

Mitsuo Okamoto

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Development of Ultrahigh-Voltage SiC Devices. IEEE Transactions on Electron Devices, 2015, 62, 396-404.	3.0	78
2	Growth of nitride crystals, BN, AlN and GaN by using a Na flux. Diamond and Related Materials, 2000, 9, 512-515.	3.9	47
3	Strong dependence of the inversion mobility of 4H and 6H SiC(0001) MOSFETs on the water content in pyrogenic re-oxidation annealing. IEEE Electron Device Letters, 2002, 23, 136-138.	3.9	46
4	Effect of the oxidation process on the electrical characteristics of 4H-SiC p-channel metal-oxide-semiconductor field-effect transistors. Applied Physics Letters, 2006, 89, 023502.	3.3	46
5	700-V 1.0- $\Omega \cdot \text{cm}^2$ Buried Gate SiC-SIT (SiC-BGSIT). IEEE Electron Device Letters, 2006, 27, 908-910.	3.9	40
6	Fabrication of a P-Channel SiC-IGBT with High Channel Mobility. Materials Science Forum, 0, 740-742, 958-961.	0.3	37
7	Coexistence of Small Threshold Voltage Instability and High Channel Mobility in 4H-SiC($000\bar{1}$) Metal-Oxide-Semiconductor Field-Effect Transistors. Applied Physics Express, 2012, 5, 041302.	2.4	35
8	8.5- $\Omega \cdot \text{cm}^2$; 600-V Double-Epitaxial MOSFETs in 4H-SiC. IEEE Electron Device Letters, 2004, 25, 292-294.	3.9	27
9	Lateral RESURF MOSFET Fabricated on 4H-SiC($000\bar{1}$) C-Face. IEEE Electron Device Letters, 2004, 25, 405-407.	3.9	26
10	Single photon sources in 4H-SiC metal-oxide-semiconductor field-effect transistors. Applied Physics Letters, 2018, 112, .	3.3	24
11	Device Performance and Switching Characteristics of 16 kV Ultrahigh-Voltage SiC Flip-Type n-Channel IGBTs. Materials Science Forum, 0, 821-823, 842-846.	0.3	22
12	Low V_{th} and highly reliable 16 kV ultrahigh voltage SiC flip-type n-channel implantation and epitaxial IGBT. , 2013, , .		21
13	First Demonstration of a Monolithic SiC Power IC Integrating a Vertical MOSFET with a CMOS Gate Buffer. , 2021, , .		21
14	Anomalous carbon clusters in 4H-SiC/SiO ₂ interfaces. Journal of Applied Physics, 2019, 125, .	2.5	20
15	Characteristics of 4H-SiC n- and p-Channel Metal-Oxide-Semiconductor Field-Effect Transistors with Ion-Implanted Buried Channel. Japanese Journal of Applied Physics, 2012, 51, 02BF05.	1.5	19
16	Evaluation of 4H-SiC Thermal Oxide Reliability Using Area-Scaling Method. Japanese Journal of Applied Physics, 2009, 48, 081404.	1.5	18
17	Na: A New Flux for Growing Hexagonal Boron Nitride Crystals at Low Temperature. Japanese Journal of Applied Physics, 2000, 39, L300-L302.	1.5	17
18	Control of Nucleation Site and Growth Orientation of Bulk GaN Crystals. Japanese Journal of Applied Physics, 1999, 38, L1121-L1123.	1.5	16

#	ARTICLE	IF	CITATIONS
19	Growth of AlN thin films on (111) and (100) silicon by pulsed laser deposition in nitrogen plasma ambient. <i>Diamond and Related Materials</i> , 1997, 6, 1015-1018.	3.9	15
20	1.8 m ² , 10 A Power MOSFET in 4H-SiC. , 2006, , .		15
21	Improvement of Channel Mobility in 4H-SiC C-Face MOSFETs by H ₂ Rich Wet Re-Oxidation. <i>Materials Science Forum</i> , 0, 778-780, 975-978.	0.3	15
22	Epitaxial Growth of AlN Thin Films on Sapphire by Pulsed Laser Deposition and Effect of N ₂ Ambient on Crystallinity. <i>Japanese Journal of Applied Physics</i> , 1999, 38, 2114-2115.	1.5	13
23	(Invited) SiC MOS Interface States: Difference between Si Face and C Face. <i>ECS Transactions</i> , 2013, 58, 55-60.	0.5	13
24	Dynamic characteristics of large current capacity module using 16-kV ultrahigh voltage SiC flip-type n-channel IGBT. , 2014, , .		13
25	Electrical Properties of 4H-Silicon Carbide Complementary Metal-Oxide Semiconductor Devices with Wet-Processed Gate Oxide. <i>Japanese Journal of Applied Physics</i> , 2009, 48, 04C087.	1.5	12
26	Difference in electron mobility at 4H-SiC/SiO ₂ interfaces with various crystal faces originating from effective-field-dependent scattering. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	11
27	4.3 m ² , 1100 V 4H-SiC Implantation and Epitaxial MOSFET. <i>Materials Science Forum</i> , 2006, 527-529, 1281-1284.	0.3	10
28	1270V, 1.21 m ² SiC Buried Gate Static Induction Transistors (SiC-BGSITs). <i>Materials Science Forum</i> , 2008, 600-603, 1071-1074.	0.3	10
29	Effect of Doping Concentration in Buried-Channel NMOSFETs on Electrical Properties of 4H-SiC CMOS Devices. <i>Materials Science Forum</i> , 0, 645-648, 995-998.	0.3	10
30	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.	1.5	10
31	Aluminum nitride thin films grown by plasma-assisted pulsed laser deposition. <i>Applied Surface Science</i> , 1997, 113-114, 57-60.	6.1	9
32	The ohmic character of doped AlN films. <i>Diamond and Related Materials</i> , 2001, 10, 1322-1325.	3.9	9
33	Influence of pressure control on the growth of bulk GaN single crystal using a Na flux. <i>Journal of Crystal Growth</i> , 2002, 237-239, 2112-2115.	1.5	8
34	Low on-resistance in inversion channel IEMOSFET formed on 4H-SiC C-face substrate. , 0, , .		8
35	Controlling Characteristics of 4H-SiC(0001) p-Channel MOSFETs Fabricated on Ion-Implanted n-Well. <i>Materials Science Forum</i> , 0, 717-720, 781-784.	0.3	8
36	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> , 0, 717-720, 709-712.	0.3	8

