

# Wook Bahng

## List of Publications by Citations

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96  
ext. papers

664  
ext. citations

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L-index

#	Paper	IF	Citations
77	Current conduction mechanisms in atomic-layer-deposited HfO <sub>2</sub> /nitrided SiO <sub>2</sub> stacked gate on 4H silicon carbide. <i>Journal of Applied Physics</i> , <b>2008</b> , 103, 084113	2.5	110
76	Analysis of current conduction mechanisms in atomic-layer-deposited Al <sub>2</sub> O <sub>3</sub> gate on 4H silicon carbide. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 162113	3.4	33
75	Electronic Properties of Atomic-Layer-Deposited Al <sub>2</sub> O <sub>3</sub> /Thermal-Nitrided SiO <sub>2</sub> Stacking Dielectric on 4H SiC. <i>Electrochemical and Solid-State Letters</i> , <b>2007</b> , 10, H69		32
74	Improved Electronic Performance of HfO <sub>2</sub> /SiO <sub>2</sub> Stacking Gate Dielectric on 4H SiC. <i>IEEE Transactions on Electron Devices</i> , <b>2007</b> , 54, 3409-3413	2.9	28
73	Effects of thermal nitrided gate-oxide thickness on 4H silicon-carbide-based metal-oxide-semiconductor characteristics. <i>Applied Physics Letters</i> , <b>2007</b> , 90, 012120	3.4	28
72	Metal-oxide-semiconductor characteristics of thermally grown nitrided SiO <sub>2</sub> thin film on 4H-SiC in various N <sub>2</sub> O ambient. <i>Thin Solid Films</i> , <b>2010</b> , 518, 3255-3259	2.2	24
71	Effects of post-oxidation annealing temperature on ZrO <sub>2</sub> thin film deposited on 4H-SiC substrate. <i>Materials Science in Semiconductor Processing</i> , <b>2011</b> , 14, 13-17	4.3	22
70	Analysis of charge conduction mechanisms in nitrided SiO <sub>2</sub> Film on 4H SiC. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , <b>2008</b> , 372, 529-532	2.3	20
69	Flux-Controlled Sublimation Growth by an Inner Guide-Tube. <i>Materials Science Forum</i> , <b>2002</b> , 389-393, 83-86	0.4	18
68	Structural and optical properties of epitaxial ZnO thin films on 4H-SiC (0001) substrates prepared by pulsed laser deposition. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 489, 179-182	5.7	16
67	Heteroepitaxial growth of SiC thin films on Si(100) substrate using bis-trimethylsilylmethane. <i>Applied Physics Letters</i> , <b>1996</b> , 69, 4053-4055	3.4	16
66	Current conduction mechanisms in post-nitridation rapid-thermal-annealed gate oxides on 4H silicon carbide. <i>Applied Physics Letters</i> , <b>2005</b> , 87, 212102	3.4	15
65	High-Quality SiC Bulk Single Crystal Growth Based on Simulation and Experiment. <i>Materials Science Forum</i> , <b>2004</b> , 457-460, 29-34	0.4	14
64	Homoepitaxial growth of 6H-SiC thin films by metal-organic chemical vapor deposition using bis-trimethylsilylmethane precursor. <i>Journal of Crystal Growth</i> , <b>2000</b> , 210, 629-636	1.6	12
63	Schottky barrier modulation of metal/4H-SiC junction with thin interface spacer driven by surface polarization charge on 4H-SiC substrate. <i>Applied Physics Letters</i> , <b>2015</b> , 107, 252101	3.4	11
62	Effect of Postoxidation Annealing on High Temperature Grown SiO <sub>2</sub> /4H-SiC Interfaces. <i>Journal of the Electrochemical Society</i> , <b>2010</b> , 157, H196	3.9	11
61	Shape of SiC Bulk Single Crystal Grown by Sublimation. <i>Materials Science Forum</i> , <b>2000</b> , 338-342, 99-102	0.4	11

