

# Hong-Xing Wang

## List of Publications by Year in descending order

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103  
papers

1,009  
citations

471509

17  
h-index

580821

25  
g-index

104  
all docs

104  
docs citations

104  
times ranked

824  
citing authors

#	ARTICLE	IF	CITATIONS
1	HfAlO <sub>x</sub> /Al <sub>2</sub> O <sub>3</sub> Bilayer Dielectrics for a Field Effect Transistor on a Hydrogen-Terminated Diamond. <i>Materials</i> , 2022, 15, 446.	2.9	0
2	Thickness Impact on the Morphology, Strain Relaxation and Defects of Diamond Heteroepitaxially Grown on Ir/Al <sub>2</sub> O <sub>3</sub> Substrates. <i>Materials</i> , 2022, 15, 624.	2.9	1
3	Structural changes during femtosecond laser percussion drilling of high-aspect-ratio diamond microholes. <i>Optical Engineering</i> , 2022, 61, .	1.0	2
4	Reducing Threading Dislocations of Single-Crystal Diamond via In Situ Tungsten Incorporation. <i>Materials</i> , 2022, 15, 444.	2.9	6
5	Normally-off hydrogen-terminated diamond field effect transistor with a bilayer dielectric of Er <sub>2</sub> O <sub>3</sub> /Al <sub>2</sub> O <sub>3</sub> . <i>Diamond and Related Materials</i> , 2022, 123, 108848.	3.9	2
6	Solution-processed tin oxide thin film for normally-off hydrogen terminated diamond field effect transistor. <i>Applied Physics Letters</i> , 2022, 120, .	3.3	6
7	Electrical Characteristics of Diamond MOSFET with 2DHG on a Heteroepitaxial Diamond Substrate. <i>Materials</i> , 2022, 15, 2557.	2.9	1
8	Transport Properties of the Two-Dimensional Hole Gas for H-Terminated Diamond with an Al <sub>2</sub> O <sub>3</sub> Passivation Layer. <i>Crystals</i> , 2022, 12, 390.	2.2	1
9	Tunable Continuous-Variable Tripartite Entanglement via Cascaded Third-Order Nonlinear Processes in a Ring Cavity. <i>Annalen Der Physik</i> , 2022, 534, 2100396.	2.4	0
10	Argon Ion Beam Current Dependence of Si-Si Surface Activated Bonding. <i>Materials</i> , 2022, 15, 3115.	2.9	6
11	Large $V_{TH}$ of Normally-OFF Field Effect Transistor With Yttrium Gate Material Directly Deposited on Hydrogen-Terminated Diamond. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 3563-3567.	3.0	5
12	Electrical and Thermal Characteristics of AlGaN/GaN HEMT Devices with Dual Metal Gate Structure: A Theoretical Investigation. <i>Materials</i> , 2022, 15, 3818.	2.9	3
13	Small Subthreshold Swing Diamond Field Effect Transistors With SnO <sub>2</sub> Gate Dielectric. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 4427-4431.	3.0	5
14	Detection of Glucose Using Diamond Solution-Gate Field-Effect Transistor. <i>IEEE Transactions on Electron Devices</i> , 2022, 69, 4534-4539.	3.0	1
15	Leakage current reduction of normally off hydrogen-terminated diamond field effect transistor utilizing dual-barrier Schottky gate. <i>Journal of Applied Physics</i> , 2022, 132, .	2.5	1
16	Room temperature direct bonding of diamond and InGaP in atmospheric air. <i>Functional Diamond</i> , 2021, 1, 110-116.	3.8	13
17	Electrical properties of yttrium gate hydrogen-terminated diamond field effect transistor with Al <sub>2</sub> O <sub>3</sub> dielectric layer. <i>Applied Physics Letters</i> , 2021, 118, .	3.3	9
18	Fabrication of Dual-Barrier Planar Structure Diamond Schottky Diodes by Rapid Thermal Annealing. <i>IEEE Transactions on Electron Devices</i> , 2021, 68, 1176-1180.	3.0	4