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37	High Performance SiC IEMOSFET/SBD Module. Materials Science Forum, 2012, 717-720, 1053-1058.	0.3	8
38	Electrically detected-magnetic-resonance identifications of defects at 4H-SiC(000 1 Å ⁻¹)/SiO ₂ interfaces with wet oxidation. Applied Physics Letters, 2019, 115, 151602.	3.3	8
39	Epitaxial aluminum nitride thin films grown by pulsed laser deposition in various nitrogen ambients. Diamond and Related Materials, 2000, 9, 516-519.	3.9	7
40	Demonstration of motor drive with SiC normally-off IBMOSFET/SBD power converter. , 2007, , .		7
41	Dynamic Characterization of the Threshold Voltage Instability under the Pulsed Gate Bias Stress in 4H-SiC MOSFET. Materials Science Forum, 0, 897, 549-552.	0.3	7
42	Mobility-limiting Coulomb scattering in nitrided 4H-SiC inversion channel on 1 1 Å ⁻¹ 00 m-face and 11 2 Å ⁻¹ 0 a-face characterized by Hall effect measurements. Applied Physics Letters, 2019, 115, 132106.	3.3	7
43	Comprehensive physical and electrical characterizations of NO nitrided SiO ₂ /4H-SiC(112̄,0) interfaces. Japanese Journal of Applied Physics, 2022, 61, SC1065.	1.5	7
44	Fabrication of 700V SiC-SIT with Ultra-Low On-Resistance of 1.01 mΩ/cm ² . Materials Science Forum, 2006, 527-529, 1219-1222.	0.3	6
45	(Invited) SiC MOS Interface States: Similarity and Dissimilarity from Silicon. ECS Transactions, 2013, 50, 305-311.	0.5	6
46	(Invited) Interface Defects in C-face 4H-SiC MOSFETs: An Electrically-Detected-Magnetic-Resonance Study. ECS Transactions, 2017, 80, 147-153.	0.5	6
47	Impact of nitridation on the reliability of 4H-SiC(112̄,0) MOS devices. Applied Physics Express, 2022, 15, 041002.	2.4	6
48	Buried Gate Static Induction Transistors in 4H-SiC (SiC-BGSITs) with Ultra Low On-Resistance. , 2007, , .		5
49	Slow response in gate current-voltage characteristics of metal-oxide-semiconductor structures on the 4H-SiC(0001) face. Japanese Journal of Applied Physics, 2016, 55, 054103.	1.5	5
50	Anomalous Behavior of Gate Current and TDDB Lifetime by Constant Voltage Stress in NO-Annealed SiC-MOSFETs. IEEE Transactions on Electron Devices, 2021, 68, 1207-1213.	3.0	5
51	Analysis of Low On-Resistance in 4H-SiC Double-Epitaxial MOSFET. Materials Science Forum, 2005, 483-485, 813-816.	0.3	4
52	Influence of the Growth Atmosphere on the Properties of AlN Grown by Plasma - Assisted Pulsed Laser Deposition. Materials Research Society Symposia Proceedings, 1996, 423, 391.	0.1	3
53	Aluminum Nitride Thin Films Grown by Plasma-Assisted Pulsed Laser Deposition on Si Substrates. Materials Research Society Symposia Proceedings, 1997, 468, 87.	0.1	3
54	Lifetime Control of the Minority Carrier in PiN Diodes by He ⁺ Ion Implantation. Materials Science Forum, 2005, 483-485, 985-988.	0.3	3

