

Arto Javanainen

List of Publications by Year in descending order

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62
papers

1,018
citations

430874

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63
times ranked

509
citing authors

#	ARTICLE	IF	CITATIONS
1	Heavy-ion induced single event effects and latent damages in SiC power MOSFETs. <i>Microelectronics Reliability</i> , 2022, 128, 114423.	1.7	13
2	Proton Direct Ionization in Sub-Micron Technologies: Numerical Method for RPP Parameter Extraction. <i>IEEE Transactions on Nuclear Science</i> , 2022, 69, 254-263.	2.0	1
3	Isotopic Enriched and Natural SiC Junction Barrier Schottky Diodes Under Heavy Ion Irradiation. <i>IEEE Transactions on Nuclear Science</i> , 2022, 69, 1675-1682.	2.0	1
4	Impact of Terrestrial Neutrons on the Reliability of SiC VD-MOSFET Technologies. <i>IEEE Transactions on Nuclear Science</i> , 2021, 68, 634-641.	2.0	24
5	Electron-Induced Upsets and Stuck Bits in SDRAMs in the Jovian Environment. <i>IEEE Transactions on Nuclear Science</i> , 2021, 68, 716-723.	2.0	10
6	Assessment of Proton Direct Ionization for the Radiation Hardness Assurance of Deep Submicron SRAMs Used in Space Applications. <i>IEEE Transactions on Nuclear Science</i> , 2021, 68, 937-948.	2.0	20
7	Radiation Hardness Assurance Through System-Level Testing: Risk Acceptance, Facility Requirements, Test Methodology, and Data Exploitation. <i>IEEE Transactions on Nuclear Science</i> , 2021, 68, 958-969.	2.0	12
8	The Pion Single-Event Latch-Up Cross Section Enhancement: Mechanisms and Consequences for Accelerator Hardness Assurance. <i>IEEE Transactions on Nuclear Science</i> , 2021, 68, 1613-1622.	2.0	1
9	Radioluminescence Response of Ce-, Cu-, and Gd-Doped Silica Glasses for Dosimetry of Pulsed Electron Beams. <i>Sensors</i> , 2021, 21, 7523.	3.8	5
10	Unifying Concepts for Ion-Induced Leakage Current Degradation in Silicon Carbide Schottky Power Diodes. <i>IEEE Transactions on Nuclear Science</i> , 2020, 67, 135-139.	2.0	19
11	Ion-Induced Energy Pulse Mechanism for Single-Event Burnout in High-Voltage SiC Power MOSFETs and Junction Barrier Schottky Diodes. <i>IEEE Transactions on Nuclear Science</i> , 2020, 67, 22-28.	2.0	67
12	Heavy-Ion Microbeam Studies of Single-Event Leakage Current Mechanism in SiC VD-MOSFETs. <i>IEEE Transactions on Nuclear Science</i> , 2020, 67, 1381-1389.	2.0	36
13	Direct Ionization Impact on Accelerator Mixed-Field Soft-Error Rate. <i>IEEE Transactions on Nuclear Science</i> , 2020, 67, 345-352.	2.0	12
14	Impact of Electrical Stress and Neutron Irradiation on Reliability of Silicon Carbide Power MOSFET. <i>IEEE Transactions on Nuclear Science</i> , 2020, 67, 1365-1373.	2.0	16
15	The Pion Single-Event Effect Resonance and its Impact in an Accelerator Environment. <i>IEEE Transactions on Nuclear Science</i> , 2020, 67, 1606-1613.	2.0	5
16	SEU characterization of commercial and custom-designed SRAMs based on 90 nm technology and below. , 2020, , .		9
17	Enhanced Charge Collection in SiC Power MOSFETs Demonstrated by Pulse-Laser Two-Photon Absorption SEE Experiments. <i>IEEE Transactions on Nuclear Science</i> , 2019, 66, 1694-1701.	2.0	19
18	Effects of Heavy Ion and Proton Irradiation on a SLC NAND Flash Memory. , 2019, , .		2

