

Tsunenobu Kimoto

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456 papers	12,059 citations	56 h-index	92 g-index
487 ext. papers	13,517 ext. citations	2.4 avg, IF	6.94 L-index

#	Paper	IF	Citations
456	Material science and device physics in SiC technology for high-voltage power devices. <i>Japanese Journal of Applied Physics</i> , 2015 , 54, 040103	1.4	558
455	Step-controlled epitaxial growth of SiC: High quality homoepitaxy. <i>Materials Science and Engineering Reports</i> , 1997 , 20, 125-166	30.9	457
454	2014 ,		391
453	Deep Defect Centers in Silicon Carbide Monitored with Deep Level Transient Spectroscopy. <i>Physica Status Solidi A</i> , 1997 , 162, 199-225		330
452	Power Conversion With SiC Devices at Extremely High Ambient Temperatures. <i>IEEE Transactions on Power Electronics</i> , 2007 , 22, 1321-1329	7.2	193
451	Negative-U system of carbon vacancy in 4H-SiC. <i>Physical Review Letters</i> , 2012 , 109, 187603	7.4	176
450	High performance of high-voltage 4H-SiC Schottky barrier diodes. <i>IEEE Electron Device Letters</i> , 1995 , 16, 280-282	4.4	176
449	High channel mobility in inversion layers of 4H-SiC MOSFETs by utilizing (112-0) face. <i>IEEE Electron Device Letters</i> , 1999 , 20, 611-613	4.4	175
448	Performance limiting surface defects in SiC epitaxial p-n junction diodes. <i>IEEE Transactions on Electron Devices</i> , 1999 , 46, 471-477	2.9	167
447	Interface Properties of MetalOxideSemiconductor Structures on 4H-SiC{0001} and (11bar20) Formed by N2O Oxidation. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, 1213-1218	1.4	159
446	Investigation of carrier lifetime in 4H-SiC epilayers and lifetime control by electron irradiation. <i>Applied Physics Letters</i> , 2007 , 90, 202109	3.4	158
445	Reduction of Deep Levels and Improvement of Carrier Lifetime in n-Type 4H-SiC by Thermal Oxidation. <i>Applied Physics Express</i> , 2009 , 2, 041101	2.4	150
444	Step bunching mechanism in chemical vapor deposition of 6H-SiC and 4H-SiC{0001}. <i>Journal of Applied Physics</i> , 1997 , 81, 3494-3500	2.5	144
443	Surface kinetics of adatoms in vapor phase epitaxial growth of SiC on 6H-SiC{0001} vicinal surfaces. <i>Journal of Applied Physics</i> , 1994 , 75, 850-859	2.5	142
442	Growth mechanism of 6H-SiC in step-controlled epitaxy. <i>Journal of Applied Physics</i> , 1993 , 73, 726-732	2.5	138
441	Characterization of in-grown stacking faults in 4H-SiC (0001) epitaxial layers and its impacts on high-voltage Schottky barrier diodes. <i>Applied Physics Letters</i> , 2005 , 87, 051912	3.4	125
440	Effects of wet oxidation/anneal on interface properties of thermally oxidized SiO ₂ /SiC MOS system and MOSFET's. <i>IEEE Transactions on Electron Devices</i> , 1999 , 46, 504-510	2.9	124

439	Step-Controlled Epitaxial Growth of High-Quality SiC Layers. <i>Physica Status Solidi (B): Basic Research</i> , 1997 , 202, 247-262	1.3	123
438	Electronic behaviors of high-dose phosphorus-ion implanted 4H-SiC (0001). <i>Journal of Applied Physics</i> , 2004 , 96, 224-228	2.5	123
437	Excellent reverse blocking characteristics of high-voltage 4H-SiC Schottky rectifiers with boron-implanted edge termination. <i>IEEE Electron Device Letters</i> , 1996 , 17, 139-141	4.4	123
436	Investigation of deep levels in n-type 4H-SiC epilayers irradiated with low-energy electrons. <i>Journal of Applied Physics</i> , 2006 , 100, 113728	2.5	119
435	Step bunching in chemical vapor deposition of 6H- and 4H-SiC on vicinal SiC(0001) faces. <i>Applied Physics Letters</i> , 1995 , 66, 3645-3647	3.4	117
434	Reduction of doping and trap concentrations in 4H-SiC epitaxial layers grown by chemical vapor deposition. <i>Applied Physics Letters</i> , 2001 , 79, 2761-2763	3.4	115
433	Generation of very fast states by nitridation of the SiO ₂ /SiC interface. <i>Journal of Applied Physics</i> , 2012 , 112, 024520	2.5	111
432	Nearly Ideal Current-Voltage Characteristics of Schottky Barrier Diodes Formed on Hydride-Vapor-Phase-Epitaxy-Grown GaN Free-Standing Substrates. <i>Applied Physics Express</i> , 2010 , 3, 101003	2.4	106
431	Nitrogen donors and deep levels in high-quality 4H-SiC epilayers grown by chemical vapor deposition. <i>Applied Physics Letters</i> , 1995 , 67, 2833-2835	3.4	101
430	Lifetime-killing defects in 4H-SiC epilayers and lifetime control by low-energy electron irradiation. <i>Physica Status Solidi (B): Basic Research</i> , 2008 , 245, 1327-1336	1.3	96
429	Characterization of stacking faults in 4H-SiC epilayers by room-temperature microphotoluminescence mapping. <i>Applied Physics Letters</i> , 2008 , 92, 221906	3.4	92
428	Accurate evaluation of interface state density in SiC metal-oxide-semiconductor structures using surface potential based on depletion capacitance. <i>Journal of Applied Physics</i> , 2012 , 111, 014502	2.5	90
427	Formation of periodic steps with a unit-cell height on 6H-SiC (0001) surface by HCl etching. <i>Applied Physics Letters</i> , 2000 , 76, 3412-3414	3.4	89
426	Ultrahigh-Voltage SiC p-i-n Diodes With Improved Forward Characteristics. <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 374-381	2.9	88
425	21-kV SiC BJTs With Space-Modulated Junction Termination Extension. <i>IEEE Electron Device Letters</i> , 2012 , 33, 1598-1600	4.4	82
424	Nitrogen Ion Implantation into SiC Epitaxial Layers. <i>Physica Status Solidi A</i> , 1997 , 162, 263-276		80
423	Deep level transient spectroscopy on as-grown and electron-irradiated p-type 4H-SiC epilayers. <i>Journal of Applied Physics</i> , 2007 , 101, 103704	2.5	78
422	Space-Modulated Junction Termination Extension for Ultrahigh-Voltage p-i-n Diodes in 4H-SiC. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 414-418	2.9	76

4 ²¹	A cause for highly improved channel mobility of 4H-SiC metal-oxide-semiconductor field-effect transistors on the (112 0) face. <i>Applied Physics Letters</i> , 2001 , 78, 374-376	3.4	76
4 ²⁰	Temperature and doping dependencies of electrical properties in Al-doped 4H-SiC epitaxial layers. <i>Journal of Applied Physics</i> , 2009 , 106, 013716	2.5	73
4 ¹⁹	. <i>IEEE Electron Device Letters</i> , 1993 , 14, 548-550	4.4	73
4 ¹⁸	Terrace growth and polytype development in epitaxial SiC films on SiC (6H and 15R) substrates. <i>Journal of Materials Research</i> , 1994 , 9, 940-954	2.5	72
4 ¹⁷	Incorporation mechanism of N, Al, and B impurities in chemical vapor deposition of SiC. <i>Applied Physics Letters</i> , 1995 , 67, 2385-2387	3.4	71
4 ¹⁶	High-quality 4H-SiC homoepitaxial layers grown by step-controlled epitaxy. <i>Applied Physics Letters</i> , 1994 , 65, 1400-1402	3.4	70
4 ¹⁵	Bulk and epitaxial growth of silicon carbide. <i>Progress in Crystal Growth and Characterization of Materials</i> , 2016 , 62, 329-351	3.5	66
4 ¹⁴	A 3 kV Schottky barrier diode in 4H-SiC. <i>Applied Physics Letters</i> , 1998 , 72, 445-447	3.4	66
4 ¹³	The effects of N ⁺ dose in implantation into 6h-sic epilayers. <i>Journal of Electronic Materials</i> , 1995 , 24, 235-240	1.9	66
4 ¹²	Electrical activation of high-concentration aluminum implanted in 4H-SiC. <i>Journal of Applied Physics</i> , 2004 , 96, 4916-4922	2.5	63
4 ¹¹	Midgap levels in both n- and p-type 4H-SiC epilayers investigated by deep level transient spectroscopy. <i>Applied Physics Letters</i> , 2005 , 86, 122104	3.4	63
4 ¹⁰	Impacts of recombination at the surface and in the substrate on carrier lifetimes of n-type 4H-SiC epilayers. <i>Journal of Applied Physics</i> , 2010 , 108, 083721	2.5	60
4 ⁰⁹	Triple Shockley type stacking faults in 4H-SiC epilayers. <i>Applied Physics Letters</i> , 2009 , 94, 091910	3.4	60
4 ⁰⁸	Simulation and Experimental Study on the Junction Termination Structure for High-Voltage 4H-SiC PiN Diodes. <i>IEEE Transactions on Electron Devices</i> , 2008 , 55, 1841-1846	2.9	60
4 ⁰⁷	Surface diffusion lengths of adatoms on 6H-SiC{0001} faces in chemical vapor deposition of SiC. <i>Journal of Applied Physics</i> , 1995 , 78, 3132-3137	2.5	60
4 ⁰⁶	Nucleation and step motion in chemical vapor deposition of SiC on 6H-SiC{0001} faces. <i>Journal of Applied Physics</i> , 1994 , 76, 7322-7327	2.5	60
4 ⁰⁵	4H-SiC MISFETs with nitrogen-containing insulators. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009 , 206, 2374-2390	1.6	58
4 ⁰⁴	Shallow states at SiO ₂ /4H-SiC interface on (112 0) and (0001) faces. <i>Applied Physics Letters</i> , 2002 , 81, 301-303	3.4	58