60	Fabrication of a 600-V/20-A 4H-SiC schottky barrier diode. <i>Journal of the Korean Physical Society</i> , <b>2014</b> , 64, 1886-1891	0.6	9
59	Liquid-phase epitaxy on 6H-SiC Acheson seed crystals in closed vessel. <i>Journal of Crystal Growth</i> , <b>2000</b> , 220, 75-81	1.6	9
58	Fabrication of 4H-SiC lateral double implanted MOSFET on an on-axis semi-insulating substrate without using epi-layer. <i>Japanese Journal of Applied Physics</i> , <b>2017</b> , 56, 120305	1.4	8
57	Improved local oxidation of silicon carbide using atomic force microscopy. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 082105	3.4	8
56	Electrical Properties of Atomic-Layer-Deposited La <sub>2</sub> O <sub>3</sub> /Thermal-Nitrided SiO <sub>2</sub> Stacking Dielectric on 4H-SiC(0001). <i>Materials Science Forum</i> , <b>2007</b> , 556-557, 643-646	0.4	8
55	Epitaxial growth of SiC thin films using bis-trimethylsilylmethane on Si(100) with a polycrystalline buffer layer. <i>Thin Solid Films</i> , <b>1996</b> , 290-291, 181-185	2.2	8
54	Anti-reflective nano- and micro-structures on 4H-SiC for photodiodes. <i>Nanoscale Research Letters</i> , <b>2011</b> , 6, 236	5	7
53	Suppression of Macrostep Formation in 4H-SiC Using a Cap Oxide Layer. <i>Materials Science Forum</i> , <b>2002</b> , 389-393, 863-866	0.4	7
52	Effects of rapid thermal annealing on Al <sub>2</sub> O <sub>3</sub> /SiN reaction barrier layer/thermal-nitrided SiO <sub>2</sub> stacking gate dielectrics on n-type 4H-SiC. <i>Applied Physics Letters</i> , <b>2010</b> , 96, 122108	3.4	6
51	Damage Relaxation Pre-Activation Anneal in Al-Implanted SiC. <i>Materials Science Forum</i> , <b>2003</b> , 433-436, 617-620	0.4	6
50	Fabrication of 1.2 kV Ni/4H-SiC Junction Barrier-Controlled Schottky Diodes with a Single P+ Ion-Implantation Process. <i>Journal of the Korean Physical Society</i> , <b>2009</b> , 54, 1802-1806	0.6	6
49	Investigation of thermally grown oxide on 4H-SiC by a combination of H <sub>2</sub> O and HNO <sub>3</sub> vapor with varied HNO <sub>3</sub> solution heating temperature. <i>Applied Surface Science</i> , <b>2013</b> , 285, 795-804	6.7	5
48	Enhanced field-emission capacity by density control of a CNT cathode using post-plasma treatment. <i>Solid State Communications</i> , <b>2013</b> , 171, 50-54	1.6	5
47	Etch pit investigation of free electron concentration controlled 4H-SiC. <i>Journal of Crystal Growth</i> , <b>2013</b> , 369, 38-42	1.6	4
46	Top-down fabrication of 4H-SiC nano-channel field effect transistors. <i>Journal of Nanoscience and Nanotechnology</i> , <b>2014</b> , 14, 7821-3	1.3	4
45	Effects of Thermally Oxidized-SiN Gate Oxide on 4H-SiC Substrate. <i>Electrochemical and Solid-State Letters</i> , <b>2007</b> , 10, H327		4
44	Fabrication and Characterization of 4H-SiC pn Diode with Field Limiting Ring. <i>Materials Science Forum</i> , <b>2004</b> , 457-460, 1013-1016	0.4	4
43	Characteristics of Post-Nitridation Rapid-Thermal Annealed Gate Oxide Grown on 4H-SiC. <i>Materials Science Forum</i> , <b>2005</b> , 483-485, 689-692	0.4	4