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19	Normally-off hydrogen-terminated diamond field effect transistor with yttrium gate. Carbon, 2021, 176, 307-312.	10.3	28
20	Temperature dependent thermal conductivity of Ila diamond by laser excited Raman spectroscopy. Applied Physics Letters, 2021, 118, 192104.	3.3	3
21	The role of tunable nonlinear dark resonances on vacuum Rabi splitting and optical bistability in an atom-cavity system. Scientific Reports, 2021, 11, 10503.	3.3	0
22	Fabrication of a Micron-Scale Three-Dimensional Single Crystal Diamond Channel Using a Micro-Jet Water-Assisted Laser. Materials, 2021, 14, 3006.	2.9	4
23	Simple way to fabricate orderly arranged nanostructure arrays on diamond utilizing metal dewetting effect. Optics Express, 2021, 29, 28359.	3.4	3
24	Effects of surface activation time on Si-Si direct wafer bonding at room temperature. Materials Research Express, 2021, 8, 085901.	1.6	8
25	Heteroepitaxy of single crystal diamond on Ir buffered KTaO <sub>3</sub> (001) substrates. Applied Physics Letters, 2021, 119, .	3.3	7
26	Performance-Improved Vertical Zr/Diamond Schottky Barrier Diode With Lanthanum Hexaboride Interfacial Layer. IEEE Electron Device Letters, 2021, 42, 1366-1369.	3.9	8
27	Schottky Barrier Height Modulation of Zr/p-Diamond Schottky Contact by Inserting Ultrathin Atomic Layer-Deposited Al <sub>2</sub> O <sub>3</sub> . IEEE Transactions on Electron Devices, 2021, 68, 5995-6000.	3.0	7
28	Operation of Diamond Solution-Gated Field-Effect Transistor in the Frequency Domain. IEEE Transactions on Electron Devices, 2021, , 1-7.	3.0	0
29	Suppressing Nitrogen-Vacancy Centers to Enhance Performance of Diamond Ultraviolet Photodetector via Growing With Tungsten. IEEE Transactions on Electron Devices, 2021, 68, 6228-6232.	3.0	2
30	Surface Morphology and Microstructure Evolution of Single Crystal Diamond during Different Homoepitaxial Growth Stages. Materials, 2021, 14, 5964.	2.9	5
31	Performance of hydrogen-terminated diamond MOSFET with LaB <sub>6</sub> /Al <sub>2</sub> O <sub>3</sub> bilayer dielectric. Diamond and Related Materials, 2021, 120, 108646.	3.9	3
32	Influence of near threshold energy electron irradiation on the thermal conductivity of Ila diamond. Applied Physics Letters, 2021, 119, 182105.	3.3	2
33	Progress of diamond substrate development. , 2021, , .		0
34	Room Temperature Bonding of Semiconductor Materials Based on Mo/Au Interlayer. , 2021, , .		0
35	Effect of HfO <sub>2</sub> -Based Multi-Dielectrics on Electrical Properties of Amorphous In-Ga-Zn-O Thin Film Transistors. Coatings, 2021, 11, 1381.	2.6	0
36	Temperature dependence of optical centres in ultrapure diamond after 200 keV electron irradiation. Journal Physics D: Applied Physics, 2020, 53, 135303.	2.8	8

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37	Nonlinear optical induced lattice in atomic configurations. <i>Scientific Reports</i> , 2020, 10, 13396.	3.3	3
38	Optical defects and their depth penetration in 200 keV electron irradiated Ila diamond. <i>Radiation Effects and Defects in Solids</i> , 2020, 175, 1083-1092.	1.2	0
39	Visible-Light Activation of Photocatalytic for Reduction of Nitrogen to Ammonia by Introducing Impurity Defect Levels into Nanocrystalline Diamond. <i>Materials</i> , 2020, 13, 4559.	2.9	3
40	Normally Off Hydrogen-Terminated Diamond Field-Effect Transistor With Ti/TiO <sub>x</sub> Gate Materials. <i>IEEE Transactions on Electron Devices</i> , 2020, 67, 4784-4788.	3.0	28
41	Fabrication and Characterization of (100)-Oriented Single-Crystal Diamond p-n Junction Ultraviolet Detector. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020, 217, 2000207.	1.8	9
42	Local initial heteroepitaxial growth of diamond (111) on Ru (0001)/c-sapphire by antenna-edge-type microwave plasma chemical vapor deposition. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	7
43	Diamond avalanche diodes for obtaining high-voltage pulse with subnanosecond front edge. <i>AIP Advances</i> , 2020, 10, .	1.3	2
44	Pd nanoparticle size effects in localized surface plasmon-enhanced diamond photodetectors. <i>Optical Materials</i> , 2020, 107, 110031.	3.6	7
45	Hydrophobic Surface Coating of Nanodiamonds by Polyglycerol-Based Polymers with Alkyl Chains for Dispersing in an Organic Solvent. <i>ChemNanoMat</i> , 2020, 6, 1332-1336.	2.8	3
46	Nancone Structures Enhancing Nitrogen-Vacancy Center Emissions in Diamonds. <i>Coatings</i> , 2020, 10, 513.	2.6	3
47	3D TiO <sub>2</sub> /Diamond Ultraviolet Detector Using Back Pd Schottky Electrode. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020, 217, 2000218.	1.8	5
48	An Enhancement-Mode Hydrogen-Terminated Diamond Field-Effect Transistor With Lanthanum Hexaboride Gate Material. <i>IEEE Electron Device Letters</i> , 2020, 41, 585-588.	3.9	52
49	LiF/Al <sub>2</sub> O <sub>3</sub> as Dielectrics for MOSFET on Single Crystal Hydrogen-Terminated Diamond. <i>IEEE Electron Device Letters</i> , 2020, 41, 808-811.	3.9	21
50	Diamond field effect transistors using bilayer dielectrics Yb <sub>2</sub> TiO <sub>5</sub> /Al <sub>2</sub> O <sub>3</sub> on hydrogen-terminated diamond. <i>Diamond and Related Materials</i> , 2020, 106, 107866.	3.9	4
51	Hydrogen-terminated diamond field-effect transistor with a bilayer dielectric of HfSiON/Al <sub>2</sub> O <sub>3</sub> . <i>AIP Advances</i> , 2020, 10, 035327.	1.3	4
52	Enhanced Responsivity of Diamond UV Detector Based on Regrown Lens Structure. <i>IEEE Electron Device Letters</i> , 2020, 41, 1829-1832.	3.9	19
53	Adjustable charge states of nitrogen-vacancy centers in low-nitrogen diamond after electron irradiation and subsequent annealing. <i>Applied Physics Letters</i> , 2020, 117, .	3.3	12
54	RF Performance of Hydrogenated Single Crystal Diamond MOSFETs. , 2019, , .		5

