

# Hiroshi Furuta

## List of Publications by Year in descending order

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105  
papers

1,768  
citations

304743

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106  
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106  
docs citations

106  
times ranked

1753  
citing authors

#	ARTICLE	IF	CITATIONS
1	Formation of Thermally Stable, High-Areal-Density, and Small-Diameter Catalyst Nanoparticles via Intermittent Sputtering Deposition for the High-Density Growth of Carbon Nanotubes. <i>Nanomaterials</i> , 2022, 12, 365.	4.1	0
2	Fabrication of Self-Assembling Carbon Nanotube Forest Fishnet Metamaterials. <i>Nanomaterials</i> , 2022, 12, 464.	4.1	2
3	Oxidative Stress Pathways Linked to Apoptosis Induction by Low-Temperature Plasma Jet Activated Media in Bladder Cancer Cells: An In Vitro and In Vivo Study. <i>Plasma</i> , 2022, 5, 233-246.	1.8	5
4	Hydrogenated InGaZnO thin-film transistors with anodized and fluorinated Al <sub>2</sub> O <sub>3</sub> gate insulator for flexible devices. <i>Japanese Journal of Applied Physics</i> , 2021, 60, SBBM05.	1.5	5
5	Study of self-organized structure in carbon nanotube forest by fractal dimension and lacunarity analysis. <i>Materials Characterization</i> , 2020, 160, 110086.	4.4	10
6	Shape-dependent infrared reflectance properties of CNT forest metamaterial arrays. <i>Optics Express</i> , 2020, 28, 607.	3.4	25
7	Pulsed-DC Discharge for Plasma CVD of Carbon Thin Films. <i>IEEE Transactions on Plasma Science</i> , 2019, 47, 22-31.	1.3	2
8	Analysis of the Preheating Phase of Micro-Arc Discharge in Seawater, Operated Using a Needle-to-Plane Electrode with Variation in the Tip Shape. <i>Plasma</i> , 2019, 2, 303-315.	1.8	2
9	Atomic Emission Spectroscopy of Microarc Discharge in Sea Water for On-Site Detection of Metals. <i>IEEE Transactions on Plasma Science</i> , 2019, 47, 1841-1850.	1.3	5
10	Effects of sheath gas flow on He atmospheric pressure plasma jet. <i>Applied Physics Express</i> , 2019, 12, 036001.	2.4	10
11	Optical reflectance of patterned frost column-like CNT forest for metamaterial applications. <i>Diamond and Related Materials</i> , 2018, 83, 196-203.	3.9	5
12	Pulsed DC plasma CVD system for the deposition of DLC films. <i>Materials Today Communications</i> , 2018, 14, 40-46.	1.9	21
13	Novel high-frequency energy-efficient pulsed-dc generator for capacitively coupled plasma discharge. <i>Review of Scientific Instruments</i> , 2018, 89, 033506.	1.3	5
14	Modelling the helium plasma jet delivery of reactive species into a 3D cancer tumour. <i>Plasma Sources Science and Technology</i> , 2018, 27, 014001.	3.1	57
15	UV-vis spectroscopy study of plasma-activated water: Dependence of the chemical composition on plasma exposure time and treatment distance. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 0102B9.	1.5	62
16	UV Absorption Spectroscopy Analysis on Water Irradiated to Atmospheric Pressure Plasma Jet. , 2018, , .		0
17	Generation of micro-arc discharge plasma in highly pressurized seawater. <i>Applied Physics Letters</i> , 2018, 113, .	3.3	8
18	Detection of metal contaminants in seawater by spectral analysis of microarc discharge. <i>Japanese Journal of Applied Physics</i> , 2018, 57, 0102B8.	1.5	5

