Hideharu Matsuura

List of Publications by Year
in descending order

73	1,169	394421 19	414414 32
papers	citations	h-index	g-index

74	74	74	627
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Simple physical model for the sign of the Hall coefficient in variable-range hopping conduction in heavily Al-doped p-type 4H-SiC. Japanese Journal of Applied Physics, 2021, 60, 031008.	1.5	3
2	Sign of Hall coefficient in nearest-neighbor hopping conduction in heavily Al-doped p-type 4H-SiC. Japanese Journal of Applied Physics, 2020, 59, 051004.	1.5	4
3	Transition of conduction mechanism from band to variable-range hopping conduction due to Al doping in heavily Al-doped 4H-SiC epilayers. Japanese Journal of Applied Physics, 2019, 58, 098004.	1.5	14
4	Dependence of conduction mechanisms in heavily Al-doped 4H-SiC epilayers on Al concentration. Applied Physics Express, 2018, 11, 101302.	2.4	12
5	Possibility of gated silicon drift detector detecting hard x-ray. Proceedings of SPIE, 2015, , .	0.8	0
6	Density and energy level of a deep-level Mg acceptor in 4H-SiC. Japanese Journal of Applied Physics, 2015, 54, 011301.	1.5	3
7	Gated Silicon Drift Detector Fabricated from a Low-Cost Silicon Wafer. Sensors, 2015, 15, 12022-12033.	3.8	3
8	Simulation of 1.5-mm-thick and 15-cm-diameter gated silicon drift X-ray detector operated with a single high-voltage source. Japanese Journal of Applied Physics, 2015, 54, 044301.	1.5	3
9	Simulation of Thick Gated Silicon Drift X-ray Detector Operated by a Single High-Voltage Source. Japanese Journal of Applied Physics, 2013, 52, 024301.	1.5	2
10	Simulation and Fabrication of Gated Silicon Drift X-Ray Detector Operated by Peltier Cooling. Open Electrical and Electronic Engineering Journal, 2013, 7, 1-8.	0.6	3
11	Possibilities for Thick, Simple-Structure Silicon X-Ray Detectors Operated by Peltier Cooling. Key Engineering Materials, 2011, 495, 294-297.	0.4	4
12	Reduction of Electron Concentration in Lightly N-Doped n-Type 4H-SiC Epilayers by 200 keV Electron Irradiation. The Open Applied Physics Journal, 2011, 4, 37-40.	2.0	0
13	Effect of Intrinsic Defects in High-Purity Semi-Insulating 4H-SiC on Reverse Currentâ€“Voltage Characteristics of Schottky Barrier Diodes. Japanese Journal of Applied Physics, 2009, 48, 056504.	1.5	3
14	Mechanisms of changes of hole concentration in Al-doped 6H-SiC by electron irradiation and annealing. Physica B: Condensed Matter, 2009, 404, 4755-4757.	2.7	4
15	A graphical peak analysis method for characterizing impurities in SiC, GaN and diamond from temperature-dependent majority-carrier concentration. Journal of Materials Science: Materials in Electronics, 2008, 19, 720-726.	2.2	2
16	Characterization of deep centers in semi-insulating SiC and HgI2: Application of discharge current transient spectroscopy. Journal of Materials Science: Materials in Electronics, 2008, 19, 810-814.	2.2	5
17	Characterization of Intrinsic Defects in High-Purity High-Resistivity p-Type 6H-SiC. Japanese Journal of Applied Physics, 2008, 47, 7052-7055.	1.5	3
18	Mechanisms of Reduction in Hole Concentration in Al-Implanted p-Type 6H-SiC by 1 MeV Electron Irradiation. Japanese Journal of Applied Physics, 2008, 47, 5355.	1.5	2