403	Aluminum and boron ion implantations into 6H-SiC epilayers. <i>Journal of Electronic Materials</i> , 1996 , 25, 879-884	1.9	58
402	Analytical model for reduction of deep levels in SiC by thermal oxidation. <i>Journal of Applied Physics</i> , 2012 , 111, 053710	2.5	57
401	Alternative techniques to reduce interface traps in n-type 4H-SiC MOS capacitors. <i>Physica Status Solidi (B): Basic Research</i> , 2008 , 245, 1378-1389	1.3	56
400	Characterization of major in-grown stacking faults in 4H-SiC epilayers. <i>Physica B: Condensed Matter</i> , 2009 , 404, 4745-4748	2.8	55
399	Impact Ionization Coefficients in 4H-SiC Toward Ultrahigh-Voltage Power Devices. <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 3326-3333	2.9	53
398	Current status and perspectives of ultrahigh-voltage SiC power devices. <i>Materials Science in Semiconductor Processing</i> , 2018 , 78, 43-56	4.3	53
397	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
396	Detection and depth analyses of deep levels generated by ion implantation in n- and p-type 4H-SiC. <i>Journal of Applied Physics</i> , 2009 , 106, 013719	2.5	53
395	Fast homoepitaxial growth of 4H-SiC with low basal-plane dislocation density and low trap concentration by hot-wall chemical vapor deposition. <i>Journal of Crystal Growth</i> , 2007 , 306, 297-302	1.6	53
394	Interface Properties of 4H-SiC ($11\bar{1}200$) and ($11\bar{1}200$) MOS Structures Annealed in NO. <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 309-315	2.9	52
393	Development of Ultrahigh-Voltage SiC Devices. <i>IEEE Transactions on Electron Devices</i> , 2015 , 62, 396-404	2.9	52
392	Radiation-induced defect centers in 4H silicon carbide. <i>Diamond and Related Materials</i> , 1997 , 6, 1333-1337	3.5	50
391	4H-polytype AlN grown on 4H-SiC(112 0) substrate by polytype replication. <i>Applied Physics Letters</i> , 2003 , 83, 5208-5210	3.4	49
390	Effects of Nitridation on 4H-SiC MOSFETs Fabricated on Various Crystal Faces. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 1260-1262	2.9	48
389	Measuring Terminal Capacitance and Its Voltage Dependency for High-Voltage Power Devices. <i>IEEE Transactions on Power Electronics</i> , 2009 , 24, 1486-1493	7.2	48
388	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
387	Design and Fabrication of GaN p-n Junction Diodes With Negative Beveled-Mesa Termination. <i>IEEE Electron Device Letters</i> , 2019 , 40, 941-944	4.4	45
386	Formation of a semi-insulating layer in n-type 4H-SiC by electron irradiation. <i>Applied Physics Letters</i> , 2011 , 98, 262106	3.4	45

385	High-purity and high-quality 4H-SiC grown at high speed by chimney-type vertical hot-wall chemical vapor deposition. <i>Applied Physics Letters</i> , 2002 , 80, 1586-1588	3-4	45
384	Investigation on origin of Z1/2 center in SiC by deep level transient spectroscopy and electron paramagnetic resonance. <i>Applied Physics Letters</i> , 2013 , 102, 112106	3-4	44
383	Epitaxial growth of 4H-SiC on 4° off-axis (0 0 0 1) and (0 0 0 1̄) substrates by hot-wall chemical vapor deposition. <i>Journal of Crystal Growth</i> , 2006 , 291, 370-374	1.6	44
382	Defect engineering in SiC technology for high-voltage power devices. <i>Applied Physics Express</i> , 2020 , 13, 120101	2-4	44
381	4H-SiC BJTs With Record Current Gains of 257 on (0001) and 335 on ($\bar{1}\bar{1}\bar{1}0$). <i>IEEE Electron Device Letters</i> , 2011 , 32, 841-843	4-4	43
380	Carrier Recombination in n-Type 4H-SiC Epilayers with Long Carrier Lifetimes. <i>Applied Physics Express</i> , 2012 , 5, 101301	2-4	43
379	High temperature annealing of n-type 4H-SiC: Impact on intrinsic defects and carrier lifetime. <i>Journal of Applied Physics</i> , 2012 , 111, 033515	2-5	43
378	Homoepitaxy of 6H-SiC on nearly on-axis (0 0 0 1) faces by chemical vapor deposition Part I: Effect of C/Si ratio on wide-area homoepitaxy without 3C-SiC inclusions. <i>Journal of Crystal Growth</i> , 2003 , 256, 341-346	1.6	42
377	Sources of carrier compensation in metalorganic vapor phase epitaxy-grown homoepitaxial n-type GaN layers with various doping concentrations. <i>Applied Physics Express</i> , 2018 , 11, 041001	2-4	41
376	Stability of deep centers in 4H-SiC epitaxial layers during thermal annealing. <i>Applied Physics Letters</i> , 2004 , 85, 1716-1718	3-4	41
375	Crystallographic defects under device-killing surface faults in a homoepitaxially grown film of SiC. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 361, 67-74	5-3	41
374	Formation of semi-insulating 6H-SiC layers by vanadium ion implantations. <i>Applied Physics Letters</i> , 1996 , 69, 1113-1115	3-4	40
373	Negative-U carbon vacancy in 4H-SiC: Assessment of charge correction schemes and identification of the negative carbon vacancy at the quasicubic site. <i>Physical Review B</i> , 2013 , 88,	3-3	39
372	Al ⁺ and B ⁺ implantations into 6H-SiC epilayers and application to pn junction diodes. <i>Journal of Electronic Materials</i> , 1998 , 27, 358-364	1-9	38
371	Thermal instability effects in SiC Power MOSFETs. <i>Microelectronics Reliability</i> , 2012 , 52, 2414-2419	1-2	37
370	Impacts of growth parameters on deep levels in n-type 4H-SiC. <i>Journal of Applied Physics</i> , 2007 , 101, 053709	1-9	37
369	Anisotropy in breakdown field of 4H-SiC. <i>Applied Physics Letters</i> , 2002 , 80, 3355-3357	3-4	37
368	P-Channel MOSFETs on 4H-SiC {0001} and Nonbasal Faces Fabricated by Oxide Deposition and N_2O Annealing. <i>IEEE Transactions on Electron Devices</i> , 2009 , 56, 1953-1958	2-9	36

367	Low-loss, high-voltage 6H-SiC epitaxial p-i-n diode. <i>IEEE Transactions on Electron Devices</i> , 2002 , 49, 150-154	36
366	Effects of C/Si ratio in fast epitaxial growth of 4H-SiC(0 0 0 1) by vertical hot-wall chemical vapor deposition. <i>Journal of Crystal Growth</i> , 2005 , 281, 370-376	1.6 36
365	Experimental and theoretical investigations on short-channel effects in 4H-SiC MOSFETs. <i>IEEE Transactions on Electron Devices</i> , 2005 , 52, 1954-1962	2.9 36
364	Topographic study of dislocation structure in hexagonal SiC single crystals with low dislocation density. <i>Journal of Crystal Growth</i> , 2007 , 304, 57-63	1.6 35
363	4H-SiC Lateral Double RESURF MOSFETs With Low on Resistance. <i>IEEE Transactions on Electron Devices</i> , 2007 , 54, 1216-1223	2.9 35
362	Major deep levels with the same microstructures observed in n-type 4H-SiC and 6H-SiC. <i>Journal of Applied Physics</i> , 2011 , 109, 013705	2.5 34
361	High-quality nonpolar 4H-AlN grown on 4H-SiC (1120) substrate by molecular-beam epitaxy. <i>Applied Physics Letters</i> , 2006 , 89, 112117	3.4 34
360	Remarkable lattice recovery and low sheet resistance of phosphorus-implanted 4H-SiC (112 0). <i>Applied Physics Letters</i> , 2002 , 80, 240-242	3.4 34
359	Traps at the SiC/SiO ₂ -Interface. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 640, 1	34
358	Quantitative comparison between Z1 center and carbon vacancy in 4H-SiC. <i>Journal of Applied Physics</i> , 2014 , 115, 143705	2.5 33
357	Breakdown Characteristics of 15-kV-Class 4H-SiC PiN Diodes With Various Junction Termination Structures. <i>IEEE Transactions on Electron Devices</i> , 2012 , 59, 2748-2752	2.9 33
356	Enhancement and control of carrier lifetimes in p-type 4H-SiC epilayers. <i>Journal of Applied Physics</i> , 2012 , 112, 064503	2.5 32
355	Deep levels induced by reactive ion etching in n- and p-type 4H-SiC. <i>Journal of Applied Physics</i> , 2010 , 108, 023706	2.5 32
354	1580-V/0.5- Ωcm^2 Double-RESURF MOSFETs on 4H-SiC. <i>IEEE Electron Device Letters</i> , 2009 , 30, 831-833	4.4 32
353	Epitaxy of nonpolar AlN on 4H-SiC (1-100) substrates. <i>Applied Physics Letters</i> , 2006 , 88, 011908	3.4 32
352	Growth and characterization of 4H-SiC in vertical hot-wall chemical vapor deposition. <i>Journal of Crystal Growth</i> , 2003 , 255, 136-144	1.6 32
351	Improvement of Current Gain in 4H-SiC BJTs by Surface Passivation With Deposited Oxides Nitrided in N_2/O_2 or NO. <i>IEEE Electron Device Letters</i> , 2011 , 32, 285-287	4.4 30
350	Effects of C/Si Ratio in Chemical Vapor Deposition of 4H-SiC(1120) and (0001). <i>Japanese Journal of Applied Physics</i> , 2003 , 42, 7294-7295	1.4 30

