Oliver Williams

List of Publications by Year
in descending order

153 papers	6,580 citations	61857 43 h-index	74018 75 g-index
155 all docs	155 docs citations	155 times ranked	5127 citing authors

#	Article	IF	Citations
1	Nanocrystalline diamond. Diamond and Related Materials, 2011, 20, 621-640.	1.8	377
2	Enhanced diamond nucleation on monodispersed nanocrystalline diamond. Chemical Physics Letters, 2007, 445, 255-258.	1.2	345
3	Size-Dependent Reactivity of Diamond Nanoparticles. ACS Nano, 2010, 4, 4824-4830.	7.3	345
4	Growth, electronic properties and applications of nanodiamond. Diamond and Related Materials, 2008, 17, 1080-1088.	1.8	279
5	Electronic and optical properties of boron-doped nanocrystalline diamond films. Physical Review B, 2009, 79, .	1.1	220
6	Comparison of the growth and properties of ultrananocrystalline diamond and nanocrystalline diamond. Diamond and Related Materials, 2006, 15, 654-658.	1.8	154
7	n-type conductivity in ultrananocrystalline diamond films. Applied Physics Letters, 2004, 85, 1680-1682.	1.5	152
8	Ordered growth of neurons on diamond. Biomaterials, 2004, 25, 4073-4078.	5.7	139
9	Electrostatic self-assembly of diamond nanoparticles. Chemical Physics Letters, 2011, 509, 12-15.	1.2	130
10	Chemical mechanical polishing of thin film diamond. Carbon, 2014, 68, 473-479.	5.4	121
11	Growth and properties of nanocrystalline diamond films. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 3375-3386.	0.8	117
12	Effect of nitrogen on the electronic properties of ultrananocrystalline diamond thin films grown on quartz and diamond substrates. Physical Review B, 2006, 74, .	1.1	103
13	pH sensors based on hydrogenated diamond surfaces. Applied Physics Letters, 2005, 86, 073504.	1.5	101
14	High Youngâ€™s modulus in ultra thin nanocrystalline diamond. Chemical Physics Letters, 2010, 495, 84-89.	1.2	98
15	Positive zeta potential of nanodiamonds. Nanoscale, 2017, 9, 12549-12555.	2.8	98
16	Optical properties of nanocrystalline diamond thin films. Applied Physics Letters, 2006, 88, 101908.	1.5	95
17	Super-High-Frequency SAW Resonators on AlN/Diamond. IEEE Electron Device Letters, 2012, 33, 495-497.	2.2	93
18	High precision pressure sensors based on SAW devices in the GHz range. Sensors and Actuators A: Physical, 2013, 189, 364-369.	2.0	89

