Masahiko Ogura

List of Publications by Year
in descending order

140 papers	3,070 citations	172457 29 h-index	197818 49 g-index
141 all docs	141 docs citations	141 times ranked	2017 citing authors

#	Article	IF	Citations
1	Optically detected magnetic resonance of nitrogen-vacancy centers in vertical diamond Schottky diodes. Japanese Journal of Applied Physics, 2022, 61, SC1061.	1.5	0
2	Study of ion-implanted nitrogen related defects in diamond Schottky barrier diode by transient photocapacitance and photoluminescence spectroscopy. Japanese Journal of Applied Physics, 2021, 60, SBBD07.	1.5	3
3	Carrier transport mechanism of diamond p⁺â€“n junction at low temperature using Schottkyâ€“pn junction structure. Japanese Journal of Applied Physics, 2021, 60, 030905.	1.5	5
4	Diamond microfabrication by imprinting with nickel mold under high temperature. Diamond and Related Materials, 2021, 114, 108294.	3.9	2
5	Inversion channel MOSFET on heteroepitaxially grown free-standing diamond. Carbon, 2021, 175, 615-619.	10.3	9
6	Photoelectrical detection of nitrogen-vacancy centers by utilizing diamond lateral pâ€“iâ€“n diodes. Applied Physics Letters, 2021, 118, .	3.3	9
7	Distinguishing dislocation densities in intrinsic layers of pin diamond diodes using two photon-excited photoluminescence imaging. Diamond and Related Materials, 2021, 117, 108463.	3.9	2
8	Fabrication of inversion p-channel MOSFET with a nitrogen-doped diamond body. Applied Physics Letters, 2021, 119, .	3.3	11
9	Characterization of Schottky Barrier Diodes on Heteroepitaxial Diamond on 3C-SiC/Si Substrates. IEEE Transactions on Electron Devices, 2020, 67, 212-216.	3.0	11
10	Energy distribution of Al2O3/diamond interface states characterized by high temperature capacitance-voltage method. Carbon, 2020, 168, 659-664.	10.3	20
11	Vector Electrometry in a Wide-Gap-Semiconductor Device Using a Spin-Ensemble Quantum Sensor. Physical Review Applied, 2020, 14, .	3.8	17
12	Insight into Al2O3/B-doped diamond interface states with high-temperature conductance method. Applied Physics Letters, 2020, 117, .	3.3	11
13	Study of defects in diamond Schottky barrier diode by photocurrent spectroscopy. Japanese Journal of Applied Physics, 2020, 59, SGGK14.	1.5	2
14	Temperature dependence of diamond MOSFET transport properties. Japanese Journal of Applied Physics, 2020, 59, SGGD19.	1.5	4
15	Determination of Current Leakage Sites in Diamond pâ€“n Junction. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900243.	1.8	1
16	Inversion channel mobility and interface state density of diamond MOSFET using N-type body with various phosphorus concentrations. Applied Physics Letters, 2019, 114, .	3.3	19
17	Microstructures of dome-shaped hillocks formed on B doped CVD homoepitaxial diamond films. Diamond and Related Materials, 2019, 97, 107422.	3.9	7
18	Carbon 1s X-ray photoelectron spectra of realistic samples of hydrogen-terminated and oxygen-terminated CVD diamond (111) and (001). Diamond and Related Materials, 2019, 93, 105-130.	3.9	25

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19	Single crystal diamond membranes for nanoelectronics. Nanoscale, 2018, 10, 4028-4035.	5.6	27
20	Direct observation of inversion capacitance in p-type diamond MOS capacitors with an electron injection layer. Japanese Journal of Applied Physics, 2018, 57, 04FR01.	1.5	14
21	Temperature dependence of electrical characteristics for diamond Schottky-pn diode in forward bias. Diamond and Related Materials, 2018, 85, 49-52.	3.9	11
22	Reverseâ€recovery of diamond pâ€iâ€n diodes. IET Power Electronics, 2018, 11, 695-699.	2.1	4
