# Hiroshi Furuta

List of Publications by Year
in descending order

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|---|---|---|---|
| 105 papers | 1,768 citations | 304743 22 h-index | 315739 38 g-index |
| 106 all docs | 106 docs citations | 106 times ranked | 1753 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Bottom-Gate Zinc Oxide Thin-Film Transistors (ZnO TFTs) for AM-LCDs. IEEE Transactions on Electron Devices, 2008, 55, 3136-3142. | 3.0 | 209 |
| 2 | Efficient field emission from an individual aligned carbon nanotube bundle enhanced by edge effect. Applied Physics Letters, 2007, 90, 153108. | 3.3 | 105 |
| 3 | Novel top-gate zinc oxide thin-film transistors (ZnO TFTs) for AMLCDs. Journal of the Society for Information Display, 2007, 15, 17. | 2.1 | 85 |
| 4 | How to assess the plasma delivery of RONS into tissue fluid and tissue. Journal Physics D: Applied Physics, 2016, 49, 304005. | 2.8 | 81 |
| 5 | 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 |
| 6 | UVâ€“vis spectroscopy study of plasma-activated water: Dependence of the chemical composition on plasma exposure time and treatment distance. Japanese Journal of Applied Physics, 2018, 57, 0102B9. | 1.5 | 62 |
| 7 | Modelling the helium plasma jet delivery of reactive species into a 3D cancer tumour. Plasma Sources Science and Technology, 2018, 27, 014001. | 3.1 | 57 |
| 8 | 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 |
| 9 | Influence of Thermal Annealing on Microstructures of Zinc Oxide Films Deposited by RF Magnetron Sputtering. Japanese Journal of Applied Physics, 2007, 46, 3319-3323. | 1.5 | 43 |
| 10 | Oxygen bombardment effects on average crystallite size of sputter-deposited ZnO films. Journal of Non-Crystalline Solids, 2008, 354, 1926-1931. | 3.1 | 36 |
| 11 | 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 |
| 12 | 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 |
| 13 | 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 |
| 14 | 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 |
| 15 | 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 |
| 16 | Influence of amorphous buffer layers on the crystallinity of sputter-deposited undoped ZnO films. Journal of Crystal Growth, 2008, 310, 31-35. | 1.5 | 30 |
| 17 | Slow Molecular Transport of Plasma-Generated Reactive Oxygen and Nitrogen Species and O2 through Agarose as a Surrogate for Tissue. Plasma Medicine, 2015, 5, 125-143. | 0.6 | 29 |
| 18 | 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 |

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|---|---|---|---|
| 19 | Optimization of catalyst formation conditions for synthesis of carbon nanotubes using Taguchi method. Applied Surface Science, 2016, 371, 425-435. | 6.1 | 26 |
| 20 | How plasma induced oxidation, oxygenation, and de-oxygenation influences viability of skin cells. Applied Physics Letters, 2016, 109, . | 3.3 | 25 |
| 21 | Shape-dependent infrared reflectance properties of CNT forest metamaterial arrays. Optics Express, 2020, 28, 607. | 3.4 | 25 |
| 22 | 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 |
| 23 | Effect of substrate bias on crystal structure and thermal stability of sputter-deposited ZnO films. Journal of Crystal Growth, 2009, 311, 282-285. | 1.5 | 23 |
| 24 | 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 |
| 25 | 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 |
| 26 | 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 |
| 27 | Pulsed DC plasma CVD system for the deposition of DLC films. Materials Today Communications, 2018, 14, 40-46. | 1.9 | 21 |
| 28 | 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 |
| 29 | Effect of Energetic Particle Bombardment on Microstructure of Zinc Oxide Films Deposited by RF Magnetron Sputtering. Japanese Journal of Applied Physics, 2007, 46, 4038-4041. | 1.5 | 19 |
| 30 | 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 |
| 31 | 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 |
| 32 | Intense Green Cathodoluminescence from Low-Temperature-Deposited ZnO Film with Fluted Hexagonal Cone Nanostructures. Applied Physics Express, 2009, 2, 091601. | 2.4 | 18 |
| 33 | 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 |
| 34 | 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 |
| 35 | 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 |
| 36 | Spiky diamond field emitters. Diamond and Related Materials, 2003, 12, 1681-1684. | 3.9 | 15 |

