Hiroshi Kawarada

List of Publications by Year
in descending order

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342 papers	10,085 citations	31902 53 h-index	56606 83 g-index
356 all docs	356 docs citations	356 times ranked	5319 citing authors

#	Article	IF	Citations
1	Hydrogen-terminated diamond surfaces and interfaces. Surface Science Reports, 1996, 26, 205-206.	3.8	529
2	Superconductivity in diamond thin films well above liquid helium temperature. Applied Physics Letters, 2004, 85, 2851-2853.	1.5	277
3	Origin of the metallic properties of heavily boron-doped superconducting diamond. Nature, 2005, 438, 647-650.	13.7	244
4	Enhancement mode metalâ€semiconductor field effect transistors using homoepitaxial diamonds. Applied Physics Letters, 1994, 65, 1563-1565.	1.5	166
5	Growth Kinetics of 0.5 cm Vertically Aligned Single-Walled Carbon Nanotubes. Journal of Physical Chemistry B, 2007, 111, 1907-1910.	1.2	165
6	C-H surface diamond field effect transistors for high temperature (400â€‰Â°C) and high voltage (500â€‰V) operation. Applied Physics Letters, 2014, 105, .	1.5	161
7	Normally-Off Câ€"H Diamond MOSFETs With Partial Câ€"O Channel Achieving 2-kV Breakdown Voltage. IEEE Electron Device Letters, 2017, 38, 363-366.	2.2	144
8	Properties of metal/diamond interfaces and effects of oxygen adsorbed onto diamond surface. Applied Physics Letters, 1991, 58, 940-941.	1.5	139
9	Scanning-tunneling-microscope observation of the homoepitaxial diamond (001) 2Ã—1 reconstruction observed under atmospheric pressure. Physical Review B, 1995, 52, 11351-11358.	1.1	133
10	Low Temperature Synthesis of Extremely Dense and Vertically Aligned Single-Walled Carbon Nanotubes. Japanese Journal of Applied Physics, 2005, 44, 1558-1561.	0.8	130
11	Large Area Chemical Vapour Deposition of Diamond Particles and Films Using Magneto-Microwave Plasma. Japanese Journal of Applied Physics, 1987, 26, L1032-L1034.	0.8	122
12	Electrolyte-Solution-Gate FETs Using Diamond Surface for Biocompatible Ion Sensors. Physica Status Solidi A, 2001, 185, 79-83.	1.7	122
13	DNA Micropatterning on Polycrystalline Diamond via One-Step Direct Amination. Langmuir, 2006, 22, 3728-3734.	1.6	111
14	Spontaneous polarization model for surface orientation dependence of diamond hole accumulation layer and its transistor performance. Applied Physics Letters, 2008, 92, .	1.5	106
15	Smart Power Devices and ICs Using GaAs and Wide and Extreme Bandgap Semiconductors. IEEE Transactions on Electron Devices, 2017, 64, 856-873.	1.6	106
16	Excitonic recombination radiation in undoped and boron-doped chemical-vapor-deposited diamonds. Physical Review B, 1993, 47, 3633-3637.	1.1	105
17	Heteroepitaxial growth of smooth and continuous diamond thin films on silicon substrates via high quality silicon carbide buffer layers. Applied Physics Letters, 1995, 66, 583-585.	1.5	105
18	Superconducting properties of homoepitaxial CVD diamond. Diamond and Related Materials, 2007, 16, 911-914.	1.8	104

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19	Cathodoluminescence and electroluminescence of undoped and boronâ€doped diamond formed by plasma chemical vapor deposition. Journal of Applied Physics, 1990, 67, 983-989.	1.1	100
20	Low temperature grown carbon nanotube interconnects using inner shells by chemical mechanical polishing. Applied Physics Letters, 2007, 91, .	1.5	100
21	High-preformance diamond surface-channel field-effect transistors and their operation mechanism. Diamond and Related Materials, 1999, 8, 927-933.	1.8	96
