Wook Bahng

List of Publications by Year
in descending order

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83	713	623574	642610
papers	citations	14 h-index	23 g-index

96	96	96	585
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Current conduction mechanisms in atomic-layer-deposited HfO2/nitridedâ€‚SiO2 stacked gate on 4H silicon carbide. Journal of Applied Physics, 2008, 103, .	1.1	121
2	Electronic Properties of Atomic-Layer-Deposited Al[sub 2]O[sub 3]/Thermal-Nitrided SiO[sub 2] Stacking Dielectric on 4H SiC. Electrochemical and Solid-State Letters, 2007, 10, H69.	2.2	39
3	Improved Electronic Performance of $hbox{HfO}_{2}/ hbox{SiO}_{2}$ Stacking Gate Dielectric on 4H SiC. IEEE Transactions on Electron Devices, 2007, 54, 3409-3413.	1.6	38
4	Analysis of current conduction mechanisms in atomic-layer-deposited Al2O3 gate on 4H silicon carbide. Applied Physics Letters, 2007, 90, 162113.	1.5	36
5	Effects of thermal nitrided gate-oxide thickness on 4H silicon-carbide-based metal-oxide-semiconductor characteristics. Applied Physics Letters, 2007, 90, 012120.	1.5	29
6	Effects of post-oxidation annealing temperature on ZrO2 thin film deposited on 4H-SiC substrate. Materials Science in Semiconductor Processing, 2011, 14, 13-17.	1.9	27
7	Metal-oxideâ€“semiconductor characteristics of thermally grown nitrided SiO2 thin film on 4H-SiC in various N2O ambient. Thin Solid Films, 2010, 518, 3255-3259.	0.8	26
8	Analysis of charge conduction mechanisms in nitrided SiO2 Film on 4H SiC. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 529-532.	0.9	21
9	Flux-Controlled Sublimation Growth by an Inner Guide-Tube. Materials Science Forum, 2002, 389-393, 83-86.	0.3	20
10	Heteroepitaxial growth of Î²â€SiC thin films on Si(100) substrate using bisâ€trimethylsilylmethane. Applied Physics Letters, 1996, 69, 4053-4055.	1.5	18
11	Structural and optical properties of epitaxial ZnO thin films on 4Hâ€“SiC (0001) substrates prepared by pulsed laser deposition. Journal of Alloys and Compounds, 2010, 489, 179-182.	2.8	17
12	Schottky barrier modulation of metal/4H-SiC junction with thin interface spacer driven by surface polarization charge on 4H-SiC substrate. Applied Physics Letters, 2015, 107, .	1.5	17
13	Current conduction mechanisms in post-nitridation rapid-thermal-annealed gate oxides on 4H silicon carbide. Applied Physics Letters, 2005, 87, 212102.	1.5	16
14	High-Quality SiC Bulk Single Crystal Growth Based on Simulation and Experiment. Materials Science Forum, 2004, 457-460, 29-34.	0.3	15
15	Effect of Postoxidation Annealing on High Temperature Grown SiO[sub 2]/4H-SiC Interfaces. Journal of the Electrochemical Society, 2010, 157, H196.	1.3	15
16	Homoepitaxial growth of 6Hâ€“SiC thin films by metal-organic chemical vapor deposition using bis-trimethylsilylmethane precursor. Journal of Crystal Growth, 2000, 210, 629-636.	0.7	12
17	Fabrication of a 600-V/20-A 4H-SiC schottky barrier diode. Journal of the Korean Physical Society, 2014, 64, 1886-1891.	0.3	12
18	Shape of SiC Bulk Single Crystal Grown by Sublimation. Materials Science Forum, 2000, 338-342, 99-102.	0.3	11