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19	Preparation of hydrogenated amorphous carbon films using a microsecond-pulsed DC capacitive-coupled plasma chemical vapor deposition system operated at high frequency up to 400 kHz. Japanese Journal of Applied Physics, 2018, 57, 06JF02.	1.5	3
20	Significant decrease in the reflectance of thin CNT forest films tuned by the Taguchi method. Vacuum, 2018, 154, 285-295.	3.5	11
21	Investigation of Effect of Needle Electrode Configuration on Microplasma Discharge Process in Sea Water. IEEE Transactions on Plasma Science, 2017, 45, 754-760.	1.3	12
22	The influence of the inner structure of CNT forest metamaterials in the infrared regime. Diamond and Related Materials, 2017, 80, 99-107.	3.9	5
23	FIB Secondary Etching Method for Fabrication of Fine CNT Forest Metamaterials. Nano-Micro Letters, 2017, 9, 44.	27.0	15
24	DC Microplasma Jet for Local a:C-H Deposition Operated in SEM Chamber. Micromachines, 2017, 8, 211.	2.9	5
25	CdSe/ZnS Quantum Dot (QD) Sensitized Solar Cell Utilizing a Multi-Walled Carbon Nanotube Photoanode on a Stainless Steel Substrate. International Journal of Electrochemical Science, 2017, , 3814-3825.	1.3	5
26	CdSe/ZnS (Core/Shell) Quantum Dots Multi-walled Carbon Nanotubes (MWCNTs) on a Stainless Steel as a Photoanode in Solar Cells. , 2017, , .		0
27	Carbon Nanotube (CNT) Honeycomb Cell Area-Dependent Optical Reflectance. Nanomaterials, 2016, 6, 202.	4.1	4
28	Infrared properties of patterned CNT forest for metamaterials. , 2016, , .		0
29	How plasma induced oxidation, oxygenation, and de-oxygenation influences viability of skin cells. Applied Physics Letters, 2016, 109, .	3.3	25
30	In-situ UV Absorption Spectroscopy for Observing Dissolved Ozone in Water. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2016, 29, 427-432.	0.3	22
31	How to assess the plasma delivery of RONS into tissue fluid and tissue. Journal Physics D: Applied Physics, 2016, 49, 304005.	2.8	81
32	Investigation of microplasma discharge in sea water for optical emission spectroscopy. Japanese Journal of Applied Physics, 2016, 55, 07LC03.	1.5	7
33	Effect of plasma jet diameter on the efficiency of reactive oxygen and nitrogen species generation in water. Japanese Journal of Applied Physics, 2016, 55, 06HD01.	1.5	18
34	Optimization of catalyst formation conditions for synthesis of carbon nanotubes using Taguchi method. Applied Surface Science, 2016, 371, 425-435.	6.1	26
35	In-situ UV Absorption Spectroscopy for Monitoring Transport of Plasma Reactive Species through Agarose as Surrogate for Tissue. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2015, 28, 439-444.	0.3	33
36	Slow Molecular Transport of Plasma-Generated Reactive Oxygen and Nitrogen Species and O <sub>2</sub> through Agarose as a Surrogate for Tissue. Plasma Medicine, 2015, 5, 125-143.	0.6	29