- 349 Carrier compensation near tail region in aluminum- or boron-implanted 4H-SiC (0001). *Journal of Applied Physics*, **2005**, 98, 043709 2.5 30
- 348 Injected carrier concentration dependence of the expansion of single Shockley-type stacking faults in 4H-SiC PiN diodes. *Journal of Applied Physics*, **2018**, 123, 025707 2.5 30
- 347 Reduction of Double Positioning Twinning in 3C-SiC Grown on SiC Substrates. *Japanese Journal of Applied Physics*, **1997**, 36, 5202-5207 1.4 29
- 346 Deep-level transient spectroscopy studies of electron and hole traps in n-type GaN homoepitaxial layers grown by quartz-free hydride-vapor-phase epitaxy. *Applied Physics Letters*, **2019**, 115, 012103 3.4 28
- 345 Reduction of deep levels generated by ion implantation into n- and p-type 4H-SiC. *Journal of Applied Physics*, **2010**, 108, 033706 2.5 28
- 344 High Channel Mobility in Inversion Layer of SiC MOSFETs for Power Switching Transistors. *Japanese Journal of Applied Physics*, **2000**, 39, 2008-2011 1.4 28
- 343 Temperature and injection level dependencies and impact of thermal oxidation on carrier lifetimes in p-type and n-type 4H-SiC epilayers. *Journal of Applied Physics*, **2011**, 109, 014505 2.5 27
- 342 SiC technologies for future energy electronics **2010**, 27
- 341 Low-Concentration Deep Traps in 4H-SiC Grown with High Growth Rate by Chemical Vapor Deposition. *Japanese Journal of Applied Physics*, **2004**, 43, L969-L971 1.4 27
- 340 1330 V, 67 m/spl Omega//spl middot/cm/sup 2/ 4H-SiC(0001) RESURF MOSFET. *IEEE Electron Device Letters*, **2005**, 26, 649-651 4.4 27
- 339 Control of carrier lifetime of thick n-type 4H-SiC epilayers by high-temperature Ar annealing. *Applied Physics Express*, **2016**, 9, 061303 2.4 27
- 338 Effect of C/Si Ratio on Spiral Growth on 6H-SiC (0001). *Japanese Journal of Applied Physics*, **2003**, 42, L846-L848 2.4 26
- 337 Promise and Challenges of High-Voltage SiC Bipolar Power Devices. *Energies*, **2016**, 9, 908 3.1 26
- 336 Carbon ejection from a SiO₂/SiC(0001) interface by annealing in high-purity Ar. *Applied Physics Letters*, **2017**, 111, 062101 3.4 25
- 335 Understanding and reduction of degradation phenomena in SiC power devices **2017**, 25
- 334 Characterization of very fast states in the vicinity of the conduction band edge at the SiO₂/SiC interface by low temperature conductance measurements. *Journal of Applied Physics*, **2014**, 115, 014502 2.5 25
- 333 Engineering the band gap of SiC nanotubes with a transverse electric field. *Applied Physics Letters*, **2010**, 97, 043108 3.4 25
- 332 Over-700-nm Critical Thickness of AlN Grown on 6H-SiC(0001) by Molecular Beam Epitaxy. *Applied Physics Express*, **2012**, 5, 105502 2.4 25

331	A Study on SiC Devices in Synchronous Rectification of DC-DC Converter. <i>IEEE Applied Power Electronics Conference and Exposition</i> , 2007 ,		25
330	Deposition of high-quality a-Si:H by direct photodecomposition of Si ₂ H ₆ using vacuum ultraviolet light. <i>Journal of Applied Physics</i> , 1988 , 64, 2380-2383	2.5	25
329	Ultrahigh-Voltage SiC MPS Diodes With Hybrid Unipolar/Bipolar Operation. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 874-881	2.9	24
328	Impact of NO Annealing on Flatband Voltage Instability due to Charge Trapping in Si-MOS Devices. <i>Materials Science Forum</i> , 2016 , 858, 599-602	0.4	24
327	Carrier lifetime and breakdown phenomena in SiC power device material. <i>Journal Physics D: Applied Physics</i> , 2018 , 51, 363001	3	24
326	Robust 4H-SiC pn Diodes Fabricated using (11-20) Face. <i>Japanese Journal of Applied Physics</i> , 2004 , 43, 471-476	1.4	24
325	Interface state density of SiO ₂ /p-type 4H-SiC (0001), (11-20), (11-00) metal-oxide-semiconductor structures characterized by low-temperature subthreshold slopes. <i>Applied Physics Letters</i> , 2016 , 108, 152108	3.4	24
324	Interface carbon defects at 4H-SiC(0001)/SiO ₂ interfaces studied by electron-spin-resonance spectroscopy. <i>Applied Physics Letters</i> , 2018 , 113, 061605	3.4	23
323	Enhancement of carrier lifetime in lightly Al-doped p-type 4H-SiC epitaxial layers by combination of thermal oxidation and hydrogen annealing. <i>Applied Physics Express</i> , 2014 , 7, 085501	2.4	23
322	Impacts of reduction of deep levels and surface passivation on carrier lifetimes in p-type 4H-SiC epilayers. <i>Journal of Applied Physics</i> , 2011 , 109, 114502	2.5	23
321	High-Temperature Deep Level Transient Spectroscopy on As-Grown P-Type 4H-SiC Epilayers. <i>Japanese Journal of Applied Physics</i> , 2006 , 45, L285-L287	1.4	23
320	m-plane GaN layers grown by rf-plasma assisted molecular beam epitaxy with varying GaN flux ratios on m-plane 4H-SiC substrates. <i>Journal of Applied Physics</i> , 2007 , 101, 033534	2.5	23
319	Conductivity Control of SiC by In-Situ Doping and Ion Implantation. <i>Materials Science Forum</i> , 1998 , 264-268, 675-680	0.4	23
318	Impact ionization coefficients and critical electric field in GaN. <i>Journal of Applied Physics</i> , 2021 , 129, 185702	2.3	23
317	Parallel-Plane Breakdown Fields of 2.8-3.5 MV/cm in GaN-on-GaN p-n Junction Diodes with Double-Side-Depleted Shallow Bevel Termination 2018 ,		23
316	Correlation between shapes of Shockley stacking faults and structures of basal plane dislocations in 4H-SiC epilayers. <i>Philosophical Magazine</i> , 2017 , 97, 2736-2752	1.6	22
315	Impact of surface step heights of 6H-SiC (0 0 0 1) vicinal substrates in heteroepitaxial growth of 2H-NiN. <i>Applied Surface Science</i> , 2008 , 254, 7858-7860	6.7	22
314	SiC JFET dc characteristics under extremely high ambient temperatures. <i>IEICE Electronics Express</i> , 2004 , 1, 523-527	0.5	22

313	Identification of dislocations in 4H-SiC epitaxial layers and substrates using photoluminescence imaging. <i>Japanese Journal of Applied Physics</i> , 2014 , 53, 020304	1.4	21
312	Enhancement of Carrier Lifetimes in n-Type 4H-SiC Epitaxial Layers by Improved Surface Passivation. <i>Applied Physics Express</i> , 2010 , 3, 121201	2.4	21
311	Improvement of Channel Mobility in Inversion-Type n-Channel GaN Metal-Oxide-Semiconductor Field-Effect Transistor by High-Temperature Annealing. <i>Japanese Journal of Applied Physics</i> , 2008 , 47, 7784-7787	1.4	21
310	Surface Morphological Structures of 4H-, 6H- and 15R-SiC (0001) Epitaxial Layers Grown by Chemical Vapor Deposition. <i>Japanese Journal of Applied Physics</i> , 2001 , 40, 3315-3319	1.4	21
309	Interface properties in metal-oxide-semiconductor structures on n-type 4H-SiC(0001). <i>Applied Physics Letters</i> , 2002 , 81, 4772-4774	3.4	21
308	High-Temperature Operation of n- and p-Channel JFETs Fabricated by Ion Implantation Into a High-Purity Semi-Insulating SiC Substrate. <i>IEEE Electron Device Letters</i> , 2018 , 39, 723-726	4.4	20
307	Lattice mismatch and crystallographic tilt induced by high-dose ion-implantation into 4H-SiC. <i>Journal of Applied Physics</i> , 2012 , 111, 103715	2.5	20
306	Correspondence between Surface Morphological Faults and Crystallographic Defects in 4H-SiC Homoepitaxial Film. <i>Japanese Journal of Applied Physics</i> , 2002 , 41, 6320-6326	1.4	20
305	Photoluminescence of Homoepitaxial 3C-SiC on Sublimation-Grown 3C-SiC Substrates. <i>Japanese Journal of Applied Physics</i> , 1995 , 34, L1110-L1113	1.4	20
304	Ion implantation technology in SiC for power device applications 2014 ,		19
303	Temperature Dependence of Impact Ionization Coefficients in 4H-SiC. <i>Materials Science Forum</i> , 2014 , 778-780, 461-466	0.4	19
302	Performance and reliability improvement in SiC power MOSFETs by implementing ALON high-k gate dielectrics 2012 ,		19
301	Epitaxial Growth of Cubic SiC Films on Si Substrates by High Vacuum Chemical Vapor Deposition Using 1,3-Disilabutane. <i>Journal of the Electrochemical Society</i> , 1997 , 144, 1474-1476	3.9	19
300	Evaluation of High Frequency Switching Capability of SiC Schottky Barrier Diode, Based on Junction Capacitance Model. <i>IEEE Transactions on Power Electronics</i> , 2008 , 23, 2602-2611	7.2	19
299	Homoepitaxial growth of 4H-SiC and nitrogen doping by chemical vapor deposition. <i>Journal of Crystal Growth</i> , 2003 , 249, 208-215	1.6	19
298	Switching characteristics of SiC JFET and Schottky diode in high-temperature dc-dc power converters. <i>IEICE Electronics Express</i> , 2005 , 2, 97-102	0.5	19
297	Electrical properties of n- and p-type 4H-SiC formed by ion implantation into high-purity semi-insulating substrates. <i>Japanese Journal of Applied Physics</i> , 2017 , 56, 070306	1.4	18
296	Electronic energy model for single Shockley stacking fault formation in 4H-SiC crystals. <i>Journal of Applied Physics</i> , 2019 , 126, 105703	2.5	18