#	ARTICLE	IF	CITATIONS
19	Estimating Terrestrial Neutron-Induced SEB Cross Sections and FIT Rates for High-Voltage SiC Power MOSFETs. IEEE Transactions on Nuclear Science, 2019, 66, 337-343.	2.0	37
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.	3.1	9
21	Current Transport Mechanism for Heavy-Ion Degraded SiC MOSFETs. IEEE Transactions on Nuclear Science, 2019, 66, 1702-1709.	2.0	31
22	Mechanisms of Electron-Induced Single-Event Latchup. IEEE Transactions on Nuclear Science, 2019, 66, 437-443.	2.0	7
23	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
24	Single-Event Effects in the Peripheral Circuitry of a Commercial Ferroelectric Random Access Memory. IEEE Transactions on Nuclear Science, 2018, 65, 1708-1714.	2.0	12
25	Microbeam SEE Analysis of MIM Capacitors for GaN Amplifiers. IEEE Transactions on Nuclear Science, 2018, 65, 732-738.	2.0	2
26	Single-Event Burnout Mechanisms in SiC Power MOSFETs. IEEE Transactions on Nuclear Science, 2018, 65, 1951-1955.	2.0	94
27	Failure Estimates for SiC Power MOSFETs in Space Electronics. Aerospace, 2018, 5, 67.	2.2	23
28	Molecular Dynamics Simulations of Heavy Ion Induced Defects in SiC Schottky Diodes. IEEE Transactions on Device and Materials Reliability, 2018, 18, 481-483.	2.0	12
29	Mechanisms of Electron-Induced Single-Event Upsets in Medical and Experimental Linacs. IEEE Transactions on Nuclear Science, 2018, 65, 1715-1723.	2.0	3
30	Parasitic Bipolar Action in SiC Power MOSFETs Demonstrated by Two-Photon Laser Experiment. , 2018, , .		0
31	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
32	Heavy Ion Induced Degradation in SiC Schottky Diodes: Incident Angle and Energy Deposition Dependence. IEEE Transactions on Nuclear Science, 2017, , 1-1.	2.0	20
33	Application and development of ion-source technology for radiation-effects testing of electronics. Nuclear Instruments & Methods in Physics Research B, 2017, 406, 205-209.	1.4	2
34	Incident angle effect on heavy ion induced reverse leakage current in SiC Schottky diodes. , 2016, , .		5
35	Charge Transport Mechanisms in Heavy-Ion Driven Leakage Current in Silicon Carbide Schottky Power Diodes. IEEE Transactions on Device and Materials Reliability, 2016, 16, 208-212.	2.0	27
36	Single Event Transients and Pulse Quenching Effects in Bandgap Reference Topologies for Space Applications. IEEE Transactions on Nuclear Science, 2016, 63, 2950-2961.	2.0	15

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37	Methodologies for the Statistical Analysis of Memory Response to Radiation. IEEE Transactions on Nuclear Science, 2016, 63, 2122-2128.	2.0	5
38	Heavy-Ion Radiation Impact on a 4 Mb FRAM Under Different Test Modes and Conditions. IEEE Transactions on Nuclear Science, 2016, 63, 2010-2015.	2.0	10
39	A Methodology for the Analysis of Memory Response to Radiation through Bitmap Superposition and Slicing. , 2015, , .		1
40	Heavy-Ion Radiation Impact on a 4Mb FRAM under Different Test Conditions. , 2015, , .		3
41	SEE on Different Layers of Stacked-SRAMs. IEEE Transactions on Nuclear Science, 2015, 62, 2673-2678.	2.0	7
42	Investigation on MCU Clustering Methodologies for Cross-Section Estimation of RAMs. IEEE Transactions on Nuclear Science, 2015, 62, 2620-2626.	2.0	12
43	A subthreshold, low-power, RHBD reference circuit, for earth observation and communication satellites. , 2015, , .		7
44	Low Energy Protons at RADEF - Application to Advanced eSRAMs. , 2014, , .		14
45	Dynamic Test Methods for COTS SRAMs. IEEE Transactions on Nuclear Science, 2014, 61, 3095-3102.	2.0	26
46	SEGR in SiO ₂ /Si ₃ N ₄ Stacks. IEEE Transactions on Nuclear Science, 2014, 61, 1902-1908.	2.0	9
47	Semi-Empirical Model for SEGR Prediction. IEEE Transactions on Nuclear Science, 2013, 60, 2660-2665.	2.0	8
48	SEGR in SiO ₂ /Si ₃ N ₄ stacks. , 2013, , .		0
49	Statistical Analysis of Heavy-Ion Induced Gate Rupture in Power MOSFETs—Methodology for Radiation Hardness Assurance. IEEE Transactions on Nuclear Science, 2012, 59, 2920-2929.	2.0	17
50	Influence of Beam Conditions and Energy for SEE Testing. IEEE Transactions on Nuclear Science, 2012, 59, 1149-1160.	2.0	33
51	A simple expression for electronic stopping force of heavy ions in solids. Nuclear Instruments & Methods in Physics Research B, 2012, 285, 158-161.	1.4	8
52	Influence of beam conditions and energy for SEE testing. , 2011, , .		11
53	Energy loss measurement of protons in liquid water. Physics in Medicine and Biology, 2011, 56, 2367-2374.	3.0	30
54	Semi-Empirical LET Descriptions of Heavy Ions Used in the European Component Irradiation Facilities. IEEE Transactions on Nuclear Science, 2010, 57, 1946-1949.	2.0	5

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55	Experimental Linear Energy Transfer of Heavy Ions in Silicon for RADEF Cocktail Species. IEEE Transactions on Nuclear Science, 2009, 56, 2242-2246.	2.0	15
56	The first experimental values for the stopping power of 89Y ions in carbon, nickel and gold. Vacuum, 2009, 83, S73-S76.	3.5	4
57	Heavy-Ion Induced Charge Yield in MOSFETs. IEEE Transactions on Nuclear Science, 2009, 56, 3367-3371.	2.0	22
58	Semi-empirical LET descriptions of heavy ions used in the European Component Irradiation Facilities. , 2009, , .		0
59	Experimental Linear Energy Transfer of heavy ions in silicon for RADEF cocktail species. , 2008, , .		1
60	Linear Energy Transfer of Heavy Ions in Silicon. IEEE Transactions on Nuclear Science, 2007, 54, 1158-1162.	2.0	40
61	Upgrades for the RADEF Facility. , 2007, , .		29
62	New Insight into Single-Event Radiation Failure Mechanisms in Silicon Carbide Power Schottky Diodes and MOSFETs. Materials Science Forum, 0, 1004, 1066-1073.	0.3	4