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55	Photovoltaic Three-Dimensional Diamond UV Photodetector With Low Dark Current and Fast Response Speed Fabricated by Bottom-Up Method. IEEE Electron Device Letters, 2019, 40, 1186-1189.	3.9	27
56	Performance Improved Vertical Diamond Schottky Barrier Diode With Fluorination-Termination Structure. IEEE Electron Device Letters, 2019, 40, 1229-1232.	3.9	8
57	Schottky barrier diode fabricated on oxygen-terminated diamond using a selective growth approach. Diamond and Related Materials, 2019, 99, 107529.	3.9	4
58	Ohmic Contact of Pt/Au on Hydrogen-Terminated Single Crystal Diamond. Coatings, 2019, 9, 539.	2.6	6
59	Hydrogen-terminated diamond field-effect transistor with a bilayer dielectric of HfSiO <sub>4</sub> /Al <sub>2</sub> O <sub>3</sub> . Diamond and Related Materials, 2019, 99, 107530.	3.9	4
60	Performance of hydrogen-terminated diamond MOSFET with bilayer dielectrics of YSZ/Al <sub>2</sub> O <sub>3</sub> . Diamond and Related Materials, 2019, 99, 107532.	3.9	13
61	Fabrication of Diamond Submicron Lenses and Cylinders by ICP Etching Technique with SiO <sub>2</sub> Balls Mask. Materials, 2019, 12, 1622.	2.9	8
62	Room temperature bonding of Si and Si wafers by using Mo/Au nano-adhesion layers. Microelectronic Engineering, 2019, 215, 111018.	2.4	12
63	Self-powered diamond ultraviolet photodetector with a transparent Ag nanowire electrode. Nanotechnology, 2019, 30, 325204.	2.6	7
64	Diamond Schottky barrier diodes with floating metal rings for high breakdown voltage. Materials Science in Semiconductor Processing, 2019, 97, 101-105.	4.0	16
65	Iridium size effects in localized surface plasmon-enhanced diamond UV photodetectors. Applied Surface Science, 2019, 487, 674-677.	6.1	19
66	Creation and Migration of Intrinsic Defects in Si-Doped Diamond Produced Using Microwave Plasma Chemical Vapor Deposition. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900003.	1.8	2
67	Hydrogen-terminated diamond field-effect transistor with AlO <sub>x</sub> dielectric layer formed by autoxidation. Scientific Reports, 2019, 9, 5192.	3.3	16
68	Fabrication of micro lens array on diamond surface. AIP Advances, 2019, 9, .	1.3	8
69	Enhanced ultraviolet photoresponse of diamond photodetector using patterned diamond film and two-step growth process. Materials Science in Semiconductor Processing, 2019, 89, 110-115.	4.0	19
70	Enhanced ultraviolet absorption in diamond surface via localized surface plasmon resonance in palladium nanoparticles. Applied Surface Science, 2019, 464, 455-457.	6.1	17
71	Enhancing diamond NV center density in HPHT substrate and epitaxy lateral overgrowth layer by tungsten pattern. Materials Letters, 2019, 240, 233-237.	2.6	7
72	Characterization of UV photodetector based on ZnO/diamond film. Optics Express, 2019, 27, 36750.	3.4	9