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|---|---|---|---|
| 37 | 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 |
| 38 | FIB Secondary Etching Method for Fabrication of Fine CNT Forest Metamaterials. Nano-Micro Letters, 2017, 9, 44. | 27.0 | 15 |
| 39 | Structural Analysis of High-Density Vertically Aligned Carbon Nanotubes Grown by Thermal Chemical Vapor Deposition with Fe/Al Multilayer Catalyst. Japanese Journal of Applied Physics, 2006, 45, 8988-8990. | 1.5 | 12 |
| 40 | 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 |
| 41 | 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 |
| 42 | Significant decrease in the reflectance of thin CNT forest films tuned by the Taguchi method. Vacuum, 2018, 154, 285-295. | 3.5 | 11 |
| 43 | Sheet resistance and crystallinity of Ga- and Al-implanted zinc oxide thin films with postannealing. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2007, 25, 706-710. | 2.1 | 10 |
| 44 | Effects of sheath gas flow on He atmospheric pressure plasma jet. Applied Physics Express, 2019, 12, 036001. | 2.4 | 10 |
| 45 | Study of self-organized structure in carbon nanotube forest by fractal dimension and lacunarity analysis. Materials Characterization, 2020, 160, 110086. | 4.4 | 10 |
| 46 | 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 |
| 47 | Local sputter etching by micro plasma jet in SEM. Vacuum, 2013, 87, 132-135. | 3.5 | 9 |
| 48 | 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 |
| 49 | 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 |
| 50 | 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 |
| 51 | 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 |
| 52 | Generation of micro-arc discharge plasma in highly pressurized seawater. Applied Physics Letters, 2018, 113, . | 3.3 | 8 |
| 53 | Low-Temperature Growth of Carbon Nanofiber by Thermal Chemical Vapor Deposition Using CuNi Catalyst. Japanese Journal of Applied Physics, 2006, 45, 5329-5331. | 1.5 | 7 |
| 54 | Thermal Stability and Sheet Resistance of Undoped ZnO Films Deposited on Insulators. Electrochemical and Solid-State Letters, 2009, 12, K74. | 2.2 | 7 |

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|---|---|---|---|
| 55 | 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 |
| 56 | 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 |
| 57 | 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 |
| 58 | Diamond-like carbon films from CO source gas by RF plasma CVD method. Japanese Journal of Applied Physics, 2015, 54, 01AD04. | 1.5 | 7 |
| 59 | Investigation of microplasma discharge in sea water for optical emission spectroscopy. Japanese Journal of Applied Physics, 2016, 55, 07LC03. | 1.5 | 7 |
| 60 | Observation of single crystal diamond whiskers by FE-SEM and TEM. Molecular Crystals and Liquid Crystals, 2002, 386, 183-188. | 0.9 | 6 |
| 61 | SiO2Insulator Film Synthesized at 100 Â°C Using Tetramethylsilane by Inductively Coupled Plasma Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2007, 46, L237-L240. | 1.5 | 6 |
| 62 | 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 |
| 63 | Low temperature deposition of SiO insulator film with newly developed facing electrodes chemical vapor deposition. Vacuum, 2014, 101, 189-192. | 3.5 | 6 |
| 64 | RF Power and Thermal Annealing Effect on the Properties of Zinc Oxide Films Prepared by Radio Frequency Magnetron Sputtering. Research Letters in Materials Science, 2007, 2007, 1-5. | 0.2 | 5 |
| 65 | 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 |
| 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 SiO2Deposited by Inductively Coupled Plasma Chemical Vapor Deposition. Japanese Journal of Applied Physics, 2010, 49, 03CA03. | 1.5 | 5 |
| 68 | Long lifetime emission from screen printing carbon nanotubes over 45,000h at 1.27mA/cm2 with 10% duty ratio. Diamond and Related Materials, 2013, 35, 29-35. | 3.9 | 5 |
| 69 | 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 |
| 70 | DC Microplasma Jet for Local a:C-H Deposition Operated in SEM Chamber. Micromachines, 2017, 8, 211. | 2.9 | 5 |
| 71 | 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 |
| 72 | Optical reflectance of patterned frost column-like CNT forest for metamaterial applications. Diamond and Related Materials, 2018, 83, 196-203. | 3.9 | 5 |