23	Direct Nanoscale Sensing of the Internal Electric Field in Operating Semiconductor Devices Using Single Electron Spins. ACS Nano, 2017, 11, 1238-1245.	14.6	82
24	Fabrication of graphene on atomically flat diamond (111) surfaces using nickel as a catalyst. Diamond and Related Materials, 2017, 75, 105-109.	3.9	22
25	Dynamic properties of diamond high voltage pâ€"iâ€"n diodes. Japanese Journal of Applied Physics, 2017, 56, 04CR14.	1.5	10
26	Lifetime and migration length of B-related admolecules on diamond {1 0 0}-surface: Comparative study of hot-filament and microwave plasma-enhanced chemical vapor deposition. Journal of Crystal Growth, 2017, 479, 52-58.	1.5	8
27	Estimation of Inductively Coupled Plasma Etching Damage of Boronâ€Doped Diamond Using Xâ€Ray Photoelectron Spectroscopy. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700233.	1.8	11
28	Observation of Interface Defects in Diamond Lateral p-n-Junction Diodes and Their Effect on Reverse Leakage Current. IEEE Transactions on Electron Devices, 2017, 64, 3298-3302.	3.0	6
29	High-Temperature Bipolar-Mode Operation of Normally-Off Diamond JFET. IEEE Journal of the Electron Devices Society, 2017, 5, 95-99.	2.1	27
30	Direct determination of the barrier height of Au ohmic-contact on a hydrogen-terminated diamond (001) surface. Diamond and Related Materials, 2017, 73, 182-189.	3.9	14
31	Influence of substrate misorientation on the surface morphology of homoepitaxial diamond (111) films. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 2051-2055.	1.8	10
32	N-type control of single-crystal diamond films by ultra-lightly phosphorus doping. Applied Physics Letters, 2016, 109, .	3.3	49
33	Inversion channel diamond metal-oxide-semiconductor field-effect transistor with normally off characteristics. Scientific Reports, 2016, 6, 31585.	3.3	150
34	Normally-Off Diamond Junction Field-Effect Transistors With Submicrometer Channel. IEEE Electron Device Letters, 2016, 37, 209-211.	3.9	36
35	Desorption time of phosphorus during MPCVD growth of n-type (001) diamond. Diamond and Related Materials, 2016, 64, 208-212.	3.9	11
36	Heavily phosphorus-doped nano-crystalline diamond electrode for thermionic emission application. Diamond and Related Materials, 2016, 63, 165-168.	3.9	23

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37	Potential profile evaluation of a diamond lateral pâ€“n junction diode using Kelvin probe force microscopy. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2589-2594.	1.8	1
38	Fabrication of diamond lateral pâ€“n junction diodes on (111) substrates. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2548-2552.	1.8	7
39	Progress on diamond PIN diode emitters with negative electron affinity for high-voltage d.c. vacuum switches. , 2015, , .		0
40	Electronic properties of diamond Schottky barrier diodes fabricated on silicon-based heteroepitaxially grown diamond substrates. Applied Physics Express, 2015, 8, 104103.	2.4	30
41	Current enhancement by conductivity modulation in diamond JFETs for next generation low-loss power devices. , 2015, , .		2
42	Carrier transport in homoepitaxial diamond films with heavy phosphorus doping. Japanese Journal of Applied Physics, 2014, 53, 05FP05.	1.5	19
43	Generation and transportation mechanisms for two-dimensional hole gases in GaN/AlGaN/GaN double heterostructures. Journal of Applied Physics, 2014, 115, .	2.5	42
44	Electron emission from nitrogen-containing diamond with narrow-gap coplanar electrodes. Japanese Journal of Applied Physics, 2014, 53, 05FP08.	1.5	0
45	Diamond electronic devices fabricated using heavily doped hopping p⁺and n⁺layers. Japanese Journal of Applied Physics, 2014, 53, 05FA12.	1.5	29
