

Paul May

List of Publications by Year in descending order

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110
papers

4,458
citations

71061

41
h-index

110317

64
g-index

112
all docs

112
docs citations

112
times ranked

4502
citing authors

#	ARTICLE	IF	CITATIONS
1	Ab initio study of negative electron affinity on the scandium-terminated diamond (100) surface for electron emission devices. Carbon, 2022, 196, 176-185.	5.4	6
2	Hunting the elusive shallow n-type donor – An ab initio study of Li and N co-doped diamond. Carbon, 2021, 171, 857-868.	5.4	9
3	A review of surface functionalisation of diamond for thermionic emission applications. Carbon, 2021, 171, 532-550.	5.4	26
4	Hydrophobic behaviour of reduced graphene oxide thin film fabricated via electrostatic spray deposition. Bulletin of Materials Science, 2021, 44, 1.	0.8	8
5	Experimental Studies of Electron Affinity and Work Function from Aluminium on Oxidized Diamond (100) and (111) Surfaces. Physica Status Solidi (B): Basic Research, 2021, 258, 2100027.	0.7	5
6	Resolving physical interactions between bacteria and nanotopographies with focused ion beam scanning electron microscopy. IScience, 2021, 24, 102818.	1.9	8
7	Hydrophobicity and Adhesion of Aggregated Diamond Particles. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, .	0.8	1
8	Yu-Shiba-Rusinov bands in ferromagnetic superconducting diamond. Science Advances, 2020, 6, eaaz2536.	4.7	9
9	Nitrogen in Diamond. Chemical Reviews, 2020, 120, 5745-5794.	23.0	133
10	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.	0.2	0
11	Studies of Black Diamond as an antibacterial surface for Gram Negative bacteria: the interplay between chemical and mechanical bactericidal activity. Scientific Reports, 2019, 9, 8815.	1.6	29
12	Ab initio study of negative electron affinity from light metals on the oxygen-terminated diamond (111) surface. Journal of Physics Condensed Matter, 2019, 31, 295002.	0.7	10
13	Anomalous Anisotropy in Superconducting Nanodiamond Films Induced by Crystallite Geometry. Physical Review Applied, 2019, 12, .	1.5	5
14	Superconductor-insulator transition driven by pressure-tuned intergrain coupling in nanodiamond films. Physical Review Materials, 2019, 3, .	0.9	5
15	Studies of black silicon and black diamond as materials for antibacterial surfaces. Biomaterials Science, 2018, 6, 1424-1432.	2.6	64
16	Negative electron affinity from aluminium on the diamond (100) surface: a theoretical study. Journal of Physics Condensed Matter, 2018, 30, 235002.	0.7	15
17	Superconducting Ferromagnetic Nanodiamond. ACS Nano, 2017, 11, 5358-5366.	7.3	25
18	Direct observation of electron emission from CVD diamond grain boundaries by tunnelling atomic force microscopy independent of surface morphology. Diamond and Related Materials, 2017, 80, 147-152.	1.8	7

