Ryoji

List of Publications by Year
in descending order

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76 papers	1,190 citations	516561 16 h-index	477173 29 g-index
77 all docs	77 docs citations	77 times ranked	674 citing authors

#	Article	IF	Citations
1	Fast-filling of 4H-SiC trenches at 10ÂÎ¼m/h by enhancing partial pressures of source species in chemical vapor deposition processes. Journal of Crystal Growth, 2020, 546, 125809.	0.7	0
2	Modeling of Al Doping During 4H-SiC Chemical-Vapor-Deposition Trench Filling. IEEE Journal of the Electron Devices Society, 2019, 7, 470-475.	1.2	3
3	Breaking the Theoretical Limit of 6.5 kV-Class 4H-SiC Super-Junction (SJ) MOSFETs by Trench-Filling Epitaxial Growth. , 2019, , .		40
4	Selection of ion species suited for channeled implantation to be used in multi-epitaxial growth for SiC superjunction devices. Japanese Journal of Applied Physics, 2019, 58, 050905.	0.8	8
5	Gibbsâ€“Thomson effect on aluminum doping during trench-filling epitaxial growth of 4H-SiC. Japanese Journal of Applied Physics, 2019, 58, 051009.	0.8	2
6	Effect of HCL on Surface Free Energy of SiC during CVD Trench Filling. Materials Science Forum, 2019, 963, 136-140.	0.3	1
7	Single photon sources in 4H-SiC metal-oxide-semiconductor field-effect transistors. Applied Physics Letters, 2018, 112, .	1.5	24
8	Progress in High and Ultrahigh Voltage Silicon Carbide Device Technology. , 2018, , .		4
9	Topography Simulation of 4H-SiC-Chemical-Vapor-Deposition Trench Filling Including an OrientationDependent Surface Free Energy. , 2018, , .		2
10	Effect of boron incorporation on slow interface traps in SiO2/4H-SiC structures. Applied Physics A: Materials Science and Processing, 2017, 123, 1.	1.1	16
11	Characterization of near-interface traps at 4H-SiC metalâ€“oxideâ€“semiconductor interfaces using modified distributed circuit model. Applied Physics Express, 2017, 10, 064101.	1.1	19
12	Evaluation of silicon- and carbon-face SiO2/SiC MOS interface quality based on scanning nonlinear dielectric microscopy. Applied Physics Letters, 2017, 111, .	1.5	13
13	An empirical growth window concerning the input ratio of HCl/SiH₄gases in filling 4H-SiC trench by CVD. Applied Physics Express, 2017, 10, 055505.	1.1	14
14	First topography simulation of SiC-chemical-vapor-deposition trench filling, demonstrating the essential impact of the Gibbs-Thomson effect. , 2017, , .		3
15	Strong impact of slight trench direction misalignment from $[11ar{2}0]$ on deep trench filling epitaxy for SiC super-junction devices. Japanese Journal of Applied Physics, 2017, 56, 04CR05.	0.8	21
16	Effect of H₂ Carrier Gas on CVD Growth Rate for 4H-SiC Trench Filling. Materials Science Forum, 2016, 858, 181-184.	0.3	7
17	Local deep level transient spectroscopy using super-higher-order scanning nonlinear dielectric microscopy. Microelectronics Reliability, 2016, 64, 566-569.	0.9	8
18	Proposal of local deep level transient spectroscopy using super-higher-order scanning nonlinear dielectric microscopy and 2-dimensional imaging of trap distribution in SiO<inf>2</inf>/SiC interface. , 2016, , .		1

