

# Paul May

## List of Publications by Year in descending order

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110  
papers

4,458  
citations

71102

41  
h-index

110387

64  
g-index

112  
all docs

112  
docs citations

112  
times ranked

4502  
citing authors

#	ARTICLE	IF	CITATIONS
1	Diamond thin films: a 21st-century material. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2000, 358, 473-495.	3.4	573
2	Thin film diamond by chemical vapour deposition methods. Chemical Society Reviews, 1994, 23, 21.	38.1	192
3	Porous Boron-Doped Diamond/Carbon Nanotube Electrodes. ACS Applied Materials & Interfaces, 2014, 6, 990-995.	8.0	134
4	Nitrogen in Diamond. Chemical Reviews, 2020, 120, 5745-5794.	47.7	133
5	Microcrystalline, nanocrystalline, and ultrananocrystalline diamond chemical vapor deposition: Experiment and modeling of the factors controlling growth rate, nucleation, and crystal size. Journal of Applied Physics, 2007, 101, 053115.	2.5	117
6	Isolation and Structural Proof of the Large Diamond Molecule, Cyclohexamantane (C <sub>26</sub> H <sub>30</sub> ). Angewandte Chemie - International Edition, 2003, 42, 2040-2044.	13.8	116
7	The New Diamond Age?. Science, 2008, 319, 1490-1491.	12.6	102
8	From Ultrananocrystalline Diamond to Single Crystal Diamond Growth in Hot Filament and Microwave Plasma-Enhanced CVD Reactors: a Unified Model for Growth Rates and Grain Sizes. Journal of Physical Chemistry C, 2008, 112, 12432-12441.	3.1	102
9	Reevaluation of the mechanism for ultrananocrystalline diamond deposition from Ar-CH <sub>4</sub> -H <sub>2</sub> gas mixtures. Journal of Applied Physics, 2006, 99, 104907.	2.5	100
10	Raman spectroscopy of nanocrystalline diamond: Anab initioapproach. Physical Review B, 2006, 74, .	3.2	93
11	Unravelling aspects of the gas phase chemistry involved in diamond chemical vapour deposition. Physical Chemistry Chemical Physics, 2001, 3, 3471-3485.	2.8	89
12	CVD diamond: a new technology for the future?. Endeavour, 1995, 19, 101-106.	0.4	87
13	Diamond-coated "black silicon"™ as a promising material for high-surface-area electrochemical electrodes and antibacterial surfaces. Journal of Materials Chemistry B, 2016, 4, 5737-5746.	5.8	86
14	Phosphorus carbides: theory and experiment. Dalton Transactions, 2004, , 3085.	3.3	75
15	Field Emission from Hybrid Diamond-like Carbon and Carbon Nanotube Composite Structures. ACS Applied Materials & Interfaces, 2013, 5, 12238-12243.	8.0	69
16	Diamond thin films: giving biomedical applications a new shine. Journal of the Royal Society Interface, 2017, 14, 20170382.	3.4	69
17	Sputtering of grains in C-type shocks. Monthly Notices of the Royal Astronomical Society, 2000, 318, 809-816.	4.4	66
18	Raman spectroscopy of diamondoids. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2006, 64, 681-692.	3.9	64