46	Analysis of selective growth of n-type diamond in lateral pâ€“n junction diodes by cross-sectional transmission electron microscopy. Japanese Journal of Applied Physics, 2014, 53, 05FP01.	1.5	10
47	Polarizationâ€controlled dressedâ€photonâ€“phonon etching of patterned diamond structures. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2339-2342.	1.8	7
48	Anisotropic lateral growth of homoepitaxial diamond (111) films by plasma-enhanced chemical vapor deposition. Japanese Journal of Applied Physics, 2014, 53, 04EH04.	1.5	19
49	High voltage vacuum power switch with diamond electron emitters. , 2014, , .		0
50	Unique temperature dependence of deep ultraviolet emission intensity for diamond light emitting diodes. Japanese Journal of Applied Physics, 2014, 53, 05FP02.	1.5	4
51	Free exciton luminescence from a diamond pâ€“iâ€“n diode grown on a substrate produced by heteroepitaxy. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2251-2256.	1.8	14
52	600 V Diamond Junction Field-Effect Transistors Operated at 200$^{circ}{m C}$. IEEE Electron Device Letters, 2014, 35, 241-243.	3.9	74
53	Deterministic Electrical Charge-State Initialization of Single Nitrogen-Vacancy Center in Diamond. Physical Review X, 2014, 4, .	8.9	41
54	Reduction of nâ€type diamond contact resistance by graphite electrode. Physica Status Solidi - Rapid Research Letters, 2014, 8, 137-140.	2.4	16

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55	Electrical characterization of diamond Pi<scp>N</scp> diodes for high voltage applications. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 2035-2039.	1.8	52
56	Fabrication of bipolar junction transistor on (001)-oriented diamond by utilizing phosphorus-doped n-type diamond base. Diamond and Related Materials, 2013, 34, 41-44.	3.9	38
57	Potential of diamond power devices. , 2013, , .		5
58	Single photon, spin, and charge in diamond semiconductor at room temperature. , 2013, , .		0
59	Negative electron affinity of diamond and its application to high voltage vacuum power switches. Physica Status Solidi (A) Applications and Materials Science, 2013, 210, 1961-1975.	1.8	53
60	High voltage vacuum switch with negative electron affinity of diamond PIN diode emitter. , 2013, , .		0
61	High-Temperature Operation of Diamond Junction Field-Effect Transistors With Lateral p-n Junctions. IEEE Electron Device Letters, 2013, 34, 1175-1177.	3.9	51
62	High-Voltage Vacuum Switch with a Diamond pâ€"iâ€"n Diode Using Negative Electron Affinity. Japanese Journal of Applied Physics, 2012, 51, 090113.	1.5	17
63	A 10kV vacuum switch with negative electron affinity of diamond p-i-n electron emitter. , 2012, , .		7
64	Isotope Effect of Deuterium Microwave Plasmas on the Formation of Atomically Flat (111) Diamond Surfaces. Japanese Journal of Applied Physics, 2012, 51, 090106.	1.5	4
65	Diamond bipolar junction transistor device with phosphorus-doped diamond base layer. Diamond and Related Materials, 2012, 27-28, 19-22.	3.9	51
66	Device Design of Diamond Schottky-pn Diode for Low-Loss Power Electronics. Japanese Journal of Applied Physics, 2012, 51, 090116.	1.5	6
67	Diamond semiconductor JFETs by selectively grown n⁺-diamond side gates for next generation power devices. , 2012, , .		5
68	Electrically driven single-photon source at room temperature in diamond. Nature Photonics, 2012, 6, 299-303.	31.4	291
69	Diamond Junction Field-Effect Transistors with Selectively Grown n^{+}-Side Gates. Applied Physics Express, 2012, 5, 091301.	2.4	61