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19	Diamond nano-wires, a new approach towards next generation electrochemical gene sensor platforms. Diamond and Related Materials, 2009, 18, 910-917.	1.8	82
20	Hydrogen-induced transport properties of holes in diamond surface layers. Applied Physics Letters, 2001, 79, 4541-4543.	1.5	77
21	Nanocrystalline Diamond Nanoelectrode Arrays and Ensembles. ACS Nano, 2011, 5, 3339-3346.	7.3	74
22	Battery-like supercapacitors from diamond networks and water-soluble redox electrolytes. Journal of Materials Chemistry A, 2017, 5, 1778-1785.	5.2	74
23	Seeding, growth and characterization of nanocrystalline diamond films on various substrates. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 3005-3010.	0.8	72
24	Batteryâ€like Supercapacitors from Vertically Aligned Carbon Nanofiber Coated Diamond: Design and Demonstrator. Advanced Energy Materials, 2018, 8, 1702947.	10.2	70
25	Electrochemical Supercapacitors from Diamond. Journal of Physical Chemistry C, 2015, 119, 18918-18926.	1.5	68
26	Towards a Real-Time, Label-Free, Diamond-Based DNA Sensor. Langmuir, 2007, 23, 13193-13202.	1.6	66
27	Ultrananocrystalline diamond for electronic applications. Semiconductor Science and Technology, 2006, 21, R49-R56.	1.0	61
28	Anisotropic etching of diamond by molten Ni particles. Applied Physics Letters, 2010, 97, .	1.5	59
29	Low temperature properties of the p-type surface conductivity of diamond. Diamond and Related Materials, 2002, 11, 351-354.	1.8	57
30	Ultra-nano-crystalline/single crystal diamond heterostructure diode. Diamond and Related Materials, 2005, 14, 416-420.	1.8	57
31	Diamond-Modified AFM Probes: From Diamond Nanowires to Atomic Force Microscopy-Integrated Boron-Doped Diamond Electrodes. Analytical Chemistry, 2011, 83, 4936-4941.	3.2	57
32	Coherent anti-Stokes Raman scattering microscopy of single nanodiamonds. Nature Nanotechnology, 2014, 9, 940-946.	15.6	56
33	Surface conductivity on hydrogen terminated diamond. Semiconductor Science and Technology, 2003, 18, S34-S40.	1.0	55
34	Hydrogen concentration and bonding configuration in polycrystalline diamond films: From micro-to nanometric grain size. Journal of Applied Physics, 2007, 102, .	1.1	54
35	The Diamond Superconducting Quantum Interference Device. ACS Nano, 2011, 5, 7144-7148.	7.3	54
36	Microwave properties of nanodiamond particles. Applied Physics Letters, 2013, 102, .	1.5	54

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37	Diamond nanoseeding on silicon: Stability under H2 MPCVD exposures and early stages of growth. Diamond and Related Materials, 2008, 17, 1143-1149.	1.8	53
38	Optimization of AlN thin layers on diamond substrates for high frequency SAW resonators. Materials Letters, 2012, 66, 339-342.	1.3	52
39	Strongly inhomogeneous distribution of spectral properties of silicon-vacancy color centers in nanodiamonds. New Journal of Physics, 2018, 20, 115002.	1.2	52
40	Immobilization of horseradish peroxidase via an amino silane on oxidized ultrananocrystalline diamond. Diamond and Related Materials, 2007, 16, 138-143.	1.8	50
41	Vertically aligned diamond nanowires: Fabrication, characterization, and application for DNA sensing. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2048-2056.	0.8	48
42	Piezoelectric actuated micro-resonators based on the growth of diamond on aluminum nitride thin films. Nanotechnology, 2013, 24, 025601.	1.3	46
43	MEMS/NEMS based on mono-, nano-, and ultrananocrystalline diamond films. MRS Bulletin, 2014, 39, 511-516.	1.7	45
44	Tuneable optical lenses from diamond thin films. Applied Physics Letters, 2009, 95, .	1.5	43
45	Nonlinear dissipation in diamond nanoelectromechanical resonators. Applied Physics Letters, 2013, 102, .	1.5	43
46	Silica based polishing of {100} and {111} single crystal diamond. Science and Technology of Advanced Materials, 2014, 15, 035013.	2.8	43
47	Weak localization in ultrananocrystalline diamond. Applied Physics Letters, 2006, 88, 092107.	1.5	42
48	Pure nanodiamonds for levitated optomechanics in vacuum. New Journal of Physics, 2018, 20, 043016.	1.2	42
49	Redox agent enhanced chemical mechanical polishing of thin film diamond. Carbon, 2018, 130, 25-30.	5.4	40
50	Structural and Optical Properties of DNA Layers Covalently Attached to Diamond Surfaces. Langmuir, 2008, 24, 7269-7277.	1.6	38
51	A detailed analysis of the Raman spectra in superconducting boron doped nanocrystalline diamond. Physica Status Solidi (B): Basic Research, 2012, 249, 2656-2659.	0.7	38
52	Nanostructured polymer brushes and protein density gradients on diamond by carbon templating. Soft Matter, 2011, 7, 4861.	1.2	37
53	Formation of shallow acceptor states in the surface region of thin film diamond. Applied Physics Letters, 2001, 78, 3460-3462.	1.5	36
54	Hydrogen bonding at grain surfaces and boundaries of nanodiamond films detected by high resolution electron energy loss spectroscopy. Applied Physics Letters, 2007, 91, .	1.5	36