22	Label-free DNA sensors using ultrasensitive diamond field-effect transistors in solution. Physical Review E, 2006, 74, 041919.	0.8	93
23	High-frequency performance of diamond field-effect transistor. IEEE Electron Device Letters, 2001, 22, 390-392.	2.2	91
24	Fabrication of photo-electrochemical biosensors for ultrasensitive screening of mono-bioactive molecules: the effect of geometrical structures and crystal surfaces. Journal of Materials Chemistry B, 2017, 5, 7985-7996.	2.9	88
25	Selective nucleation and growth of diamond particles by plasmaâ€assisted chemical vapor deposition. Applied Physics Letters, 1989, 55, 1071-1073.	1.5	87
26	Control wettability of the hydrogen-terminated diamond surface and the oxidized diamond surface using an atomic force microscope. Diamond and Related Materials, 2003, 12, 560-564.	1.8	85
27	Very High Yield Growth of Vertically Aligned Single-Walled Carbon Nanotubes by Point-Arc Microwave Plasma CVD. Chemical Vapor Deposition, 2005, 11, 127-130.	1.4	85
28	Durability-enhanced two-dimensional hole gas of C-H diamond surface for complementary power inverter applications. Scientific Reports, 2017, 7, 42368.	1.6	85
29	Heteroepitaxial growth of highly oriented diamond on cubic silicon carbide. Journal of Applied Physics, 1997, 81, 3490-3493.	1.1	84
30	Semi-quantitative study on the fabrication of densely packed and vertically aligned single-walled carbon nanotubes. Carbon, 2006, 44, 2009-2014.	5.4	84
31	Effects of diamond-FET-based RNA aptamer sensing for detection of real sample of HIV-1 Tat protein. Biosensors and Bioelectronics, 2013, 40, 277-282.	5.3	83
32	3.8 W/mm RF Power Density for ALD Al₂O₃-Based Two-Dimensional Hole Gas Diamond MOSFET Operating at Saturation Velocity. IEEE Electron Device Letters, 2019, 40, 279-282.	2.2	83
33	Electrical Properties of Carbon Nanotubes Grown at a Low Temperature for Use as Interconnects. Japanese Journal of Applied Physics, 2008, 47, 1985.	0.8	73
34	Characterization of hydrogen-terminated CVD diamond surfaces and their contact properties. Diamond and Related Materials, 1994, 3, 961-965.	1.8	72
35	Superconductivity in polycrystalline diamond thin films. Diamond and Related Materials, 2005, 14, 1936-1938.	1.8	72
36	High-reliability passivation of hydrogen-terminated diamond surface by atomic layer deposition of Al2O3. Journal of Applied Physics, 2014, 115, .	1.1	70

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37	Direct Evidence for Root Growth of Vertically Aligned Single-Walled Carbon Nanotubes by Microwave Plasma Chemical Vapor Deposition. Journal of Physical Chemistry B, 2005, 109, 19556-19559.	1.2	68
38	Blue and Green Cathodoluminescence of Synthesized Diamond Films Formed by Plasma-Assisted Chemical Vapour Deposition. Japanese Journal of Applied Physics, 1988, 27, L683-L686.	0.8	67
39	Electric Properties of Metal/Diamond Interfaces Utilizing Hydrogen-Terminated Surfaces of Homoepitaxial Diamonds. Japanese Journal of Applied Physics, 1994, 33, L708-L711.	0.8	66
40	Cathodoluminescence from highâ€pressure synthetic and chemicalâ€vaporâ€deposited diamond. Journal of Applied Physics, 1995, 77, 1729-1734.	1.1	66
41	Superconductor-to-insulator transition in boron-doped diamond films grown using chemical vapor deposition. Physical Review B, 2010, 82, .	1.1	66
42	Diamond surface conductivity: Properties, devices, and sensors. MRS Bulletin, 2014, 39, 542-548.	1.7	64
43	Enhancement/depletion MESFETs of diamond and their logic circuits. Diamond and Related Materials, 1997, 6, 339-343.	1.8	62