70	Maskless Selective Growth Method for pâ€"n Junction Applications on (001)-Oriented Diamond. Japanese Journal of Applied Physics, 2012, 51, 090118.	1.5	6
71	Electrical properties of lateral pâ€"n junction diodes fabricated by selective growth of n⁺ diamond. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1761-1764.	1.8	32
72	Isotope Effect of Deuterium Microwave Plasmas on the Formation of Atomically Flat (111) Diamond Surfaces. Japanese Journal of Applied Physics, 2012, 51, 090106.	1.5	2

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73	High-Voltage Vacuum Switch with a Diamond pâ€“iâ€“n Diode Using Negative Electron Affinity. Japanese Journal of Applied Physics, 2012, 51, 090113.	1.5	22
74	Device Design of Diamond Schottky-pn Diode for Low-Loss Power Electronics. Japanese Journal of Applied Physics, 2012, 51, 090116.	1.5	5
75	Maskless Selective Growth Method for pâ€“n Junction Applications on (001)-Oriented Diamond. Japanese Journal of Applied Physics, 2012, 51, 090118.	1.5	5
76	Electron emission from CVD diamond pâ€“iâ€“n junctions with negative electron affinity during room temperature operation. Diamond and Related Materials, 2011, 20, 917-921.	3.9	10
77	Carrier transport of diamond p⁺â€iâ€n⁺ junction diode fabricated using lowâ€resistance hopping p⁺ and n⁺ layers. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 937-942.	1.8	5
78	Misorientation-angle dependence of boron incorporation into (001)-oriented chemical-vapor-deposited (CVD) diamond. Journal of Crystal Growth, 2011, 317, 60-63.	1.5	90
79	Enhancement in emission efficiency of diamond deep-ultraviolet light emitting diode. Applied Physics Letters, 2011, 99, .	3.3	73
80	Improvement of (001)-oriented diamond p-i-n diode by use of selective grown n+ layer. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2099-2104.	1.8	12
81	Diamond Schottkyâ€pn diode without tradeâ€off relationship between onâ€resistance and blocking voltage. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2105-2109.	1.8	34
82	Electron Emission from a Diamond (111) pâ€“iâ€“n+Junction Diode with Negative Electron Affinity during Room Temperature Operation. Applied Physics Express, 2010, 3, 041301.	2.4	24
83	Electron Emission from Diamond (111) p+-i-n+ Junction Diode. Materials Research Society Symposia Proceedings, 2009, 1203, 1.	0.1	0
84	Diamond Schottky pâ€“n diode with high forward current density. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2086-2090.	1.8	20
85	Dopingâ€induced changes in the valence band edge structure of homoepitaxial Bâ€doped diamond films below Mott's critical density. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1991-1995.	1.8	5
86	Diamond Schottky-pn diode with high forward current density and fast switching operation. Applied Physics Letters, 2009, 94, .	3.3	77
87	Electrical properties of a B doped layer in diamond formed by hot B implantation and high-temperature annealing. Diamond and Related Materials, 2009, 18, 128-131.	3.9	22
88	Selective Growth of Buried n+Diamond on (001) Phosphorus-Doped n-Type Diamond Film. Applied Physics Express, 2009, 2, 055502.	2.4	55
89	Hall effect of photocurrent in CVD diamond film. Diamond and Related Materials, 2009, 18, 779-781.	3.9	2
90	High performance of diamond p+-i-n+ junction diode fabricated using heavily doped p+ and n+ layers. Applied Physics Letters, 2009, 94, .	3.3	73

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91	Photoelectron emission from heavily B-doped homoepitaxial diamond films. Diamond and Related Materials, 2008, 17, 813-816.	3.9	3
92	Electron emission suppression from hydrogen-terminated n-type diamond. Diamond and Related Materials, 2008, 17, 986-988.	3.9	13