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73	Analysis of diamond pseudo-vertical Schottky barrier diode through patterning tungsten growth method. Applied Physics Letters, 2018, 112, .	3.3	11
74	UV-photodetector based on NiO/diamond film. Applied Physics Letters, 2018, 112, .	3.3	42
75	Normally-off hydrogen-terminated diamond field-effect transistor with Al <sub>2</sub> O <sub>3</sub> dielectric layer formed by thermal oxidation of Al. Diamond and Related Materials, 2018, 81, 113-117.	3.9	39
76	Investigating non-equilibrium carrier lifetimes in nitrogen-doped and boron-doped single crystal HPHT diamonds with an optical method. Applied Physics Letters, 2018, 112, 022103.	3.3	4
77	FEM thermal analysis of high power GaN-on-diamond HEMTs. Journal of Semiconductors, 2018, 39, 104005.	3.7	5
78	Fabrication of dual-termination Schottky barrier diode by using oxygen-/fluorine-terminated diamond. Applied Surface Science, 2018, 457, 411-416.	6.1	14
79	Responsivity improvement of Ti-diamond-Ti structured UV photodetector through photocurrent gain. Optics Express, 2018, 26, 17092.	3.4	16
80	Efficient and Tunable Photoinduced Honeycomb Lattice in an Atomic Ensemble. Laser and Photonics Reviews, 2018, 12, 1800050.	8.7	20
81	A Method for Demonstration of the Feasibility of InP as an All-optical Imaging Sensor. , 2018, , .		0
82	Two-dimensional Talbot self-imaging via Electromagnetically induced lattice. Scientific Reports, 2017, 7, 41790.	3.3	17
83	Annealing and lateral migration of defects in Ila diamond created by near-threshold electron irradiation. Applied Physics Letters, 2017, 110, .	3.3	11
84	Investigation of an InP-based image converter with optical excitation. Review of Scientific Instruments, 2017, 88, 033109.	1.3	5
85	Hybrid Three-Mode Correlation and Squeezing in a Pr <sup>3+</sup> :YSO Crystal. Scientific Reports, 2017, 7, 1743.	3.3	1
86	Effect of thermoelastic damping on silicon, GaAs, diamond and SiC micromechanical resonators. AIP Advances, 2017, 7, .	1.3	4
87	FEM thermal analysis of Cu/diamond/Cu and diamond/SiC heat spreaders. AIP Advances, 2017, 7, 035102.	1.3	8
88	A finite element analysis of the effects of geometrical shape on the elastic properties of chemical vapor deposited diamond nanowire. AIP Advances, 2017, 7, .	1.3	3
89	FEM thermal and stress analysis of bonded GaN-on-diamond substrate. AIP Advances, 2017, 7, 095105.	1.3	6
90	Ohmic contact between iridium film and hydrogen-terminated single crystal diamond. Scientific Reports, 2017, 7, 12157.	3.3	12

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91	Photoelectrical characteristics of ultra thin TiO <sub>2</sub> /diamond photodetector. Materials Letters, 2017, 188, 52-54.	2.6	16
92	Diamond MIP structure Schottky diode with different drift layer thickness. Diamond and Related Materials, 2017, 73, 15-18.	3.9	18
93	Fabrication of monolithic diamond photodetector with microlenses. Optics Express, 2017, 25, 31586.	3.4	23
94	Development of an all-optical framing camera and its application on the Z-pinch. Optics Express, 2017, 25, 32074.	3.4	6
95	Triple-mode squeezing with dressed six-wave mixing. Scientific Reports, 2016, 6, 25554.	3.3	10
96	Fabrication of three dimensional diamond ultraviolet photodetector through down-top method. Applied Physics Letters, 2016, 109, 153507.	3.3	27
97	Effect of depth of Buried-In Tungsten Electrodes on Single Crystal Diamond Photodetector. MRS Advances, 2016, 1, 1099-1104.	0.9	11
98	Controllable hybrid shape of correlation and squeezing. Physical Review A, 2016, 94, .	2.5	24
99	Fabrication of UV Photodetector on TiO <sub>2</sub> /Diamond Film. Scientific Reports, 2015, 5, 14420.	3.3	81
100	Diamond Based Field-Effect Transistors of Zr Gate with $S_i N_x$ Layers. Journal of Nanomaterials, 2015, 2015, 1-5.	2.7	12
101	A 3W High-Voltage Single-Chip Green Light-Emitting Diode with Multiple-Cells Network. Journal of Nanomaterials, 2015, 2015, 1-4.	2.7	1
102	Soil Evaporation and its Affecting Factors under Crop Canopy. Communications in Soil Science and Plant Analysis, 2007, 38, 259-271.	1.4	18
103	The influence of nitrogen doping on the thermal conductivity of diamond heat sink. Spectroscopy Letters, 0, , 1-6.	1.0	1