44	Detection of Mismatched DNA on Partially Negatively Charged Diamond Surfaces by Optical and Potentiometric Methods. Journal of the American Chemical Society, 2008, 130, 13251-13263.	6.6	62
45	High-Performance P-Channel Diamond Metalâ€“Oxideâ€“Semiconductor Field-Effect Transistors on H-Terminated (111) Surface. Applied Physics Express, 2010, 3, 044001.	1.1	62
46	Growth of diamond films at low pressure using magneto-microwave plasma CVD. Journal of Crystal Growth, 1990, 99, 1201-1205.	0.7	61
47	The Synthesis of Diamond Films at Lower Pressure and Lower Temperature Using Magneto-Microwave Plasma CVD. Japanese Journal of Applied Physics, 1989, 28, L281-L283.	0.8	60
48	Characterization of locally modified diamond surface using Kelvin probe force microscope. Surface Science, 2005, 581, 207-212.	0.8	58
49	Over 20-GHz Cutoff Frequency Submicrometer-Gate Diamond MISFETs. IEEE Electron Device Letters, 2004, 25, 480-482.	2.2	56
50	Ozone-treated channel diamond field-effect transistors. Diamond and Related Materials, 2003, 12, 1971-1975.	1.8	55
51	Low-Energy Electrodynamics of Superconducting Diamond. Physical Review Letters, 2006, 97, 097002.	2.9	55
52	Enhanced field emission properties of vertically aligned double-walled carbon nanotube arrays. Nanotechnology, 2008, 19, 415703.	1.3	54
53	Diamond electrolyte solution gate FETs for DNA and protein sensors using DNA/RNA aptamers. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2005-2016.	0.8	54
54	Refractory two-dimensional hole gas on hydrogenated diamond surface. Journal of Applied Physics, 2012, 112, .	1.1	54

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55	Signature of high <i>T</i>c above 25â€‰K in high quality superconducting diamond. Applied Physics Letters, 2015, 106, 052601.	1.5	54
56	High-Current Metal Oxide Semiconductor Field-Effect Transistors on H-Terminated Diamond Surfaces and Their High-Frequency Operation. Japanese Journal of Applied Physics, 2012, 51, 090111.	0.8	53
57	Three-dimensional graphene nanosheet encrusted carbon micropillar arrays for electrochemical sensing. Nanoscale, 2012, 4, 3673.	2.8	52
58	Oneâ€Pot Fabrication of Dendritic NiO@carbonâ€"nitrogen Dot Electrodes for Screening Blood Glucose Level in Diabetes. Advanced Healthcare Materials, 2015, 4, 2110-2119.	3.9	52
59	Initial Growth of Heteroepitaxial Diamond on Si(001) Substrates via Î² -SiC Buffer Layer. Japanese Journal of Applied Physics, 1995, 34, 4898-4904.	0.8	51
60	Surface-modified Diamond Field-effect Transistors for Enzyme-immobilized Biosensors. Japanese Journal of Applied Physics, 2004, 43, L814-L817.	0.8	51
61	Figure of merit of diamond power devices based on accurately estimated impact ionization processes. Journal of Applied Physics, 2013, 114, .	1.1	49
62	Mesoporous NiO nanomagnets as catalysts and separators of chemical agents. Applied Catalysis B: Environmental, 2012, 127, 1-10.	10.8	48
63	High-Performance Diamond Metal-Semiconductor Field-Effect Transistor with 1 Âµm Gate Length. Japanese Journal of Applied Physics, 1999, 38, L1222-L1224.	0.8	47
64	Characterization of DNA Hybridization on Partially Aminated Diamond by Aromatic Compounds. Langmuir, 2006, 22, 11245-11250.	1.6	47
65	Highly sensitive detection of platelet-derived growth factor on a functionalized diamond surface using aptamer sandwich design. Analyst, The, 2012, 137, 1692.	1.7	47
66	Charge state stabilization of shallow nitrogen vacancy centers in diamond by oxygen surface modification. Japanese Journal of Applied Physics, 2017, 56, 04CK08.	0.8	46
