

Mark E Law

List of Publications by Year in descending order

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42
papers

584
citations

623734

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610901

24
g-index

43
all docs

43
docs citations

43
times ranked

442
citing authors

#	ARTICLE	IF	CITATIONS
1	Continuum based modeling of silicon integrated circuit processing: An object oriented approach. Computational Materials Science, 1998, 12, 289-308.	3.0	95
2	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
3	ColdFlux Superconducting EDA and TCAD Tools Project: Overview and Progress. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-7.	1.7	50
4	Modeling Proton Irradiation in AlGaIn/GaN HEMTs: Understanding the Increase of Critical Voltage. IEEE Transactions on Nuclear Science, 2013, 60, 4103-4108.	2.0	34
5	Nonmelt laser annealing of 5-KeV and 1-KeV boron-implanted silicon. IEEE Transactions on Electron Devices, 2002, 49, 1118-1123.	3.0	33
6	Cross-sectional transmission electron microscopy analysis of $\{311\}$ defects from Si implantation into silicon. Applied Physics Letters, 1998, 72, 2547-2549.	3.3	32
7	The stress assisted evolution of point and extended defects in silicon. Journal of Applied Physics, 1997, 82, 1138-1146.	2.5	30
8	The role of annealing ambient on diffusion of implanted Si in \hat{I}^2 -Ga ₂ O ₃ . AIP Advances, 2019, 9, .	1.3	27
9	Diffusion of dopants and impurities in \hat{I}^2 -Ga ₂ O ₃ . Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	2.1	26
10	Effect of arsenic doping on $\{311\}$ defect dissolution in silicon. Applied Physics Letters, 1999, 75, 229-231.	3.3	22
11	Diffusion of implanted Ge and Sn in \hat{I}^2 -Ga ₂ O ₃ . Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2019, 37, .	1.2	22
12	Effect of proton irradiation on AlGaIn/GaN high electron mobility transistor off-state drain breakdown voltage. Applied Physics Letters, 2014, 104, .	3.3	21
13	Level set modeling of the orientation dependence of solid phase epitaxial regrowth. Journal of Vacuum Science & Technology B, 2008, 26, 357.	1.3	17
14	Radiation-Induced Oxide Charge in Low- and High-H $\{2\}$ Environments. IEEE Transactions on Nuclear Science, 2012, 59, 755-759.	2.0	16
15	A comparison of boron and phosphorus diffusion and dislocation loop growth from silicon implants into silicon. Journal of Applied Physics, 1997, 81, 107-111.	2.5	14
16	Comparison of Discretization Methods for Device Simulation. , 2009, , .		11
17	Total Dose Radiation Damage: A Simulation Framework. IEEE Transactions on Nuclear Science, 2015, 62, 1650-1657.	2.0	11
18	Laser-Induced Current Transients in Strained-Si Diodes. IEEE Transactions on Nuclear Science, 2009, 56, 3203-3209.	2.0	10

#	ARTICLE	IF	CITATIONS
19	Nitrogen ion-implanted resistive regions for edge termination of vertical Ga ₂ O ₃ rectifiers. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, 063405.	2.1	8
20	Disorder and critical current variability in Josephson junctions. Journal of Applied Physics, 2020, 127, .	2.5	6
21	Process Modeling for Advanced Devices. Materials Research Society Symposia Proceedings, 2004, 810, 128.	0.1	5
22	Modeling Process and Device Behavior of Josephson Junctions in Superconductor Electronics With TCAD. IEEE Transactions on Electron Devices, 2021, 68, 5448-5454.	3.0	5
23	Mobility Modeling Considerations for Radiation Effects Simulations in Silicon. IEEE Transactions on Nuclear Science, 2010, 57, 2318-2326.	2.0	4
24	Interdiffusion Behavior of Si/Si _{1-x} Ge _x Layers in Inert and Oxidizing Ambients. Materials Research Society Symposia Proceedings, 1998, 532, 119.	0.1	3
25	Silicon Self-Interstitial Cluster Formation and Dissolution in SOI. Materials Research Society Symposia Proceedings, 2002, 717, 1.	0.1	3
26	Simulating the Fabrication of Nb/Al-O/Nb Josephson Junction for Superconductive Electronics Application. , 2019, , .		3
27	Modeling the Effect of Fabrication Process on Grain Boundary Formation in Nb/Al-AIO _x /Nb Josephson Junction Circuit. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.7	3
28	The Diffusion Mechanism of Ge During Oxidation of Si/SiGe Nanofins. ACS Applied Materials & Interfaces, 2022, 14, 29422-29430.	8.0	3
29	Simulation of Hot-Electron Effects with Multi-band Semiconductor Devices. , 2018, , .		2
30	Technology computer aided design characterization needs and requirements. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 213.	1.6	1
31	Atomic scale modeling of boron transient diffusion in silicon. , 0, , .		1
32	A noise simulation post-processor: A new tool for low noise device design. , 1999, , .		1
33	Influence of Carbon on the Diffusion of Interstitials and Boron in Silicon. Materials Research Society Symposia Proceedings, 2000, 610, 741.	0.1	1
34	Room Temperature Boron Diffusion in Amorphous Silicon. Materials Research Society Symposia Proceedings, 2006, 912, 1.	0.1	1
35	An Alternative Approach to Analyzing the Interstitial Decay from the End of Range Damage During Millisecond Annealing. Materials Research Society Symposia Proceedings, 2008, 1070, 1.	0.1	1
36	An Adaptive Grid Scheme for Single-Event Upset Device Simulations. IEEE Transactions on Nuclear Science, 2010, , .	2.0	1

#	ARTICLE	IF	CITATIONS
37	Critical currents in conventional Josephson junctions with grain boundaries. Journal of Applied Physics, 2021, 130, .	2.5	1
38	Modeling B clustering in Si and SiGe. Materials Research Society Symposia Proceedings, 2004, 810, 368.	0.1	0
39	Advanced process simulation - laser and flash annealing. , 2006, , .		0
40	Level Set Modeling of Nickel Silicide Growth. Materials Research Society Symposia Proceedings, 2012, 1429, 13.	0.1	0
41	20 years of SISPAD: Adolescence of TCAD and further perspective. , 2016, , .		0
42	Negative Impact of Compressive Biaxial Stress on High Precision Bipolar Devices. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 1310-1312.	2.5	0