

Yoshiyuki Yonezawa

List of Publications by Citations

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71
papers

951
citations

17
h-index

27
g-index

75
ext. papers

1,157
ext. citations

2
avg, IF

4.08
L-index

#	Paper	IF	Citations
71	Improved Channel Mobility in 4H-SiC MOSFETs by Boron Passivation. <i>IEEE Electron Device Letters</i> , 2014 , 35, 1176-1178	4.4	83
70	Characterization of traps at nitrided SiO ₂ /SiC interfaces near the conduction band edge by using Hall effect measurements. <i>Applied Physics Express</i> , 2017 , 10, 046601	2.4	72
69	Current status and perspectives of ultrahigh-voltage SiC power devices. <i>Materials Science in Semiconductor Processing</i> , 2018 , 78, 43-56	4.3	53
68	Growth of Shockley type stacking faults upon forward degradation in 4H-SiC p-i-n diodes. <i>Journal of Applied Physics</i> , 2016 , 119, 095711	2.5	53
67	Development of Ultrahigh-Voltage SiC Devices. <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 396-404	2.9	52
66	Short minority carrier lifetimes in highly nitrogen-doped 4H-SiC epilayers for suppression of the stacking fault formation in PiN diodes. <i>Journal of Applied Physics</i> , 2016 , 120, 115101	2.5	47
65	Temperature-dependent analysis of conduction mechanism of leakage current in thermally grown oxide on 4H-SiC. <i>Journal of Applied Physics</i> , 2015 , 117, 024505	2.5	37
64	Perfect Bi ₄ Ti ₃ O ₁₂ Single-Crystal Films via Flux-Mediated Epitaxy. <i>Advanced Functional Materials</i> , 2006 , 16, 485-491	15.6	34
63	Injected carrier concentration dependence of the expansion of single Shockley-type stacking faults in 4H-SiC PiN diodes. <i>Journal of Applied Physics</i> , 2018 , 123, 025707	2.5	30
62	Fabrication of a P-Channel SiC-IGBT with High Channel Mobility. <i>Materials Science Forum</i> , 2013 , 740-742, 958-961	0.4	29
61	Analyses of High Leakage Currents in Al ⁺ Implanted 4H SiC pn Diodes Caused by Threading Screw Dislocations. <i>Materials Science Forum</i> , 2010 , 645-648, 913-916	0.4	28
60	Threshold-voltage instability in 4H-SiC MOSFETs with nitrided gate oxide revealed by non-relaxation method. <i>Japanese Journal of Applied Physics</i> , 2016 , 55, 04ER11	1.4	23
59	Breaking the Theoretical Limit of 6.5 kV-Class 4H-SiC Super-Junction (SJ) MOSFETs by Trench-Filling Epitaxial Growth 2019 ,		22
58	Dependences of contraction/expansion of stacking faults on temperature and current density in 4H-SiC pi ⁺ n diodes. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 061301	1.4	20
57	Device Performance and Switching Characteristics of 16 kV Ultrahigh-Voltage SiC Flip-Type n-Channel IE-IGBTs. <i>Materials Science Forum</i> , 2015 , 821-823, 842-846	0.4	18
56	2013 ,		18
55	High-sensitivity two-dimensional thermal- and mechanical-stress-induced birefringence measurements in a Nd:YAG rod. <i>Applied Optics</i> , 1994 , 33, 6368-72	1.7	17