67	Nitrogen-Terminated Diamond Surface for Nanoscale NMR by Shallow Nitrogen-Vacancy Centers. Journal of Physical Chemistry C, 2019, 123, 3594-3604.	1.5	46
68	High-performance p-channel diamond MOSFETs with alumina gate insulator. , 2007, , .		45
69	Nanofabrication on Hydrogen-Terminated Diamond Surfaces by Atomic Force Microscope Probe-Induced Oxidation. Japanese Journal of Applied Physics, 2000, 39, 4631-4632.	0.8	44
70	Clâˆ’ sensitive biosensor used electrolyte-solution-gate diamond FETs. Biosensors and Bioelectronics, 2003, 19, 137-140.	5.3	44
71	Intrinsic and extrinsic recombination radiation from undoped and boronâ€doped diamonds formed by plasma chemical vapor deposition. Applied Physics Letters, 1990, 57, 1889-1891.	1.5	43
72	Mechanism Analysis of Interrupted Growth of Single-Walled Carbon Nanotube Arrays. Nano Letters, 2008, 8, 886-890.	4.5	43

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73	Higher coverage of carboxylic acid groups on oxidized single crystal diamond (001). Diamond and Related Materials, 2011, 20, 1319-1324.	1.8	43
74	Schottky barrier heights, carrier density, and negative electron affinity of hydrogen-terminated diamond. Physical Review B, 2010, 81, .	1.1	42
75	Ultrashallow TiC Source/Drain Contacts in Diamond MOSFETs Formed by Hydrogenation-Last Approach. IEEE Transactions on Electron Devices, 2010, 57, 966-972.	1.6	42
76	Dominant freeâ€exciton recombination radiation in chemical vapor deposited diamonds. Applied Physics Letters, 1994, 64, 451-453.	1.5	41
77	Radially oriented nanostrand electrodes to boost glucose sensing in mammalian blood. Biosensors and Bioelectronics, 2016, 77, 656-665.	5.3	41
78	Observation of a Superconducting Gap in Boron-Doped Diamond by Laser-Excited Photoemission Spectroscopy. Physical Review Letters, 2007, 98, 047003.	2.9	40
79	Phonon softening in superconducting diamond. Physical Review B, 2007, 75, .	1.1	40
80	Vertical-type two-dimensional hole gas diamond metal oxide semiconductor field-effect transistors. Scientific Reports, 2018, 8, 10660.	1.6	40
81	High-Current Metal Oxide Semiconductor Field-Effect Transistors on H-Terminated Diamond Surfaces and Their High-Frequency Operation. Japanese Journal of Applied Physics, 2012, 51, 090111.	0.8	40
82	pH-sensitive diamond field-effect transistors (FETs) with directly aminated channel surface. Analytica Chimica Acta, 2006, 573-574, 3-8.	2.6	39
83	Hydrogen-terminated diamond vertical-type metal oxide semiconductor field-effect transistors with a trench gate. Applied Physics Letters, 2016, 109, .	1.5	38
84	Growth and electrical characterisation of Î´-doped boron layers on (111) diamond surfaces. Journal of Applied Physics, 2012, 111, 033710.	1.1	37
85	Fabrication and Characterization of Metal-Semiconductor Field-Effect Transistor Utilizing Diamond Surface-Conductive Layer. Japanese Journal of Applied Physics, 1995, 34, 4677-4681.	0.8	36
86	Fabrication of single-hole transistors on hydrogenated diamond surface using atomic force microscope. Applied Physics Letters, 2002, 81, 2854-2856.	1.5	36
87	Microscopic evidence for evolution of superconductivity by effective carrier doping in boron-doped diamond:B11â^'NMRstudy. Physical Review B, 2007, 75, .	1.1	36
88	Effect of iodide ions on the hydrogen-terminated and partially oxygen-terminated diamond surface. Diamond and Related Materials, 2003, 12, 618-622.	1.8	35
89	Characterization of diamond metal-insulator-semiconductor field-effect transistors with aluminum oxide gate insulator. Applied Physics Letters, 2006, 88, 112117.	1.5	35