42	High-voltage lateral double-implanted MOSFETs implemented on high-purity semi-insulating 4H-SiC substrates with gate field plates. <i>Japanese Journal of Applied Physics</i> , <b>2018</b> , 57, 06HC08	1.4	4
41	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. <i>Japanese Journal of Applied Physics</i> , <b>2018</b> , 57, 06HC07	1.4	4
40	Effect of sweeping direction on the capacitance-voltage behavior of sputtered SiO <sub>2</sub> /4H-SiC metal-oxide semiconductors after nitric oxide post-deposition annealing. <i>Physica Scripta</i> , <b>2019</b> , 94, 125811	1.6	3
39	Investigation of SiO <sub>2</sub> film growth on 4H-SiC by direct thermal oxidation and postoxidation annealing techniques in HNO <sub>3</sub> & H <sub>2</sub> O vapor at varied process durations. <i>Thin Solid Films</i> , <b>2014</b> , 570, 138-149	1.2	3
38	Improved 4H-SiC metal oxide semiconductor interface produced by using an oxidized SiN gate oxide that had undergone post-oxidation annealing. <i>Journal of the Korean Physical Society</i> , <b>2014</b> , 64, 1363-1369	0.6	3
37	Nanomechanical Analysis of Triangular Defect in 4H-SiC Epilayer. <i>Materials Science Forum</i> , <b>2014</b> , 778-780, 394-397	0.4	3
36	Black SiC formation induced by Si overlayer deposition and subsequent plasma etching. <i>Thin Solid Films</i> , <b>2011</b> , 519, 3728-3731	2.2	3
35	Metal Work-function and Doping-Concentration Dependent Barrier Height of Ni-Contacts to 4H-SiC with Metal-Embedded Nano-Particles. <i>Materials Science Forum</i> , <b>2012</b> , 717-720, 857-860	0.4	3
34	Low Resistance Cathode Metallization and Die-Bonding in Silicon Carbide P-N Junction Diodes. <i>Materials Science Forum</i> , <b>2007</b> , 556-557, 717-720	0.4	3
33	TEOS-based low-pressure chemical vapor deposition for gate oxides in 4H-SiC MOSFETs using nitric oxide post-deposition annealing. <i>Current Applied Physics</i> , <b>2020</b> , 20, 1386-1390	2.6	3
32	Impact of Stacking Fault on the I-V Characteristics of 4H-SiC Schottky Barrier Diode. <i>Materials Science Forum</i> , <b>2015</b> , 821-823, 563-566	0.4	2
31	Double p-base structure for 1.2-kV SiC trench MOSFETs with the suppression of electric-field crowding at gate oxide. <i>Microelectronic Engineering</i> , <b>2020</b> , 225, 111280	2.5	2
30	Correlation between reverse characteristics and structural defects in 4H-SiC PiN diode. <i>Journal of the Korean Physical Society</i> , <b>2013</b> , 63, 1819-1823	0.6	2
29	Oxygen- and photoresist-related interface states of 4H-SiC Schottky diode observed by deep-level transient spectroscopy. <i>Journal of Applied Physics</i> , <b>2017</b> , 122, 094504	2.5	2
28	Effect of surface passivation on breakdown voltages of 4H-SiC Schottky barrier diodes. <i>Journal of the Korean Physical Society</i> , <b>2017</b> , 71, 707-710	0.6	2
27	Effects of wet-oxidized 4H-SiC annealed in HNO <sub>3</sub> /H <sub>2</sub> O vapour. <i>Microelectronics International</i> , <b>2013</b> , 31, 42-53	0.8	2
26	Improved 4H-SiC MOS Interface Produced by Oxidized-SiN Gate Oxide. <i>Materials Science Forum</i> , <b>2010</b> , 645-648, 511-514	0.4	2
25	A low knee voltage and high breakdown voltage of 4H-SiC TSBS employing poly-Si/Ni Schottky scheme. <i>Solid-State Electronics</i> , <b>2018</b> , 140, 8-11	1.7	2

