

Philip mawby

List of Publications by Year in descending order

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219
papers

6,548
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136740

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71532

76
g-index

220
all docs

220
docs citations

220
times ranked

3953
citing authors

#	ARTICLE	IF	CITATIONS
1	An Industry-Based Survey of Reliability in Power Electronic Converters. IEEE Transactions on Industry Applications, 2011, 47, 1441-1451.	3.3	1,435
2	Condition Monitoring for Device Reliability in Power Electronic Converters: A Review. IEEE Transactions on Power Electronics, 2010, 25, 2734-2752.	5.4	1,076
3	A Lifetime Estimation Technique for Voltage Source Inverters. IEEE Transactions on Power Electronics, 2013, 28, 4113-4119.	5.4	355
4	Investigation Into IGBT dV/dt During Turn-Off and Its Temperature Dependence. IEEE Transactions on Power Electronics, 2011, 26, 3019-3031.	5.4	177
5	Monitoring Solder Fatigue in a Power Module Using Case-Above-Ambient Temperature Rise. IEEE Transactions on Industry Applications, 2011, 47, 2578-2591.	3.3	146
6	Condition Monitoring Power Module Solder Fatigue Using Inverter Harmonic Identification. IEEE Transactions on Power Electronics, 2012, 27, 235-247.	5.4	139
7	Failure and Reliability Analysis of a SiC Power Module Based on Stress Comparison to a Si Device. IEEE Transactions on Device and Materials Reliability, 2017, 17, 727-737.	1.5	124
8	Temperature and Switching Rate Dependence of Crosstalk in Si-IGBT and SiC Power Modules. IEEE Transactions on Industrial Electronics, 2016, 63, 849-863.	5.2	114
9	Exploration of Power Device Reliability Using Compact Device Models and Fast Electrothermal Simulation. IEEE Transactions on Industry Applications, 2008, 44, 894-903.	3.3	107
10	Low Stress Cycle Effect in IGBT Power Module Die-Attach Lifetime Modeling. IEEE Transactions on Power Electronics, 2016, 31, 6575-6585.	5.4	106
11	Field-effect mobility temperature modeling of 4H-SiC metal-oxide-semiconductor transistors. Journal of Applied Physics, 2006, 100, 114508.	1.1	105
12	An Investigation of Temperature-Sensitive Electrical Parameters for SiC Power MOSFETs. IEEE Transactions on Power Electronics, 2017, 32, 7954-7966.	5.4	85
13	Experimental Investigation on the Effects of Narrow Junction Temperature Cycles on Die-Attach Solder Layer in an IGBT Module. IEEE Transactions on Power Electronics, 2017, 32, 1431-1441.	5.4	84
14	Modelling the inhomogeneous SiC Schottky interface. Journal of Applied Physics, 2013, 114, .	1.1	78
15	A Fast Loss and Temperature Simulation Method for Power Converters, Part II: 3-D Thermal Model of Power Module. IEEE Transactions on Power Electronics, 2012, 27, 258-268.	5.4	74
16	The Effect of Electrothermal Nonuniformities on Parallel Connected SiC Power Devices Under Unclamped and Clamped Inductive Switching. IEEE Transactions on Power Electronics, 2016, 31, 4526-4535.	5.4	71
17	Physically based compact device models for circuit modelling applications. Microelectronics Journal, 2001, 32, 433-447.	1.1	65
18	An Analysis of the Switching Performance and Robustness of Power MOSFETs Body Diodes: A Technology Evaluation. IEEE Transactions on Power Electronics, 2015, 30, 2383-2394.	5.4	65