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37	Diamond-like carbon films from CO source gas by RF plasma CVD method. Japanese Journal of Applied Physics, 2015, 54, 01AD04.	1.5	7
38	Investigating the effect of additional gases in an atmospheric-pressure helium plasma jet using ambient mass spectrometry. Japanese Journal of Applied Physics, 2015, 54, 01AA03.	1.5	21
39	Fabrication of Zinc Oxide Nanostructures by Mist Chemical Vapor Deposition. Transactions of the Materials Research Society of Japan, 2014, 39, 161-164.	0.2	4
40	Hydrophilic DLC Surface Induced by Nanostructures Formed by RF O <sub>2</sub> Plasma Etching With Metal Micromasks. IEEE Transactions on Plasma Science, 2014, 42, 3858-3861.	1.3	2
41	Electrical conductance behavior of thin Ni catalyst films during intermittent direct current magnetron sputtering. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, .	2.1	4
42	Low temperature deposition of SiO <sub>2</sub> insulator film with newly developed facing electrodes chemical vapor deposition. Vacuum, 2014, 101, 189-192.	3.5	6
43	Low temperature ZnO TFT fabricated on SiO <sub>2</sub> gate insulator deposited by facing electrodes chemical vapor deposition. , 2014, , .		1
44	Localized DLC etching by a non-thermal atmospheric-pressure helium plasma jet in ambient air. Diamond and Related Materials, 2014, 50, 91-96.	3.9	8
45	Influence of Substrates on Formation of Zinc Oxide Nanostructures by a Novel Reducing Annealing Method. Nanoscience and Nanotechnology Letters, 2014, 6, 174-180.	0.4	9
46	X-ray reflectivity analysis on initial stage of diamond-like carbon film deposition on Si substrate by RF plasma CVD and on removal of the sub-surface layer by oxygen plasma etching. Diamond and Related Materials, 2013, 38, 36-40.	3.9	7
47	Long lifetime emission from screen printing carbon nanotubes over 45,000h at 1.27mA/cm <sup>2</sup> with 10% duty ratio. Diamond and Related Materials, 2013, 35, 29-35.	3.9	5
48	Increased CNT growth density with an additional thin Ni layer on the Fe/Al catalyst film. Diamond and Related Materials, 2013, 36, 1-7.	3.9	18
49	Local sputter etching by micro plasma jet in SEM. Vacuum, 2013, 87, 132-135.	3.5	9
50	Trap Densities in ZnO TFTs with SiN <sub>x</sub> /SiO <sub>x</sub> Stacked Gate Insulators Fabricated Using Several N <sub>2</sub> O Flow Rate during SiO <sub>x</sub> Deposition. ECS Transactions, 2013, 54, 121-126.	0.5	1
51	Current-Voltage Characteristics of DC Discharge in Micro Gas Jet Injected into Vacuum Environment. Journal of Physics: Conference Series, 2013, 441, 012021.	0.4	6
52	Analysis on Self-Organized Formation of Nanofibers on Diamond-Like Carbon Film Surface during RF O <sub>2</sub> Plasma Etching. Transactions of the Materials Research Society of Japan, 2013, 38, 447-450.	0.2	1
53	Multi-Scale Monte Carlo Simulation of Soft Errors Using PHITS-HyENEXSS Code System. IEEE Transactions on Nuclear Science, 2012, 59, 965-970.	2.0	33
54	Neutron-induced soft error analysis in MOSFETs from a 65nm to a 25 nm design rule using multi-scale Monte Carlo simulation method. , 2012, , .		7

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55	Magnetron Sputtering Deposition of Additional Ni Thin Films on the Fe/Al Multi-layered Catalyst Film for the Growth Control of Carbon Nanotubes. Transactions of the Materials Research Society of Japan, 2012, 37, 511-514.	0.2	4
56	Validation of nuclear reaction models relevant to cosmic-ray neutron induced single-event effects in microelectronics. Journal of Physics: Conference Series, 2011, 312, 062004.	0.4	3
57	Extraction of Trap Densities in ZnO Thin-Film Transistors and Dependence on Oxygen Partial Pressure During Sputtering of ZnO Films. IEEE Transactions on Electron Devices, 2011, 58, 3018-3024.	3.0	24
58	Formation of Nanofibers on the Surface of Diamond-Like Carbon Films by RF Oxygen Plasma Etching. Japanese Journal of Applied Physics, 2011, 50, 08JF12.	1.5	7
59	ZnO Thin-Film Transistors with SiNx/SiOx Stacked Gate Insulators: Trap Densities and N2O Flow Rate Dependence. Electrochemical and Solid-State Letters, 2011, 14, H365.	2.2	0
60	Formation of Nanofibers on the Surface of Diamond-Like Carbon Films by RF Oxygen Plasma Etching. Japanese Journal of Applied Physics, 2011, 50, 08JF12.	1.5	2
61	Thermal stability of ZnO thin film prepared by RF-magnetron sputtering evaluated by thermal desorption spectroscopy. Applied Surface Science, 2010, 256, 6350-6353.	6.1	17
62	Activation behavior of boron implanted poly-Si on glass substrate. Thin Solid Films, 2010, 518, 4477-4481.	1.8	2
63	High-Density Short-Height Directly Grown CNT Patterned Emitter on Glass. E-Journal of Surface Science and Nanotechnology, 2010, 8, 336-339.	0.4	5
64	Effect of Surface Treatment of Gate-Insulator on Uniformity of Bottom-Gate ZnO Thin Film Transistors. Electrochemical and Solid-State Letters, 2010, 13, H101.	2.2	21
65	Crystallinity and resistivity of ZnO thin films with indium implantation and postannealing. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2010, 28, 135-138.	2.1	12
66	Simulation study of the in-plane-type triode carbon nanotube emitter. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2010, 28, 878-881.	1.2	5
67	Effect of Pulsed Substrate Bias on Film Properties of SiO2 Deposited by Inductively Coupled Plasma Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2010, 49, 03CA03.	1.5	5
68	Crystal Structure Analysis of Multiwalled Carbon Nanotube Forests by Newly Developed Cross-Sectional X-ray Diffraction Measurement. Applied Physics Express, 2010, 3, 105101.	2.4	15
69	Analysis of Hump Characteristics in Thin-Film Transistors With ZnO Channels Deposited by Sputtering at Various Oxygen Partial Pressures. IEEE Electron Device Letters, 2010, , .	3.9	36
70	Comparison of structural and photoluminescence properties of zinc oxide nanostructures influenced by gas ratio and substrate bias during radio frequency sputtering. Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics, 2010, 28, C2B51-C2B55.	1.2	8
71	Thermal Stability and Sheet Resistance of Undoped ZnO Films Deposited on Insulators. Electrochemical and Solid-State Letters, 2009, 12, K74.	2.2	7
72	Effects of substrate on the structural, electrical and optical properties of Al-doped ZnO films prepared by radio frequency magnetron sputtering. Thin Solid Films, 2009, 517, 3265-3268.	1.8	75

