

Takatoshi Yamada

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135
papers

1,529
citations

19
h-index

34
g-index

166
ext. papers

1,736
ext. citations

3.6
avg, IF

4.28
L-index

#	Paper	IF	Citations
135	A roll-to-roll microwave plasma chemical vapor deposition process for the production of 294mm width graphene films at low temperature. <i>Carbon</i> , 2012 , 50, 2615-2619	10.4	136
134	Direct observation of negative electron affinity in hydrogen-terminated diamond surfaces. <i>Applied Physics Letters</i> , 2005 , 86, 152103	3.4	133
133	Low-temperature graphene synthesis using microwave plasma CVD. <i>Journal Physics D: Applied Physics</i> , 2013 , 46, 063001	3	76
132	Electron emission from nitrogen-doped pyramidal-shape diamond and its battery operation. <i>Applied Physics Letters</i> , 1997 , 70, 2201-2203	3.4	67
131	Electron emission from conduction band of diamond with negative electron affinity. <i>Physical Review B</i> , 2009 , 80,	3.3	52
130	Large area coating of graphene at low temperature using a roll-to-roll microwave plasma chemical vapor deposition. <i>Thin Solid Films</i> , 2013 , 532, 89-93	2.2	43
129	Cycle of two-step etching process using ICP for diamond MEMS applications. <i>Diamond and Related Materials</i> , 2007 , 16, 996-999	3.5	41
128	Metal-insulator-vacuum type electron emission from N-containing chemical vapor deposited diamond. <i>Applied Physics Letters</i> , 2001 , 79, 275-277	3.4	39
127	ICP etching of polycrystalline diamonds: Fabrication of diamond nano-tips for AFM cantilevers. <i>Diamond and Related Materials</i> , 2008 , 17, 728-731	3.5	37
126	Development of an amorphous selenium-based photodetector driven by a diamond cold cathode. <i>Sensors</i> , 2013 , 13, 13744-78	3.8	33
125	Field emission from reconstructed heavily phosphorus-doped homoepitaxial diamond (111). <i>Applied Physics Letters</i> , 2006 , 88, 212114	3.4	32
124	Bilayer graphene synthesis by plasma treatment of copper foils without using a carbon-containing gas. <i>Carbon</i> , 2014 , 77, 823-828	10.4	30
123	Conditions for a carrier multiplication in amorphous-selenium based photodetector. <i>Applied Physics Letters</i> , 2013 , 102, 073506	3.4	28
122	A transparent ultraviolet triggered amorphous selenium p-n junction. <i>Applied Physics Letters</i> , 2011 , 98, 152102	3.4	28
121	Characterization of electron emission from N-doped diamond using simultaneous field emission and photoemission technique. <i>Applied Surface Science</i> , 1999 , 146, 274-279	6.7	27
120	Potential profile between boron-doped diamond electron emitter and anode electrode. <i>Applied Physics Letters</i> , 2000 , 76, 1297-1299	3.4	25
119	Field emission mechanism of oxidized highly phosphorus-doped homoepitaxial diamond (111). <i>Applied Physics Letters</i> , 2005 , 87, 234107	3.4	22