54	Influence of basal-plane dislocation structures on expansion of single Shockley-type stacking faults in forward-current degradation of 4H-SiC p-i-n diodes. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 04FR07	1.4	15
53	Strong impact of slight trench direction misalignment from $\{11\bar{2}0\}$ on deep trench filling epitaxy for SiC super-junction devices. <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 04CR05	1.4	14
52	Nanoskyscrapers of ferroelectric Bi ₄ Ti ₃ O ₁₂ . <i>Applied Physics Letters</i> , 2006 , 88, 152904	3.4	13
51	Ideal phonon-scattering-limited mobility in inversion channels of 4H-SiC(0001) MOSFETs with ultralow net doping concentrations. <i>Applied Physics Letters</i> , 2019 , 115, 132102	3.4	12
50	Impact of crystal faces of 4H-SiC in SiO ₂ /4H-SiC structures on interface trap densities and mobilities. <i>Applied Physics Express</i> , 2019 , 12, 021003	2.4	12
49	Combinatorial exploration of flux material for Bi ₄ Ti ₃ O ₁₂ single crystal film growth. <i>Applied Surface Science</i> , 2006 , 252, 2477-2481	6.7	12
48	45°rotational epitaxy of SrTiO ₃ thin films on sulfide-buffered Si. <i>Applied Physics Letters</i> , 2003 , 82, 4125-4127	3.1	12
47	Madelung Potentials in YBa ₂ Cu ₃ O _x (x=7 and 8). <i>Japanese Journal of Applied Physics</i> , 1987 , 26, L1492-L1494	1.4	12
46	Effect of boron incorporation on slow interface traps in SiO ₂ /4H-SiC structures. <i>Applied Physics A: Materials Science and Processing</i> , 2017 , 123, 1	2.6	11
45	Origin analysis of expanded stacking faults by applying forward current to 4H-SiC p-i-n diodes. <i>Applied Physics Express</i> , 2017 , 10, 081201	2.4	11
44	Screening of metal flux for SiC solution growth by a thin-film combinatorial method. <i>Science and Technology of Advanced Materials</i> , 2011 , 12, 054209	7.1	11
43	Overlapping repulsive energies between ions (Y ³⁺ , Ba ²⁺ , Cu ³⁺ , Cu ²⁺ and O ²⁻) and their effects on the nature of the bonds in Y ₂ O ₃ , BaO, CuO and YBa ₂ Cu ₃ O _x . <i>Journal of Physics and Chemistry of Solids</i> , 1990 , 51, 313-322	3.9	11
42	Dynamic characteristics of large current capacity module using 16-kV ultrahigh voltage SiC flip-type n-channel IE-IGBT 2014 ,		10
41	An empirical growth window concerning the input ratio of HCl/SiH ₄ gases in filling 4H-SiC trench by CVD. <i>Applied Physics Express</i> , 2017 , 10, 055505	2.4	9
40	Effect of Current-Spreading Layer Formed by Ion Implantation on the Electrical Properties of High-Voltage 4H-SiC p-Channel IGBTs. <i>Materials Science Forum</i> , 2014 , 778-780, 1038-1041	0.4	9
39	Ceramic liquid droplets stabilized in vacuum. <i>Journal of Applied Physics</i> , 2007 , 101, 033511	2.5	9
38	Relationship between depth of basal-plane dislocations and expanded stacking faults by application of forward current to 4H-SiC p-i-n diodes. <i>Applied Physics Express</i> , 2019 , 12, 051007	2.4	8
37	Exact Characterization of Threshold Voltage Instability in 4H-SiC MOSFETs by Non-Relaxation Method. <i>Materials Science Forum</i> , 2015 , 821-823, 685-688	0.4	8

36	Accurate evaluation of fast threshold voltage shift for SiC MOS devices under various gate bias stress conditions. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 04FA07	1.4	8
35	Numerical analysis of the Gibbs-Thomson effect on trench-filling epitaxial growth of 4H-SiC. <i>Applied Physics Express</i> , 2016 , 9, 035601	2.4	8
34	Characterization of Screw Dislocations in a 4H-Silicon Carbide Diode Using X-Ray Microbeam Three-Dimensional Topography. <i>Materials Science Forum</i> , 2009 , 615-617, 251-254	0.4	8
33	Impact of rapid cooling process in ultrahigh-temperature oxidation of 4H-SiC(0001). <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 04CR04	1.4	7
32	Expansion and contraction of single Shockley stacking faults in SiC epitaxial layer under ultraviolet irradiation. <i>Applied Physics Express</i> , 2019 , 12, 041006	2.4	6
31	Effect of Post-Oxidation Annealing in Wet O ₂ and N ₂ O Ambient on Thermally Grown SiO ₂ /4H-SiC Interface for P-Channel MOS Devices. <i>Materials Science Forum</i> , 2012 , 717-720, 709-712	0.4	6
30	Selection of ion species suited for channeled implantation to be used in multi-epitaxial growth for SiC superjunction devices. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, 050905	1.4	5
29	Dynamic Behavior of a Medium-Voltage N-Channel SiC-IGBT With Ultrafast Switching Performance of 300 kV/μs. <i>IEEE Transactions on Industry Applications</i> , 2018 , 54, 3558-3565	4.3	5
28	Static and dynamic performance evaluation of > 13 kV SiC p-channel IGBTs at high temperatures 2014 ,		5
27	13-kV, 20-A 4H-SiC PiN Diodes for Power System Applications. <i>Materials Science Forum</i> , 2014 , 778-780, 855-858	0.4	5
26	Composition Distribution of Compound Oxide Films Deposited by Magnetron Sputtering. <i>Japanese Journal of Applied Physics</i> , 2000 , 39, 5379-5383	1.4	5
25	Analysis of Dislocation Structures in 4H-SiC by Synchrotron X-Ray Topography. <i>Electrical Engineering in Japan (English Translation of Denki Gakkai Ronbunshi)</i> , 2016 , 197, 3-17	0.4	5
24	Initiation of Shockley Stacking Fault Expansion in 4H-SiC P-i-N Diodes. <i>Materials Science Forum</i> , 2019 , 963, 280-283	0.4	5
23	Improved channel mobility of 4H-SiC n-MOSFETs by ultrahigh-temperature gate oxidation with low-oxygen partial-pressure cooling. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 120304	1.4	5
22	Effect of H ₂ Carrier Gas on CVD Growth Rate for 4H-SiC Trench Filling. <i>Materials Science Forum</i> , 2016 , 858, 181-184	0.4	4
21	Structural analysis of interfacial dislocations and expanded single Shockley-type stacking faults in forward-current degradation of 4H-SiC p-i-n diodes. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, 011005 ^{1.4}	1.4	4
20	Pragmatic Approach to the Characterization of SiC/SiO ₂ Interface Traps near the Conduction Band with Split C-V and Hall Measurements. <i>Materials Science Forum</i> , 2016 , 858, 477-480	0.4	3
19	CVD Filling of Narrow Deep 4H-SiC Trenches in a Quasi-Selective Epitaxial Growth Mode. <i>Materials Science Forum</i> , 2018 , 924, 116-119	0.4	3