#	ARTICLE	IF	CITATIONS
19	Studies of black silicon and black diamond as materials for antibacterial surfaces. <i>Biomaterials Science</i> , 2018, 6, 1424-1432.	5.4	64
20	Field emission conduction mechanisms in chemical vapor deposited diamond and diamondlike carbon films. <i>Applied Physics Letters</i> , 1998, 72, 2182-2184.	3.3	63
21	Low temperature diamond growth using CO <sub>2</sub> /CH <sub>4</sub> plasmas: Molecular beam mass spectrometry and computer simulation investigations. <i>Journal of Applied Physics</i> , 2001, 89, 1484-1492.	2.5	59
22	Direct Growth of Highly Organized Crystalline Carbon Nitride from Liquid-Phase Pulsed Laser Ablation. <i>Chemistry of Materials</i> , 2006, 18, 5058-5064.	6.7	58
23	Ion energy distributions in radio-frequency discharges. <i>Journal of Applied Physics</i> , 1991, 70, 82-92.	2.5	56
24	Amine functionalized nanodiamond promotes cellular adhesion, proliferation and neurite outgrowth. <i>Biomedical Materials (Bristol)</i> , 2014, 9, 045009.	3.3	56
25	Direct observation of electron emission from grain boundaries in CVD diamond by PeakForce-controlled tunnelling atomic force microscopy. <i>Carbon</i> , 2015, 94, 386-395.	10.3	56
26	Field emission from chemical vapor deposited diamond and diamond-like carbon films: Investigations of surface damage and conduction mechanisms. <i>Journal of Applied Physics</i> , 1998, 84, 1618-1625.	2.5	54
27	Assisted deposition of nano-hydroxyapatite onto exfoliated carbon nanotube oxide scaffolds. <i>Nanoscale</i> , 2015, 7, 10218-10232.	5.6	54
28	Experiment and modeling of the deposition of ultrananocrystalline diamond films using hot filament chemical vapor deposition and Ar•CH <sub>4</sub> •H <sub>2</sub> gas mixtures: A generalized mechanism for ultrananocrystalline diamond growth. <i>Journal of Applied Physics</i> , 2006, 100, 024301.	2.5	53
29	Towards new binary compounds: Synthesis of amorphous phosphorus carbide by pulsed laser deposition. <i>Journal of Solid State Chemistry</i> , 2013, 198, 466-474.	2.9	53
30	Modeling radio-frequency discharges: Effects of collisions upon ion and neutral particle energy distributions. <i>Journal of Applied Physics</i> , 1992, 71, 3721-3730.	2.5	51
31	Gas-phase composition measurements during chlorine assisted chemical vapor deposition of diamond: A molecular beam mass spectrometric study. <i>Journal of Applied Physics</i> , 1996, 79, 7264-7273.	2.5	51
32	Ultra fine carbon nitride nanocrystals synthesized by laser ablation in liquid solution. <i>Journal of Nanoparticle Research</i> , 2007, 9, 1181-1185.	1.9	51
33	Field emission properties of diamond films of different qualities. <i>Applied Physics Letters</i> , 1997, 71, 2337-2339.	3.3	48
34	Carbon nitride: <i>Ab initio</i> investigation of carbon-rich phases. <i>Physical Review B</i> , 2009, 80, .	3.2	48
35	High temperature properties of SiC and diamond CVD-monofilaments. <i>Journal of the European Ceramic Society</i> , 2005, 25, 1929-1942.	5.7	47
36	Long-term culture of pluripotent stem-cell-derived human neurons on diamond – A substrate for neurodegeneration research and therapy. <i>Biomaterials</i> , 2015, 61, 139-149.	11.4	47