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19	Mechanisms of unexpected reduction in hole concentration in Al-doped 4H-SiC by 200 keV electron irradiation. Journal of Applied Physics, 2008, 104, 043702.	2.5	13
20	Mechanisms of Decrease in Hole Concentration in Al-Doped 4H-SiC by Irradiation of 200 keV Electrons. Materials Science Forum, 2007, 556-557, 379-382.	0.3	5
21	Removal of Carbon Contamination on Si Wafers with an Excimer Lamp. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 596-598.	2.2	9
22	Influence of excited states of a deep substitutional dopant on majority-carrier concentration in semiconductors. Physical Review B, 2006, 74, .	3.2	9
23	Relationship between defects induced by irradiation and reduction of hole concentration in Al-doped 4Hâ€“SiC. Physica B: Condensed Matter, 2006, 376-377, 342-345.	2.7	7
24	Si Substrate Suitable for Radiation-Resistant Space Solar Cells. Japanese Journal of Applied Physics, 2006, 45, 2648-2655.	1.5	16
25	Accurate Determination of Density and Energy Level of B Acceptor in Diamond from Temperature Dependence of Hole Concentration. Japanese Journal of Applied Physics, 2006, 45, 6376-6378.	1.5	2
26	Ionization of deep Te donor in Te-doped Al0.6Ga0.4Sb epilayers. Journal of Applied Physics, 2005, 97, 093711.	2.5	6
27	Parameters required to simulate electric characteristics of SiC devices for n-type 4Hâ€“SiC. Journal of Applied Physics, 2004, 96, 5601-5606.	2.5	65
28	Investigation of a distribution function suitable for acceptors in SiC. Journal of Applied Physics, 2004, 95, 4213-4218.	2.5	16
29	Determination of densities and energy levels of donors in free-standing undoped 3Câ€“SiC epilayers with thicknesses of 80Î¼m. Journal of Applied Physics, 2004, 96, 7346-7351.	2.5	16
30	Dependence of acceptor levels and hole mobility on acceptor density and temperature in Al-doped p-type 4H-SiC epilayers. Journal of Applied Physics, 2004, 96, 2708-2715.	2.5	79
31	Reduction in Al Acceptor Density by Electron Irradiation in Al-Doped 4H-SiC. Materials Science Forum, 2004, 457-460, 751-754.	0.3	0
32	Dependence of Hole Concentration in p-Type Silicon Solar Cell Wafers on Temperature and on Position within the Polycrystalline Ingot. Solid State Phenomena, 2003, 93, 141-146.	0.3	2
33	Real Relationship between Acceptor Density and Hole Concentration in Al-Implanted 4H-SiC. Materials Science Forum, 2003, 433-436, 447-450.	0.3	4
34	Decrease in Al acceptor density in Al-doped 4H-SiC by irradiation with 4.6 MeV electrons. Applied Physics Letters, 2003, 83, 4981-4983.	3.3	39
35	Occupation probability for acceptor in Al-implantedp-type 4Hâ€“SiC. Journal of Applied Physics, 2003, 94, 2234-2241.	2.5	21
36	Graphical peak analysis method for determining densities and emission rates of traps in dielectric film from transient discharge current. Journal of Applied Physics, 2002, 91, 2085-2092.	2.5	14

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37	Acceptor Densities and Acceptor Levels in Undoped GaSb Determined by Free Carrier Concentration Spectroscopy. Japanese Journal of Applied Physics, 2002, 41, 496-500.	1.5	19
38	Influence of Excited States of Deep Acceptors on Hole Concentrations in SiC. Materials Science Forum, 2002, 389-393, 679-682.	0.3	13
39	The influence of excited states of deep dopants on majority-carrier concentration in a wide-bandgap semiconductor. New Journal of Physics, 2002, 4, 12-12.	2.9	23
40	Calculation of band bending in ferroelectric semiconductor. New Journal of Physics, 2000, 2, 8-8.	2.9	27
41	Investigation of Transient Reverse Currents in X-Ray Detector Pin Diodes by Discharge Current Transient Spectroscopy. Japanese Journal of Applied Physics, 2000, 39, 178-179.	1.5	6
42	Difference between Traps Determined from Transient Capacitance and Transient Reverse Current. Japanese Journal of Applied Physics, 2000, 39, 2714-2715.	1.5	2
43	Determination of Donor Densities and Donor Levels in 3C-SiC Grown from Si2(CH3)6Using Hall-Effect Measurements. Japanese Journal of Applied Physics, 2000, 39, 5069-5075.	1.5	28
44	Temperature dependence of electron concentration in type-converted silicon by 1Ã—1017â€Šcmâ”2 fluence irradiation of 1 MeV electrons. Applied Physics Letters, 2000, 76, 2092-2094.	3.3	24
45	A New N-Channel Junction Field-Effect Transistor Embedded in the i Layer of a Pin Diode. Japanese Journal of Applied Physics, 1999, 38, L1015-L1017.	1.5	5
46	Nitrogen Donor Concentrations and Its Energy Levels in 4H-SiC Uniquely Determined by a New Graphical Method Based on Hall-Effect Measurement. Japanese Journal of Applied Physics, 1999, 38, 4013-4016.	1.5	21
47	An Improved Method for Determining Densities and Energy Levels of Dopants and Traps by Means of Hall-Effect Measurement. Japanese Journal of Applied Physics, 1999, 38, 5176-5177.	1.5	2
48	A New Structure of an N-Channel Junction Field-Effect Transistor Embedded in a Pin Diode for an X-Ray Detector. Japanese Journal of Applied Physics, 1998, 37, L115-L118.	1.5	6
49	Evaluation of Hole Traps in 10-MeV Proton-Irradiated p-Type Silicon from Hall-Effect Measurements. Japanese Journal of Applied Physics, 1998, 37, 6034-6040.	1.5	19
50	A Simple Graphical Method for Determining Densities and Energy Levels of Donors and Acceptors in Semiconductor from Temperature Dependence of Majority Carrier Concentration. Japanese Journal of Applied Physics, 1997, 36, 3541-3547.	1.5	13
51	A Simple Graphical Method for Evaluating Dipole Relaxation Time in Dielectric. Japanese Journal of Applied Physics, 1996, 35, 2216-2217.	1.5	7
52	Evaluating Polarization in Dielectrics with Continuously Distributed Dipole Relaxation Time by Discharge Current Transient Spectroscopy. Japanese Journal of Applied Physics, 1996, 35, 4711-4712.	1.5	6
53	A Simple Graphic Method for Evaluating Densities and Energy Levels of Impurities in Semiconductor from Temperature Dependence of Majority-Carrier Concentration. Japanese Journal of Applied Physics, 1996, 35, L555-L557.	1.5	25
54	Discharging Current Transient Spectroscopy for Evaluating Traps in Insulators. Japanese Journal of Applied Physics, 1995, 34, L185-L187.	1.5	33