295	Resolving the EH6/7 level in 4H-SiC by Laplace-transform deep level transient spectroscopy. <i>Applied Physics Letters</i> , 2013 , 102, 152108	3.4	18
294	Nonradiative recombination at threading dislocations in 4H-SiC epilayers studied by micro-photoluminescence mapping. <i>Journal of Applied Physics</i> , 2011 , 110, 033525	2.5	18
293	Capacitance spectroscopy study of deep levels in Cl-implanted 4H-SiC. <i>Journal of Applied Physics</i> , 2012 , 112, 063717	2.5	18
292	Design and fabrication of RESURF MOSFETs on 4H-SiC(0001), (112~0), and 6H-SiC(0001). <i>IEEE Transactions on Electron Devices</i> , 2005 , 52, 112-117	2.9	18
291	Specular Surface Morphology of 4H-SiC Epilayers Grown on ($\bar{1}1\bar{2}0$) Face. <i>Japanese Journal of Applied Physics</i> , 1999 , 38, L1375-L1378	1.4	18
290	Updated trade-off relationship between specific on-resistance and breakdown voltage in 4H-SiC{0001} unipolar devices. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, 018002	1.4	18
289	Ultrahigh-voltage SiC devices for future power infrastructure 2013 ,		17
288	The structural and electronic properties of chiral SiC nanotubes: a hybrid density functional study. <i>Nanotechnology</i> , 2009 , 20, 285703	3.4	17
287	Hot-implantation of nitrogen donors into p- type SiC and characterization of n+-p junction. <i>Journal of Electronic Materials</i> , 1997 , 26, 165-171	1.9	17
286	. <i>IEEE Transactions on Electron Devices</i> , 2008 , 55, 2054-2060	2.9	17
285	Chemical vapor deposition and deep level analyses of 4H-SiC(112 0). <i>Journal of Applied Physics</i> , 2001 , 89, 6105-6109	2.5	17
284	Nitrogen Donor Concentrations and Its Energy Levels in 4H-SiC Uniquely Determined by a New Graphical Method Based on Hall-Effect Measurement. <i>Japanese Journal of Applied Physics</i> , 1999 , 38, 4013-4016	1.4	17
283	Nitrogen Ion Implantation into 6H-SiC and Application to High-Temperature, Radiation-Hard Diodes. <i>Japanese Journal of Applied Physics</i> , 1995 , 34, 3036-3042	1.4	17
282	Efficient power Schottky rectifiers of 4H-SiC		17
281	Design and formation of SiC (0001)/SiO ₂ interfaces via Si deposition followed by low-temperature oxidation and high-temperature nitridation. <i>Applied Physics Express</i> , 2020 , 13, 091003	2.4	17
280	Accurate method for estimating hole trap concentration in n-type GaN via minority carrier transient spectroscopy. <i>Applied Physics Express</i> , 2018 , 11, 071002	2.4	16
279	Structural analysis of double-layer Shockley stacking faults formed in heavily-nitrogen-doped 4H-SiC during annealing. <i>Journal of Applied Physics</i> , 2017 , 122, 045707	2.5	16
278	Structural and electronic characterization of (2,33) bar-shaped stacking fault in 4H-SiC epitaxial layers. <i>Applied Physics Letters</i> , 2011 , 98, 051915	3.4	16

- 277 Characterization of silicon dioxide films on 4H-SiC Si (0001) face by cathodoluminescence spectroscopy and x-ray photoelectron spectroscopy. *Applied Physics Letters*, **2012**, 100, 082105 3.4 16
- 276 Deep level transient spectroscopy study of defects in hydrogen implanted p-type 4H-SiC. *Journal of Applied Physics*, **2007**, 101, 103716 2.5 16
- 275 Effect of the Schottky barrier height on the detection of midgap levels in 4H-SiC by deep level transient spectroscopy. *Journal of Applied Physics*, **2007**, 102, 113702 2.5 16
- 274 Schottky Barriers for Pt, Mo and Ti on 6H and 4H SiC (0001), (000-1), (1-100) and (1-210) Faces Measured by I-V, C-V and Internal Photoemission. *Materials Science Forum*, **2003**, 433-436, 705-708 0.4 16
- 273 Mobility improvement of 4H-SiC (0001) MOSFETs by a three-step process of H₂ etching, SiO₂ deposition, and interface nitridation. *Applied Physics Express*, **2021**, 14, 031001 2.4 16
- 272 Reduction of interface state density in SiC (0001) MOS structures by post-oxidation Ar annealing at high temperature. *AIP Advances*, **2017**, 7, 045008 1.5 15
- 271 Normally-off 400 °C Operation of n- and p-JFETs With a Side-Gate Structure Fabricated by Ion Implantation Into a High-Purity Semi-Insulating SiC Substrate. *IEEE Electron Device Letters*, **2019**, 40, 866-869 4.4 15
- 270 Estimation of Threshold Voltage in SiC Short-Channel MOSFETs. *IEEE Transactions on Electron Devices*, **2018**, 65, 3077-3080 2.9 15
- 269 Improvement of Carrier Lifetimes in Highly Al-Doped p-Type 4H-SiC Epitaxial Layers by Hydrogen Passivation. *Applied Physics Express*, **2013**, 6, 121301 2.4 15
- 268 Deep Interface States in SiO₂/p-type SiC Structure. *Japanese Journal of Applied Physics*, **1997**, 36, L1430-L1432 1.4 15
- 267 Impact Ionization Coefficients in GaN Measured by Above- and Sub-E_g Illuminations for p/n⁺ Junction **2019**, 15
- 266 Measurement of avalanche multiplication utilizing Franz-Keldysh effect in GaN p-n junction diodes with double-side-depleted shallow bevel termination. *Applied Physics Letters*, **2019**, 115, 142101 3.4 14
- 265 Single-crystalline 4H-SiC micro cantilevers with a high quality factor. *Sensors and Actuators A: Physical*, **2013**, 197, 122-125 3.9 14
- 264 Quantum-confinement effect on holes in silicon nanowires: Relationship between wave function and band structure. *Journal of Applied Physics*, **2011**, 109, 064318 2.5 14
- 263 Enhancement of initial layer-by-layer growth and reduction of threading dislocation density by optimized Ga pre-irradiation in molecular-beam epitaxy of 2H-AlN on 6H-SiC(0001). *Physica Status Solidi C: Current Topics in Solid State Physics*, **2010**, 7, 2094-2096 14
- 262 Deep levels in 6H-SiC wafers and step-controlled epitaxial layers. *Applied Physics Letters*, **1994**, 65, 581-583 3.4 14
- 261 Impact ionization coefficients of 4H-SiC in a wide temperature range. *Japanese Journal of Applied Physics*, **2019**, 58, 018001 1.4 14
- 260 Temperature dependence of conductance in NiO-based resistive switching memory showing two modes in the forming process. *Applied Physics Letters*, **2015**, 107, 233510 3.4 13

259	Detection of minority carrier traps in p-type 4H-SiC. <i>Applied Physics Letters</i> , 2014 , 104, 092105	3.4	13
258	Exciton-Related Photoluminescence in 4H-SiC Grown by Step-Controlled Epitaxy. <i>Japanese Journal of Applied Physics</i> , 1996 , 35, 4373-4378	1.4	13
257	Fast Epitaxial Growth of 4H-SiC by Chimney-Type Vertical Hot-Wall Chemical Vapor Deposition. <i>Japanese Journal of Applied Physics</i> , 2001 , 40, L374-L376	1.4	13
256	Step-Controlled Epitaxial Growth of 4H-SiC and Doping of Ga as a Blue Luminescent Center. <i>Japanese Journal of Applied Physics</i> , 1993 , 32, 1045-1050	1.4	13
255	Franz-Keldysh effect in GaN p-n junction diode under high reverse bias voltage. <i>Applied Physics Letters</i> , 2018 , 112, 252104	3.4	13
254	Observation of double Shockley stacking fault expansion in heavily-nitrogen-doped 4H-SiC using PL technique. <i>Journal of Crystal Growth</i> , 2017 , 468, 889-893	1.6	12
253	Reduction of interface state density in SiC (0001) MOS structures by low-oxygen-partial-pressure annealing. <i>Applied Physics Express</i> , 2019 , 12, 031001	2.4	12
252	Shockley-Read-Hall lifetime in homoepitaxial p-GaN extracted from recombination current in GaN p ⁺ n junction diodes. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, SCCB14	1.4	12
251	TaC-coated graphite prepared via a wet ceramic process: Application to CVD susceptors for epitaxial growth of wide-bandgap semiconductors. <i>Journal of Crystal Growth</i> , 2017 , 478, 163-173	1.6	12
250	Appearance of quantum point contact in Pt/NiO/Pt resistive switching cells. <i>Journal of Materials Research</i> , 2017 , 32, 2631-2637	2.5	12
249	Correlation between Oxygen Composition and Electrical Properties in NiO Thin Films for Resistive Random Access Memory. <i>Japanese Journal of Applied Physics</i> , 2011 , 50, 015802	1.4	12
248	Sources of Epitaxial Growth-Induced Stacking Faults in 4H-SiC. <i>Journal of Electronic Materials</i> , 2010 , 39, 1166-1169	1.9	12
247	Evaluation of capacitance-voltage characteristics for high voltage SiC-JFET. <i>IEICE Electronics Express</i> , 2007 , 4, 517-523	0.5	12
246	High-Voltage 4H-SiC Schottky Barrier Diodes Fabricated on (0001) with Closed Micropipes. <i>Japanese Journal of Applied Physics</i> , 2003 , 42, L13-L16	1.4	12
245	Homoepitaxial Chemical Vapor Deposition of 6H-SiC at Low Temperatures on {0001} Substrates. <i>Japanese Journal of Applied Physics</i> , 1992 , 31, 3655-3661	1.4	12
244	Thermo-Optic Coefficients of 4H-SiC, GaN, and AlN for Ultraviolet to Infrared Regions up to 500 °C. <i>Japanese Journal of Applied Physics</i> , 2012 , 51, 112101	1.4	12
243	Stress Characterization of 4H-SiC Metal-Oxide-Semiconductor Field-Effect Transistor (MOSFET) using Raman Spectroscopy and the Finite Element Method. <i>Applied Spectroscopy</i> , 2016 , 70, 1209-13	3.1	11
242	Characterization of silicon dioxide films on 4H-SiC (0001) Si, (1-100) M, and (11-20) A faces by cathodoluminescence spectroscopy. <i>Applied Physics Letters</i> , 2013 , 102, 051612	3.4	11