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55	Gate-Area Dependence of SiC Thermal Oxides Reliability. Materials Science Forum, 0, 600-603, 787-790.	0.3	3
56	Fabrication and Electrical Properties of Thermally Oxidized p-Channel Metal-Oxide-Semiconductor Field-Effect Transistors on 4H-SiC C-Face. Japanese Journal of Applied Physics, 2012, 51, 046504.	1.5	3
57	Dipole scattering at the interface: The origin of low mobility observed in SiC MOSFETs. Journal of Applied Physics, 2022, 131, .	2.5	3
58	Homoepitaxial Growth of 4H-SiC Thin Film Below 1000°C by Microwave Plasma Chemical Vapor Deposition. Materials Science Forum, 2002, 389-393, 299-302.	0.3	2
59	Fabrication of 4H-SiC Double-Epitaxial MOSFETs. Materials Science Forum, 2004, 457-460, 1421-1424.	0.3	2
60	Deep UV Excitation Raman Spectroscopy of Homoepitaxial 4H-SiC Films Grown by Microwave Plasma Chemical Vapor Deposition. Materials Science Forum, 2004, 457-460, 629-632.	0.3	2
61	4.3 m.OMEGA.cm ² , 1100 V normally-off IEMOSFET on SiC. IEEJ Transactions on Industry Applications, 2007, 127, 267-272.	0.2	2
62	Three Dimensional Analysis of Turnoff Operation of SiC Buried Gate Static Induction Transistors (BG-SITs). Materials Science Forum, 2008, 600-603, 1075-1078.	0.3	2
63	Fabrication and Electrical Properties of Thermally Oxidized p-Channel Metal-Oxide-Semiconductor Field-Effect Transistors on 4H-SiC C-Face. Japanese Journal of Applied Physics, 2012, 51, 046504.	1.5	2
64	C-Face Interface Defects in 4H-SiC MOSFETs Studied by Electrically Detected Magnetic Resonance. Materials Science Forum, 2014, 778-780, 414-417.	0.3	2
65	Oxidation-Process Dependence of Single Photon Sources Embedded in 4H-SiC MOSFETs. Materials Science Forum, 0, 924, 281-284.	0.3	2
66	Free carrier density enhancement of 4H-SiC Si-face MOSFET by Ba diffusion process and NO passivation. Japanese Journal of Applied Physics, 2021, 60, SBBD08.	1.5	2
67	Accurate determination of threshold voltage shift during negative gate bias stress in 4H-SiC MOSFETs by fast on-the-fly method. Japanese Journal of Applied Physics, 2021, 60, 060901.	1.5	2
68	Evaluation of drain current decrease by AC gate bias stress in commercially available SiC MOSFETs. , 2017, , .		2
69	Impact of post-nitridation annealing in CO ₂ ambient on threshold voltage stability in 4H-SiC metal-oxide-semiconductor field-effect transistors. Applied Physics Express, 2022, 15, 061003.	2.4	2
70	Realization of Monolithic SiC Power IC Utilizing the Compatible Process for CMOS and Power MOSFET. , 2022, , .		2
71	Activation of p-Type Dopants in 4H-SiC Using Hybrid Super-Rapid Thermal Annealing Equipment. Japanese Journal of Applied Physics, 2007, 46, 5342-5344.	1.5	1
72	Photo-Irradiation-Induced Narrowing of Photoluminescence Spectra from Porous Silicon. Materials Research Society Symposia Proceedings, 1996, 452, 529.	0.1	0

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73	Influence of the Wet Re-Oxidation Procedure on Inversion Mobility of 4H-SiC MOSFETs. Materials Science Forum, 2002, 389-393, 1049-1052.	0.3	0
74	Homoepitaxial 4H-SiC films grown by microwave plasma chemical vapor deposition. Materials Research Society Symposia Proceedings, 2002, 742, 561.	0.1	0
75	4H-SiC Lateral RESURF MOSFETs on Carbon-Face Substrates. Materials Science Forum, 2005, 483-485, 805-808.	0.3	0
76	Fabrication of 4H-SiC p-Channel MOSFET with High Channel Mobility. Materials Science Forum, 2006, 527-529, 1301-1304.	0.3	0
77	Electrical Properties of p-Channel MOSFETs Fabricated on 4H- and 6H-SiC. Materials Science Forum, 2007, 556-557, 783-786.	0.3	0
78	A $4.3 \times 10^4 \text{ cm}^2/\text{Vs}$, 1100-V normally-off IEMOSFET on SiC. Electronics and Communications in Japan, 2008, 91, 9-14.	0.5	0
79	4H-SiC p-Channel MOSFETs with Epi-Channel Structure. Materials Science Forum, 2008, 600-603, 711-714.	0.3	0
80	Challenges of 4H-SiC MOSFETs on the C(000-1) Face toward the Achievement of Ultra Low On-Resistance. Materials Science Forum, 0, 600-603, 907-912.	0.3	0
81	Fabrication of P-Channel MOSFETs on 4H-SiC C-Face. Materials Science Forum, 2011, 679-680, 653-656.	0.3	0
82	Characteristics of 4H-SiC n- and p-Channel Metal-Oxide-Semiconductor Field-Effect Transistors with Ion-Implanted Buried Channel. Japanese Journal of Applied Physics, 2012, 51, 02BF05.	1.5	0
83	Negative Bias Temperature Instability in 4H-SiC MOSFETs Investigated by On-the-fly Methods. , 2021, , .		0