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37	Impedance studies of boron-doped CVD diamond electrodes. <i>Diamond and Related Materials</i> , 2000, 9, 1181-1183.	3.9	46
38	The structure of MHD shocks in molecular outflows: grain sputtering and SiO formation. <i>Monthly Notices of the Royal Astronomical Society</i> , 1996, 280, 447-457.	4.4	45
39	Infrared spectroscopic investigation of higher diamondoids. <i>Journal of Molecular Spectroscopy</i> , 2006, 238, 158-167.	1.2	45
40	Metalâ€“Bosonic Insulatorâ€“Superconductor Transition in Boron-Doped Granular Diamond. <i>Physical Review Letters</i> , 2013, 110, 077001.	7.8	44
41	Optimizing Biosensing Properties on Undecylenic Acid-Functionalized Diamond. <i>Langmuir</i> , 2007, 23, 5824-5830.	3.5	43
42	Electrochemical Performance of Porous Diamond-like Carbon Electrodes for Sensing Hormones, Neurotransmitters, and Endocrine Disruptors. <i>ACS Applied Materials &amp; Interfaces</i> , 2014, 6, 21086-21092.	8.0	42
43	Structural characterisation of CN <sub>x</sub> thin films deposited by pulsed laser ablation. <i>Diamond and Related Materials</i> , 2003, 12, 1049-1054.	3.9	40
44	Scaling of Hydrogen-Terminated Diamond FETs to Sub-100-nm Gate Dimensions. <i>IEEE Electron Device Letters</i> , 2011, 32, 599-601.	3.9	40
45	A planar refractive x-ray lens made of nanocrystalline diamond. <i>Journal of Applied Physics</i> , 2010, 108, 123107.	2.5	39
46	Growth of self-assembled ZnO nanoleaf from aqueous solution by pulsed laser ablation. <i>Nanotechnology</i> , 2007, 18, 215602.	2.6	38
47	Sulfur doping of diamond films: Spectroscopic, electronic, and gas-phase studies. <i>Journal of Applied Physics</i> , 2002, 91, 3605-3613.	2.5	35
48	Simulations of chemical vapor deposition diamond film growth using a kinetic Monte Carlo model. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	33
49	Field emission from diamond-coated multiwalled carbon nanotube â€œteepeeâ€œ-structures. <i>Journal of Applied Physics</i> , 2012, 112, .	2.5	33
50	Studies of Black Diamond as an antibacterial surface for Gram Negative bacteria: the interplay between chemical and mechanical bactericidal activity. <i>Scientific Reports</i> , 2019, 9, 8815.	3.3	29
51	Sputtering of the refractory cores of interstellar grains. <i>Monthly Notices of the Royal Astronomical Society</i> , 1997, 285, 839-846.	4.4	27
52	Direct observation of electron emission from the grain boundaries of chemical vapour deposition diamond films by tunneling atomic force microscopy. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	26
53	Three-dimensional kinetic Monte Carlo simulations of diamond chemical vapor deposition. <i>Journal of Chemical Physics</i> , 2015, 142, 214707.	3.0	26
54	A review of surface functionalisation of diamond for thermionic emission applications. <i>Carbon</i> , 2021, 171, 532-550.	10.3	26

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55	Promising electrochemical performance of high-surface-area boron-doped diamond/carbon nanotube electroanalytical sensors. <i>Journal of Solid State Electrochemistry</i> , 2016, 20, 2403-2409.	2.5	25
56	Superconducting Ferromagnetic Nanodiamond. <i>ACS Nano</i> , 2017, 11, 5358-5366.	14.6	25
57	Simplified Monte Carlo simulations of chemical vapour deposition diamond growth. <i>Journal of Physics Condensed Matter</i> , 2009, 21, 364203.	1.8	24
58	Incorporation of lithium and nitrogen into CVD diamond thin films. <i>Diamond and Related Materials</i> , 2014, 44, 1-7.	3.9	23
59	Potential for diamond fibres and diamond fibre composites. <i>Materials Science and Technology</i> , 1994, 10, 505-512.	1.6	22
60	Nanofocusing optics for synchrotron radiation made from polycrystalline diamond. <i>Optics Express</i> , 2014, 22, 7657.	3.4	22
61	Effect of Multi-Walled Carbon Nanotubes Incorporation on the Structure, Optical and Electrochemical Properties of Diamond-Like Carbon Thin Films. <i>Journal of the Electrochemical Society</i> , 2014, 161, H290-H295.	2.9	22
62	Monte Carlo simulations of electron distributions in the sheath region of reactive-ion etching plasmas. <i>Journal of Applied Physics</i> , 1993, 73, 1634-1643.	2.5	21
63	Isolation and Structural Proof of the Large Diamond Molecule, Cyclohexamantane (C <sub>26</sub> H <sub>30</sub> ). <i>Angewandte Chemie</i> , 2003, 115, 2086-2090.	2.0	21
64	Simulations of chemical vapor deposition diamond film growth using a kinetic Monte Carlo model and two-dimensional models of microwave plasma and hot filament chemical vapor deposition reactors. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	20
65	Chemical vapour deposited diamond fibres: manufacture and potential properties. <i>Materials Science and Technology</i> , 1994, 10, 177-189.	1.6	19
66	Laser Raman Studies of Polycrystalline and Amorphous Diamond Films. <i>Physica Status Solidi A</i> , 1996, 154, 255-268.	1.7	18
67	Preparation of solid and hollow diamond fibres and the potential for diamond fibre metal matrix composites. <i>Journal of Materials Science Letters</i> , 1994, 13, 247-249.	0.5	17
68	Solid phosphorus carbide?. <i>Chemical Communications</i> , 2002, , 2494-2495.	4.1	16
69	Binary phosphorus-carbon compounds: The series P <sub>4</sub> C <sub>3+8n</sub> . <i>International Journal of Quantum Chemistry</i> , 2003, 95, 546-553.	2.0	16
70	Hierarchical architecture of self-assembled carbon nitride nanocrystals. <i>Journal of Materials Chemistry</i> , 2007, 17, 1255.	6.7	16
71	Bosonic Confinement and Coherence in Disordered Nanodiamond Arrays. <i>ACS Nano</i> , 2017, 11, 11746-11754.	14.6	16
72	Negative electron affinity from aluminium on the diamond (111) surface: a theoretical study. <i>Journal of Physics Condensed Matter</i> , 2018, 30, 235002.	1.8	15