18	Reliability Improvement and Optimization of Trench Orientation of 4H-SiC Trench-Gate Oxide. <i>Materials Science Forum</i> , 2014 , 778-780, 537-540	0.4	3
17	Modeling of Al Doping During 4H-SiC Chemical-Vapor-Deposition Trench Filling. <i>IEEE Journal of the Electron Devices Society</i> , 2019 , 7, 470-475	2.3	2
16	Development of ultrahigh voltage SiC power devices 2014 ,		2
15	Ultrahigh voltage SiC bipolar devices 2013 ,		2
14	Dislocation-Related Etch Protrusions Formed on 4H-SiC (000-1) Surfaces by Molten KOH Etching. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 911, 22		2
13	Evaluation of drain current decrease by AC gate bias stress in commercially available SiC MOSFETs 2017 ,		2
12	Conduction Mechanism of Leakage Current in Thermal Oxide on 4H-SiC. <i>Materials Science Forum</i> , 2014 , 778-780, 579-582	0.4	1
11	High Voltage and Fast Switching Reverse Recovery Characteristics of 4H-SiC PiN Diode. <i>Materials Science Forum</i> , 2014 , 778-780, 841-844	0.4	1
10	Growth and Electrical Properties of Fe doped (Ba, Sr)TiO ₃ Thin Films Deposited by Pulsed Laser Deposition. <i>Materials Research Society Symposia Proceedings</i> , 2001 , 688, 1		1
9	Direct visualization of kinetic reversibility of crystallization and dissolution behavior at solution growth interface of SiC in Si-Cr solvent. <i>Surfaces and Interfaces</i> , 2022 , 28, 101664	4.1	1
8	A Study of CVD Growth Parameters to Fill 50- μ m-Deep 4H-SiC Trenches. <i>Materials Science Forum</i> , 2019 , 963, 131-135	0.4	1
7	Effect of HCL on Surface Free Energy of SiC during CVD Trench Filling. <i>Materials Science Forum</i> , 2019 , 963, 136-140	0.4	1
6	Gibbs-Thomson effect on aluminum doping during trench-filling epitaxial growth of 4H-SiC. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, 051009	1.4	0
5	Crystalline Quality Evaluation of SiC p/n Column Layers Formed by Trench-Filling-Epitaxial Growth. <i>Materials Science Forum</i> , 2020 , 1004, 445-450	0.4	
4	Low V F 4H-SiC N-i-P diodes using newly developed low-resistivity p-type substrates. <i>Japanese Journal of Applied Physics</i> , 2020 , 59, SGGD14	1.4	
3	Flux-mediated epitaxy for ferroelectric Bi ₄ Ti ₃ O ₁₂ single crystal film growth. <i>Journal of Electroceramics</i> , 2006 , 17, 189-195	1.5	
2	Depth Distribution of Defects in SiC PiN Diodes Formed Using Ion Implantation or Epitaxial Growth. <i>Physica Status Solidi (B): Basic Research</i> , 2100419	1.3	
1	Fast-filling of 4H-SiC trenches at 10 μ m/h by enhancing partial pressures of source species in chemical vapor deposition processes. <i>Journal of Crystal Growth</i> , 2020 , 546, 125809	1.6	

