383-2383.	1.2	0
79	2013 Special NSREC Issue of the IEEE Transactions on Nuclear Science Comments by the Editors. IEEE Transactions on Nuclear Science, 2013, 60, 4042-4042.	1.2	0
80	Possible effects on avionics induced by terrestrial gamma-ray flashes. Natural Hazards and Earth System Sciences, 2013, 13, 1127-1133.	1.5	23
81	Comments by the Editors. IEEE Transactions on Nuclear Science, 2012, 59, 696-696.	1.2	0
82	2012 Special NSREC Issue of the IEEE Transactions on Nuclear Science Comments by the Editors. IEEE Transactions on Nuclear Science, 2012, 59, 2632-2632.	1.2	0
83	Degradation of Sub 40-nm NAND Flash Memories Under Total Dose Irradiation. IEEE Transactions on Nuclear Science, 2012, 59, 2952-2958.	1.2	21
84	Alpha-induced soft errors in Floating Gate flash memories. , 2012, , .		8
85	Neutron-Induced Upsets in NAND Floating Gate Memories. IEEE Transactions on Device and Materials Reliability, 2012, 12, 437-444.	1.5	21
86	Radiation Environment in the ITER Neutral Beam Injector Prototype. IEEE Transactions on Nuclear Science, 2012, 59, 1099-1104.	1.2	6
87	Proton-Induced Upsets in 41-nm NAND Floating Gate Cells. IEEE Transactions on Nuclear Science, 2012, 59, 838-844.	1.2	10
88	Retention Errors in 65-nm Floating Gate Cells After Exposure to Heavy Ions. IEEE Transactions on Nuclear Science, 2012, 59, 2785-2790.	1.2	12
89	Temperature dependence of neutron-induced soft errors in SRAMs. Microelectronics Reliability, 2012, 52, 289-293.	0.9	24
90	Layout-Aware Multi-Cell Upsets Effects Analysis on TMR Circuits Implemented on SRAM-Based FPGAs. IEEE Transactions on Nuclear Science, 2011, 58, 2325-2332.	1.2	9

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91	Effects of Total Ionizing Dose on the Retention of 41-nm NAND Flash Cells. IEEE Transactions on Nuclear Science, 2011, 58, 2824-2829.	1.2	19
92	Impact of Technology Scaling on the Heavy-Ion Upset Cross Section of Multi-Level Floating Gate Cells. IEEE Transactions on Nuclear Science, 2011, 58, 969-974.	1.2	37
93	Angular Dependence of Heavy-Ion Induced Errors in Floating Gate Memories. IEEE Transactions on Nuclear Science, 2011, 58, 2621-2627.	1.2	23
94	Ionizing radiation compatibility in the MITICA neutral beam prototype. Fusion Engineering and Design, 2011, 86, 1268-1272.	1.0	6
95	Single Event Effects in 90-nm Phase Change Memories. IEEE Transactions on Nuclear Science, 2011, 58, 2755-2760.	1.2	15
96	Heavy-Ion Induced Threshold Voltage Shifts in Sub 70-nm Charge-Trap Memory Cells. IEEE Transactions on Nuclear Science, 2011, 58, 827-833.	1.2	6
97	A study on the short- and long-term effects of X-ray exposure on NAND Flash memories. , 2011, , .		8
98	Comments by the Editors. IEEE Transactions on Nuclear Science, 2011, 58, 753-753.	1.2	0
99	2011 Special NSREC Issue of the IEEE Transactions on Nuclear Science Comments by the Editors. IEEE Transactions on Nuclear Science, 2011, 58, 2545-2545.	1.2	0
100	Destructive events in NAND Flash memories irradiated with heavy ions. Microelectronics Reliability, 2010, 50, 1832-1836.	0.9	7
101	Impact of total dose on heavy-ion upsets in floating gate arrays. Microelectronics Reliability, 2010, 50, 1837-1841.	0.9	4
102	Annealing of Heavy-Ion Induced Floating Gate Errors: LET and Feature Size Dependence. IEEE Transactions on Nuclear Science, 2010, 57, 1835-1841.	1.2	33
103	Heavy-Ion Induced Threshold Voltage Tails in Floating Gate Arrays. IEEE Transactions on Nuclear Science, 2010, , .	1.2	37
104	Angular and Strain Dependence of Heavy-Ions Induced Degradation in SOI FinFETs. IEEE Transactions on Nuclear Science, 2010, 57, 1924-1932.	1.2	8
105	Increase in the Heavy-Ion Upset Cross Section of Floating Gate Cells Previously Exposed to TID. IEEE Transactions on Nuclear Science, 2010, , .	1.2	28
106	Impact of Radiation on the Operation and Reliability of Deep Submicron CMOS Technologies. ECS Transactions, 2010, 27, 39-46.	0.3	2
107	Catastrophic Failure in Highly Scaled Commercial NAND Flash Memories. IEEE Transactions on Nuclear Science, 2010, 57, 266-271.	1.2	37
108	Scaling trends of neutron effects in MLC NAND Flash memories. , 2010, , .		11