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55	Topographical and Functional Characterization of the ssDNA Probe Layer Generated Through EDC-Mediated Covalent Attachment to Nanocrystalline Diamond Using Fluorescence Microscopy. Langmuir, 2008, 24, 9125-9134.	1.6	35
56	Low-temperature transport in highly boron-doped nanocrystalline diamond. Physical Review B, 2009, 79, .	1.1	35
57	Observation of Nonlinear Dissipation in Piezoresistive Diamond Nanomechanical Resonators by Heterodyne Down-Mixing. Nano Letters, 2013, 13, 4014-4019.	4.5	34
58	Fluorinated nanodiamonds as unique neutron reflector. Carbon, 2018, 130, 799-805.	5.4	34
59	Surface Zeta Potential and Diamond Seeding on Gallium Nitride Films. ACS Omega, 2017, 2, 7275-7280.	1.6	33
60	Diamond Nucleation by Carbon Transport from Buried Nanodiamond TiO₂ Solâ€Gel Composites. Advanced Materials, 2009, 21, 670-673.	11.1	32
61	Microwave determination of sp2 carbon fraction in nanodiamond powders. Carbon, 2015, 81, 174-178.	5.4	32
62	Diamond: a material for acoustic devices. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 1009-1020.	0.8	31
63	Transparent diamondâ€onâ€glass microâ€electrode arrays for exâ€vivo neuronal study. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2126-2129.	0.8	31
64	Nanostructures made from superconducting boron-doped diamond. Nanotechnology, 2010, 21, 195303.	1.3	31
65	Microstructured poly(2-oxazoline) bottle-brush brushes on nanocrystalline diamond. Physical Chemistry Chemical Physics, 2010, 12, 4360.	1.3	31
66	Influence of the postplasma process conditions on the surface conductivity of hydrogenated diamond surfaces. Journal of Applied Physics, 2003, 93, 2700-2704.	1.1	30
67	Low temperature catalytic reactivity of nanodiamond in molecular hydrogen. Carbon, 2016, 110, 438-442.	5.4	30
68	Low Temperature Surface Conductivity of Hydrogenated Diamond. Physica Status Solidi A, 2001, 186, 241-247.	1.7	28
69	High growth rate MWPECVD of single crystal diamond. Diamond and Related Materials, 2004, 13, 557-560.	1.8	28
70	Formation of nano-pores in nano-crystalline diamond films. Chemical Physics Letters, 2011, 507, 253-259.	1.2	28
71	Effect of slurry composition on the chemical mechanical polishing of thin diamond films. Science and Technology of Advanced Materials, 2017, 18, 654-663.	2.8	28
72	Carrier generation within the surface region of hydrogenated thin film polycrystalline diamond. Diamond and Related Materials, 2001, 10, 423-428.	1.8	26