93	Atomically flat diamond (111) surface formation by homoepitaxial lateral growth. Diamond and Related Materials, 2008, 17, 1051-1054.	3.9	43
94	Mapping of extended defects in B-doped (001) homoepitaxial diamond films by electron-beam-induced current (EBIC) and cathodoluminescence (CL) combination technique. Diamond and Related Materials, 2008, 17, 489-493.	3.9	5
95	Formation of a heavily B doped diamond layer using an ion implantation technique. Diamond and Related Materials, 2008, 17, 498-501.	3.9	5
96	Enhancement of Dopant Activation in B-Implanted Diamond by High-Temperature Annealing. Japanese Journal of Applied Physics, 2008, 47, 7047.	1.5	15
97	Exciton-derived Electron Emission from (001) Diamond<i>p</i>â€“<i>n</i>Junction Diodes with Negative Electron Affinity. Applied Physics Express, 2008, 1, 015004.	2.4	8
98	Leakage current analysis of diamond Schottky barrier diode. Applied Physics Letters, 2007, 90, 073506.	3.3	121
99	Electrical and light-emitting properties of (001)-oriented homoepitaxial diamond pâ€“iâ€“n junction. Diamond and Related Materials, 2007, 16, 1025-1028.	3.9	18
100	Growth and characterization of boron-doped CVD homoepitaxial diamond films. Journal of Crystal Growth, 2007, 299, 235-242.	1.5	4
101	Electrical and optical characterizations of (001)-oriented homoepitaxial diamond pâ€“n junction. Diamond and Related Materials, 2006, 15, 513-516.	3.9	15
102	p-type doping by B ion implantation into diamond at elevated temperatures. Diamond and Related Materials, 2006, 15, 157-159.	3.9	15
103	Temperature evolution of photocurrent spectra in undoped and boron-doped homoepitaxial CVD diamond film. Diamond and Related Materials, 2006, 15, 577-581.	3.9	7
104	Characterization of leakage current on diamond Schottky barrier diodes using thermionic-field emission modeling. Diamond and Related Materials, 2006, 15, 1949-1953.	3.9	66
105	Hydrogen passivation effects on carbon dangling bond defects accompanying a nearby hydrogen atom in p-type CVD diamond. Physica B: Condensed Matter, 2006, 376-377, 300-303.	2.7	3
106	Hydrogen plasma etching mechanism on (001) diamond. Journal of Crystal Growth, 2006, 293, 311-317.	1.5	24
107	Energetics of dopant atoms in subsurface positions of diamond semiconductor. Superlattices and Microstructures, 2006, 40, 574-579.	3.1	4
108	High-Efficiency Excitonic Emission with Deep-Ultraviolet Light from (001)-Oriented Diamondp-i-nJunction. Japanese Journal of Applied Physics, 2006, 45, L1042-L1044.	1.5	52

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109	Low-resistance p+ layer formation into diamond using heavily B ion implantation. Applied Physics Letters, 2006, 89, 012101.	3.3	29
110	Structure due to indirect exciton in photocurrent spectrum of homoepitaxial diamond film. Solid State Communications, 2005, 133, 469-472.	1.9	3
111	Diamond Schottky barrier diodes with low specific on-resistance. Semiconductor Science and Technology, 2005, 20, 1203-1206.	2.0	5
112	Surface conductive layers on oxidized (111) diamonds. Applied Physics Letters, 2005, 87, 262107.	3.3	19
113	Ohmic contacts on p-type homoepitaxial diamond and their thermal stability. Semiconductor Science and Technology, 2005, 20, 860-863.	2.0	44
114	Passivation effects of deuterium exposure on boron-doped CVD homoepitaxial diamond. Diamond and Related Materials, 2005, 14, 2023-2026.	3.9	9
115	Effect of laser irradiation during B ion implantation into diamond. Diamond and Related Materials, 2005, 14, 1969-1972.	3.9	9
116	Strong Excitonic Emission from (001)-Oriented DiamondP-NJunction. Japanese Journal of Applied Physics, 2005, 44, L1190-L1192.	1.5	22