118	Electrical properties and domain sizes of graphene films synthesized by microwave plasma treatment under a low carbon concentration. <i>Carbon</i> , 2015 , 82, 60-66	10.4	20
117	Electron emission from the pyramidal-shaped diamond after hydrogen and oxygen surface treatments. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 1997 , 15, 1678		20
116	Field emission characteristics from graphene on hexagonal boron nitride. <i>Applied Physics Letters</i> , 2014 , 104, 221603	3.4	19
115	Heavily phosphorus-doped nano-crystalline diamond electrode for thermionic emission application. <i>Diamond and Related Materials</i> , 2016 , 63, 165-168	3.5	18
114	Electrical characterization of graphene films synthesized by low-temperature microwave plasma chemical vapor deposition. <i>Applied Physics Letters</i> , 2013 , 103, 153106	3.4	18
113	Field emission from surface-modified heavily phosphorus-doped homoepitaxial (111) diamond. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007 , 204, 2957-2964	1.6	18
112	Electron emission mechanism of diamond characterized using combined x-ray photoelectron spectroscopy/ultraviolet photoelectron spectroscopy/field emission spectroscopy system. <i>Applied Physics Letters</i> , 2006 , 88, 202101	3.4	18
111	Imaging of local structures affecting electrical transport properties of large graphene sheets by lock-in thermography. <i>Science Advances</i> , 2019 , 5, eaau3407	14.3	17
110	Graphene Growth and Carbon Diffusion Process during Vacuum Heating on Cu(111)/Al ₂ O ₃ Substrates. <i>Japanese Journal of Applied Physics</i> , 2013 , 52, 110122	1.4	16
109	Effect of bias treatment in the CVD diamond growth on Ir(001). <i>Diamond and Related Materials</i> , 2004 , 13, 2081-2087	3.5	16
108	Band alignment determination of bulk h-BN and graphene/h-BN laminates using photoelectron emission microscopy. <i>Journal of Applied Physics</i> , 2019 , 125, 144303	2.5	14
107	Vacuum Annealing Formation of Graphene on Diamond C(111) Surfaces Studied by Real-Time Photoelectron Spectroscopy. <i>Japanese Journal of Applied Physics</i> , 2012 , 51, 11PF02	1.4	14
106	Quantized electronic properties of diamond. <i>Journal of Applied Physics</i> , 2008 , 103, 013712	2.5	13
105	Characterizations of a-Se based photodetectors using X-ray photoelectron spectroscopy and Raman spectroscopy. <i>Journal of Non-Crystalline Solids</i> , 2007 , 353, 308-312	3.9	13
104	Symmetry of the hydrogen-vacancy-like defect H1 in diamond. <i>Physical Review B</i> , 2002 , 66,	3.3	13
103	Microscopically inhomogeneous electronic and material properties arising during thermal and plasma CVD of graphene. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 8939-8948	7.1	12
102	Potassium-doped n-type bilayer graphene. <i>Applied Physics Letters</i> , 2018 , 112, 043105	3.4	11
101	Electron emission from conduction band of heavily phosphorus doped diamond negative electron affinity surface. <i>Journal Physics D: Applied Physics</i> , 2016 , 49, 045102	3	11

