

Wolfgang Choyke

List of Publications by Year in descending order

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159525
30
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133188
59
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80
all docs

80
docs citations

80
times ranked

2182
citing authors

#	ARTICLE	IF	CITATIONS
1	Band structure properties, phonons, and exciton fine structure in 4-H-SiC measured by wavelength-modulated absorption and low-temperature photoluminescence. <i>Physical Review B</i> , 2020, 102, .	1.1	3
2	Anharmonic vibrations of the dicarbon antisite defect in 4-H-SiC . <i>Applied Physics Letters</i> , 2012, 100, .	1.5	5
3	Ionization energy of the phosphorus donor in 3-C-SiC from the donor-acceptor pair emission. <i>Journal of Applied Physics</i> , 2010, 108, .	1.1	7
4	Surface polishing by electrochemical etching of p-type 4-H-SiC . <i>Journal of Applied Physics</i> , 2009, 106, .	1.1	14
5	Comparative columnar porous etching studies on n-type 6-H-SiC crystalline faces. <i>Physica Status Solidi (B): Basic Research</i> , 2008, 245, 1396-1403.	0.7	25
6	Electronic states of chemically treated SiC surfaces. <i>Journal of Applied Physics</i> , 2008, 103, 013709.	1.1	8
7	Self-Ordered Nanocolumnar Pore Formation in the Photoelectrochemical Etching of 6-H-SiC . <i>Electrochemical and Solid-State Letters</i> , 2007, 10, K24.	2.2	18
8	Ab initio supercell calculations on aluminum-related defects in SiC . <i>Physical Review B</i> , 2007, 75, .	1.1	24
9	Hydrogen passivation of carbon Pb like centers at the 3-C- and 4-H-SiC/SiO_2 interfaces in oxidized porous SiC . <i>Applied Physics Letters</i> , 2006, 88, 092108.	1.5	35
10	SiC pore surfaces: Surface studies of $4\text{-H-SiC}(11\bar{1}0_2)$ and $4\text{-H-SiC}(1\bar{1}0_2\bar{1})$. <i>Applied Physics Letters</i> , 2006, 88, 031915.	1.5	16
11	Activation of shallow boron acceptor in C-B coimplanted silicon carbide: A theoretical study. <i>Applied Physics Letters</i> , 2005, 86, 102108.	1.5	17
12	Doping of phosphorus in chemical-vapor-deposited silicon carbide layers: A theoretical study. <i>Applied Physics Letters</i> , 2005, 87, 212114.	1.5	4
13	Fabrication and morphology of porous p-type SiC . <i>Journal of Applied Physics</i> , 2005, 97, 044908.	1.1	31
14	Photoelectrochemical etching of n-type 4-H silicon carbide. <i>Journal of Applied Physics</i> , 2004, 96, 2311-2322.	1.1	73
15	Correlation between the antisite pair and the D_1 center in SiC . <i>Physical Review B</i> , 2003, 67, .	1.1	72
16	Aggregation of carbon interstitials in silicon carbide: A theoretical study. <i>Physical Review B</i> , 2003, 68, .	1.1	103
17	Optical and Structural Investigation of AlN Grown on Sapphire with Reactive MBE Using RF Nitrogen or Ammonia. <i>Materials Research Society Symposia Proceedings</i> , 2003, 764, 1.	0.1	0
18	Isolated oxygen defects in 3-C- and 4-H-SiC : A theoretical study. <i>Physical Review B</i> , 2002, 66, .	1.1	47