90	Multidirectional porous NiO nanoplatelet-like mosaics as catalysts for green chemical transformations. Applied Catalysis B: Environmental, 2012, 123-124, 162-173.	10.8	35

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91	Fabrication of carbon nanostructures using photo-nanoimprint lithography and pyrolysis. Journal of Micromechanics and Microengineering, 2012, 22, 045024.	1.5	34
92	Potential applications of surface channel diamond field-effect transistors. Diamond and Related Materials, 2001, 10, 1743-1748.	1.8	33
93	Triple nitrogen-vacancy centre fabrication by C5N4Hn ion implantation. Nature Communications, 2019, 10, 2664.	5.8	33
94	Oxidized Si terminated diamond and its MOSFET operation with SiO2 gate insulator. Applied Physics Letters, 2020, 116, .	1.5	33
95	Low temperature diamond film fabrication using magneto-active plasma CVD. Diamond and Related Materials, 1992, 1, 168-174.	1.8	32
96	Plasma-Enhanced Diamond Nucleation on Si. Japanese Journal of Applied Physics, 1994, 33, L194-L196.	0.8	32
97	Control of adsorbates and conduction on CVD-grown diamond surface, using scanning probe microscope. Applied Surface Science, 2000, 159-160, 578-582.	3.1	32
98	Cu/CaF2/Diamond Metal-Insulator-Semiconductor Field-Effect Transistor Utilizing Self-Aligned Gate Fabrication Process. Japanese Journal of Applied Physics, 2000, 39, L908-L910.	0.8	32
99	Structure of Chemical Vapor Deposited Diamond (111) Surfaces by Scanning Tunneling Microscopy. Japanese Journal of Applied Physics, 1993, 32, L1771-L1774.	0.8	31
100	Effective Surface Functionalization of Nanocrystalline Diamond Films by Direct Carboxylation for PDGF Detection via Aptasensor. ACS Applied Materials & Interfaces, 2012, 4, 3526-3534.	4.0	31
101	Normally-OFF Two-Dimensional Hole Gas Diamond MOSFETs Through Nitrogen-Ion Implantation. IEEE Electron Device Letters, 2019, 40, 933-936.	2.2	31
102	Fabrication of diamond single-hole transistors using AFM anodization process. Diamond and Related Materials, 2002, 11, 387-391.	1.8	30
103	Platelet-derived growth factor oncoprotein detection using three-dimensional carbon microarrays. Biosensors and Bioelectronics, 2013, 39, 118-123.	5.3	30
104	Low-Temperature Transport Properties of Holes Introduced by Ionic Liquid Gating in Hydrogen-Terminated Diamond Surfaces. Journal of the Physical Society of Japan, 2013, 82, 074718.	0.7	30
105	High voltage breakdown (1.8â€‰kV) of hydrogenated black diamond field effect transistor. Applied Physics Letters, 2016, 109, .	1.5	30
106	Formation of optical centers in CVD diamond by electron and neutron irradiation. Diamond and Related Materials, 1992, 1, 470-477.	1.8	29
107	High performance diamond MISFETs using CaF2 gate insulator. Diamond and Related Materials, 2003, 12, 399-402.	1.8	29
108	Aptamer-based biosensor for sensitive PDGF detection using diamond transistor. Biosensors and Bioelectronics, 2010, 26, 1599-1604.	5.3	29

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109	Fabrication of Metalâ€"Oxideâ€"Diamond Field-Effect Transistors with Submicron-Sized Gate Length on Boron-Doped (111) H-Terminated Surfaces Using Electron Beam Evaporated SiO2 and Al2O3. Journal of Electronic Materials, 2011, 40, 247-252.	1.0	29
110	Isotope analysis of diamond-surface passivation effect of high-temperature H2O-grown atomic layer deposition-Al2O3 films. Journal of Applied Physics, 2015, 117, .	1.1	29
111	Low-Temperature Synthesis of Diamond Films Using Magneto-Microwave Plasma CVD. Japanese Journal of Applied Physics, 1990, 29, L1483-L1485.	0.8	28