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19	Improved local oxidation of silicon carbide using atomic force microscopy. Applied Physics Letters, 2010, 96, .	1.5	11
20	Electrical Properties of Atomic-Layer-Deposited La₂O₃/Thermal-Nitrided SiO₂ Stacking Dielectric on 4H-SiC(0001). Materials Science Forum, 2007, 556-557, 643-646.	0.3	10
21	Epitaxial growth of Î²-SiC thin films using bis-trimethylsilylmethane on Si(100) with a polycrystalline buffer layer. Thin Solid Films, 1996, 290-291, 181-185.	0.8	9
22	Liquid-phase epitaxy on 6H-SiC Acheson seed crystals in closed vessel. Journal of Crystal Growth, 2000, 220, 75-81.	0.7	9
23	Top-Down Fabrication of 4Hâ€“SiC Nano-Channel Field Effect Transistors. Journal of Nanoscience and Nanotechnology, 2014, 14, 7821-7823.	0.9	9
24	Fabrication of 4H-SiC lateral double implanted MOSFET on an on-axis semi-insulating substrate without using epi-layer. Japanese Journal of Applied Physics, 2017, 56, 120305.	0.8	9
25	TEOS-based low-pressure chemical vapor deposition for gate oxides in 4Hâ€“SiC MOSFETs using nitric oxide post-deposition annealing. Current Applied Physics, 2020, 20, 1386-1390.	1.1	9
26	Double p-base structure for 1.2-kV SiC trench MOSFETs with the suppression of electric-field crowding at gate oxide. Microelectronic Engineering, 2020, 225, 111280.	1.1	9
27	Effects of rapid thermal annealing on Al2O3/SiN reaction barrier layer/thermal-nitrided SiO2 stacking gate dielectrics on n-type 4H-SiC. Applied Physics Letters, 2010, 96, .	1.5	8
28	Anti-reflective nano- and micro-structures on 4H-SiC for photodiodes. Nanoscale Research Letters, 2011, 6, 236.	3.1	8
29	Suppression of Macrostep Formation in 4H-SiC Using a Cap Oxide Layer. Materials Science Forum, 2002, 389-393, 863-866.	0.3	7
30	Damage Relaxation Pre-Activation Anneal in Al-Implanted SiC. Materials Science Forum, 2003, 433-436, 617-620.	0.3	6
31	Investigation of thermally grown oxide on 4H-SiC by a combination of H2O and HNO3 vapor with varied HNO3 solution heating temperature. Applied Surface Science, 2013, 285, 795-804.	3.1	6
32	Enhanced field-emission capacity by density control of a CNT cathode using post-plasma treatment. Solid State Communications, 2013, 171, 50-54.	0.9	6
33	Effects of trench profile and self-aligned ion implantation on electrical characteristics of 1.2 kV 4H-SiC trench MOSFETs using bottom protection p-well. Japanese Journal of Applied Physics, 2018, 57, 06HC07.	0.8	6
34	Fabrication of 1.2 kV Ni/4H-SiC Junction Barrier-Controlled Schottky Diodes with a Single P+ Ion-Implantation Process. Journal of the Korean Physical Society, 2009, 54, 1802-1806.	0.3	6
35	Characteristics of Post-Nitridation Rapid-Thermal Annealed Gate Oxide Grown on 4H-SiC. Materials Science Forum, 2005, 483-485, 689-692.	0.3	5
36	Effects of Thermally Oxidized-SiN Gate Oxide on 4H-SiC Substrate. Electrochemical and Solid-State Letters, 2007, 10, H327.	2.2	5