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55	Thermal recovery process of the midgapâ€state profile of lightâ€soaked undoped hydrogenated amorphous silicon. Applied Physics Letters, 1989, 54, 344-346.	3.3	6
56	Optically and thermally induced reversible changes of midgap states in undoped a-Si:H. Journal of Non-Crystalline Solids, 1989, 114, 609-611.	3.1	5
57	A novel method for determining the gapâ€state profile and its application to amorphous Si1â^'xGex: H films. Journal of Applied Physics, 1988, 64, 1964-1973.	2.5	56
58	The Density-of-State Distribution in Undoped a-Si:H and a-SiGe:H Determined by Heterojunctions with c-Si. Materials Research Society Symposia Proceedings, 1988, 118, 647.	0.1	4
59	Schottky barrier junctions of hydrogenated amorphous siliconâ€germanium alloys. Journal of Applied Physics, 1987, 62, 2871-2879.	2.5	25
60	Schottky barrier junctions of hydrogenated amorphous silicon-germanium alloys. Journal of Non-Crystalline Solids, 1987, 97-98, 963-966.	3.1	1
61	Dark current transport mechanism ofpâ€iâ€nhydrogenated amorphous silicon diodes. Journal of Applied Physics, 1985, 58, 1578-1583.	2.5	41
62	Electrical properties ofnâ€amorphous/pâ€crystalline silicon heterojunctions. Journal of Applied Physics, 1984, 55, 1012-1019.	2.5	275
63	Metalâ€semiconductor junctions and amorphousâ€crystalline heterojunctions using Bâ€doped hydrogenated amorphous silicon. Applied Physics Letters, 1984, 45, 433-435.	3.3	21
64	Ohmic Contact Properties of Magnesium Evaporated onto Undoped and P-doped a-Si: H. Japanese Journal of Applied Physics, 1983, 22, L197-L199.	1.5	35
65	Characteristics of Silicon Inversion Layer Solar Cells. Japanese Journal of Applied Physics, 1982, 21, 117.	1.5	1
66	Fundamental Properties of MIS Solar Cells Using Mg-pSi System. Japanese Journal of Applied Physics, 1981, 20, 51.	1.5	8
67	Reduction in Majority-Carrier Concentration in Lightly-Doped 4H-SiC Epilayers by Electron Irradiation. Materials Science Forum, 0, 679-680, 181-184.	0.3	0
68	Effects of Sacrifice Oxidation on Characterization of Defects in High-Purity Semi-Insulating 4H-SiC by Discharge Current Transient Spectroscopy. Materials Science Forum, 0, 717-720, 271-274.	0.3	0
69	Electrical Properties of Mg-Implanted 4H-SiC. Materials Science Forum, 0, 778-780, 685-688.	0.3	0
70	Comparison of Conduction Mechanisms in Heavily Al-Doped 4H-SiC and Heavily Al- and N-Codoped 4H-SiC. Materials Science Forum, 0, 924, 188-191.	0.3	8
71	Relationship between Temperature Dependencies of Resistivity and Hall Coefficient in Heavily Al-Doped 4H-SiC Epilayers. Materials Science Forum, 0, 963, 324-327.	0.3	5
72	Anomalous Temperature Dependence of the Hall Coefficient of Heavily Al-Doped 4H-SiC Epilayers in the Band Conduction Region. Materials Science Forum, 0, 1004, 215-223.	0.3	4

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73	Anomalous Conduction between the Band and Nearest-Neighbor Hopping Conduction Regions in Heavily Al-Doped p-Type 4H-SiC. Materials Science Forum, 0, 1004, 224-230.	0.3	2