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19	Capacitor Selection for Modular Multilevel Converter. IEEE Transactions on Industry Applications, 2016, 52, 3279-3293.	3.3	62
20	A Fast Loss and Temperature Simulation Method for Power Converters, Part I: Electrothermal Modeling and Validation. IEEE Transactions on Power Electronics, 2012, 27, 248-257.	5.4	61
21	An Evaluation of Silicon Carbide Unipolar Technologies for Electric Vehicle Drive-Trains. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2014, 2, 517-528.	3.7	59
22	Characterization and modeling of n-nâ€™Siâ€™SiC heterojunction diodes. Journal of Applied Physics, 2007, 102, .	1.1	58
23	Robustness and Balancing of Parallel-Connected Power Devices: SiC Versus CoolMOS. IEEE Transactions on Industrial Electronics, 2016, 63, 2092-2102.	5.2	58
24	SiC Trench MOSFET With Shielded Fin-Shaped Gate to Reduce Oxide Field and Switching Loss. IEEE Electron Device Letters, 2016, 37, 1324-1327.	2.2	57
25	Improved Electrothermal Ruggedness in SiC MOSFETs Compared With Silicon IGBTs. IEEE Transactions on Electron Devices, 2014, 61, 2278-2286.	1.6	56
26	A Temperature Gradient-Based Potential Defects Identification Method for IGBT Module. IEEE Transactions on Power Electronics, 2017, 32, 2227-2242.	5.4	56
27	Heteroepitaxial Beta-Ga₂O₃ on 4H-SiC for an FET With Reduced Self Heating. IEEE Journal of the Electron Devices Society, 2017, 5, 256-261.	1.2	55
28	The Impact of Temperature and Switching Rate on the Dynamic Characteristics of Silicon Carbide Schottky Barrier Diodes and MOSFETs. IEEE Transactions on Industrial Electronics, 2015, 62, 163-171.	5.2	53
29	The Impact of Parasitic Inductance on the Performance of Siliconâ€™Carbide Schottky Barrier Diodes. IEEE Transactions on Power Electronics, 2012, 27, 3826-3833.	5.4	51
30	An industry-based survey of reliability in power electronic converters. , 2009, , .		46
31	Comparative surface studies on wet and dry sacrificial thermal oxidation on silicon carbide. Applied Surface Science, 2001, 174, 210-216.	3.1	39
32	SiC MOSFET with built-in SBD for reduction of reverse recovery charge and switching loss in 10-kV applications. , 2017, , .		38
33	Study on the lifetime characteristics of power modules under power cycling conditions. IET Power Electronics, 2016, 9, 1045-1052.	1.5	36
34	Analysis of Al/Ti, Al/Ni multiple and triple layer contacts to p-type 4H-SiC. Solid-State Electronics, 2007, 51, 797-801.	0.8	35
35	Accurate Analytical Modeling for Switching Energy of PiN Diodes Reverse Recovery. IEEE Transactions on Industrial Electronics, 2015, 62, 1461-1470.	5.2	34
36	A Model Assisted Testing Scheme for Modular Multilevel Converter. IEEE Transactions on Power Electronics, 2016, 31, 165-176.	5.4	32

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37	Si ⁺ /SiC Heterojunctions Fabricated by Direct Wafer Bonding. <i>Electrochemical and Solid-State Letters</i> , 2008, 11, H306.	2.2	31
38	Compact Electrothermal Reliability Modeling and Experimental Characterization of Bipolar Latchup in SiC and CoolMOS Power MOSFETs. <i>IEEE Transactions on Power Electronics</i> , 2015, 30, 6978-6992.	5.4	29
39	High doped MBE Si ⁿ and n ⁿ heterojunction diodes on 4H-SiC. <i>Microelectronics Journal</i> , 2007, 38, 1233-1237.	1.1	26
40	Si/SiC bonded wafer: A route to carbon free SiO ₂ on SiC. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	26
41	Analysis of inhomogeneous Ge/SiC heterojunction diodes. <i>Journal of Applied Physics</i> , 2009, 106, .	1.1	26
42	Enhanced Field Effect Mobility on 4H-SiC by Oxidation at 1500°C. <i>IEEE Journal of the Electron Devices Society</i> , 2014, 2, 114-117.	1.2	24
43	A Power Module for Grid Inverter With In-Built Short-Circuit Fault Current Capability. <i>IEEE Transactions on Power Electronics</i> , 2020, 35, 10567-10579.	5.4	24
44	A 2D physically based compact model for advanced power bipolar devices. <i>Microelectronics Journal</i> , 2004, 35, 591-594.	1.1	23
45	Distributed Thermal Monitoring of Wind Turbine Power Electronic Modules Using FBG Sensing Technology. <i>IEEE Sensors Journal</i> , 2020, 20, 9886-9894.	2.4	23
46	Lateral high-voltage devices using an optimized variational lateral doping. <i>International Journal of Electronics</i> , 1996, 80, 449-459.	0.9	20
47	Investigation of the power dissipation during IGBT turn-off using a new physics-based IGBT compact model. <i>Microelectronics Reliability</i> , 2002, 42, 1045-1052.	0.9	20
48	Exploration of Power Device Reliability using Compact Device Models and Fast Electro-Thermal Simulation. <i>Conference Record - IAS Annual Meeting (IEEE Industry Applications Society)</i> , 2006, , .	0.0	20
49	Study of a novel Si/SiC hetero-junction MOSFET. <i>Solid-State Electronics</i> , 2007, 51, 662-666.	0.8	20
50	Impact of the Oxidation Temperature on the Interface Trap Density in 4H-SiC MOS Capacitors. <i>Materials Science Forum</i> , 0, 778-780, 599-602.	0.3	18
51	On the Ti ₃ /SiC ₂ ; Metallic Phase Formation for Robust p-Type 4H-SiC Ohmic Contacts. <i>Materials Science Forum</i> , 0, 778-780, 693-696.	0.3	18
52	Improved Testing Capability of the Model-Assisted Testing Scheme for a Modular Multilevel Converter. <i>IEEE Transactions on Power Electronics</i> , 2016, 31, 7823-7836.	5.4	18
53	The Potential of SiC Cascode JFETs in Electric Vehicle Traction Inverters. <i>IEEE Transactions on Transportation Electrification</i> , 2019, 5, 1349-1359.	5.3	18
54	Status and Prospects of Cubic Silicon Carbide Power Electronics Device Technology. <i>Materials</i> , 2021, 14, 5831.	1.3	18