112	Cathodoluminescence of phosphorus doped (111) homoepitaxial diamond thin films. Diamond and Related Materials, 2001, 10, 1652-1654.	1.8	28
113	Diamond nanofabrication and characterization for biosensing application. Physica Status Solidi A, 2003, 199, 39-43.	1.7	28
114	Direct amination on 3-dimensional pyrolyzed carbon micropattern surface for DNA detection. Materials Letters, 2009, 63, 2680-2683.	1.3	28
115	Quantum oscillations of the two-dimensional hole gas at atomically flat diamond surfaces. Physical Review B, 2014, 89, .	1.1	28
116	Initial growth of heteroepitaxial diamond on Ir (001)/MgO (001) substrates using antenna-edge-type microwave plasma assisted chemical vapor deposition. Diamond and Related Materials, 2003, 12, 246-250.	1.8	27
117	Trapping mechanism on oxygen-terminated diamond surfaces. Applied Physics Letters, 2006, 89, 203503.	1.5	27
118	Preparation and characterization of wide area, high quality diamond film using magnetoactive plasma chemical vapour deposition. Surface and Coatings Technology, 1990, 43-44, 10-21.	2.2	26
119	Excitonic recombination radiation as characterization of diamonds using cathodoluminescence. Diamond and Related Materials, 1993, 2, 100-105.	1.8	26
120	Cathodoluminescence and Hall-effect measurements in sulfur-doped chemical-vapor-deposited diamond. Applied Physics Letters, 2003, 82, 2074-2076.	1.5	26
121	Drain Current Density Over 1.1 A/mm in 2D Hole Gas Diamond MOSFETs With Regrown p++-Diamond Ohmic Contacts. IEEE Electron Device Letters, 2021, 42, 204-207.	2.2	26
122	Câ€"Si bonded two-dimensional hole gas diamond MOSFET with normally-off operation and wide temperature range stability. Carbon, 2021, 175, 525-533.	5.4	26
123	Characterization of Diamond Particles and Films Formed by Plasma-Assisted Chemical Vapour Deposition Using High-Voltage Electron Microscopy. Japanese Journal of Applied Physics, 1987, 26, L1903-L1906.	0.8	25
124	Enhancement/Depletion Surface Channel Field Effect Transistors of Diamond and Their Logic Circuits. Japanese Journal of Applied Physics, 1997, 36, 7133-7139.	0.8	25
125	Temperature-Dependent Localized Excitations of Doped Carriers in Superconducting Diamond. Physical Review Letters, 2008, 100, 166402.	2.9	25
126	Low drift and small hysteresis characteristics of diamond electrolyte-solution-gate FET. Journal Physics D: Applied Physics, 2010, 43, 374020.	1.3	25

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127	Effect of atomic layer deposition temperature on current conduction in Al2O3 films formed using H2O oxidant. Journal of Applied Physics, 2016, 120, .	1.1	25
128	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.	1.8	25
129	Reflection electron microscope and scanning tunneling microscope observations of CVD diamond (001) surfaces. Diamond and Related Materials, 1993, 2, 1271-1276.	1.8	24
130	RF Performance of High Transconductance and High-Channel-Mobility Surface-Channel Polycrystalline Diamond Metal-Insulator-Semiconductor Field-Effect Transistors. Japanese Journal of Applied Physics, 2002, 41, 2611-2614.	0.8	24
131	DC and RF characteristics of 0.7-Î¼m-gate-length diamond metalâ€“insulatorâ€“semiconductor field effect transistor. Diamond and Related Materials, 2002, 11, 378-381.	1.8	24
132	Enhancement of field emission characteristics of tungsten emitters by single-walled carbon nanotube modification. Applied Physics Letters, 2006, 88, 033116.	1.5	24
133	Miniaturized diamond field-effect transistors for application in biosensors in electrolyte solution. Applied Physics Letters, 2007, 90, 063901.	1.5	24