100	Low Temperature Graphene Synthesis from Poly(methyl methacrylate) Using Microwave Plasma Treatment. <i>Applied Physics Express</i> , 2013 , 6, 115102	2.4	11
99	Broad area electron emission from oxygen absorbed homoepitaxially grown nitrogen (N)-doped chemical vapor deposited diamond (111) surface. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2003 , 21, 1730		11
98	Vacuum Annealing Formation of Graphene on Diamond C(111) Surfaces Studied by Real-Time Photoelectron Spectroscopy. <i>Japanese Journal of Applied Physics</i> , 2012 , 51, 11PF02	1.4	11
97	Precise measurements of diamond lattice constant using Bond method. <i>Japanese Journal of Applied Physics</i> , 2018 , 57, 111301	1.4	11
96	X-ray absorption fine structure study of heavily P doped (111) and (001) diamond. <i>Applied Physics Letters</i> , 2017 , 110, 072106	3.4	10
95	Resonant field emission from two-dimensional density of state on hydrogen-terminated intrinsic diamond. <i>Journal of Applied Physics</i> , 2010 , 107, 013705	2.5	10
94	Annealing effects in H- and O-terminated P-doped diamond (111) surfaces. <i>Diamond and Related Materials</i> , 2008 , 17, 472-475	3.5	10
93	Field Emission from Modified P-Doped Diamond Surfaces with Different Barrier Heights. <i>Japanese Journal of Applied Physics</i> , 2008 , 47, 8921-8924	1.4	10
92	Field emission from H- and O-terminated heavily P-doped homoepitaxial diamond. <i>Journal of Vacuum Science & Technology B</i> , 2006 , 24, 967		10
91	Anneal-Induced Degradation of Amorphous Selenium Characterized by Photoconductivity Measurements. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, L334-L337	1.4	10
90	Growth of homoepitaxial diamond doped with nitrogen for electron emitter. <i>Diamond and Related Materials</i> , 2002 , 11, 257-261	3.5	10
89	Improvement of device performance of polymer organic light-emitting diodes on smooth transparent sheet with graphene films synthesized by plasma treatment. <i>Japanese Journal of Applied Physics</i> , 2015 , 54, 095103	1.4	9
88	Field emission properties of nano-structured phosphorus-doped diamond. <i>Applied Surface Science</i> , 2009 , 256, 1006-1009	6.7	9
87	Self-aligned fabrication of single crystal diamond gated field emitter array. <i>Diamond and Related Materials</i> , 2005 , 14, 2047-2050	3.5	9
86	Electron emission from hydrogenated and oxidized heteroepitaxial diamond doped with boron. <i>Diamond and Related Materials</i> , 2002 , 11, 780-783	3.5	9
85	Improvement of multilayer graphene synthesis on copper substrate by microwave plasma process using helium at low temperatures. <i>Japanese Journal of Applied Physics</i> , 2014 , 53, 015505	1.4	8
84	Correlation between low threshold emission and C-N bond in nitrogen-doped diamond films. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011 , 29, 02B119	1.3	8
83	Effect of film structure on field emission properties of nitrogen doped hydrogenated amorphous carbon films. <i>Diamond and Related Materials</i> , 2009 , 18, 423-425	3.5	8

82	Electron emission from nitrogen-doped chemical vapour deposited diamond. <i>Ultramicroscopy</i> , 1998 , 73, 43-49	3.1	8
81	Field emission process of O-terminated heavily P-doped homoepitaxial diamond. <i>Diamond and Related Materials</i> , 2006 , 15, 863-865	3.5	8
80	Triode-structure amorphous selenium photodetector driven by diamond cold cathode. <i>Electronics Letters</i> , 2002 , 38, 1711	1.1	8
79	Epitaxially grown free-standing diamond platelet. <i>Diamond and Related Materials</i> , 2001 , 10, 2153-2156	3.5	8
78	Durability and photo-electric characteristics of a mille-feuille structured amorphous selenium (a-Se)/arsenic selenide (As ₂ Se ₃) multi-layered thin film. <i>Journal of Non-Crystalline Solids</i> , 2013 , 378, 96-100	3.9	7
77	Field electron emission properties of n-type (111)-oriented single crystal cubic boron nitride. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2011 , 29, 02B115	1.3	7
76	Field emission characteristics of surface-reconstructed heavily phosphorus-doped homoepitaxial diamond. <i>Journal of Vacuum Science & Technology B</i> , 2007 , 25, 528		7
75	Characterization of Field Emission from Nano-Scale Diamond Tip Arrays. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, L385-L387	1.4	7
74	Valence-band electronic structure evolution of graphene oxide upon thermal annealing for optoelectronics. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016 , 213, 2380-2386	1.6	7
73	Transport Properties of Se/As ₂ Se ₃ Nanolayer Superlattice Fabricated Using Rotational Evaporation. <i>Advanced Functional Materials</i> , 2019 , 29, 1904758	15.6	6
72	Formation of p-n Junction in a-Se Thin Film and Its Application to High Sensitivity Photodetector Driven by Diamond Cold Cathode. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2017 , 214, 1700161	1.6	6
71	Field emission from N-doped diamond doped with dimethylureaa). <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010 , 28, 506-510	1.3	6
70	Surface modification by vacuum annealing for field emission from heavily phosphorus-doped homoepitaxial (111) diamond. <i>Applied Surface Science</i> , 2008 , 254, 7921-7924	6.7	6
69	Amorphous selenium based photodetector driven by field emission current from N-doped diamond cold cathode. <i>Journal of Vacuum Science & Technology B</i> , 2006 , 24, 1035		6
68	X-ray absorption near edge structure and extended X-ray absorption fine structure studies of P doped (111) diamond. <i>Diamond and Related Materials</i> , 2020 , 105, 107769	3.5	5
67	Field emission spectroscopy measurements of graphene/n-type diamond heterojunction. <i>Applied Physics Letters</i> , 2019 , 114, 231601	3.4	5
66	Core Level Photoelectron Spectroscopic Study on Oxidized Phosphorus-Doped (100) Diamond Surfaces after Vacuum Annealing. <i>Japanese Journal of Applied Physics</i> , 2009 , 48, 011602	1.4	5
65	Electron emission mechanism of hydrogenated natural type IIb diamond (111). <i>Diamond and Related Materials</i> , 2008 , 17, 162-166	3.5	5