241	E1/E2 traps in 6H-SiC studied with Laplace deep level transient spectroscopy. <i>Applied Physics Letters</i> , 2013 , 102, 032104	3.4	11
240	Demonstration of 3 kV 4H-SiC reverse blocking MOSFET 2016 ,		11
239	Observation of carrier recombination in single Shockley stacking faults and at partial dislocations in 4H-SiC. <i>Journal of Applied Physics</i> , 2018 , 124, 095702	2.5	11
238	Estimation of the critical condition for expansion/contraction of single Shockley stacking faults in 4H-SiC PIN diodes. <i>Applied Physics Letters</i> , 2020 , 116, 092105	3.4	10
237	. <i>IEEE Electron Device Letters</i> , 2014 , 35, 339-341	4.4	10
236	Physics of SiC MOS interface and development of trench MOSFETs 2013 ,		10
235	Abnormal behavior of longitudinal optical phonon in silicon dioxide films on 4H-SiC bulk epitaxial substrate using Fourier transform infrared (FT-IR) spectroscopy. <i>Applied Spectroscopy</i> , 2013 , 67, 542-5	3.1	10
234	Embedded epitaxial growth of 4H-SiC on trench substrates and pn junction characteristics. <i>Microelectronic Engineering</i> , 2006 , 83, 27-29	2.5	10
233	Homoepitaxy of 4H-SiC on Trenched (0001) Si Face Substrates by Chemical Vapor Deposition. <i>Japanese Journal of Applied Physics</i> , 2004 , 43, 4105-4109	1.4	10
232	Interface structures of epitaxial 6SiC on 6SiC substrates. <i>Journal of Crystal Growth</i> , 1994 , 137, 175-180	1.6	10
231	Photoluminescence of Ti Doped 6H-SiC Grown by Vapor Phase Epitaxy. <i>Japanese Journal of Applied Physics</i> , 1991 , 30, L289-L291	1.4	10
230	Formation of high-quality SiC(0001)/SiO ₂ structures by excluding oxidation process with H ₂ etching before SiO ₂ deposition and high-temperature N ₂ annealing. <i>Applied Physics Express</i> , 2020 , 13, 121002	2.4	10
229	Interface properties of NO-annealed 4H-SiC (0001), (1120), and (1100) MOS structures with heavily doped p-bodies. <i>Journal of Applied Physics</i> , 2017 , 121, 145703	2.5	9
228	Dominant conduction mechanism in NiO-based resistive memories. <i>Journal of Applied Physics</i> , 2015 , 117, 225701	2.5	9
227	Forward thermionic field emission transport and significant image force lowering caused by high electric field at metal/heavily-doped SiC Schottky interfaces. <i>Applied Physics Express</i> , 2020 , 13, 041001	2.4	9
226	Electron-spin-resonance and electrically detected-magnetic-resonance characterization on PbC center in various 4H-SiC(0001)/SiO ₂ interfaces. <i>Journal of Applied Physics</i> , 2020 , 127, 145301	2.5	9
225	Theoretical analysis of Hall factor and hole mobility in p-type 4H-SiC considering anisotropic valence band structure. <i>Journal of Applied Physics</i> , 2018 , 123, 245704	2.5	9
224	Phonon-Limited Electron Mobility in Rectangular Cross-Sectional Ge Nanowires. <i>IEEE Transactions on Electron Devices</i> , 2014 , 61, 1993-1998	2.9	9

223	Orientation and Shape Effects on Ballistic Transport Properties in Gate-All-Around Rectangular Germanium Nanowire nFETs. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 944-950	2.9	9
222	High-Temperature Characteristics of 3-kV 4H-SiC Reverse Blocking MOSFET for High-Performance Bidirectional Switch. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 4167-4174	2.9	9
221	Progress in ultrahigh-voltage SiC devices for future power infrastructure 2014 ,		9
220	Breakdown characteristics of 1200 kV-class 4H-SiC PiN diodes with improved junction termination structures 2012 ,		9
219	Characterization of silicon dioxide films on a 4H-SiC Si(0001) face by fourier transform infrared (FT-IR) spectroscopy and cathodoluminescence spectroscopy. <i>Applied Spectroscopy</i> , 2011 , 65, 543-8	3.1	9
218	Mobility oscillation by one-dimensional quantum confinement in Si-nanowire metal-oxide-semiconductor field effect transistors. <i>Journal of Applied Physics</i> , 2009 , 106, 034312	2.5	9
217	4H-SiC bipolar junction transistors with record current gains of 257 on (0001) and 335 on (000 $\bar{1}$) 2011 ,		9
216	Direct determination of Burgers vector sense and magnitude of elementary dislocations by synchrotron white x-ray topography. <i>Journal of Applied Physics</i> , 2008 , 103, 013510	2.5	9
215	Improved Performance of 4H-SiC Double Reduced Surface Field MetalOxideSemiconductor Field-Effect Transistors by Increasing RESURF Doses. <i>Applied Physics Express</i> , 2008 , 1, 101403	2.4	9
214	Characterization of SiC diodes in extremely high temperature ambient		9
213	Molecular-beam epitaxy of AlN on off-oriented SiC and demonstration of MISFET using AlN/SiC interface. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 2643-2646		9
212	Scanning Capacitance and Spreading Resistance Microscopy of SiC Multiple-pn-Junction Structure. <i>Japanese Journal of Applied Physics</i> , 2002 , 41, L40-L42	1.4	9
211	Experimental Determination of Impact Ionization Coefficients Along <1120> in 4H-SiC. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 3740-3744	2.9	9
210	Effect of NiO crystallinity on forming characteristics in Pt/NiO/Pt cells as resistive switching memories. <i>Journal of Applied Physics</i> , 2016 , 120, 115308	2.5	9
209	Control of carbon vacancy in SiC toward ultrahigh-voltage power devices. <i>Superlattices and Microstructures</i> , 2016 , 99, 151-157	2.8	9
208	Conductance fluctuation in NiO-based resistive switching memory. <i>Journal of Applied Physics</i> , 2018 , 124, 152134	2.5	9
207	Suppression of Punch-Through Current in 3 kV 4H-SiC Reverse-Blocking MOSFET by Using Highly Doped Drift Layer. <i>IEEE Journal of the Electron Devices Society</i> , 2018 , 6, 449-453	2.3	8
206	Characterization of traps in SiC/SiO ₂ interfaces close to the conduction band by deep-level transient spectroscopy. <i>Japanese Journal of Applied Physics</i> , 2015 , 54, 111301	1.4	8

205	Temperature dependence of optical absorption coefficient of 4H- and 6H-SiC from room temperature to 300 °C. <i>Japanese Journal of Applied Physics</i> , 2014 , 53, 108003	1.4	8
204	Enhanced Drain Current of 4H-SiC MOSFETs by Adopting a Three-Dimensional Gate Structure. <i>IEEE Transactions on Electron Devices</i> , 2009 , 56, 2632-2637	2.9	8
203	Impact of III/V ratio on polytype and crystalline quality of AlN grown on 4H-SiC (11 $\bar{2}$ 0) substrate by molecular-beam epitaxy. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2006 , 3, 1503-1506		8
202	Avalanche phenomena in 4H-SiC p-n diodes fabricated by aluminum or boron implantation. <i>IEEE Transactions on Electron Devices</i> , 2002 , 49, 1505-1510	2.9	8
201	Fabrication of SiC lateral super junction diodes with multiple stacking p- and n-layers. <i>IEEE Electron Device Letters</i> , 2003 , 24, 321-323	4.4	8
200	Deep-ultraviolet micro-Raman investigation of surface defects in a 4H-SiC homoepitaxially grown film. <i>Applied Physics Letters</i> , 2005 , 87, 241906	3.4	8
199	Tunneling Current in 4H-SiC p-n Junction Diodes. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 3329-3334	3.4	7
198	Reliability-aware design of metal/high-k gate stack for high-performance SiC power MOSFET 2017 ,		7
197	Phonon-assisted optical absorption due to Franz-Keldysh effect in 4H-SiC p-n junction diode under high reverse bias voltage. <i>Applied Physics Express</i> , 2018 , 11, 091302	2.4	7
196	Calibration on wide-ranging aluminum doping concentrations by photoluminescence in high-quality uncompensated p-type 4H-SiC. <i>Applied Physics Letters</i> , 2017 , 111, 072101	3.4	7
195	Progress and future challenges of SiC power devices and process technology 2017 ,		7
194	Oxidation-induced majority and minority carrier traps in n- and p-type 4H-SiC. <i>Applied Physics Express</i> , 2015 , 8, 111301	2.4	7
193	Demonstration of Common-Emitter Operation in AlGaN/SiC Heterojunction Bipolar Transistors. <i>IEEE Electron Device Letters</i> , 2010 , 31, 942-944	4.4	7
192	Characterization of ZrB ₂ (0 0 0 1) surface prepared by ex situ HF solution treatment toward applications as a substrate for GaN growth. <i>Surface Science</i> , 2006 , 600, 1439-1449	1.8	7
191	Homoepitaxy of 6H-SiC on nearly on-axis (0001) faces by chemical vapor deposition Part II: Evolution of surface steps. <i>Journal of Crystal Growth</i> , 2003 , 256, 347-351	1.6	7
190	Fast epitaxial growth of high-purity 4H-SiC((0001) in a vertical hot-wall chemical vapor deposition) in a vertical hot-wall chemical vapor deposition. <i>Journal of Electronic Materials</i> , 2005 , 34, 324-329	1.9	7
189	Direct growth of GaN on off-oriented SiC (0001) by molecular-beam epitaxy for GaN/SiC heterojunction bipolar transistor. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 2208-2211		7
188	Step-controlled epitaxy of SiC: High-quality homoepitaxial growth. <i>Diamond and Related Materials</i> , 1998 , 7, 342-347	3.5	7