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55	High-Temperature (1200–1400°C) Dry Oxidation of 3C-SiC on Silicon. <i>Journal of Electronic Materials</i> , 2015, 44, 4167-4174.	1.0	17
56	Analysis of Linear-Doped Si/SiC Power LDMOSFETs Based on Device Simulation. <i>IEEE Transactions on Electron Devices</i> , 2016, 63, 2442-2448.	1.6	17
57	The improvement of Mo/4H-SiC Schottky diodes via a P2O5 surface passivation treatment. <i>Journal of Applied Physics</i> , 2020, 127, .	1.1	17
58	A comparison of IGBT models for use in circuit design. <i>IEEE Transactions on Power Electronics</i> , 1999, 14, 607-614.	5.4	16
59	Study of 4H-SiC trench MOSFET structures. <i>Solid-State Electronics</i> , 2005, 49, 1081-1085.	0.8	16
60	Interface characteristics of n-n and p-n Ge/SiC heterojunction diodes formed by molecular beam epitaxy deposition. <i>Journal of Applied Physics</i> , 2010, 107, .	1.1	16
61	Numerical analysis of a trench VDMOST structure with no quasi-saturation. <i>Solid-State Electronics</i> , 1995, 38, 821-828.	0.8	14
62	Investigating the reliability of SiC MOSFET body diodes using Fourier series modelling. , 2014, , .		14
63	Electrical activation of nitrogen heavily implanted 3C-SiC(1 0 0). <i>Applied Surface Science</i> , 2015, 353, 958-963.	3.1	14
64	Heat-Flux-Based Condition Monitoring of Multichip Power Modules Using a Two-Stage Neural Network. <i>IEEE Transactions on Power Electronics</i> , 2021, 36, 7489-7500.	5.4	14
65	A fast power loss calculation method for long real time thermal simulation of IGBT modules for a three-phase inverter system. <i>International Journal of Numerical Modelling: Electronic Networks, Devices and Fields</i> , 2006, 19, 33-46.	1.2	13
66	Analytical Modeling of Switching Energy of Silicon Carbide Schottky Diodes as Functions of dI_{DS}/dt and Temperature. <i>IEEE Transactions on Power Electronics</i> , 2015, 30, 3345-3355.	5.4	13
67	Comparative analysis of false turn-ON in silicon bipolar and SiC unipolar power devices. , 2015, , .		13
68	Cryogenic Characterization of Commercial SiC Power MOSFETs. <i>Materials Science Forum</i> , 0, 821-823, 777-780.	0.3	13
69	3C-SiC Transistor With Ohmic Contacts Defined at Room Temperature. <i>IEEE Electron Device Letters</i> , 2016, 37, 1189-1192.	2.2	13
70	Comparative Study of RESURF Si/SiC LDMOSFETs for High-Temperature Applications Using TCAD Modeling. <i>IEEE Transactions on Electron Devices</i> , 2017, 64, 3713-3718.	1.6	13
71	Highly Effective Junction Isolation Structures for PICs Based on Standard CMOS Process. <i>IEEE Transactions on Electron Devices</i> , 2004, 51, 1178-1184.	1.6	12
72	Creating room temperature Ohmic contacts to 4H-SiC: studied by specific contact resistance measurements and X-ray photoelectron spectroscopy. <i>Surface Science</i> , 2004, 573, 253-263.	0.8	12