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109	Accelerated testing of RF-MEMS contact degradation through radiation sources. , 2010, , .		3
110	A multi-megarad, radiation hardened by design 512 kbit SRAM in CMOS technology. , 2010, , .		6
111	Can Atmospheric Neutrons Induce Soft Errors in nand Floating Gate Memories?. IEEE Electron Device Letters, 2009, 30, 178-180.	2.2	10
112	The Role of Irradiation Bias on the Time-Dependent Dielectric Breakdown of 130-nm MOSFETs Exposed to X-rays. IEEE Transactions on Nuclear Science, 2009, 56, 3244-3249.	1.2	11
113	Error Instability in Floating Gate Flash Memories Exposed to TID. IEEE Transactions on Nuclear Science, 2009, 56, 3267-3273.	1.2	44
114	Channel-Hot-Carrier Degradation and Bias Temperature Instabilities in CMOS Inverters. IEEE Transactions on Electron Devices, 2009, 56, 2155-2159.	1.6	21
115	Gate dielectric degradation in CMOS inverters. Microelectronic Engineering, 2009, 86, 2123-2126.	1.1	0
116	TID Sensitivity of NAND Flash Memory Building Blocks. IEEE Transactions on Nuclear Science, 2009, 56, 1909-1913.	1.2	49
117	A Statistical Approach to Microdose Induced Degradation in FinFET Devices. IEEE Transactions on Nuclear Science, 2009, 56, 3285-3292.	1.2	13
118	Methodologies to Study Frequency-Dependent Single Event Effects Sensitivity in Flash-Based FPGAs. IEEE Transactions on Nuclear Science, 2009, 56, 3534-3541.	1.2	14
119	On the Static Cross Section of SRAM-Based FPGAs. , 2008, , .		12
120	Channel Hot Carrier Stress on Irradiated 130-nm NMOSFETs. IEEE Transactions on Nuclear Science, 2008, 55, 1960-1967.	1.2	27
121	Microdose and Breakdown Effects Induced by Heavy Ions on Sub 32-nm Triple-Gate SOI FETs. IEEE Transactions on Nuclear Science, 2008, 55, 3182-3188.	1.2	18
122	Degradation Induced by X-Ray Irradiation and Channel Hot Carrier Stresses in 130-nm NMOSFETs With Enclosed Layout. IEEE Transactions on Nuclear Science, 2008, 55, 3216-3223.	1.2	18
123	Key Contributions to the Cross Section of NAND Flash Memories Irradiated With Heavy Ions. IEEE Transactions on Nuclear Science, 2008, 55, 3302-3308.	1.2	47
124	Facility for fast neutron irradiation tests of electronics at the ISIS spallation neutron source. Applied Physics Letters, 2008, 92, 114101.	1.5	63
125	Electrostatic Discharge Effects in Irradiated Fully Depleted SOI MOSFETs With Ultra-Thin Gate Oxide. IEEE Transactions on Nuclear Science, 2007, 54, 2204-2209.	1.2	7
126	A New Hardware/Software Platform and a New 1/E Neutron Source for Soft Error Studies: Testing FPGAs at the ISIS Facility. IEEE Transactions on Nuclear Science, 2007, 54, 1184-1189.	1.2	77

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127	Using AFM Related Techniques for the Nanoscale Electrical Characterization of Irradiated Ultrathin Gate Oxides. IEEE Transactions on Nuclear Science, 2007, 54, 1891-1897.	1.2	18
128	Systematic characterization of soft- and hard-breakdown spots using techniques with nanometer resolution. Microelectronic Engineering, 2007, 84, 1956-1959.	1.1	16
129	Lifetime estimation of analog circuits from the electrical characteristics of stressed MOSFETs. Microelectronics Reliability, 2007, 47, 1349-1352.	0.9	6
130	Effects of Heavy-Ion Strikes on Fully Depleted SOI MOSFETs With Ultra-Thin Gate Oxide and Different Strain-Inducing Techniques. IEEE Transactions on Nuclear Science, 2007, 54, 2257-2263.	1.2	13
131	Electrostatic Discharge Effects in Ultrathin Gate Oxide MOSFETs. IEEE Transactions on Device and Materials Reliability, 2006, 6, 87-94.	1.5	14
132	Degradation of static and dynamic behavior of CMOS inverters during constant and pulsed voltage stress. Microelectronics Reliability, 2006, 46, 1669-1672.	0.9	10
133	Degradation induced by 2-MeV alpha particles on AlGaIn/GaN high electron mobility transistors. Microelectronics Reliability, 2006, 46, 1750-1753.	0.9	7
134	Impact of 24-GeV Proton Irradiation on 0.13- μm CMOS Devices. IEEE Transactions on Nuclear Science, 2006, 53, 1917-1922.	1.2	24
135	Impact of Heavy-Ion Strikes on Minimum-Size MOSFETs With Ultra-Thin Gate Oxide. IEEE Transactions on Nuclear Science, 2006, 53, 3675-3680.	1.2	20
136	Impact of Fowler-Nordheim and channel hot carrier stresses on MOSFETs with 2.2nm gate oxide. Microelectronic Engineering, 2005, 80, 178-181.	1.1	3
137	Electrical stresses on ultra-thin gate oxide SOI MOSFETs after irradiation. IEEE Transactions on Nuclear Science, 2005, 52, 2252-2258.	1.2	14
138	Radiation-induced breakdown in 1.7 nm oxynitrided gate oxides. IEEE Transactions on Nuclear Science, 2005, 52, 2210-2216.	1.2	8
139	MOSFET drain current reduction under Fowler-Nordheim and channel hot carrier injection before gate oxide breakdown. Materials Science in Semiconductor Processing, 2004, 7, 175-180.	1.9	9
140	Drain current decrease in MOSFETs after heavy ion irradiation. IEEE Transactions on Nuclear Science, 2004, 51, 3150-3157.	1.2	36