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19	Anharmonicity of the C-H stretch mode in SiC: Unambiguous identification of hydrogen-silicon vacancy defect. <i>Applied Physics Letters</i> , 2002, 80, 237-239.	1.5	22
20	Four Current Examples of Characterization of Silicon Carbide. <i>Materials Research Society Symposia Proceedings</i> , 2002, 742, 311.	0.1	6
21	Structural Properties of GaN Films Grown by Molecular Beam Epitaxy on Singular and Vicinal 6H-SiC(0001). <i>MRS Internet Journal of Nitride Semiconductor Research</i> , 2002, 7, 1.	1.0	13
22	Structural Properties of GaN films grown by Molecular Beam Epitaxy on vicinal SiC(0001). <i>Materials Research Society Symposia Proceedings</i> , 2001, 693, 471.	0.1	3
23	Properties of GaN epitaxial layers grown on 6H-SiC(0001) by plasma-assisted molecular beam epitaxy. <i>Journal of Electronic Materials</i> , 2001, 30, 162-169.	1.0	34
24	Impurity-controlled dopant activation: Hydrogen-determined site selection of boron in silicon carbide. <i>Applied Physics Letters</i> , 2001, 79, 2746-2748.	1.5	27
25	A Survey of Conduction and Valence Band Edges in SiC. <i>Physica Scripta</i> , 1999, T79, 9.	1.2	15
26	Scanning tunneling microscope assisted nanostructure formation: Two excitation mechanisms for precursor molecules. <i>Journal of Applied Physics</i> , 1999, 86, 4949-4953.	1.1	6
27	Two mechanisms of scanning tunneling microscopy assisted nanostructure formation using precursor molecules. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1999, 17, 1445-1450.	0.9	20
28	Electron stimulated decomposition of adsorbed hexafluoroacetylacetonate Cu(I) vinyltrimethylsilane, Cu(I)(hfac)(vtms). <i>Journal of Applied Physics</i> , 1999, 85, 3368-3373.	1.1	20
29	Nanometer-scale investigation of metal-SiC interfaces using ballistic electron emission microscopy. <i>Journal of Electronic Materials</i> , 1998, 27, 345-352.	1.0	19
30	Absorption coefficient of 4H silicon carbide from 3900 to 3250 Å... <i>Journal of Applied Physics</i> , 1998, 84, 2963-2964.	1.1	112
31	Direct observation of conduction-band structure of 4H- and 6H-SiC using ballistic electron emission microscopy. <i>Physical Review B</i> , 1998, 57, 4027-4032.	1.1	43
32	Control of silicon crystal temperature by measurement of resistivity. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1997, 15, 2766-2769.	0.9	7
33	Silicon crystal heating and thermocouple mounting designs. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1997, 15, 182-186.	0.9	30
34	Enhanced silicon oxide film growth on Si (100) using electron impact. <i>Journal of Applied Physics</i> , 1997, 82, 6289-6292.	1.1	40
35	Role of the SiH ₃ Functional Group in Silane Adsorption and Dissociation on Si(100). <i>Journal of Physical Chemistry B</i> , 1997, 101, 6879-6882.	1.2	28
36	Deep Defect Centers in Silicon Carbide Monitored with Deep Level Transient Spectroscopy. <i>Physica Status Solidi A</i> , 1997, 162, 199-225.	1.7	372

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37	Optical Characterization of Silicon Carbide Polytypes. <i>Physica Status Solidi A</i> , 1997, 162, 5-38.	1.7	96
38	Deep Defect Centers in Silicon Carbide Monitored with Deep Level Transient Spectroscopy. , 1997, 162, 199.		2
39	Optical Characterization of Silicon Carbide Polytypes. <i>Physica Status Solidi A</i> , 1997, 162, 5.	1.7	7
40	1.54 μm Photoluminescence and Electroluminescence in Erbium Implanted 6H SiC. <i>Materials Research Society Symposia Proceedings</i> , 1996, 422, 339.	0.1	17
41	Effect of annealing temperature on 1.5 μm photoluminescence from Er-Implanted 6H-SiC. <i>Journal of Electronic Materials</i> , 1996, 25, 869-873.	1.0	13
42	A multi-technique study of the surface preparation of InSb substrate and subsequently grown CdTe films by molecular beam epitaxy. <i>Journal of Materials Science: Materials in Electronics</i> , 1996, 7, 23.	1.1	4
43	Surface characterization of SiC mirrors exposed to fast atomic oxygen. <i>Surface and Interface Analysis</i> , 1995, 23, 77-82.	0.8	13
44	GaN patterned film synthesis: Carbon depletion by hydrogen atoms produced from NH ₃ activated by electron impact. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1995, 13, 1831-1836.	0.9	5
45	Step site bonding on a vicinal Si(100) surface upon Cl ₂ adsorption. <i>Journal of Chemical Physics</i> , 1995, 102, 2946-2950.	1.2	3
46	Ga-CH ₃ bond scission by atomic H: The depletion of surface carbon from a gallium alkyl film on silicon dioxide. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1994, 12, 3040-3047.	0.9	9
47	Characterization of nanocrystallites in porous ϵ -6H-SiC. <i>Journal of Applied Physics</i> , 1994, 76, 4045-4049.	1.1	92
48	Chlorine bonding sites and bonding configurations on Si(100)-(2 \times 1). <i>Journal of Chemical Physics</i> , 1993, 98, 8308-8323.	1.2	116
49	Reflector atomic hydrogen source: A method for producing pure atomic hydrogen in ultrahigh vacuum. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1993, 11, 2822-2826.	0.9	18
50	Infrared reflectance of thin aluminum nitride films on various substrates. <i>Applied Physics Letters</i> , 1993, 62, 750-752.	1.5	35
51	Thermal disorder in adsorbed Cl on Si(100). <i>Journal of Chemical Physics</i> , 1993, 99, 5581-5585.	1.2	1
52	Combined Optical, Structural and Theoretical Assessment of MOCVD Grown Multiple GaAs Quantum Wells. <i>Materials Research Society Symposia Proceedings</i> , 1993, 326, 359.	0.1	0
53	Effect of oxygen on boron doping in chemical vapor deposition of diamond as deduced from cathodoluminescence studies. <i>Applied Physics Letters</i> , 1992, 60, 1884-1886.	1.5	30
54	On the β -band emission and boron related luminescence in diamond. <i>Applied Physics Letters</i> , 1992, 60, 3138-3140.	1.5	124