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73	Fast Thermal Models for Power Device Packaging. , 2008, , .		12
74	Improved Performance of 4H-SiC PiN Diodes Using a Novel Combined High Temperature Oxidation and Annealing Process. IEEE Transactions on Semiconductor Manufacturing, 2014, 27, 443-451.	1.4	12
75	Series motor four quadrants drive DC Chopper part2: Driving and reverse mode with direct current control. , 2016, , .		12
76	3C-SiD _j Hetero-Epitaxially Grown on Silicon Compliance Substrates and New 3C-SiD _j Substrates for Sustainable Wide-Band-Gap Power Devices (CHALLENGE). Materials Science Forum, 2018, 924, 913-918.	0.3	12
77	An advanced finite element strategy for thermal stress field investigation in aluminium interconnections during processing of very large scale integration multilevel structures. Microelectronics Journal, 1999, 30, 1207-1212.	1.1	11
78	Fast Inverter Loss and Temperature Simulation and Silicon Carbide Device Evaluation for Hybrid Electric Vehicle Drives. IEEJ Transactions on Industry Applications, 2008, 128, 441-449.	0.1	11
79	The numerical modelling of silicon carbide high power semiconductor devices. Microelectronics Journal, 1999, 30, 527-534.	1.1	10
80	SiC MOSFETs with thermally oxidized Ta ₂ Si stacked on SiO ₂ as high-k gate insulator. Microelectronic Engineering, 2008, 85, 704-709.	1.1	10
81	Monitoring solder fatigue in a power module using the rise of case-above-ambient temperature. , 2010, , .		10
82	A study of temperature-related non-linearity at the metal-silicon interface. Journal of Applied Physics, 2012, 112, .	1.1	10
83	Study on lifetime prediction considering fatigue accumulative effect for dieâ€attach solder layer in an IGBT module. IEEJ Transactions on Electrical and Electronic Engineering, 2018, 13, 613-621.	0.8	10
84	A New Protection Scheme for an SSSC in an MV Network by Using a Varistor and Thyristors. IEEE Transactions on Power Delivery, 2021, 36, 102-113.	2.9	10
85	Two-dimensional simulation of constricted-mesa InGaAsP/InP buried-heterostructure lasers. IEEE Journal of Quantum Electronics, 1994, 30, 1691-1700.	1.0	9
86	Mechanical stress related instabilities in silicon under metal coverage. IEEE Transactions on Electron Devices, 2000, 47, 2429-2437.	1.6	9
87	Silicon carbide Schottky diodes and MOSFETs: Solutions to performance problems. , 2008, , .		9
88	Characterization of n-n Ge/SiC heterojunction diodes. Applied Physics Letters, 2008, 93, 112104.	1.5	9
89	Modeling the Impact of the Trench Depth on the Gateâ€Drain Capacitance in Power MOSFETs. IEEE Electron Device Letters, 2011, 32, 1269-1271.	2.2	9
90	Capacitor selection for modular multilevel converter. , 2014, , .		9