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73	Effect of substrate bias on crystal structure and thermal stability of sputter-deposited ZnO films. <i>Journal of Crystal Growth</i> , 2009, 311, 282-285.	1.5	23
74	Comparison of different annealing gases effects on the optical emission properties of zinc oxide thin films deposited by radio frequency sputtering. , 2009, , .		0
75	P&#191L: <i>Late&#News Poster</i>: Fabrication of High Efficient Green Emission Zinc Oxide Films at Low Temperature by Radio Frequency Magnetron Sputtering. Digest of Technical Papers SID International Symposium, 2009, 40, 1456-1459.	0.3	0
76	Intense Green Cathodoluminescence from Low-Temperature-Deposited ZnO Film with Fluted Hexagonal Cone Nanostructures. <i>Applied Physics Express</i> , 2009, 2, 091601.	2.4	18
77	Influence of amorphous buffer layers on the crystallinity of sputter-deposited undoped ZnO films. <i>Journal of Crystal Growth</i> , 2008, 310, 31-35.	1.5	30
78	Bottom-Gate Zinc Oxide Thin-Film Transistors (ZnO TFTs) for AM-LCDs. <i>IEEE Transactions on Electron Devices</i> , 2008, 55, 3136-3142.	3.0	209
79	Oxygen bombardment effects on average crystallite size of sputter-deposited ZnO films. <i>Journal of Non-Crystalline Solids</i> , 2008, 354, 1926-1931.	3.1	36
80	SiO <sub>2</sub> Insulator Film Synthesized at 100 Å°C Using Tetramethylsilane by Inductively Coupled Plasma Chemical Vapor Deposition. <i>Japanese Journal of Applied Physics</i> , 2007, 46, L237-L240.	1.5	6
81	Effect of Energetic Particle Bombardment on Microstructure of Zinc Oxide Films Deposited by RF Magnetron Sputtering. <i>Japanese Journal of Applied Physics</i> , 2007, 46, 4038-4041.	1.5	19
82	Sheet resistance and crystallinity of Ga- and Al-implanted zinc oxide thin films with postannealing. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2007, 25, 706-710.	2.1	10
83	Influence of Thermal Annealing on Microstructures of Zinc Oxide Films Deposited by RF Magnetron Sputtering. <i>Japanese Journal of Applied Physics</i> , 2007, 46, 3319-3323.	1.5	43
84	Novel top-gate zinc oxide thin-film transistors (ZnO TFTs) for AMLCDs. <i>Journal of the Society for Information Display</i> , 2007, 15, 17.	2.1	85
85	Efficient field emission from an individual aligned carbon nanotube bundle enhanced by edge effect. <i>Applied Physics Letters</i> , 2007, 90, 153108.	3.3	105
86	RF Power and Thermal Annealing Effect on the Properties of Zinc Oxide Films Prepared by Radio Frequency Magnetron Sputtering. <i>Research Letters in Materials Science</i> , 2007, 2007, 1-5.	0.2	5
87	Correlation between the Crystallinity Controlled by rf Substrate Bias and Sidewall Morphology on Dry-etched ZnO Films. <i>Shinku/Journal of the Vacuum Society of Japan</i> , 2007, 50, 498-501.	0.2	0
88	4.1: Distinguished Paper: High Mobility Top-Gate Zinc Oxide Thin-Film Transistors (ZnO-TFTs) for Active-Matrix Liquid Crystal Displays. Digest of Technical Papers SID International Symposium, 2006, 37, 18.	0.3	44
89	Structural Analysis of High-Density Vertically Aligned Carbon Nanotubes Grown by Thermal Chemical Vapor Deposition with Fe/Al Multilayer Catalyst. <i>Japanese Journal of Applied Physics</i> , 2006, 45, 8988-8990.	1.5	12
90	Low-Temperature Growth of Carbon Nanofiber by Thermal Chemical Vapor Deposition Using CuNi Catalyst. <i>Japanese Journal of Applied Physics</i> , 2006, 45, 5329-5331.	1.5	7