24	Micro-trench free 4H-SiC etching with improved SiC/SiO <sub>2</sub> selectivity using inductively coupled SF <sub>6</sub> /O <sub>2</sub> /Ar plasma. <i>Physica Scripta</i> , <b>2020</b> , 95, 045606	2.6	1
23	Fabrication of a 1.7-kV Schottky barrier diode with improved forward current-voltage characteristics. <i>Journal of the Korean Physical Society</i> , <b>2016</b> , 68, 810-814	0.6	1
22	High-voltage LDIMOSFETs on HPSI 4H-SiC substrate with dual field plates. <i>Physica Scripta</i> , <b>2019</b> , 94, 105809	0.9	1
21	Effects of heat treatment in vacuum on the physical properties of thermal nitrided silicon dioxide gate on 4H-silicon carbide. <i>Thin Solid Films</i> , <b>2008</b> , 516, 7921-7924	2.2	1
20	Modification of Surface Layer during High Temperature Annealing and its Effects on the SiC Diode Characteristics. <i>Materials Science Forum</i> , <b>2007</b> , 556-557, 595-598	0.4	1
19	Electrical Properties of Metal-Oxide-Semiconductor (MOS) Structures on 4H-SiC(0001) Formed by Oxidizing Pre-Deposited SixNy. <i>Materials Science Forum</i> , <b>2007</b> , 556-557, 647-650	0.4	1
18	X-ray Topographic Study of SiC Crystal at High Temperature. <i>Materials Science Forum</i> , <b>2000</b> , 338-342, 461-464	0.4	1
17	Impact of Interface Charges on the Transient Characteristics of 4H-SiC DMOSFETs. <i>Journal of Electrical Engineering and Technology</i> , <b>2012</b> , 7, 236-239	1.4	1
16	Role of the oxidizing agent in the etching of 4H-SiC substrates with molten KOH. <i>Journal of the Korean Physical Society</i> , <b>2016</b> , 69, 1677-1682	0.6	1
15	Effects of junction profiles in bottom protection p-well on electrical characteristics of 1.2 kV SiC trench-gate MOSFETs. <i>EPJ Applied Physics</i> , <b>2019</b> , 88, 30103	1.1	1
14	Design and Fabrication of 1.2 kV/10A 4H-SiC Junction Barrier Schottky Diodes with High Current Density. <i>Transactions on Electrical and Electronic Materials</i> , <b>2021</b> , 22, 115-120	1.7	1
13	The inclination of threading dislocation in chemical vapor deposition-grown single-crystal diamond analyzed by synchrotron white beam X-ray topography. <i>Journal of the Korean Physical Society</i> , <b>2022</b> , 80, 175-184	0.6	0
12	Improved reverse current-voltage characteristics of a 4H-SiC PIN diode by bias-enhanced reduction of surface damage. <i>Journal of the Korean Physical Society</i> , <b>2013</b> , 62, 1312-1316	0.6	
11	Design and Characterization of 50W Switch Mode Power Supply Using Normally-On SiC JFET. <i>Materials Science Forum</i> , <b>2010</b> , 645-648, 1151-1154	0.4	
10	Post Annealing Etch Process for Improved Reverse Characteristics of 4H-SiC Diode. <i>Materials Science Forum</i> , <b>2009</b> , 615-617, 663-666	0.4	
9	GaN as a Transparent Electrode to Silicon Carbide. <i>Materials Science Forum</i> , <b>2012</b> , 717-720, 849-852	0.4	
8	Effects of Substrate Temperature on the Electrical and the Optical Properties of N-Type ZnO/P-Type 4H-SiC. <i>Materials Science Forum</i> , <b>2012</b> , 717-720, 1327-1330	0.4	
7	Numerical Investigation of the DC and RF Performances for a 4H-SiC Double Delta-Doped Channel MESFET Having Various Delta-Doping Concentrations. <i>Materials Science Forum</i> , <b>2007</b> , 556-557, 823-826	0.4	

- 6 Breakdown Voltage Characteristics of FLR-Assisted SiC-SBD Formed by Aluminum Metal Junction Edge Termination. *Materials Science Forum*, **2007**, 556-557, 861-864 0.4
- 5 Edge Termination Technique for SiC Power Devices. *Materials Science Forum*, **2004**, 457-460, 1241-1244 0.4
- 4 4H-SiC p-n Diode using Internal Ring (IR) Termination Technique. *Materials Science Forum*, **2004**, 457-460, 1041-1044 0.4
- 3 Co-Formation of Gate Electrode and Ohmic Contacts in SiC Power MOSFETs. *Materials Science Forum*, **2003**, 433-436, 661-664 0.4
- 2 Effects of stress on the evolution of Eshaped dislocation arrays in a 4H-SiC epitaxial layer. *Journal of Applied Physics*, **2021**, 129, 245101 2.5
- 1 Formation of the Uniform Interface Ni/4H-SiC Ohmic Contact with Titanium as Barrier Layer. *Materials Science Forum*, **2018**, 924, 397-400 0.4