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91	High Temperature Nitridation of 4H-SiC MOSFETs. Materials Science Forum, 0, 858, 623-626.	0.3	9
92	A Phase Change Material Integrated Press Pack Power Module With Enhanced Overcurrent Capability for Grid Support – A Study on FRD. IEEE Transactions on Industry Applications, 2021, 57, 3956-3968.	3.3	9
93	Current transport mechanism at the emitter-base junction of an n-p-n GaAs/GaAlAs heterojunction bipolar transistor prepared by MBE. IEEE Transactions on Electron Devices, 1987, 34, 947-949.	1.6	8
94	Improved Schottky contacts to annealed 4H-SiC using a protective carbon cap: Investigated using current voltage measurements and atomic force microscopy. Diamond and Related Materials, 2006, 15, 1472-1477.	1.8	8
95	Integration of HfO ₂ on Si/SiC heterojunctions for the gate architecture of SiC power devices. Applied Physics Letters, 2010, 97, 013506.	1.5	8
96	Analysis of power device failure under avalanche mode Conduction. , 2015, , .		8
97	Finite element modelling and experimental characterisation of paralleled SiC MOSFET failure under avalanche mode conduction. , 2015, , .		8
98	Highly integrated power modules based on copper thick-film-on-DCB for high frequency operation of SiC semiconductors – Design and manufacture. , 2015, , .		8
99	Investigation of parasitic turn-ON in silicon IGBT and Silicon Carbide MOSFET devices: A technology evaluation. , 2015, , .		8
100	An initial consideration of silicon carbide devices in pressure-packages. , 2016, , .		8
101	Design and evaluation of SiC multichip power module with low and symmetrical inductance. Journal of Engineering, 2019, 2019, 3573-3577.	0.6	8
102	A First Evaluation of Thick Oxide 3C-SiC MOS Capacitors Reliability. IEEE Transactions on Electron Devices, 2020, 67, 237-242.	1.6	8
103	HEAT SOURCES AND TEMPERATURE DISTRIBUTION IN INSULATED GATE BIPOLAR TRANSISTORS. International Journal of Numerical Methods for Heat and Fluid Flow, 1992, 2, 291-298.	1.6	7
104	Design of IGBTs for latch-up free operation. Solid-State Electronics, 1994, 37, 1471-1475.	0.8	7
105	Conduction and switching loss comparison between an IGBT/Si-PiN diode pair and an IGBT/SiC-Schottky diode pair. , 2011, , .		7
106	Modeling the Electrothermal Stability of Power MOSFETs During Switching Transients. IEEE Electron Device Letters, 2012, 33, 1039-1041.	2.2	7
107	Development and characterisation of pressed packaging solutions for high-temperature high-reliability SiC power modules. Microelectronics Reliability, 2016, 64, 434-439.	0.9	7
108	Improved Channel Mobility by Oxide Nitridation for N-Channel MOSFET on 3C-SiC(100)/Si. Materials Science Forum, 0, 858, 667-670.	0.3	7

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109	Evaluation of SiC Schottky Diodes Using Pressure Contacts. IEEE Transactions on Industrial Electronics, 2017, 64, 8213-8223.	5.2	7
110	An Investigation into the Impact of Surface Passivation Techniques Using Metal-Semiconductor Interfaces. Materials Science Forum, 0, 897, 443-446.	0.3	7
111	Deep Learning Neural Networks for Heat-Flux Health Condition Monitoring Method of Multi-Device Power Electronics System. , 2019, , .		7
112	The Optimization of 3.3 kV 4H-SiC JBS Diodes. IEEE Transactions on Electron Devices, 2022, 69, 298-303.	1.6	7
113	SiC MOSFET Channel Mobility Dependence on Substrate Doping and Temperature Considering High Density of Interface Traps. Materials Science Forum, 2007, 556-557, 835-838.	0.3	6
114	Physics-based modelling and experimental characterisation of parasitic turn-on in IGBTs. , 2015, , .		6
115	Power Modules for Pulsed Power Applications Using Phase Change Material. , 2018, , .		6
116	Characterization of BTI in SiC MOSFETs Using Third Quadrant Characteristics. , 2019, , .		6
117	Thermal Buffering Effect of Phase Change Material on Press-pack IGBT during Power Pulse. , 2019, , .		6
118	Modeling of Bipolar Degradations in 4H-SiC Power MOSFET Devices by a 3C-SiC Inclusive Layer Consideration in the Drift Region. IEEE Transactions on Power Electronics, 2022, 37, 2959-2969.	5.4	6
119	Quasi-Distributed Temperature Detection of Press-Pack IGBT Power Module Using FBG Sensing. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 4981-4992.	3.7	6
120	Optimization of 1700-V 4H-SiC Superjunction Schottky Rectifiers With Implanted P-Pillars for Practical Realization. IEEE Transactions on Electron Devices, 2021, 68, 3497-3504.	1.6	6
121	Hydrodynamic simulation of electron heating in conventional and lightly-doped-drain MOSFETs with application to substrate current calculation. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 1992, 5, 53-66.	1.2	5
122	An investigation of multi-quantum barriers for band offset engineering in AlGaInP/GaInP lasers. Applied Surface Science, 2002, 190, 284-287.	3.1	5
123	Report on 4H-SiC JTE Schottky diodes. Microelectronics Reliability, 2006, 46, 637-640.	0.9	5
124	Investigation of Si/4H-SiC Hetero-Junction Growth and Electrical Properties. Materials Science Forum, 2009, 615-617, 443-446.	0.3	5
125	Bow Free 4" Diameter 3C-SiC Epilayers Formed upon Wafer-Bonded Si/SiC Substrates. ECS Solid State Letters, 2012, 1, P85-P88.	1.4	5
126	Evaluation of commercially available SiC devices and packaging materials for operation up to 350°C. , 2014, , .		5