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91	Density Control of Carbon Nanotubes through the Thickness of Fe/Al Multilayer Catalyst. Japanese Journal of Applied Physics, 2006, 45, 6043-6045.	1.5	19
92	Fabrication of Nano-sized Carbon Emitters by Selective Dry Etching Method. Shinku/Journal of the Vacuum Society of Japan, 2006, 49, 430-432.	0.2	0
93	Correlation between Field Electron Emission and Structural Properties in Randomly and Vertically Oriented Carbon Nanotube Films. Japanese Journal of Applied Physics, 2005, 44, 1655-1660.	1.5	16
94	Structural characterization of randomly and vertically oriented carbon nanotube films grown by chemical vapour deposition. Surface and Interface Analysis, 2003, 35, 15-18.	1.8	9
95	Spiky diamond field emitters. Diamond and Related Materials, 2003, 12, 1681-1684.	3.9	15
96	R&D of diamond films in the Frontier Carbon Technology Project and related topics. Diamond and Related Materials, 2003, 12, 233-240.	3.9	31
97	Low Temperature Synthesis of Aligned Carbon Nanotubes by Inductively Coupled Plasma Chemical Vapor Deposition Using Pure Methane. Japanese Journal of Applied Physics, 2003, 42, L441-L443.	1.5	28
98	Observation of single crystal diamond whiskers by FE-SEM and TEM. Molecular Crystals and Liquid Crystals, 2002, 386, 183-188.	0.9	6
99	Large field emission from carbon nanotubes grown on patterned catalyst thin film by thermal chemical vapor deposition. Physica B: Condensed Matter, 2002, 323, 171-173.	2.7	8
100	Ni-based catalytic growth of vertically aligned multi-walled carbon nanotubes by dual-RF plasma CVD method and their field emission properties. Physica B: Condensed Matter, 2002, 323, 299-302.	2.7	3
101	Formation of Vertically Aligned Carbon Nanotubes by Dual-RF-Plasma Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2001, 40, L631-L634.	1.5	32
102	Self-Organized Pattern Formation in Porous Silicon Using a Lattice Model with Quantum Confinement Effect. Journal of the Physical Society of Japan, 1999, 68, 2218-2220.	1.6	1
103	Degradation of Photoluminescence and Electron Paramagnetic Defects in Naturally Oxidized or Oxygen-Implanted Porous Silicon with Electron Spin Resonance Imaging. Japanese Journal of Applied Physics, 1998, 37, 6446-6450.	1.5	4
104	ESR imaging of alanine dosimeter annealed under thermal gradient. Applied Radiation and Isotopes, 1996, 47, 1611-1614.	1.5	1
105	Ground Electric Field Effects on Rats and Sparrows: Seismic Anomalous Animal Behaviors (SAABs). Japanese Journal of Applied Physics, 1996, 35, 4587-4594.	1.5	15