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73	Superconducting nano-mechanical diamond resonators. Carbon, 2014, 72, 100-105.	5.4	26
74	Defects localization and nature in bulk and thin film utrananocrystalline diamond. Diamond and Related Materials, 2007, 16, 1806-1812.	1.8	25
75	Penicillin detection with nanocrystallineâ€diamond fieldâ€effect sensor. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2141-2145.	0.8	25
76	Optical properties of heavily boron-doped nanocrystalline diamond films studied by spectroscopic ellipsometry. Applied Physics Letters, 2008, 93, 131910.	1.5	25
77	Bulk and surface thermal stability of ultra nanocrystalline diamond films with 10â€"30 nm grain size prepared by chemical vapor deposition. Journal of Applied Physics, 2010, 107, 093521.	1.1	25
78	Semiconducting to metallic-like boron doping of nanocrystalline diamond films and its effect on osteoblastic cells. Diamond and Related Materials, 2010, 19, 190-195.	1.8	25
79	Low-temperature magnetoresistance study of electrical transport in N- and B-doped ultrananocrystalline and nanocrystalline diamond films. Diamond and Related Materials, 2006, 15, 607-613.	1.8	24
80	Characterisation of capacitive field-effect sensors with a nanocrystalline-diamond film as transducer material for multi-parameter sensing. Biosensors and Bioelectronics, 2009, 24, 1298-1304.	5.3	24
81	Spatially correlated microstructure and superconductivity in polycrystalline boron-doped diamond. Physical Review B, 2010, 82, .	1.1	24
82	Chemical Nucleation of Diamond Films. ACS Applied Materials & Interfaces, 2016, 8, 26220-26225.	4.0	24
83	Superconducting Diamond on Silicon Nitride for Device Applications. Scientific Reports, 2019, 9, 2911.	1.6	23
84	Static and dynamic determination of the mechanical properties of nanocrystalline diamond micromachined structures. Journal of Micromechanics and Microengineering, 2009, 19, 115016.	1.5	22
85	Investigating the Broadband Microwave Absorption of Nanodiamond Impurities. IEEE Transactions on Microwave Theory and Techniques, 2015, 63, 4110-4118.	2.9	22
86	An insight into neutron detection from polycrystalline CVD diamond films. Diamond and Related Materials, 2004, 13, 791-795.	1.8	21
87	Functional Polymer Brushes on Diamond as a Platform for Immobilization and Electrical Wiring of Biomolecules. Advanced Functional Materials, 2013, 23, 2979-2986.	7.8	21
88	Impact of chemical vapour deposition plasma inhomogeneity on the spatial variation of sp2 carbon in boron doped diamond electrodes. Carbon, 2017, 121, 434-442.	5.4	21
89	GaN-on-diamond technology platform: Bonding-free membrane manufacturing process. AIP Advances, 2020, 10, .	0.6	21
90	Electrical Conduction in Polycrystalline CVD Diamond: Temperature Dependent Impedance Measurements. Physica Status Solidi A, 2002, 193, 462-469.	1.7	20

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91	Atomic layer deposition of ZnO thin films on boron-doped nanocrystalline diamond. Diamond and Related Materials, 2007, 16, 983-986.	1.8	20
92	Nanocrystalline-diamond thin films with high pH and penicillin sensitivity prepared on a capacitive Siâ€“SiO2 structure. Electrochimica Acta, 2009, 54, 5981-5985.	2.6	20
93	Synthetic diamond films as a platform material for labelâ€free protein sensors. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 520-526.	0.8	20
94	Nickel doping of nitrogen enriched CVDâ€diamond for the production of single photon emitters. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2012-2015.	0.8	20
95	Hydrogen concentration and bonding in nanoâ€diamond films of varying grain sizes grown by different chemical vapor deposition methods. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2860-2867.	0.8	19
96	Microwave cavity perturbation of nitrogen doped nano-crystalline diamond films. Carbon, 2019, 145, 740-750.	5.4	19
97	Low temperature electron spin resonance investigation of ultrananocrystalline diamond films as a function of nitrogen content. Diamond and Related Materials, 2006, 15, 1913-1916.	1.8	18
98	Nanocrystalline diamond enhanced thickness shear mode resonator. Applied Physics Letters, 2007, 90, 063514.	1.5	18
99	<i>Ex situ</i> variable angle spectroscopic ellipsometry studies on chemical vapor deposited boron-doped diamond films: Layered structure and modeling aspects. Journal of Applied Physics, 2008, 104, .	1.1	18
100	Nanocrystalline diamond piezoresistive sensor. Vacuum, 2009, 84, 53-56.	1.6	18
101	Selective and visible-light-driven profenofos sensing with calixarene receptors on TiO2 nanotube film electrodes. Electrochemistry Communications, 2012, 19, 111-114.	2.3	18
102	Spectroscopic Ellipsometry of Nanocrystalline Diamond Film Growth. ACS Omega, 2017, 2, 6715-6727.	1.6	18
103	High-throughput nitrogen-vacancy center imaging for nanodiamond photophysical characterization and pH nanosensing. Nanoscale, 2020, 12, 21821-21831.	2.8	18
104	Black diamond: a new material for active electronic devices. Diamond and Related Materials, 2002, 11, 396-399.	1.8	17
105	Intrinsic granularity in nanocrystalline boron-doped diamond films measured by scanning tunneling microscopy. Physical Review B, 2009, 80, .	1.1	17
106	Structural investigations of protective polycrystalline diamond coatings on titanium substrates. Surface and Coatings Technology, 2006, 201, 203-207.	2.2	16
107	Structural, optical, and electronic properties of nanocrystalline and ultrananocrystalline diamond thin films. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2874-2880.	0.8	16
108	Surface characterisation of silicon substrates seeded with diamond nanoparticles under UHV annealing. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 2108-2113.	0.8	16