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|---|---|---|---|
| 73 | Novel high-frequency energy-efficient pulsed-dc generator for capacitively coupled plasma discharge. Review of Scientific Instruments, 2018, 89, 033506. | 1.3 | 5 |
| 74 | Detection of metal contaminants in seawater by spectral analysis of microarc discharge. Japanese Journal of Applied Physics, 2018, 57, 0102B8. | 1.5 | 5 |
| 75 | Atomic Emission Spectroscopy of Microarc Discharge in Sea Water for On-Site Detection of Metals. IEEE Transactions on Plasma Science, 2019, 47, 1841-1850. | 1.3 | 5 |
| 76 | Hydrogenated Inâ€“Gaâ€“Znâ€“O thin-film transistors with anodized and fluorinated Al<sub>2</sub>O<sub>3</sub> gate insulator for flexible devices. Japanese Journal of Applied Physics, 2021, 60, SBBM05. | 1.5 | 5 |
| 77 | 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. Plasma, 2022, 5, 233-246. | 1.8 | 5 |
| 78 | 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 |
| 79 | 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 |
| 80 | 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 |
| 81 | Carbon Nanotube (CNT) Honeycomb Cell Area-Dependent Optical Reflectance. Nanomaterials, 2016, 6, 202. | 4.1 | 4 |
| 82 | 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 |
| 83 | 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 |
| 84 | 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 |
| 85 | 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 |
| 86 | Activation behavior of boron implanted poly-Si on glass substrate. Thin Solid Films, 2010, 518, 4477-4481. | 1.8 | 2 |
| 87 | 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 |
| 88 | Pulsed-DC Discharge for Plasma CVD of Carbon Thin Films. IEEE Transactions on Plasma Science, 2019, 47, 22-31. | 1.3 | 2 |
| 89 | Analysis of the Preheating Phase of Micro-Arc Discharge in Seawater, Operated Using a Needle-to-Plane Electrode with Variation in the Tip Shape. Plasma, 2019, 2, 303-315. | 1.8 | 2 |
| 90 | 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 |

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| 91 | Fabrication of Self-Assembling Carbon Nanotube Forest Fishnet Metamaterials. Nanomaterials, 2022, 12, 464. | 4.1 | 2 |
| 92 | ESR imaging of alanine dosimeter annealed under thermal gradient. Applied Radiation and Isotopes, 1996, 47, 1611-1614. | 1.5 | 1 |
| 93 | 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 |
| 94 | Trap Densities in ZnO TFTs with SiNx/SiOx Stacked Gate Insulators Fabricated Using Several N2O Flow Rate during SiOx Deposition. ECS Transactions, 2013, 54, 121-126. | 0.5 | 1 |
| 95 | 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 |
| 96 | Low temperature ZnO TFT fabricated on SiO<inf>x</inf> gate insulator deposited by facing electrodes chemical vapor deposition. , 2014, , . | | 1 |
| 97 | Comparison of different annealing gases effects on the optical emission properties of zinc oxide thin films deposited by radio frequency sputtering. , 2009, , . | | 0 |
| 98 | Pâ€191L: Lateâ€News Poster: 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 |
| 99 | 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 |
| 100 | Infrared properties of patterned CNT forest for metamaterials. , 2016, , . | | 0 |
| 101 | UV Absorption Spectroscopy Analysis on Water Irradiated to Atmospheric Pressure Plasma Jet. , 2018, , . | | 0 |
| 102 | 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 |
| 103 | Correlation between the Crystallinity Controlled by rf Substrate Bias and Sidewall Morphology on Dry-etched ZnO Films. Shinku/Journal of the Vacuum Society of Japan, 2007, 50, 498-501. | 0.2 | 0 |
| 104 | CdSe/ZnS (Core/Shell) Quantum Dots Multi-wallled Carbon Nanotubes (MWCNTs) on a Stainless Steel as a Photoanode in Solar Cells. , 2017, , . | | 0 |
| 105 | Formation of Thermally Stable, High-Areal-Density, and Small-Diameter Catalyst Nanoparticles via Intermittent Sputtering Deposition for the High-Density Growth of Carbon Nanotubes. Nanomaterials, 2022, 12, 365. | 4.1 | 0 |