134	Robustness of CNT Via Interconnect Fabricated by Low Temperature Process over a High-Density Current. , 2008, , .		24
135	Nucleation control and selective growth of diamond particles formed with plasma CVD. Journal of Crystal Growth, 1990, 99, 1206-1210.	0.7	23
136	High Voltage Stress Induced in Transparent Polycrystalline Diamond Field-Effect Transistor and Enhanced Endurance Using Thick Al₂O₃Passivation Layer. IEEE Electron Device Letters, 2017, 38, 607-610.	2.2	23
137	MOSFETs on (110) Câ€“H Diamond: ALD Alâ‚‚Oâ‚ƒ/Diamond Interface Analysis and High Performance Normally-OFF Operation Realization. IEEE Transactions on Electron Devices, 2022, 69, 949-955.	1.6	23
138	Electrically Isolated Metal-Semiconductor Field Effect Transistors and Logic Circuits on Homoepitaxial Diamonds. Japanese Journal of Applied Physics, 1996, 35, L1165-L1168.	0.8	22
139	RF performance of diamond MISFETs. IEEE Electron Device Letters, 2002, 23, 121-123.	2.2	22
140	Holes in the Valence Band of Superconducting Boron-Doped Diamond Film Studied by Soft X-ray Absorption and Emission Spectroscopy. Journal of the Physical Society of Japan, 2008, 77, 054711.	0.7	22
141	Excitonic recombination radiation in phosphorus-doped CVD diamonds. Physical Review B, 2001, 64, .	1.1	21
142	Large-Area Synthesis of Carbon Nanofibers by Low-Power Microwave Plasma-Assisted CVD. Chemical Vapor Deposition, 2004, 10, 125-128.	1.4	21
143	RF Diamond Transistors: Current Status and Future Prospects. Japanese Journal of Applied Physics, 2005, 44, 7789-7794.	0.8	21
144	Over 12000 A/cm²and 3.2 m$Omega$ cm²Miniaturized Vertical-Type Two-Dimensional Hole Gas Diamond MOSFET. IEEE Electron Device Letters, 2020, 41, 111-114.	2.2	21

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145	Ten Years Progress of Electrical Detection of Heavy Metal Ions (HMIs) Using Various Field-Effect Transistor (FET) Nanosensors: A Review. Biosensors, 2021, 11, 478.	2.3	21
146	Surface p-channel metal-oxide-semiconductor field effect transistors fabricated on hydrogen terminated (001) surfaces of diamond. Solid-State Electronics, 1999, 43, 1465-1471.	0.8	20
147	Effect of Cl-Ionic Solutions on Electrolyte-Solution-Gate Diamond Field-Effect Transistors. Japanese Journal of Applied Physics, 2002, 41, 2595-2597.	0.8	20
148	Core-level electronic structure evolution of heavily boron-doped superconducting diamond studied with hard x-ray photoemission spectroscopy. Physical Review B, 2007, 75, .	1.1	20
149	Functionalization of ultradispersed diamond for DNA detection. Journal of Nanoparticle Research, 2008, 10, 69-75.	0.8	19
150	Space-charge-controlled field emission model of current conduction through Al2O3 films. Journal of Applied Physics, 2016, 119, .	1.1	19
151	Effect of a radical exposure nitridation surface on the charge stability of shallow nitrogen-vacancy centers in diamond. Applied Physics Express, 2017, 10, 055503.	1.1	19
152	Time-dependent dielectric breakdown of atomic-layer-deposited Al2O3 films on GaN. Journal of Applied Physics, 2018, 123, .	1.1	19
153	Surface morphology and surface p-channel field effect transistor on the heteroepitaxial diamond deposited on inclined Î^{2}-SiC(001) surfaces. Applied Physics Letters, 1998, 72, 1878-1880.	1.5	18
154	Characterization of Direct Immobilized Probe DNA on Partially Functionalized Diamond Solution-Gate Field-Effect Transistors. Japanese Journal of Applied Physics, 2006, 45, L1114-L1117.	0.8	18