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37	Etch pit investigation of free electron concentration controlled 4H-SiC. Journal of Crystal Growth, 2013, 369, 38-42.	0.7	5
38	Investigation of SiO2 film growth on 4H-SiC by direct thermal oxidation and postoxidation annealing techniques in HNO3 & H2O vapor at varied process durations. Thin Solid Films, 2014, 570, 138-149.	0.8	5
39	Role of the oxidizing agent in the etching of 4H-SiC substrates with molten KOH. Journal of the Korean Physical Society, 2016, 69, 1677-1682.	0.3	5
40	High-voltage lateral double-implanted MOSFETs implemented on high-purity semi-insulating 4H-SiC substrates with gate field plates. Japanese Journal of Applied Physics, 2018, 57, 06HC08.	0.8	5
41	Micro-trench free 4H-SiC etching with improved SiC/SiO₂ selectivity using inductively coupled SF₆/O₂/Ar plasma. Physica Scripta, 2020, 95, 045606.	1.2	5
42	Fabrication and Characterization of 4H-SiC pn Diode with Field Limiting Ring. Materials Science Forum, 2004, 457-460, 1013-1016.	0.3	4
43	Nanomechanical Analysis of Triangular Defect in 4H-SiC Epilayer. Materials Science Forum, 0, 778-780, 394-397.	0.3	4
44	Improved 4H-SiC metal oxide semiconductor interface produced by using an oxidized SiN gate oxide that had undergone post-oxidation annealing. Journal of the Korean Physical Society, 2014, 64, 1363-1369.	0.3	4
45	Oxygen- and photoresist-related interface states of 4H-SiC Schottky diode observed by deep-level transient spectroscopy. Journal of Applied Physics, 2017, 122, 094504.	1.1	4
46	Low Resistance Cathode Metallization and Die-Bonding in Silicon Carbide P-N Junction Diodes. Materials Science Forum, 2007, 556-557, 717-720.	0.3	3
47	Black SiC formation induced by Si overlayer deposition and subsequent plasma etching. Thin Solid Films, 2011, 519, 3728-3731.	0.8	3
48	Metal Work-function and Doping-Concentration Dependent Barrier Height of Ni-Contacts to 4H-SiC with Metal-Embedded Nano-Particles. Materials Science Forum, 2012, 717-720, 857-860.	0.3	3
49	Impact of Stacking Fault on the I-V Characteristics of 4H-SiC Schottky Barrier Diode. Materials Science Forum, 0, 821-823, 563-566.	0.3	3
50	The Effect of Threading Dislocation on Current-Voltage Characteristics of 3.3 kV 4H-SiC Schottky Barrier Diode. ECS Transactions, 2018, 85, 59-65.	0.3	3
51	Effect of sweeping direction on the capacitanceâ^'voltage behavior of sputtered SiO2/4H-SiC metal-oxide semiconductors after nitric oxide post-deposition annealing. Physica Scripta, 2019, 94, 125811.	1.2	3
52	Electrical Properties of Metal-Oxide-Semiconductor (MOS) Structures on 4H-SiC(0001) Formed by Oxidizing Pre-Deposited Si_xN_y. Materials Science Forum, 2007, 556-557, 647-650.	0.3	2
53	Improved 4H-SiC MOS Interface Produced by Oxidized-SiN Gate Oxide. Materials Science Forum, 2010, 645-648, 511-514.	0.3	2
54	Correlation between reverse characteristics and structural defects in 4H-SiC PiN diode. Journal of the Korean Physical Society, 2013, 63, 1819-1823.	0.3	2