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109	Novel in-plane gate devices on hydrogenated diamond surfaces. Physica Status Solidi A, 2003, 199, 56-63.	1.7	13
110	Chinese hamster ovary cell viability on hydrogen and oxygen terminated nanoâ€•and microcrystalline diamond surfaces. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2042-2047.	0.8	13
111	Metalâ€“insulator transition and superconductivity in highly boronâ€doped nanocrystalline diamond films. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1978-1985.	0.8	13
112	Observation of conduction electron spin resonance in boron-doped diamond. Physical Review B, 2013, 87, .	1.1	13
113	Electrostatic force microscopy studies of boron-doped diamond films. Journal of Materials Research, 2007, 22, 3014-3028.	1.2	12
114	Superconductivity in planarised nanocrystalline diamond films. Science and Technology of Advanced Materials, 2017, 18, 239-244.	2.8	12
115	Negative magnetoresistance in boron-doped nanocrystalline diamond films. Journal of Applied Physics, 2009, 106, 033711.	1.1	11
116	Temperature characteristics of SAW resonators on Sc_{0.26}Al_{0.74}N/polycrystalline diamond heterostructures. Smart Materials and Structures, 2018, 27, 075015.	1.8	11
117	Superconducting boron doped nanocrystalline diamond on boron nitride ceramics. Nanoscale, 2019, 11, 10266-10272.	2.8	11
118	A new diamond based heterostructure diode. Semiconductor Science and Technology, 2006, 21, L32-L35.	1.0	10
119	An investigation of structural and electrical properties of boron doped and undoped nanocrystalline diamond films. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 3021-3027.	0.8	10
120	Doping of single crystalline diamond with nickel. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2054-2057.	0.8	10
121	Production of Metal-Free Diamond Nanoparticles. ACS Omega, 2018, 3, 16099-16104.	1.6	10
122	High carrier mobilities in black diamond. Semiconductor Science and Technology, 2003, 18, S77-S80.	1.0	9
123	Homoepitaxial diamond growth for the control of surface conductive carrier transport properties. Journal of Applied Physics, 2004, 96, 3742-3747.	1.1	9
124	Homoepitaxial growth for surface conductive device applications. Diamond and Related Materials, 2004, 13, 325-328.	1.8	9
125	pH sensitivity of nanocrystalline diamond films. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 2925-2930.	0.8	9
126	Detailed study of superconductivity in nanostructured nanocrystalline boron doped diamond thin films. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2017-2022.	0.8	9