155	High quality single-walled carbon nanotube synthesis using remote plasma CVD. Diamond and Related Materials, 2012, 24, 184-187.	1.8	18
156	Blocking characteristics of diamond junctions with a punch-through design. Journal of Applied Physics, 2015, 117, 124503.	1.1	18
157	Lithographically engineered shallow nitrogen-vacancy centers in diamond for external nuclear spin sensing. New Journal of Physics, 2018, 20, 083029.	1.2	18
158	High Output Power Density of 2DHG Diamond MOSFETs With Thick ALD-Al₂O₃. IEEE Transactions on Electron Devices, 2021, 68, 3942-3949.	1.6	18
159	Heteroepitaxial Diamond Field-Effect Transistor for High Voltage Applications. IEEE Electron Device Letters, 2018, 39, 51-54.	2.2	17
160	Diamond Deposition on a Large-Area Substrate by Plasma-Assisted Chemical Vapor Deposition Using an Antenna-Type Coaxial Microwave Plasma Generator. Japanese Journal of Applied Physics, 2001, 40, L698-L700.	0.8	16
161	Characterization of Diamond Surface-Channel Metal-Semiconductor Field-Effect Transistor with Device Simulation. Japanese Journal of Applied Physics, 2001, 40, 3101-3107.	0.8	16
162	Cross-sectional TEM study and film thickness dependence of Tc in heavily boron-doped superconducting diamond. Physica C: Superconductivity and Its Applications, 2010, 470, S610-S612.	0.6	16

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163	Post-deposition-annealing effect on current conduction in Al2O3 films formed by atomic layer deposition with H2O oxidant. Journal of Applied Physics, 2017, 121, .	1.1	16
164	Reduction of contact resistivity by As redistribution during Pd2Si formation. Journal of Applied Physics, 1983, 54, 4679-4682.	1.1	15
165	Device modeling of high performance diamond MESFETs using p-type surface semiconductive layers. Diamond and Related Materials, 1997, 6, 865-868.	1.8	15
166	MOSFETs on polished surfaces of polycrystalline diamond. Diamond and Related Materials, 1999, 8, 1831-1833.	1.8	15
167	Scanning tunneling microscopy and spectroscopy studies of superconducting boron-doped diamond films. Science and Technology of Advanced Materials, 2006, 7, S22-S26.	2.8	15
168	Growth of dense single-walled carbon nanotubes in nano-sized silicon dioxide holes for future microelectronics. Carbon, 2007, 45, 2351-2355.	5.4	15
169	Polycrystalline boron-doped diamond with an oxygen-terminated surface channel as an electrolyte-solution-gate field-effect transistor for pH sensing. Electrochimica Acta, 2016, 212, 10-15.	2.6	15
170	Low-Pressure Diamond Nucleation and Growth on Cu Substrate. Japanese Journal of Applied Physics, 1993, 32, L200-L203.	0.8	14
171	Laser-excited photoemission spectroscopy study of superconducting boron-doped diamond. Science and Technology of Advanced Materials, 2006, 7, S17-S21.	2.8	14
172	Superconductivity and low temperature electrical transport in B-doped CVD nanocrystalline diamond. Science and Technology of Advanced Materials, 2006, 7, S41-S44.	2.8	14
173	Controllable oxidization of boron doped nanodiamond covered with different solution via UV/ozone treatment. Diamond and Related Materials, 2012, 24, 146-152.	1.8	14
174	Vertical SNS weak-link Josephson junction fabricated from only boron-doped diamond. Physical Review B, 2012, 85, .	1.1	14
175	Boron Î´-doped (111) diamond solution gate field effect transistors. Biosensors and Bioelectronics, 2012, 33, 152-157.	5.3	14
176	Increasing the length of a single-wall carbon nanotube forest by adding titanium to a catalytic substrate. Carbon, 2013, 57, 79-87.	5.4	14
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