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19	Numerical analysis of the Gibbsâ€“Thomson effect on trench-filling epitaxial growth of 4H-SiC. Applied Physics Express, 2016, 9, 035601.	1.1	14
20	Influence of growth pressure on filling 4H-SiC trenches by CVD method. Japanese Journal of Applied Physics, 2016, 55, 01AC04.	0.8	8
21	Filling 4H-SiC trench towards selective epitaxial growth by adding HCl to CVD process. Applied Physics Express, 2015, 8, 065502.	1.1	20
22	Improved Channel Mobility in 4H-SiC MOSFETs by Boron Passivation. IEEE Electron Device Letters, 2014, 35, 1176-1178.	2.2	98
23	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
24	First experimental demonstration of SiC super-junction (SJ) structure by multi-epitaxial growth method. , 2014, , .		53
25	(Invited) SiC MOS Interface States: Similarity and Dissimilarity from Silicon. ECS Transactions, 2013, 50, 305-311.	0.3	6
26	(Invited) SiC MOS Interface States: Difference between Si Face and C Face. ECS Transactions, 2013, 58, 55-60.	0.3	13
27	Two-Dimensional Roughness Growth at Surface and Interface of SiO₂ Films during Thermal Oxidation of 4H-SiC(0001). Materials Science Forum, 2012, 717-720, 785-788.	0.3	5
28	Behavior of nitrogen atoms in SiC-SiO2 interfaces studied by electrically detected magnetic resonance. Applied Physics Letters, 2011, 99, .	1.5	52
29	Fixed nitrogen atoms in the SiO2/SiC interface region and their direct relationship to interface trap density. Applied Physics Letters, 2011, 99, .	1.5	79
30	Voltage-Current (V-I) Characteristics of 1.5kV Class pn Junctions with p-Well Structures on (0001) 4H-SiC. Materials Science Forum, 2009, 615-617, 683-686.	0.3	1
31	Determination of free carrier density in the low doping regime of 4H-SiC by Raman scattering. Applied Physics Letters, 2008, 93, .	1.5	20
32	Correlation Between the V-I Characteristics of (0001) 4H-SiC PN Junctions Having Different Structural Features and Synchrotron X-ray Topography. Materials Research Society Symposia Proceedings, 2008, 1069, 1.	0.1	1
33	Fabrication of 4H-SiC DIMOSFETs by High-Temperature (>1400Â°C) Rapid Thermal Oxidation and Nitridation Using Cold-Wall Oxidation Furnace. Materials Science Forum, 2006, 527-529, 1309-1312.	0.3	0
34	High Temperature Rapid Thermal Oxidation and Nitridation of 4H-SiC in Diluted N₂O and NO Ambient. Materials Science Forum, 2005, 483-485, 669-672.	0.3	16
35	Fabrication of Double Implanted (0001) 4H-SiC MOSFETs by using Pyrogenic Re-Oxidation Annealing. Materials Science Forum, 2004, 457-460, 1397-1400.	0.3	0
36	Diluted Nitric Oxide (NO) Annealing of SiO₂/4H-SiC in Cold-Wall Oxidation Furnace. Materials Science Forum, 2004, 457-460, 1345-1348.	0.3	4

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37	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
38	Thermal oxidation of (0001) 4H-SiC at high temperatures in ozone-admixed oxygen gas ambient. Applied Physics Letters, 2003, 83, 884-886.	1.5	10
39	Correlation between channel mobility and shallow interface traps in SiC metalâ€“oxideâ€“semiconductor field-effect transistors. Journal of Applied Physics, 2002, 92, 6230-6234.	1.1	48
40	High-temperature post-oxidation annealing on the low-temperature oxide/4H-SiC(0001). Journal of Applied Physics, 2002, 91, 1314-1317.	1.1	10
41	A Large Reduction in Interface-State Density for MOS Capacitor on 4H-SiC (11-2 0) Face Using H₂ and H₂O Vapor Atmosphere Post-Oxidation Annealing. Materials Science Forum, 2002, 389-393, 1057-1060.	0.3	6
42	Significant Improvement of Inversion Channel Mobility in 4H-SiC MOSFET on (11-20) Face Using Hydrogen Post-Oxidation Annealing. Materials Science Forum, 2002, 389-393, 1061-1064.	0.3	11
43	Correlation between Inversion Channel Mobility and Interface Traps near the Conduction Band in SiC MOSFETs. Materials Science Forum, 2002, 389-393, 1045-1048.	0.3	3
44	Improved Channel Mobility in Normally-Off 4H-SiC MOSFETs with Buried Channel Structure. Materials Science Forum, 2002, 389-393, 1069-1072.	0.3	12
45	Improvements in Electrical Properties of n-Type-Implanted 4H-SiC Substrates Using High-Temperature Rapid Thermal Annealing. Materials Science Forum, 2002, 389-393, 795-798.	0.3	12
46	Channel Engineering of Buried-Channel 4H-SiC MOSFET Based on the Mobility Model of the Oxide/4H-SiC Interface. Materials Science Forum, 2002, 389-393, 1081-1084.	0.3	0
47	ESR Characterization of SiC Bulk Crystals and SiO₂/SiC Interface. Materials Science Forum, 2002, 389-393, 1025-1028.	0.3	13
48	Characterization of the Interfaces between SiC and Oxide Films by Spectroscopic Ellipsometry. Materials Science Forum, 2002, 389-393, 1029-1032.	0.3	5
49	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
50	Homoepitaxial Growth of 4H-SiC Thin Film Below 1000Â°C by Microwave Plasma Chemical Vapor Deposition. Materials Science Forum, 2002, 389-393, 299-302.	0.3	2
51	Homoepitaxial 4H-SiC films grown by microwave plasma chemical vapor deposition. Materials Research Society Symposia Proceedings, 2002, 742, 561.	0.1	0
52	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.	2.2	46
53	Excellent effects of hydrogen postoxidation annealing on inversion channel mobility of 4H-SiC MOSFET fabricated on (11 2 0) face. IEEE Electron Device Letters, 2002, 23, 13-15.	2.2	94
54	Relationship between channel mobility and interface state density in SiC metalâ€“oxideâ€“semiconductor field-effect transistor. Journal of Applied Physics, 2002, 91, 1568-1571.	1.1	70