187	Ion implantation technology in SiC for high-voltage/high-temperature devices 2016 ,		7
186	Design Criterion for SiC BJTs to Avoid ON-Characteristics Degradation Due to Base Spreading Resistance. <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 2086-2091	2.9	6
185	Unique resistive switching phenomena exhibiting both filament-type and interface-type switching in Ti/Pr _{0.7} Ca _{0.3} MnO ₃ /Pt ReRAM cells. <i>Applied Physics Letters</i> , 2020 , 116, 013501	3.4	6
184	Deep-ultraviolet light emission from 4H-AlN/4H-GaN short-period superlattice grown on 4H-SiC(112̄0). <i>Applied Physics Letters</i> , 2018 , 112, 012106	3.4	6
183	Passivation of Surface Recombination at the Si-Face of 4H-SiC by Acidic Solutions. <i>ECS Journal of Solid State Science and Technology</i> , 2018 , 7, Q127-Q130	2	6
182	Glide velocities of Si-core partial dislocations for double-Shockley stacking fault expansion in heavily nitrogen-doped SiC during high-temperature annealing. <i>Journal of Applied Physics</i> , 2018 , 124, 025705	2.5	6
181	Structural stability and electronic properties of SiC nanocones: First-principles calculations and symmetry considerations. <i>Applied Physics Letters</i> , 2011 , 98, 123102	3.4	6
180	Electronic properties of finite-length silicon carbide nanotubes. <i>Physica Status Solidi (B): Basic Research</i> , 2009 , 246, 407-410	1.3	6
179	Bandgap shift by quantum confinement effect in <100> Si-nanowires derived from threshold-voltage shift of fabricated metal-oxide-semiconductor field effect transistors and theoretical calculations. <i>Journal of Applied Physics</i> , 2011 , 109, 064312	2.5	6
178	Theoretical study of Cl-related defect complexes in cubic SiC. <i>Journal of Applied Physics</i> , 2012 , 111, 103705	2.5	6
177	Effects of Channel Mobility on SiC Power Metal-Oxide-Semiconductor Field Effect Transistor Performance. <i>Japanese Journal of Applied Physics</i> , 1996 , 35, 3331-3333	1.4	6
176	Surface polarity dependence in step-controlled epitaxy: progress in SiC epitaxy. <i>Diamond and Related Materials</i> , 1997 , 6, 1276-1281	3.5	6
175	N ₂ O-grown oxides/4H-SiC (0001), (033̄8), and (112̄0) interface properties characterized by using p-type gate-controlled diodes. <i>Applied Physics Letters</i> , 2008 , 93, 193510	3.4	6
174	Electron-emission properties of silicon field-emitter arrays in gaseous ambient for charge-compensation device. <i>Journal of Vacuum Science & Technology B</i> , 2008 , 26, 782		6
173	Surface Morphologies of 4H-SiC(11̄20) and (1̄100) Treated by High-Temperature Gas Etching. <i>Japanese Journal of Applied Physics</i> , 2008 , 47, 8388-8390	1.4	6
172	High-temperature characteristics of SiC Schottky barrier diodes related to physical phenomena. <i>IEICE Electronics Express</i> , 2008 , 5, 198-203	0.5	6
171	Abnormal Out-Diffusion of Epitaxially Doped Boron in 4H-SiC Caused by Implantation and Annealing. <i>Japanese Journal of Applied Physics</i> , 2007 , 46, 5053-5056	1.4	6
170	High-voltage 4H-SiC pn diodes fabricated by p-type ion implantation. <i>Electronics and Communications in Japan</i> , 2003 , 86, 44-51		6

169	Homoepitaxial mesa structures on 4H-SiC (0001) and substrates by chemical vapor deposition. <i>Journal of Crystal Growth</i> , 2003 , 254, 115-122	1.6	6
168	Mechanism of stabilization of zincblende GaN on hexagonal substrates: Insight gained from growth on ZrB ₂ (0001). <i>Journal of Crystal Growth</i> , 2005 , 284, 369-378	1.6	6
167	Nearly Fermi-level-pinning-free interface in metal/heavily-doped SiC Schottky structures. <i>Japanese Journal of Applied Physics</i> , 2021 , 60, SBBD14	1.4	6
166	Demonstration of Conductivity Modulation in SiC Bipolar Junction Transistors With Reduced Base Spreading Resistance. <i>IEEE Transactions on Electron Devices</i> , 2019 , 66, 4870-4874	2.9	5
165	Suppression of the Forward Degradation in 4H-SiC PiN Diodes by Employing a Recombination-Enhanced Buffer Layer. <i>Materials Science Forum</i> , 2017 , 897, 419-422	0.4	5
164	Characterization of Thermal Oxides on 4H-SiC Epitaxial Substrates Using Fourier-Transform Infrared Spectroscopy. <i>Applied Spectroscopy</i> , 2017 , 71, 911-918	3.1	5
163	Application of UV photoluminescence imaging spectroscopy for stacking faults identification on thick, lightly n-type doped, 4 μ m-off 4H-SiC epilayers. <i>AIP Advances</i> , 2015 , 5, 037121	1.5	5
162	Geometrical and band-structure effects on phonon-limited hole mobility in rectangular cross-sectional germanium nanowires. <i>Journal of Applied Physics</i> , 2014 , 116, 235701	2.5	5
161	High-temperature annealing behavior of deep levels in 1MeV electron irradiated p-type 6H-SiC. <i>Applied Physics Letters</i> , 2008 , 93, 032108	3.4	5
160	Epitaxial growth of 4H-SiC{0001} and reduction of deep levels. <i>Superlattices and Microstructures</i> , 2006 , 40, 225-232	2.8	5
159	Role of initial nucleation in molecular-beam epitaxy of GaN on lattice-matched ZrB ₂ substrates. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2005 , 2, 2191-2194		5
158	Power Conversion with SiC Devices at Extremely High Ambient Temperatures		5
157	Bulk crystal growth of 6H-SiC on polytype-controlled substrates through vapor phase and characterization. <i>Journal of Crystal Growth</i> , 1991 , 115, 733-739	1.6	5
156	Effect of quantum confinement on the defect-induced localized levels in 4H-SiC(0001)/SiO ₂ systems. <i>Journal of Applied Physics</i> , 2020 , 128, 095702	2.5	5
155	Short-Channel Effects in SiC MOSFETs Based on Analyses of Saturation Drain Current. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 1382-1384	2.9	5
154	Improvement of Both n- and p-Channel Mobilities in 4H-SiC MOSFETs by High-Temperature N ₂ Annealing. <i>IEEE Transactions on Electron Devices</i> , 2021 , 68, 638-644	2.9	5
153	Effects of TiO ₂ crystallinity and oxygen composition on forming characteristics in Pt/TiO ₂ /Pt resistive switching cells. <i>AIP Advances</i> , 2018 , 8, 125010	1.5	5
152	Effect of Postoxidation Nitridation on Forward Current-Voltage Characteristics in 4H-SiC Mesa p-n Diodes Passivated With SiO ₂ . <i>IEEE Transactions on Electron Devices</i> , 2017 , 64, 3016-3018	2.9	4

151	Decay curve analyses in carrier lifetime measurements of p- and n-type 4H-SiC epilayers. <i>Japanese Journal of Applied Physics</i> , 2014 , 53, 111301	1.4	4
150	Characterization of inhomogeneity in silicon dioxide films on 4H-silicon carbide epitaxial substrate using a combination of Fourier transform infrared and cathodoluminescence spectroscopy. <i>Applied Spectroscopy</i> , 2014 , 68, 1176-80	3.1	4
149	Carrier Lifetimes in Lightly-Doped p-Type 4H-SiC Epitaxial Layers Enhanced by Post-growth Processes and Surface Passivation. <i>Journal of Electronic Materials</i> , 2017 , 46, 6411-6417	1.9	4
148	Impact of conduction type and doping density on thermal oxidation rate of SiC(0001). <i>Applied Physics Express</i> , 2014 , 7, 121301	2.4	4
147	Ab initio prediction of SiC nanotubes with negative strain energy. <i>Applied Physics Letters</i> , 2014 , 104, 033107	1.7	4
146	Progress and future challenges of silicon carbide devices for integrated circuits 2014 ,		4
145	A study of SiC Power BJT performance and robustness. <i>Microelectronics Reliability</i> , 2011 , 51, 1773-1777	1.2	4
144	Observation of novel defect structure in 2H-AlN grown on 6H-SiC(0001) substrates with 3-bilayer-height step-and-terrace structures. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009 , 206, 1187-1189	1.6	4
143	High electron mobility achieved in n-channel 4H-SiC MOSFETs oxidized in the presence of nitrogen. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009 , 206, 2363-2373	1.6	4
142	Ab initio study of isolated chlorine defects in cubic SiC. <i>Journal of Physics Condensed Matter</i> , 2011 , 23, 415802	1.8	4
141	. <i>IEEE Transactions on Electron Devices</i> , 2008 , 55, 1795-1797	2.9	4
140	Source of Surface Morphological Defects Formed on 4H-SiC Homoepitaxial Films. <i>Japanese Journal of Applied Physics</i> , 2006 , 45, 7625-7631	1.4	4
139	Structure Analysis of ZrB ₂ (0001) Surface Prepared by ex situ HF Treatment. <i>Japanese Journal of Applied Physics</i> , 2006 , 45, L497-L500	1.4	4
138	Thermal stability of defects in p-type as-grown 6H-SiC. <i>Journal of Physics Condensed Matter</i> , 2007 , 19, 306204	1.8	4
137	Characterization of punch-through phenomenon in SiC-SBD by capacitance-voltage measurement at high reverse bias voltage. <i>IEICE Electronics Express</i> , 2006 , 3, 379-384	0.5	4
136	Rate-determining process in chemical vapor deposition of SiC on off-axis. <i>Journal of Crystal Growth</i> , 2004 , 270, 455-461	1.6	4
135	Effects of Parasitic Region in SiC Bipolar Junction Transistors on Forced Current Gain. <i>Materials Science Forum</i> , 2018 , 924, 629-632	0.4	4
134	Impacts of Finger Numbers on ON-State Characteristics in Multifinger SiC BJTs With Low Base Spreading Resistance. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 2771-2777	2.9	4