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127	Condition Monitoring of Power Electronics for Offshore Wind. Engineering & Technology Reference, 2014, , .	0.1	5
128	Comparative electrothermal analysis between SiC Schottky and silicon PiN diodes: Paralleling and thermal considerations. , 2016, , .		5
129	Feasibility study of SiC devices for low voltage converter in a wind power generation system. , 2018, , .		5
130	A Defects-Based Model on the Barrier Height Behavior in 3C-SiC-on-Si Schottky Barrier Diodes. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2020, 8, 54-65.	3.7	5
131	Physically based 2D compact model for power bipolar devices. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2004, 17, 397-405.	1.2	4
132	Fast 3D thermal simulation of power module packaging. International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, 2012, 25, 378-399.	1.2	4
133	Bipolar Conduction across a Wafer Bonded p-n Si/SiC Heterojunction. Materials Science Forum, 0, 740-742, 1006-1009.	0.3	4
134	The Effect of Interfacial Charge on the Development of Wafer Bonded Silicon-on-Silicon-Carbide Power Devices. Materials Science Forum, 0, 897, 747-750.	0.3	4
135	Fast Switching SiC Cascode JFETs for EV Traction Inverters. , 2020, , .		4
136	Initial investigations into the MOS interface of freestanding 3C-SiC layers for device applications. Semiconductor Science and Technology, 2021, 36, 055006.	1.0	4
137	Power module with large short-term current capability by using phase change material. Journal of Engineering, 2019, 2019, 3225-3229.	0.6	4
138	Monitoring Power Module Solder Degradation From Heat Dissipation in Two Opposite Directions. IEEE Transactions on Power Electronics, 2022, 37, 9754-9766.	5.4	4
139	Coherent properties of electron emission from a single heterobarrier. Journal of Applied Physics, 1994, 76, 395-402.	1.1	3
140	A physical insight into the quasi-saturation effect in VDMOS power transistors. International Journal of Electronics, 1997, 83, 13-22.	0.9	3
141	Emerging Silicon Carbide Power Device Technologies. Journal of Wide Bandgap Materials, 2000, 7, 179-191.	0.1	3
142	Super-junction trench MOSFETs for improved energy conversion efficiency. , 2011, , .		3
143	Physical Modelling of 4H-SiC PiN Diodes. Materials Science Forum, 2012, 717-720, 993-996.	0.3	3
144	Modelling of current sharing in paralleled current limiting superjunction MOSFETs with common gate drives. Microelectronics Reliability, 2012, 52, 497-502.	0.9	3