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73	Growth and characterization of self-assembled carbon nitride leaf-like nanostructures. <i>Nanotechnology</i> , 2006, 17, 5798-5804.	2.6	14
74	Modeling of the gas-phase chemistry in C <sub>1</sub> H <sub>4</sub> O gas mixtures for diamond chemical vapor deposition. <i>Journal of Applied Physics</i> , 2001, 89, 5219-5223.	2.5	13
75	Thermoluminescence assessment of 0.5, 1.0 and 4.0 μm thick HFCVD undoped diamond films. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 2103-2108.	1.8	12
76	Deep reactive ion etching of silicon moulds for the fabrication of diamond x-ray focusing lenses. <i>Journal of Micromechanics and Microengineering</i> , 2013, 23, 125018.	2.6	10
77	Ab initio study of negative electron affinity from light metals on the oxygen-terminated diamond (111) surface. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 295002.	1.8	10
78	Linear-supralinear-sublinear beta-ray dose dependences of TL, OSL and afterglow in undoped CVD diamond. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010, 207, 2125-2130.	1.8	9
79	Effect of doping on electronic states in B-doped polycrystalline CVD diamond films. <i>Semiconductor Science and Technology</i> , 2012, 27, 065019.	2.0	9
80	Yu-Shiba-Rusinov bands in ferromagnetic superconducting diamond. <i>Science Advances</i> , 2020, 6, eaz2536.	10.3	9
81	Hunting the elusive shallow n-type donor – An ab initio study of Li and N co-doped diamond. <i>Carbon</i> , 2021, 171, 857-868.	10.3	9
82	A technique for the manufacture of long hollow diamond fibres by chemical vapour deposition. <i>Journal of Materials Science Letters</i> , 1995, 14, 1448-1450.	0.5	8
83	Electrospray Deposition of Diamond Nanoparticle Nucleation Layers for Subsequent CVD Diamond Growth. <i>Materials Research Society Symposia Proceedings</i> , 2009, 1203, 1.	0.1	8
84	Photochemically modified diamond-like carbon surfaces for neural interfaces. <i>Materials Science and Engineering C</i> , 2016, 58, 1199-1206.	7.3	8
85	Hydrophobic behaviour of reduced graphene oxide thin film fabricated via electrostatic spray deposition. <i>Bulletin of Materials Science</i> , 2021, 44, 1.	1.7	8
86	Resolving physical interactions between bacteria and nanotopographies with focused ion beam scanning electron microscopy. <i>IScience</i> , 2021, 24, 102818.	4.1	8
87	Spatially Controlling Neuronal Adhesion and Inflammatory Reactions on Implantable Diamond. <i>IEEE Journal on Emerging and Selected Topics in Circuits and Systems</i> , 2011, 1, 557-565.	3.6	7
88	Direct observation of electron emission from CVD diamond grain boundaries by tunnelling atomic force microscopy independent of surface morphology. <i>Diamond and Related Materials</i> , 2017, 80, 147-152.	3.9	7
89	Ab initio study of negative electron affinity on the scandium-terminated diamond (100) surface for electron emission devices. <i>Carbon</i> , 2022, 196, 176-185.	10.3	6
90	Sulfur addition to microwave activated CH <sub>4</sub> /CO <sub>2</sub> gas mixtures used for diamond CVD: growth studies and gas phase investigations. <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 5199-5206.	2.8	5