64	Vacuum-annealing induced band bending in phosphorus-doped (111) diamond. <i>Diamond and Related Materials</i> , 2008 , 17, 1969-1971	3.5	5
63	Characterization of a-Se p <i>n</i> junction fabricated using bidirectional electrolysis in NaCl(aq). <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015 , 212, 2322-2325	1.6	4
62	High quantum efficiency UV detection using a-Se based photodetector. <i>Physica Status Solidi - Rapid Research Letters</i> , 2013 , 7, 473-476	2.5	4
61	Sensitivity to red/green/blue illumination of amorphous selenium based photodetector driven by nitrogen (N)-Doped CVD diamond. <i>Diamond and Related Materials</i> , 2008 , 17, 95-99	3.5	4
60	Simulation of mechanical properties of diamond membrane for application to electron beam extraction window. <i>Diamond and Related Materials</i> , 2008 , 17, 794-798	3.5	4
59	Effect of sp ² /sp ³ Ratio on Electron Emission Properties of Nitrogen-Doped Diamond Electron Emitter. <i>Physica Status Solidi A</i> , 2001 , 186, 257-262		4
58	Electron emission from N-doped homoepitaxially grown diamond. <i>Journal of Applied Physics</i> , 2002 , 92, 2194-2197	2.5	4
57	Doping Effects and Grain Boundaries in Thermal CVD Graphene on Recrystallized Cu Foil. <i>Advanced Materials Interfaces</i> , 2016 , 3, 1600166	4.6	4
56	Effects of outgassing on graphene synthesis by plasma treatment. <i>Carbon</i> , 2016 , 108, 351-355	10.4	4
55	Field emission from potassium-doped vertically aligned carbon nanosheets. <i>Vacuum</i> , 2019 , 167, 64-67	3.7	3
54	Electrolysis as a controllable method for establishing p-n junctions in multi-nanolayer films of amorphous selenium. <i>Journal of Applied Physics</i> , 2017 , 122, 065107	2.5	3
53	Impact of semiconductor on diamond structure for power supply on chip applications. <i>Japanese Journal of Applied Physics</i> , 2014 , 53, 04EP16	1.4	3
52	Combined x-ray photoelectron spectroscopy/ultraviolet photoelectron spectroscopy/field emission spectroscopy for characterization of electron-emission mechanism of diamond. <i>Journal of Vacuum Science & Technology B</i> , 2008 , 26, 730		3
51	Clarification of band structure at metal-diamond contact using device simulation. <i>Applied Surface Science</i> , 2008 , 254, 6285-6288	6.7	3
50	Diamond Tip Arrays for Parallel Lithography and Data Storage. <i>Japanese Journal of Applied Physics</i> , 1998 , 37, L562-L564	1.4	3
49	Electron Emission from a Heteroepitaxial Diamond Planar Emitter. <i>Japanese Journal of Applied Physics</i> , 1999 , 38, L902-L903	1.4	3
48	Electronic properties and potential applications of the heterojunction between silicon and multi-nanolayer amorphous selenium. <i>Electronics Letters</i> , 2017 , 53, 1270-1272	1.1	3
47	Relationship between mobility and strain in CVD graphene on h-BN. <i>AIP Advances</i> , 2020 , 10, 085309	1.5	3