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55	Effects of wet-oxidized 4H-SiC annealed in HNO₃/H₂O vapour. Microelectronics International, 2013, 31, 42-53.	0.4	2
56	Effect of surface passivation on breakdown voltages of 4H-SiC Schottky barrier diodes. Journal of the Korean Physical Society, 2017, 71, 707-710.	0.3	2
57	A low knee voltage and high breakdown voltage of 4H-SiC TSBS employing poly-Si/Ni Schottky scheme. Solid-State Electronics, 2018, 140, 8-11.	0.8	2
58	Impact of Interface Charges on the Transient Characteristics of 4H-SiC DMOSFETs. Journal of Electrical Engineering and Technology, 2012, 7, 236-239.	1.2	2
59	X-ray Topographic Study of SiC Crystal at High Temperature. Materials Science Forum, 2000, 338-342, 461-464.	0.3	1
60	Modification of Surface Layer during High Temperature Annealing and its Effects on the SiC Diode Characteristics. Materials Science Forum, 2007, 556-557, 595-598.	0.3	1
61	Effects of heat treatment in vacuum on the physical properties of thermal nitrided silicon dioxide gate on 4H-silicon carbide. Thin Solid Films, 2008, 516, 7921-7924.	0.8	1
62	Fabrication characteristics of 1.2kV SiC JBS diode. , 2008, , .		1
63	Fabrication of a 1.7-kV Schottky barrier diode with improved forward current-voltage characteristics. Journal of the Korean Physical Society, 2016, 68, 810-814.	0.3	1
64	(Invited) SiC Lateral MOSFETs Implemented on Semi-Insulating Substrate. ECS Transactions, 2018, 85, 75-87.	0.3	1
65	High-voltage LDIMOSFETs on HPSI 4H-SiC substrate with dual field plates. Physica Scripta, 2019, 94, 105809.	1.2	1
66	Effects of junction profiles in bottom protection p-well on electrical characteristics of 1.2â€‰kV SiC trench-gate MOSFETs. EPJ Applied Physics, 2019, 88, 30103.	0.3	1
67	Design and Fabrication of 1.2ÂkV/10A 4H-SiC Junction Barrier Schottky Diodes with High Current Density. Transactions on Electrical and Electronic Materials, 2021, 22, 115-120.	1.0	1
68	Effects of stress on the evolution of Î£-shaped dislocation arrays in a 4H-SiC epitaxial layer. Journal of Applied Physics, 2021, 129, .	1.1	1
69	The inclination of threading dislocation in chemical vapor deposition-grown single-crystal diamond analyzed by synchrotron white beam X-ray topography. Journal of the Korean Physical Society, 2022, 80, 175-184.	0.3	1
70	Co-Formation of Gate Electrode and Ohmic Contacts in SiC Power MOSFETs. Materials Science Forum, 2003, 433-436, 661-664.	0.3	0
71	Edge Termination Technique for SiC Power Devices. Materials Science Forum, 2004, 457-460, 1241-1244.	0.3	0
72	4H-SiC p-n Diode using Internal Ring (IR) Termination Technique. Materials Science Forum, 2004, 457-460, 1041-1044.	0.3	0

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73	Numerical Investigation of the DC and RF Performances for a 4H-SiC Double Delta-Doped Channel MESFET Having Various Delta-Doping Concentrations. Materials Science Forum, 2007, 556-557, 823-826.	0.3	0
74	Breakdown Voltage Characteristics of FLR-Assisted SiC-SBD Formed by Aluminum Metal Junction Edge Termination. Materials Science Forum, 2007, 556-557, 861-864.	0.3	0
75	Post Annealing Etch Process for Improved Reverse Characteristics of 4H-SiC Diode. Materials Science Forum, 0, 615-617, 663-666.	0.3	0
76	Design and Characterization of 50W Switch Mode Power Supply Using Normally-On SiC JFET. Materials Science Forum, 2010, 645-648, 1151-1154.	0.3	0
77	Epitaxial ZnO/4H-SiC heterojunction diodes. , 2010, , .		0
78	Mixed-mode Simulation of Transient Characteristics of 4H-SiC DMOSFETsâ€”Impact of Temperature. AIP Conference Proceedings, 2011, , .	0.3	0
79	GaZnO as a Transparent Electrode to Silicon Carbide. Materials Science Forum, 2012, 717-720, 849-852.	0.3	0
80	Effects of Substrate Temperature on the Electrical and the Optical Properties of N-Type ZnO/P-Type 4H-SiC. Materials Science Forum, 0, 717-720, 1327-1330.	0.3	0
81	Improved reverse current-voltage characteristics of a 4H-SiC PiN diode by bias-enhanced reduction of surface damage. Journal of the Korean Physical Society, 2013, 62, 1312-1316.	0.3	0
82	Investigation of charge build-up in NO nitrided gate oxide on 4H-SiC during Fowler-Nordheim injection and fabrication of 4H-SiC Lateral Double-Implanted MOSFETs. , 2014, , .		0
83	Formation of the Uniform Interface Ni/4H-SiC Ohmic Contact with Titanium as Barrier Layer. Materials Science Forum, 2018, 924, 397-400.	0.3	0