133	1200 V SiC Vertical-Channel-JFETs and Cascode Switches	157-191	4	
132	Phonon frequencies of a highly strained AlN layer coherently grown on 6H-SiC (0001). <i>AIP Advances</i> , 2017 , 7, 015105		1.5	3
131	Temperature Dependence of Conductivity Modulation in SiC Bipolar Junction Transistors. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 1699-1704		2.9	3
130	SiC Vertical-Channel n- and p-JFETs Fully Fabricated by Ion Implantation. <i>Materials Science Forum</i> , 2019 , 963, 841-844		0.4	3
129	Dominant conduction mechanism in TaO _x -based resistive switching devices. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, 090914		1.4	3
128	AlGaN/SiC Heterojunction Bipolar Transistors Featuring AlN/GaN Short-Period Superlattice Emitter. <i>IEEE Transactions on Electron Devices</i> , 2013 , 60, 2768-2775		2.9	3
127	Quantum-confinement effects on conduction band structure of rectangular cross-sectional GaAs nanowires. <i>Journal of Applied Physics</i> , 2014 , 115, 053713		2.5	3
126	Anharmonic vibrations of the dicarbon antisite defect in 4H-SiC. <i>Applied Physics Letters</i> , 2012 , 100, 132107		0.4	3
125	Thermal stability of deep levels between room temperature and 1500 °C in as-grown 3C-SiC. <i>Journal of Applied Physics</i> , 2009 , 106, 073721		2.5	3
124	Single versus double ion implantation: a deep level study. <i>Physica Status Solidi (B): Basic Research</i> , 2009 , 246, 402-406		1.3	3
123	The Effects of Transverse Electric Fields on the Electronic Properties of SiC Nanostructures. <i>Journal of Computational and Theoretical Nanoscience</i> , 2012 , 9, 1850-1859		0.3	3
122	A New Class of Step-and-Terrace Structure Observed on 4H-SiC(0001) after High-Temperature Gas Etching. <i>Applied Physics Express</i> , 2009 , 2, 101603		2.4	3
121	Photoluminescence of 3C-SiC Epilayers Grown on Lattice-Matched Substrates. <i>Japanese Journal of Applied Physics</i> , 1997 , 36, 6405-6410		1.4	3
120	Extension of lifetime of silicon field emitter arrays in oxygen ambient by carbon negative ion implantation. <i>Journal of Vacuum Science & Technology B</i> , 2008 , 26, 876			3
119	A study on electro thermal response of SiC power module during high temperature operation. <i>IEICE Electronics Express</i> , 2008 , 5, 597-602		0.5	3
118	Reduction of threading dislocations in nonpolar 4H-AlN on 4H-SiC (11 $\bar{2}$ 0) grown by molecular-beam epitaxy with slightly Al-rich conditions. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2007 , 4, 2552-2555			3
117	Growth of high-quality non-polar AlN on 4H-SiC(11 $\bar{2}$ 0) substrate by molecular-beam epitaxy. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2003 , 2502-2505			3
116	Selective Embedded Growth of 4H-SiC Trenches in 4H-SiC(0001) Substrates Using Carbon Mask. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, 4909-4910		1.4	3

115	Design and Technology Considerations for SiC Bipolar Devices: BJTs, IGBTs, and GTOs389-444		3
114	Comprehensive and systematic design of metal/high-k gate stack for high-performance and highly reliable SiC power MOSFET. <i>Japanese Journal of Applied Physics</i> , 2020 , 59, 021001	1.4	3
113	Analysis of carrier lifetimes in n-type 4H-SiC by rate equations. <i>Applied Physics Express</i> , 2020 , 13, 011006	2.4	3
112	Experimental Study on Short-Channel Effects in Double-Gate Silicon Carbide JFETs. <i>IEEE Transactions on Electron Devices</i> , 2020 , 67, 4538-4540	2.9	3
111	Theoretical analysis of band structure effects on impact ionization coefficients in wide-bandgap semiconductors. <i>Applied Physics Express</i> , 2020 , 13, 041006	2.4	3
110	Determination of Surface Recombination Velocity From Current-Voltage Characteristics in SiC p-n Diodes. <i>IEEE Transactions on Electron Devices</i> , 2018 , 65, 4786-4791	2.9	3
109	Franz-Keldysh effect in 4H-SiC p-n junction diodes under high electric field along the $\langle 11\bar{2}0 \rangle$ direction. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, 091007	1.4	2
108	ESR Study on Hydrogen Passivation of Intrinsic Defects in p-Type and Semi-Insulating 4H-SiC. <i>Materials Science Forum</i> , 2016 , 858, 318-321	0.4	2
107	Estimation of Impact Ionization Coefficient in GaN by Photomultiplication Measurement Utilizing Franz-Keldysh Effect 2019 ,		2
106	Growth, Electrical Characterization, and Electroluminescence of GaN/SiC Heterojunction Diodes and Bipolar Transistors Fabricated on SiC Off-Axis Substrates. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 124102	1.4	2
105	Impact of the Oxygen Amount of an Oxide Layer and Post Annealing on Forming Voltage and Initial Resistance of NiO-based Resistive Switching Cells. <i>Materials Research Society Symposia Proceedings</i> , 2013 , 1562, 1		2
104	Epitaxial Growth and Defect Control of SiC for High-Voltage Power Devices. <i>Journal of the Vacuum Society of Japan</i> , 2011 , 54, 362-368		2
103	Anomalously low Ga incorporation in high Al-content AlGaIn grown on $\langle 11\bar{2}0 \rangle$ non-polar plane by molecular beam epitaxy. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011 , 208, 1498-1500	1.6	2
102	Influence of Effective Fixed Charges on Short-Channel Effects in SiC Metal-Oxide-Semiconductor Field-Effect Transistors. <i>Japanese Journal of Applied Physics</i> , 2010 , 49, 024204	1.4	2
101	Electrostatic-Actuated Suspended Ribbon Structure Fabricated in Single-Crystalline SiC by Selective Photoelectrochemical Etching. <i>Japanese Journal of Applied Physics</i> , 2009 , 48, 111101	1.4	2
100	Determination of the thermo-optic coefficients of GaN and AlN up to 515 °C. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2009 , 6, S776-S779		2
99	Temperature Dependence of Electrical Properties of NiO Thin Films for Resistive Random Access Memory. <i>Materials Research Society Symposia Proceedings</i> , 2008 , 1071, 1		2
98	Hydrogen Implantation and Annealing-Induced Exfoliation Process in SiC Wafers with Various Crystal Orientations. <i>Japanese Journal of Applied Physics</i> , 2008 , 47, 5352-5354	1.4	2

97	Dose Designing and Fabrication of 4H-SiC Double RESURF MOSFETs		2
96	MOS Interface Properties and MOSFET Performance on 4H-SiC{0001} and Non-Basal Faces Processed by N ₂ O Oxidation. <i>Materials Research Society Symposia Proceedings</i> , 2004 , 815, 264		2
95	Epitaxial growth of 4H-SiC(0001) and control of MOS interface. <i>Applied Surface Science</i> , 2003 , 216, 497-501		2
94	High-Sensitivity Analysis of Z1 Center Concentration in 4H-SiC Grown by Horizontal Cold-Wall Chemical Vapor Deposition. <i>Japanese Journal of Applied Physics</i> , 2002 , 41, 2987-2988	1.4	2
93	Four Current Examples of Characterization of Silicon Carbide. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 742, 311		2
92	Epitaxial Growth of SiC on Non-Typical Orientations and MOS Interfaces. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 640, 1		2
91	Vanadium Ion Implanted Guard Rings for High-Voltage 4H-SiC Schottky Rectifiers. <i>Japanese Journal of Applied Physics</i> , 2000 , 39, L1216-L1218	1.4	2
90	4H-SiC/6H-SiC interface structures studied by high-resolution transmission electron microscopy. <i>Applied Physics Letters</i> , 1993 , 63, 2636-2637	3.4	2
89	Growth of Nonpolar AlN and AlGaN on 4H-SiC (1-100) by Molecular Beam Epitaxy. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 892, 638		2
88	Transformation of hollow-core screw dislocations: transitional configuration of superscrew dislocations. <i>Japanese Journal of Applied Physics</i> , 2020 , 59, 095502	1.4	2
87	Lateral spreads of ion-implanted Al and P atoms in silicon carbide. <i>Japanese Journal of Applied Physics</i> , 2021 , 60, 051001	1.4	2
86	Electron mobility along and directions in 4H-SiC over a wide range of donor concentration and temperature. <i>Applied Physics Express</i> ,	2.4	2
85	Strain control in AlN top layer by inserting an ultrathin GaN interlayer on an AlN template coherently grown on SiC(0001) by PAMBE. <i>Physica Status Solidi (B): Basic Research</i> , 2016 , 253, 814-818	1.3	2
84	Analysis of High-Field Hole Transport in Germanium and Silicon Nanowires Based on Boltzmann's Transport Equation. <i>IEEE Nanotechnology Magazine</i> , 2016 , 1-1	2.6	2
83	Analysis of ballistic and quasi-ballistic hole transport properties in germanium nanowires based on an extended 3D of the Barrier model. <i>Solid-State Electronics</i> , 2016 , 123, 143-149	1.7	2
82	Spin transport in n-type 3C-SiC observed in a lateral spin-pumping device. <i>Solid State Communications</i> , 2020 , 305, 113754	1.6	2
81	Progress in High and Ultrahigh Voltage Silicon Carbide Device Technology 2018 ,		2
80	Deep Defect Centers in Silicon Carbide Monitored with Deep Level Transient Spectroscopy 1997 , 162, 199		2