46	Optical properties of vertically aligned graphene sheets. <i>MRS Advances</i> , 2017 , 2, 77-82	0.7	2
45	Potassium-doped n-type stacked graphene layers. <i>Materials Research Express</i> , 2019 , 6, 055009	1.7	2
44	Observation of two-level defect system in amorphous Se superlattices. <i>Applied Physics Letters</i> , 2020 , 116, 192104	3.4	2
43	Characterization of a-Se p-n junction fabricated using electrolysis in NaCl aq 2013 ,		2
42	Effect of vacuum annealing on field emission from heavily phosphorus doped homoepitaxial (111) diamond. <i>Diamond and Related Materials</i> , 2008 , 17, 745-748	3.5	2
41	Passivation of hydrogen terminated diamond surface conductive layer using hydrogenated amorphous carbon. <i>Diamond and Related Materials</i> , 2004 , 13, 776-779	3.5	2
40	Fabrication of Single Crystalline Diamond Triode Electron Emitter. <i>Japanese Journal of Applied Physics</i> , 2005 , 44, L497-L499	1.4	2
39	Gas Barrier Properties of Chemical Vapor-Deposited Graphene to Oxygen Imparted with Sub-electronvolt Kinetic Energy. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 9159-9164	6.4	2
38	Modification of internal barrier in hydrogen-terminated heavily phosphorus-doped diamond for field emission. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016 , 213, 2063-2068	1.6	2
37	Imaging of isotope diffusion using atomic-scale vibrational spectroscopy.. <i>Nature</i> , 2022 , 603, 68-72	50.4	2
36	Growth of MoS ₂ Ni ₃ -doped MoS ₂ lateral homojunctions: A monolayer p-n diode by substitutional doping. <i>APL Materials</i> , 2021 , 9, 121115	5.7	2
35	Electrical properties of bilayer graphene synthesized using surface wave microwave plasma techniques at low temperature. <i>Nanotechnology</i> , 2017 , 28, 025705	3.4	1
34	High sensitivity photodetector made of amorphous selenium and diamond cold cathode. <i>Canadian Journal of Physics</i> , 2014 , 92, 667-670	1.1	1
33	Roll-to-Roll Graphene Synthesis by Using Microwave Plasma Chemical Vapor Deposition at Low Temperature. <i>Materials Research Society Symposia Proceedings</i> , 2012 , 1401, 20		1
32	Electron emission from diamond having negative electron affinity. <i>Electronics and Communications in Japan</i> , 1998 , 81, 54-64		1
31	Electron emission from heavily nitrogen-doped heteroepitaxial chemical vapor deposition diamond. <i>Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena</i> , 2004 , 22, 1327		1
30	Growth of N-doped heteroepitaxial diamond thin films on iridium for cold cathode. <i>Physica Status Solidi A</i> , 2003 , 199, 33-38		1
29	Formation of backcontacts on diamond electron emitters. <i>Applied Surface Science</i> , 1999 , 146, 245-250	6.7	1