117	Electrical and optical characterization of boron-doped (111) homoepitaxial diamond films. Diamond and Related Materials, 2005, 14, 1964-1968.	3.9	21
118	XPS study of diamond surface after mass-separated low-energy phosphorus ion irradiation. Diamond and Related Materials, 2005, 14, 389-392.	3.9	4
119	Schottky junction properties on high quality boron-doped homoepitaxial diamond thin films. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2004, 22, 2084.	1.6	14
120	High-performance diamond/amorphous silicon p-n+ heterojunctions. Applied Physics Letters, 2004, 85, 2110-2112.	3.3	8
121	Muon spin relaxation in CVD polycrystalline diamond film. Diamond and Related Materials, 2004, 13, 709-712.	3.9	2
122	Electrical properties of B-related acceptor in B-doped homoepitaxial diamond layers grown by microwave plasma CVD. Diamond and Related Materials, 2004, 13, 198-202.	3.9	28
123	EPR study of hydrogen-related defects in boron-doped p-type CVD homoepitaxial diamond films. Diamond and Related Materials, 2004, 13, 2096-2099.	3.9	26
124	Investigation of specific contact resistance of ohmic contacts to B-doped homoepitaxial diamond using transmission line model. Diamond and Related Materials, 2004, 13, 2121-2124.	3.9	25
125	Characterization of capacitanceâ€"voltage features of Ni/diamond Schottky diodes on oxidized boron-doped homoepitaxial diamond film. Diamond and Related Materials, 2003, 12, 1340-1345.	3.9	18
126	Temperature dependence on currentâ€"voltage characteristics of nickel/diamond Schottky diodes on high quality boron-doped homoepitaxial diamond film. Applied Physics Letters, 2003, 82, 4367-4369.	3.3	34

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127	Substitution and electrical activation of carbon in C- and C+P-implanted InP. Nuclear Instruments & Methods in Physics Research B, 2002, 190, 869-872.	1.4	0
128	Defect Characteristics in Sulfur-Implanted CVD Homoepitaxial Diamond. Solid State Phenomena, 2001, 78-79, 171-176.	0.3	2
129	Effect of implanted silicon on hydrogen behavior in aluminum and nickel. Nuclear Instruments & Methods in Physics Research B, 2000, 161-163, 401-405.	1.4	5
130	Ion-beam annealing of diamond using Ar ions up to 400 keV. Nuclear Instruments & Methods in Physics Research B, 2000, 161-163, 1043-1047.	1.4	2
131	Electrical and Structural Properties of Al and B Implanted 4H-SiC. Materials Science Forum, 2000, 338-342, 909-912.	0.3	12
132	Coimplantation Effects of (C and Si)/Ga in 6H-SiC. Materials Science Forum, 2000, 338-342, 917-920.	0.3	2
133	n-Type Control by Sulfur Ion Implantation in Homoepitaxial Diamond Films Grown by Chemical Vapor Deposition. Japanese Journal of Applied Physics, 1999, 38, L1519-L1522.	1.5	60
134	The dose effect of silicon implantation on hydrogen trapping in aluminum. Nuclear Instruments & Methods in Physics Research B, 1998, 136-138, 478-482.	1.4	4
135	Thermal behavior of hydrogen in helium-implanted high-purity SUS316L. Nuclear Instruments & Methods in Physics Research B, 1998, 136-138, 483-487.	1.4	6
136	Trapping of hydrogen in aluminum- and silicon-irradiated aluminum. , 1997, , .		0
137	Trapping of hydrogen in silicon-implanted aluminum. Nuclear Instruments & Methods in Physics Research B, 1997, 121, 470-473.	1.4	6
138	The annealing behavior of hydrogen implanted into Al-1.5 at.% Si alloy. Radiation Physics and Chemistry, 1997, 49, 645-649.	2.8	5
139	Diamond Doped by Hot Ion Implantation. Materials Science Forum, 0, 600-603, 1353-1356.	0.3	2
140	Nanometer Scale Height Standard Using Atomically Controlled Diamond Surface. Applied Physics Express, 0, 2, 055001.	2.4	20