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55	Silicon carbide epitaxial layer growths on Acheson seed crystals from silicon melt. Materials Letters, 2002, 57, 307-314.	1.3	0
56	High channel mobility in normally-off 4H-SiC buried channel MOSFETs. IEEE Electron Device Letters, 2001, 22, 272-274.	2.2	54
57	Observation of SiO₂/SiC Interface with Different Off-Angle from Si(0001) Face Using Transmission Electron Microscopy. Materials Science Forum, 2001, 353-356, 647-650.	0.3	1
58	Influence of Post-Oxidation Process on the MOS Interface and MOSFETs Properties. Materials Science Forum, 2001, 353-356, 643-646.	0.3	15
59	Effects of Pyrogenic Reoxidation Annealing on Inversion Channel Mobility of 4H-SiC Metal-Oxide-Semiconductor Field-Effect Transistor Fabricated on $(11ar{2}0)$ Face. Japanese Journal of Applied Physics, 2001, 40, L1201-L1203.	0.8	10
60	Effects of ozone treatment of 4Hâ€“SiC(0001) surface. Applied Surface Science, 2000, 159-160, 550-555.	3.1	11
61	Improvement of charge trapping by hydrogen post-oxidation annealing in gate oxide of 4Hâ€“SiC metalâ€“oxideâ€“semiconductor capacitors. Applied Physics Letters, 2000, 77, 1215-1217.	1.5	24
62	Study on electron trapping and interface states of various gate dielectric materials in 4Hâ€“SiC metal-oxide-semiconductor capacitors. Applied Physics Letters, 2000, 77, 2054-2056.	1.5	35
63	Effect of Off-Angle from Si (0001) Surface and Polytype on Surface Morphology of SiC and C-V Characteristics of SiC MOS Structures. Materials Science Forum, 2000, 338-342, 1283-1286.	0.3	2
64	Observation of Misfit Dislocations Introduced by Epi-Layer Growth on 4H-SiC. Materials Science Forum, 0, 600-603, 309-312.	0.3	9
65	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
66	Influence of Processing and of Material Defects on the Electrical Characteristics of SiC-SBDs and SiC-MOSFETs. Materials Science Forum, 0, 645-648, 655-660.	0.3	17
67	Electrically Detected ESR Study of Interface Defects in 4H-SiC Metal-Oxide-Semiconductor Field Effect Transistor. Materials Science Forum, 0, 679-680, 370-373.	0.3	7
68	Electrically Detected Magnetic Resonance (EDMR) Studies of SiC-SiO₂ Interfaces. Materials Science Forum, 0, 717-720, 427-432.	0.3	4
69	Development of SiC Super-Junction (SJ) Device by Deep Trench-Filling Epitaxial Growth. Materials Science Forum, 0, 740-742, 785-788.	0.3	27
70	Filling of Deep Trench by Epitaxial SiC Growth. Materials Science Forum, 0, 740-742, 793-796.	0.3	17
71	Development of SiC Super-Junction (SJ) Devices by Multi-Epitaxial Growth. Materials Science Forum, 0, 778-780, 845-850.	0.3	23
72	High-Speed Dicing of SiC Wafers by Femtosecond Pulsed Laser. Materials Science Forum, 0, 821-823, 524-527.	0.3	2

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73	CVD Filling of Narrow Deep 4H-SiC Trenches in a Quasi-Selective Epitaxial Growth Mode. Materials Science Forum, 0, 924, 116-119.	0.3	3
74	Oxidation-Process Dependence of Single Photon Sources Embedded in 4H-SiC MOSFETs. Materials Science Forum, 0, 924, 281-284.	0.3	2
75	A Study of CVD Growth Parameters to Fill 50-Î¼m-Deep 4H-SiC Trenches. Materials Science Forum, 0, 963, 131-135.	0.3	1
76	Crystalline Quality Evaluation of SiC p/n Column Layers Formed by Trench-Filling-Epitaxial Growth. Materials Science Forum, 0, 1004, 445-450.	0.3	0