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127	Diamond underlayer microstructure effect on the orientation of AlN piezoelectric layers for high frequency SAW resonators by TEM. Microelectronic Engineering, 2013, 112, 193-197.	1.1	9
128	Thin conductive diamond films as beam intensity monitors for soft x-ray beamlines. Review of Scientific Instruments, 2013, 84, 035105.	0.6	7
129	Microwave Permittivity of Trace sp² Carbon Impurities in Sub-Micron Diamond Powders. ACS Omega, 2018, 3, 2183-2192.	1.6	7
130	A simple, space constrained NIRIM type reactor for chemical vapour deposition of diamond. AIP Advances, 2018, 8, .	0.6	7
131	Air-clad suspended nanocrystalline diamond ridge waveguides. Optics Express, 2018, 26, 13883.	1.7	7
132	The Diamond Nano-Balance. Journal of Nanoscience and Nanotechnology, 2009, 9, 3483-3486.	0.9	6
133	Effect of ultraprecision polishing techniques on coherence times of shallow nitrogen-vacancy centers in diamond. Diamond and Related Materials, 2018, 85, 18-22.	1.8	6
134	A microstructural study of superconductive nanocrystalline diamond. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1986-1990.	0.8	5
135	Nanocrystalline boronâ€doped diamond films, a mixture of BCSâ€like and nonâ€BCSâ€like superconducting grains. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2064-2068.	0.8	5
136	Fluorinated nanodiamonds as unique neutron reflector. Journal of Neutron Research, 2019, 20, 81-82.	0.4	5
137	SAW Resonators and Filters Based on Sc0.43Al0.57N on Single Crystal and Polycrystalline Diamond. Micromachines, 2022, 13, 1061.	1.4	5
138	Diamond growth on hot-filament chemically vapour-deposited diamond for surface conductive device applications. Diamond and Related Materials, 2004, 13, 166-169.	1.8	4
139	Residual stress, intermolecular force, and frictional properties distribution maps of diamond films for micro- and nano-electromechanical (M/NEMS) applications. Journal of Materials Research, 2006, 21, 3037-3046.	1.2	4
140	Slow Electronâ€"Phonon Cooling in Superconducting Diamond Films. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-4.	1.1	4
141	Giant Reflection Coefficient on Sc_{0.26}Al_{0.74}N Polycrystalline Diamond Surface Acoustic Wave Resonators. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900360.	0.8	4
142	Dynamic characterization of thin aluminum nitride microstructures. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 479-481.	0.8	3
143	Observation of a superconducting glass state in granular superconducting diamond. Scientific Reports, 2019, 9, 4578.	1.6	3
144	CO_2 laser micromachining of nanocrystalline diamond films grown on doped silicon substrates. Optical Materials Express, 2016, 6, 3916.	1.6	2

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145	Diamond-Based 1-D Imaging Arrays. Physica Status Solidi A, 2002, 193, 476-481.	1.7	1
146	Hydrogenated Black Diamond: An Electrical Study. Physica Status Solidi A, 2002, 193, 577-584.	1.7	1
147	TEM study of superconducting polycrystalline diamond. , 2010, , .		1
148	Single Nitrogen-Vacancy Imaging in Nanodiamonds for Multimodal Sensing. Biophysical Journal, 2019, 116, 174a.	0.2	1
149	MEASUREMENT OF ELECTRICAL ACTIVATION ENERGY IN BLACK CVD DIAMOND USING IMPEDANCE SPECTROSCOPY. International Journal of Modern Physics B, 2002, 16, 4487-4492.	1.0	0
150	Nanocrystalline Diamond-Based Field-Effect Capacitive pH Sensor. , 2007, , .		0
151	Diamondâˆ•AlN Thin Films for Optical Applications. , 2010, , .		0
152	Sputter optimization of AlN on diamond substrates for high frequency SAW resonators. , 2011, , .		0
153	Fabrication of high frequency SAW resonators using AlN/Diamond/Si technology. , 2011, , .		0