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91	Anomalous Anisotropy in Superconducting Nanodiamond Films Induced by Crystallite Geometry. <i>Physical Review Applied</i> , 2019, 12, .	3.8	5
92	Experimental Studies of Electron Affinity and Work Function from Aluminium on Oxidized Diamond (100) and (111) Surfaces. <i>Physica Status Solidi (B): Basic Research</i> , 2021, 258, 2100027.	1.5	5
93	Superconductor-insulator transition driven by pressure-tuned intergrain coupling in nanodiamond films. <i>Physical Review Materials</i> , 2019, 3, .	2.4	5
94	Review of the Molecule of the Month Website in 1997. <i>Molecules</i> , 1998, 3, 16-19.	3.8	4
95	FIELD EMISSION STUDIES OF NITROGEN-DOPED DIAMOND-LIKE CARBON FILMS DEPOSITED USING CH <sub>4</sub> /N <sub>2</sub> /Ne and CH <sub>4</sub> /NH <sub>3</sub> /Ne RF PLASMAS. <i>International Journal of Modern Physics B</i> , 2000, 14, 295-300.	2.0	4
96	DIAMOND-FIBRE REINFORCED PLASTIC COMPOSITES. <i>International Journal of Modern Physics B</i> , 2002, 16, 906-911.	2.0	4
97	Symmetric organization of self-assembled carbon nitride. <i>Nanotechnology</i> , 2007, 18, 335605.	2.6	4
98	High-pressure dc glow discharges in hollow diamond cathodes. <i>Plasma Sources Science and Technology</i> , 2016, 25, 025005.	3.1	4
99	The "Molecule of the Month" Website" An Extraordinary Chemistry Educational Resource Online for over 20 Years. <i>Molecules</i> , 2017, 22, 549.	3.8	4
100	Comparative study of TL created in undoped CVD diamond by $\gamma$ rays, UV and visible light. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010, 207, 2119-2124.	1.8	3
101	Correlation between thermally and optically stimulated luminescence in beta-irradiated undoped CVD diamond. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 2098-2102.	1.8	2
102	Simulations of CVD Diamond Film Growth: 2D Models for the identities and concentrations of gas-phase species adsorbing on the surface. <i>Materials Research Society Symposia Proceedings</i> , 2011, 1282, 9.	0.1	1
103	In-situ Incorporation of Lithium and Nitrogen into CVD Diamond Thin Films. <i>Materials Research Society Symposia Proceedings</i> , 2012, 1511, 1.	0.1	1
104	Hydrophobicity and Adhesion of Aggregated Diamond Particles. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2021, 218, .	1.8	1
105	Titelbild: Isolation and Structural Proof of the Large Diamond Molecule, Cyclohexamantane (C <sub>26</sub> H <sub>30</sub> ) ( <i>Angew. Chem.</i> 18/2003). <i>Angewandte Chemie</i> , 2003, 115, 2029-2029.	2.0	0
106	Cover Picture: Isolation and Structural Proof of the Large Diamond Molecule, Cyclohexamantane (C <sub>26</sub> H <sub>30</sub> ) ( <i>Angew. Chem. Int. Ed.</i> 18/2003). <i>Angewandte Chemie - International Edition</i> , 2003, 42, 1983-1983.	13.8	0
107	High resolution Deep Level Transient Spectroscopy of p-n diodes formed from p-type polycrystalline diamond on n-type silicon.. <i>Optoelectronic and Microelectronic Materials and Devices (COMMAD), Conference on</i> , 2008, , .	0.0	0
108	Intrinsic DC operation and performance potential of 50nm gate length hydrogen-terminated diamond field effect transistors. , 2011, , .		0

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109	Deposition of CVD diamond onto Zirconium. Materials Research Society Symposia Proceedings, 2015, 1734, 13.	0.1	0
110	CVD Diamond and Nanodiamond: Versatile Materials for Countering a Wide Range of CBRN Threats. NATO Science for Peace and Security Series B: Physics and Biophysics, 2020, , 141-170.	0.3	0