79	Bulk Growth of SiC [Review on Advances of SiC Vapor Growth for Improved Doping and Systematic Study on Dislocation Evolution1-31		2
78	Bulk and Epitaxial Growth of Micropipe-Free Silicon Carbide on Basal and Rhombohedral Plane Seeds33-61		2
77	Formation of Extended Defects in 4H-SiC Epitaxial Growth and Development of a Fast Growth Technique63-94		2
76	4H-SiC MISFETs with Nitrogen-Containing Insulators235-265		2
75	Extreme Temperature 6H-SiC JFET Integrated Circuit Technology121-155		2
74	Grain-boundary structures and their impact on the electrical properties of NiO films deposited by reactive sputtering. <i>Thin Solid Films</i> , 2020 , 709, 138203	2.2	1
73	Dual-color-sub-bandgap-light-excited isothermal capacitance transient spectroscopy for quick measurement of carbon-related hole trap density in n-type GaN. <i>Japanese Journal of Applied Physics</i> , 2020 , 59, SGGD05	1.4	1
72	Two modes of bipolar resistive switching characteristics in asymmetric TaOx-based ReRAM cells. <i>MRS Advances</i> , 2019 , 4, 2601-2607	0.7	1
71	Influence of vacuum annealing on interface properties of SiC (0001) MOS structures. <i>Japanese Journal of Applied Physics</i> , 2019 , 58, 078001	1.4	1
70	Conduction-type dependence of thermal oxidation rate on SiC(0001) 2014 ,		1
69	Determination of Phase Diagram of Electron-Hole Systems in 4H-SiC. <i>Journal of the Physical Society of Japan</i> , 2013 , 82, 063703	1.5	1
68	Suppression of Divergence of Low Energy Ion Beams by Space Charge Neutralization with Low Energy Electrons Emitted from Field Emitter Arrays 2011 ,		1
67	Time-Dependent Forming Characteristics in Pt/NiO/Pt Stack Structures for Resistive Random Access Memory. <i>Materials Research Society Symposia Proceedings</i> , 2012 , 1430, 112		1
66	Demonstration of SiC heterojunction bipolar transistors with AlN/GaN short-period superlattice widegap emitter 2009 ,		1
65	MOS interface properties and MOSFET performance on 4H-SiC{0001} and (11-20) processed by N/sub 2/O oxidation		1
64	Influence of Substrate Misorientation Angle and Direction in Growth of GaN on Off-axis SiC (0001). <i>Materials Research Society Symposia Proceedings</i> , 2004 , 831, 654		1
63	Either step-flow or layer-by-layer growth for AlN on SiC (0001) substrates. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 798, 377		1
62	Surface Control of ZrB2 (0001) Substrate for Molecular-Beam Epitaxy of GaN. <i>Materials Research Society Symposia Proceedings</i> , 2003 , 798, 209		1

61	High-Purity and Thick 4H- and 6H-SiC(0001) Epitaxial Growth by Cold-Wall Chemical Vapor Deposition and High-Voltage pin Diodes. <i>Japanese Journal of Applied Physics</i> , 2001 , 40, L319-L322	1.4	1
60	Epitaxial Growth and Characterization of 4H-SiC(11 $\bar{2}$ 0) and (03 \bar{B} 8). <i>Materials Research Society Symposia Proceedings</i> , 2002 , 742, 111		1
59	SiO ₂ /SiC Interface Properties on Various Surface Orientations. <i>Materials Research Society Symposia Proceedings</i> , 2002 , 742, 451		1
58	Step-controlled epitaxial growth of SiC and its conductivity control		1
57	Nucleation and Step Dynamics in SiC Epitaxial Growth. <i>Materials Research Society Symposia Proceedings</i> , 1994 , 339, 369		1
56	Breakdown Electric Field of GaN p+-n and p-n+ Junction Diodes with Various Doping Concentrations. <i>IEEE Electron Device Letters</i> , 2021 , 1-1	4.4	1
55	Suppressed Surface-Recombination Structure and Surface Passivation for Improving Current Gain of 4H-SiC BJTs445-465		1
54	Microscopic mechanism of carbon annihilation upon SiC oxidation due to phosphorus treatment: Density functional calculations combined with ion mass spectrometry. <i>Applied Physics Express</i> , 2018 , 11, 121301	2.4	1
53	Photoionization cross section ratio of nitrogen-site carbon in GaN under sub-bandgap-light irradiation determined by isothermal capacitance transient spectroscopy. <i>Applied Physics Express</i> ,	2.4	1
52	Depth profiles of electron traps generated during reactive ion etching in n-type 4H-SiC characterized by using isothermal capacitance transient spectroscopy. <i>Journal of Applied Physics</i> , 2021 , 130, 105703	2.5	1
51	Lifetime-Killing Defects in 4H-SiC Epilayers and Lifetime Control by Low-Energy Electron Irradiation267-286		1
50	Identification and Carrier Dynamics of the Dominant Lifetime Limiting Defect in n $\bar{4}$ H-SiC Epitaxial Layers287-317		
49	Analysis of Interface Trap Parameters from Double-Peak Conductance Spectra Taken on N-Implanted 3C-SiC MOS Capacitors363-374		1
48	Application of Silicon Carbide Transistors in Photovoltaic Inverters347-388		1
47	Carrier Trapping Effects on Forward Characteristics of SiC p-i-n Diodes Fabricated on High-Purity Semi-Insulating Substrates. <i>IEEE Transactions on Electron Devices</i> , 2022 , 69, 1989-1994	2.9	1
46	High-voltage SiC power devices for improved energy efficiency.. <i>Proceedings of the Japan Academy Series B: Physical and Biological Sciences</i> , 2022 , 98, 161-189	4	1
45	SiC complementary junction field-effect transistor logic gate operation at 623 K. <i>IEEE Electron Device Letters</i> , 2022 , 1-1	4.4	1
44	Impacts of energy relaxation process on quasi-ballistic hole transport capability in germanium and silicon nanowires. <i>Journal of Applied Physics</i> , 2018 , 123, 024305	2.5	0

- 43 First-principles study of Cl diffusion in cubic SiC. *Journal of Applied Physics*, **2013**, 113, 133706 2.5 ○
- 42 Deep Levels in As-Grown and Electron-Irradiated P-type 4H-SiC. *Materials Research Society Symposia Proceedings*, **2006**, 911, 4 ○
- 41 Reliability Issues of SiC Power MOSFETs toward High Junction Temperature Operation 321-346 ○
- 40 Expansion patterns of single Shockley stacking faults from scratches on 4H-SiC. *Japanese Journal of Applied Physics*, **2021**, 60, 068001 1.4 ○
- 39 Critical electric field for transition of thermionic field emission/field emission transport in heavily doped SiC Schottky barrier diodes. *Applied Physics Letters*, **2022**, 120, 172103 3.4 ○
- 38 Characterization of Defects in Silicon Carbide by Raman Spectroscopy **2011**, 243-266
- 37 Optical Properties of As-Grown and Process-Induced Stacking Faults in 4H-SiC **2011**, 205-242
- 36 Wide-bandgap Semiconductor Devices using Group-III Nitride/SiC Heterointerface. *Hyomen Kagaku*, **2010**, 31, 651-656
- 35 Correlation between Oxygen Composition and Electrical Properties in NiO Thin Films for Resistive Random Access Memory. *Materials Research Society Symposia Proceedings*, **2010**, 1250, 1
- 34 Non-destructive detection and visualization of extended defects in 4H-SiC epilayers. *Materials Research Society Symposia Proceedings*, **2010**, 1246, 1
- 33 Fabrication of High Performance 3C-SiC Vertical MOSFETs by Reducing Planar Defects **2011**, 95-113
- 32 Density Functional Study of Graphene Overlayers on SiC **2011**, 473-492
- 31 Identification of the Location of Conductive Filaments Formed in Pt/NiO/Pt Resistive Switching Cells and Investigation on Their Properties. *Materials Research Society Symposia Proceedings*, **2012**, 1430, 118
- 30 Fabrication and Electronic Characteristics of Silicon Nanowire MOSFETs. *Materials Research Society Symposia Proceedings*, **2008**, 1080, 1
- 29 Low-dislocation-density Nonpolar AlN Grown on 4H-SiC (11-20) Substrates. *Materials Research Society Symposia Proceedings*, **2006**, 955, 1
- 28 Aluminum-Ion Implantation into 4H-SiC (11-20) and (0001). *Materials Research Society Symposia Proceedings*, **2004**, 815, 141
- 27 Impact of SiC surface control on initial growth mode and crystalline quality of AlN grown by molecular-beam epitaxy. *Physica Status Solidi C: Current Topics in Solid State Physics*, **2003**, 2529-2532
- 26 A Model for Double Positioning Twin Formation in Cubic SiC on Noncubic SiC Substrates. *Materials Research Society Symposia Proceedings*, **1992**, 280, 729

- 25 Surface Step Structures of SiC Epitaxial Layers Grown on Off-axis SiC (0001). *Materia Japan*, **2001**, 40, 1007-1007 O.1
- 24 Formation of Deep pn Junctions by High-Energy Al and B Ion Implantations into SiC. *IEEE Transactions on Electronics, Information and Systems*, **2002**, 122, 17-22 O.1
- 23 Homoepitaxial Growth on 4H-SiC {0001}-Vicinal Faces. *Zairyo/Journal of the Society of Materials Science, Japan*, **2004**, 53, 1323-1327 O.1
- 22 ??????????????????????????????????????. *Journal of the Vacuum Society of Japan*, **2008**, 51, 401-404
- 21 Rapid Revolution Speed Control of the Brushless DC Motor for Automotive LIDAR Applications. *IEICE Transactions on Electronics*, **2020**, E103.C, 324-331 O.4
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- 2 Structural determination of phosphosilicate glass based on first-principles molecular dynamics
calculation. *Japanese Journal of Applied Physics*, **2019**, 58, 011001 1.4
- 1 High-resolution electron microscopy and low-temperature electron diffraction studies of a Bi2212
single crystal grown by the floating zone method. *Journal of Superconductivity and Novel Magnetism*
, **1997**, 10, 649-655