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55	Si impurity in chemical vapor deposited diamond films. Applied Physics Letters, 1991, 58, 295-297.	1.5	68
56	Controlled growth of 3C-SiC and 6H-SiC films on low-angle vicinal (0001) 6H-SiC wafers. Applied Physics Letters, 1991, 59, 333-335.	1.5	128
57	Background effects in electron stimulated desorption ion angular distribution (ESDIAD) measurements on Si(111)-(7 \times 7). Review of Scientific Instruments, 1991, 62, 720-724.	0.6	3
58	PH ₃ surface chemistry on Si(111)-(7 \times 7): A study by Auger spectroscopy and electron stimulated desorption methods. Journal of Applied Physics, 1990, 68, 3669-3678.	1.1	16
59	Direct determination of absolute monolayer coverages of chemisorbed C ₂ H ₂ and C ₂ H ₄ on Si(100). Journal of Applied Physics, 1990, 67, 3693-3699.	1.1	145
60	Photoluminescence of Cd _{1-x} MnxTe films grown by metalorganic chemical vapor deposition. Journal of Applied Physics, 1989, 66, 1711-1716.	1.1	6
61	X-ray photoelectron spectroscopy study of SiC film growth by chemical vapor deposition of ethylene on Si(100). Journal of Applied Physics, 1989, 65, 1099-1105.	1.1	37
62	Structural defect related donor-bound exciton spectra in CdTe epitaxial films. Applied Physics Letters, 1988, 53, 128-130.	1.5	25
63	A photoluminescence comparison of CdTe thin films grown by molecular beam epitaxy, metalorganic chemical vapor deposition, and sputtering in ultrahigh vacuum. Journal of Applied Physics, 1988, 64, 2595-2600.	1.1	41
64	Methods in semiconductor surface chemistry. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1987, 5, 1-8.	0.9	178
65	Comparative electron spectroscopic studies of surface segregation on SiC(0001) and SiC(0001 $\bar{1}$,). Journal of Applied Physics, 1986, 60, 2842-2853.	1.1	273
66	Reaction chemistry at the Si(100) surface control through active site manipulation. Journal of Applied Physics, 1986, 60, 3750-3754.	1.1	40
67	Comparative oxidation studies of SiC(0001 $\bar{1}$,) and SiC(0001) surfaces. Journal of Applied Physics, 1986, 60, 2558-2563.	1.1	80
68	TWO DEFECT-RELATED PHOTOLUMINESCENCE SPECTRA AND CROSS-SECTION TEM OF MBE GROWN CdTe ON (100) InSb. Materials Research Society Symposia Proceedings, 1985, 56, 97.	0.1	1
69	Photoluminescence, Raman Scattering and Rbs/Channeling of Epitaxial Fluorides. Materials Research Society Symposia Proceedings, 1985, 60, 355.	0.1	1
70	Electron spectroscopy study of SiC. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1984, 2, 1271-1274.	0.9	62
71	Static Dielectric Constant of SiC. Physical Review B, 1970, 2, 2255-2256.	1.1	238
72	Optical Absorption in n-Type Cubic SiC. Physical Review, 1969, 186, 775-777.	2.7	48

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73	Optical Properties of 21R SiC: Absorption and Luminescence. Physical Review, 1965, 138, A1472-A1476.	2.7	37
74	Optical Properties of 15R SiC: Luminescence of Nitrogen-Exciton Complexes, and Interband Absorption. Physical Review, 1963, 132, 2023-2031.	2.7	61
75	Exciton Recombination Radiation and Phonon Spectrum of 6H SiC. Physical Review, 1962, 127, 1868-1877.	2.7	192
76	Absorption of Light in Alpha SiC near the Band Edge. Physical Review, 1957, 105, 1721-1723.	2.7	60
77	Nanoporous SiC as a Semi-Permeable Biomembrane for Medical Use: Practical and Theoretical Considerations. , 0, , 291-310.		0