28	Polarized Raman spectroscopy of phosphorous doped diamond films. <i>Diamond and Related Materials</i> , 2021 , 114, 108283	3.5	1
27	Deposition of graphene-copper composite film by cold spray from particles with graphene grown on copper particles. <i>Diamond and Related Materials</i> , 2021 , 116, 108384	3.5	1
26	High quality large-area graphene synthesis with high growth rate using plasma-enhanced CVD. <i>Synthesiology</i> , 2016 , 9, 124-138	0.2	1
25	Modifying the Electronic Properties of Se/n-Si Heterostructure Using Electrolysis. <i>Physica Status Solidi (B): Basic Research</i> , 2019 , 256, 1800445	1.3	1
24	Response time of amorphous selenium based photodetector driven by diamond cold cathode 2018 ,		1
23	Temperature dependence of carrier mobility in chemical vapor deposited graphene on high-pressure, high-temperature hexagonal boron nitride. <i>Applied Surface Science</i> , 2021 , 562, 150146	6.7	1
22	Nanocrystalline and microcrystalline diamond stacking structure as an insulating material deposited on large area. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2013 , 210, 1998-2001	1.6	0
21	Patterning of graphene using wet etching with hypochlorite and UV light.. <i>Scientific Reports</i> , 2022 , 12, 4541	4.9	0
20	Electron Emission Mechanism of Heavily Phosphorus-Doped Diamond with Oxidized Surface. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019 , 216, 1801025	1.6	
19	Improvement of Wrinkles in Roll-to-Roll Microwave Plasma CVD Graphene. <i>Materials Research Society Symposia Proceedings</i> , 2015 , 1761, 1		
18	Field Emission Mechanism of H-Terminated N-Type Diamond NEA Surface. <i>Materials Research Society Symposia Proceedings</i> , 2012 , 1395, 51		
17	Observation of Graphene-on-Diamond Formation Studied by Real-Time Photoelectron Spectroscopy. <i>Hyomen Kagaku</i> , 2012 , 33, 449-454		
16	Electron Emission Mechanism of Doped CVD Diamond Characterized Using Combined XPS/UPS/FES System. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 956, 1		
15	Microscopic Detection of DNA Hybridization using Miniaturized Diamond DNA-FETs. <i>Materials Research Society Symposia Proceedings</i> , 2007 , 1039, 1		
14	The Origin of Field-induced Electron Emission from N-doped CVD Diamond Characterized by Combined XPS/UPS/FES System. <i>Materials Research Society Symposia Proceedings</i> , 2007 , 1039, 1		
13	STM Characterization of Low Dimensional Surface Electronic Properties of Undoped Diamond in Buffer Solutions. <i>Materials Research Society Symposia Proceedings</i> , 2007 , 1039, 1		
12	Barrier Height Difference Induced by Surface Terminations for Field Emission from P-doped Diamond. <i>Materials Research Society Symposia Proceedings</i> , 2007 , 1039, 1		
11	Electron emission mechanism of diamond characterized by combined XPS/UPS/FES. <i>Materials Research Society Symposia Proceedings</i> , 2005 , 891, 1		

10	Uniform electron emission from a nitrogen-doped diamond-based electron emitter fabricated by the sintering technique. <i>IEEE Electron Device Letters</i> , 2000 , 21, 531-533	4.4
9	Electron emission from diamond having negative electron affinity. <i>Electronics and Communications in Japan</i> , 1999 , 82, 42-52	
8	Diamond Radiation Detector with Built-In Boron-Doped Neutron Converter Layer. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2100315	1.6
7	Graphene. <i>Hyomen Gijutsu/Journal of the Surface Finishing Society of Japan</i> , 2020 , 71, 189-189	0.1
6	Field Emission Phenomena and Applications. Electron Emission from CVD-grown Diamond.. <i>Hyomen Kagaku</i> , 1996 , 17, 724-730	
5	Spectroscopic ellipsometry of amorphous Se superlattices. <i>Journal Physics D: Applied Physics</i> , 2021 , 54, 255106	3
4	High quality and large-area graphene synthesis with a high growth rate using plasma-enhanced CVD. <i>Synthesiology</i> , 2016 , 9, 124-138	0.1
3	Forming an Optically Transparent Graphene Film via the Transformation of C60 Molecules. <i>Materials Science Forum</i> , 1016, 1549-1554	0.4
2	Quantum device designing (QDD) for future semiconductor engineering.. <i>Review of Scientific Instruments</i> , 2022 , 93, 034703	1.7
1	Oxygen Gas Barrier Property of Monolayer CVD Graphene. <i>Membrane</i> , 2022 , 47, 92-97	0