#	ARTICLE	IF	CITATIONS
145	The impact of silicon carbide technology on grid-connected Distributed Energy resources. , 2013, , .		3
146	Characteristics and aging of SiC MOSFETs operated at very high temperatures. Materials Research Society Symposia Proceedings, 2014, 1693, 113.	0.1	3
147	Study of a novel lateral RESURF 3C-SiC on Si Schottky diode. , 2014, , .		3
148	Characterization of 4H-SiC PiN Diodes Formed on Defects Identified by PL Imaging. Materials Science Forum, 0, 858, 405-409.	0.3	3
149	Compact electrothermal models for unbalanced parallel conducting Si-IGBTs. , 2016, , .		3
150	Physical Characterisation of 3C-SiC(001)/SiO ₂ Interface Using XPS. Materials Science Forum, 2017, 897, 151-154.	0.3	3
151	Cryogenic Characterisation and Modelling of Commercial SiC MOSFETs. Materials Science Forum, 0, 897, 557-560.	0.3	3
152	Power Module with Large Short Term Current Capability by Using Phase Change Material. , 2018, , .		3
153	Effects of Basal Plane Defects on the Performance of Voltage Source Converters. , 2019, , .		3
154	Surface Effects of Passivation within Mo/4H-SiC Schottky Diodes through MOS Analysis. Materials Science Forum, 0, 963, 511-515.	0.3	3
155	Experimental Investigation and Verification of Traps affecting the performance of 3C-SiC-on-Si Schottky Barrier Diodes. , 2019, , .		3
156	A study on free-standing 3C-SiC bipolar power diodes. Applied Physics Letters, 2021, 118, .	1.5	3
157	Experimental and Physics-Based Study of the Schottky Barrier Height Inhomogeneity and Associated Traps Affecting 3C-SiC-on-Si Schottky Barrier Diodes. IEEE Transactions on Industry Applications, 2021, 57, 5252-5263.	3.3	3
158	Optimization of 1700-V 4H-SiC Semi-Superjunction Schottky Rectifiers With Implanted P-Pillars for Practical Realization. IEEE Transactions on Electron Devices, 2022, 69, 1924-1930.	1.6	3
159	Simulation of transient self-heating during power VDMOS transistor turn-off. International Journal of Electronics, 1994, 77, 525-534.	0.9	2
160	An investigation of the impact of a Ti barrier metal on the thermal stress field in passivated aluminium lines and vias in VLSI systems using finite element modelling approach. International Journal of Electronics, 2000, 87, 1289-1299.	0.9	2
161	Study of dual-valley transport across a multiquantum barrier to enhance carrier confinement. Applied Surface Science, 2004, 234, 434-438.	3.1	2
162	Interfacial properties of thermally oxidized Ta ₂ Si on Si. Surface and Interface Analysis, 2008, 40, 1164-1167.	0.8	2

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163	Introducing a 1200V vertical merged IGBT and Power MOSFET: The HUBFET. , 2012, , .		2
164	A novel 3C-SiC on Si power Schottky diode design and modelling. Materials Research Society Symposia Proceedings, 2014, 1693, 93.	0.1	2
165	The impact of triangular defects on electrical characteristics and switching performance of 3.3kV 4H-SiC PiN diode. , 2016, , .		2
166	4H-SiC Trench Structure Fabrication with Al ₂ O ₃ Etching Mask. Materials Science Forum, 2017, 897, 371-374.	0.3	2
167	Functional Oxide as an Extreme High-k Dielectric towards 4H-SiC MOSFET Incorporation. Materials Science Forum, 2017, 897, 155-158.	0.3	2
168	Pressure contact multi-chip packaging of SiC Schottky diodes. , 2017, , .		2
169	Safe-Operating-Area of Snubberless Series Connected Silicon and SiC power devices. , 2018, , .		2
170	Long Term Reliability of Power Modules with Low Amplitude Thermomechanical Stresses and Initial Defects. , 2018, , .		2
171	Novel Method for Evaluation of Negative Bias Temperature Instability of SiC MOSFETs. Materials Science Forum, 2019, 963, 749-752.	0.3	2
172	Design Optimization of 1.2kV 4H-SiC Trench MOSFET. Materials Science Forum, 0, 963, 605-608.	0.3	2
173	Development of High-Quality Gate Oxide on 4H-SiC Using Atomic Layer Deposition. Materials Science Forum, 0, 1004, 547-553.	0.3	2
174	The Effects of Filter Capacitors on Cable Ripple at Different Sections of the Wind Farm Based Multi-Terminal DC System. Energies, 2021, 14, 7000.	1.6	2
175	3.3 kV SiC JBS diodes employing a P ₂ O ₅ surface passivation treatment to improve electrical characteristics. , 2021, , .		2
176	The inclusion of a finite capture time in the numerical simulation of quantum effect devices. Solid-State Electronics, 1995, 38, 9-15.	0.8	1
177	A fully-numerical model for PiN diodes implemented in the Saber circuit simulator. International Journal of Electronics, 1998, 84, 295-305.	0.9	1
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