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19	Diamond thin films: giving biomedical applications a new shine. <i>Journal of the Royal Society Interface</i> , 2017, 14, 20170382.	1.5	69
20	Bosonic Confinement and Coherence in Disordered Nanodiamond Arrays. <i>ACS Nano</i> , 2017, 11, 11746-11754.	7.3	16
21	The "Molecule of the Month" Website: An Extraordinary Chemistry Educational Resource Online for over 20 Years. <i>Molecules</i> , 2017, 22, 549.	1.7	4
22	High-pressure dc glow discharges in hollow diamond cathodes. <i>Plasma Sources Science and Technology</i> , 2016, 25, 025005.	1.3	4
23	Diamond-coated "black silicon" as a promising material for high-surface-area electrochemical electrodes and antibacterial surfaces. <i>Journal of Materials Chemistry B</i> , 2016, 4, 5737-5746.	2.9	86
24	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.	1.2	25
25	Photochemically modified diamond-like carbon surfaces for neural interfaces. <i>Materials Science and Engineering C</i> , 2016, 58, 1199-1206.	3.8	8
26	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.	5.4	56
27	Deposition of CVD diamond onto Zirconium. <i>Materials Research Society Symposia Proceedings</i> , 2015, 1734, 13.	0.1	0
28	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.	5.7	47
29	Assisted deposition of nano-hydroxyapatite onto exfoliated carbon nanotube oxide scaffolds. <i>Nanoscale</i> , 2015, 7, 10218-10232.	2.8	54
30	Three-dimensional kinetic Monte Carlo simulations of diamond chemical vapor deposition. <i>Journal of Chemical Physics</i> , 2015, 142, 214707.	1.2	26
31	Nanofocusing optics for synchrotron radiation made from polycrystalline diamond. <i>Optics Express</i> , 2014, 22, 7657.	1.7	22
32	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, .	1.5	26
33	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.	1.3	22
34	Incorporation of lithium and nitrogen into CVD diamond thin films. <i>Diamond and Related Materials</i> , 2014, 44, 1-7.	1.8	23
35	Porous Boron-Doped Diamond/Carbon Nanotube Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 990-995.	4.0	134
36	Electrochemical Performance of Porous Diamond-like Carbon Electrodes for Sensing Hormones, Neurotransmitters, and Endocrine Disruptors. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 21086-21092.	4.0	42

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37	Amine functionalized nanodiamond promotes cellular adhesion, proliferation and neurite outgrowth. <i>Biomedical Materials (Bristol)</i> , 2014, 9, 045009.	1.7	56
38	Towards new binary compounds: Synthesis of amorphous phosphorus carbide by pulsed laser deposition. <i>Journal of Solid State Chemistry</i> , 2013, 198, 466-474.	1.4	53
39	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.	1.5	10
40	Field Emission from Hybrid Diamond-like Carbon and Carbon Nanotube Composite Structures. <i>ACS Applied Materials & Interfaces</i> , 2013, 5, 12238-12243.	4.0	69
41	Metal-Insulator-Superconductor Transition in Boron-Doped Granular Diamond. <i>Physical Review Letters</i> , 2013, 110, 077001.	2.9	44
42	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
43	Field emission from diamond-coated multiwalled carbon nanotube structures. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	33
44	Effect of doping on electronic states in B-doped polycrystalline CVD diamond films. <i>Semiconductor Science and Technology</i> , 2012, 27, 065019.	1.0	9
45	Scaling of Hydrogen-Terminated Diamond FETs to Sub-100-nm Gate Dimensions. <i>IEEE Electron Device Letters</i> , 2011, 32, 599-601.	2.2	40
46	Intrinsic DC operation and performance potential of 50nm gate length hydrogen-terminated diamond field effect transistors. , 2011, , .		0
47	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.	2.7	7
48	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
49	Comparative study of TL created in undoped CVD diamond by γ rays, UV and visible light. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2010, 207, 2119-2124.	0.8	3
50	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.	0.8	9
51	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, .	1.1	20
52	Simulations of chemical vapor deposition diamond film growth using a kinetic Monte Carlo model. <i>Journal of Applied Physics</i> , 2010, 108, .	1.1	33
53	A planar refractive x-ray lens made of nanocrystalline diamond. <i>Journal of Applied Physics</i> , 2010, 108, 123107.	1.1	39
54	Carbon nitride: <i>Ab initio</i> investigation of carbon-rich phases. <i>Physical Review B</i> , 2009, 80, .	1.1	48

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55	Electrospray Deposition of Diamond Nanoparticle Nucleation Layers for Subsequent CVD Diamond Growth. Materials Research Society Symposia Proceedings, 2009, 1203, 1.	0.1	8
56	Correlation between thermally and optically stimulated luminescence in beta-irradiated undoped CVD diamond. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2098-2102.	0.8	2
57	Thermoluminescence assessment of 0.5, 1.0 and 4.0-µm thick HFCVD undoped diamond films. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 2103-2108.	0.8	12
58	Simplified Monte Carlo simulations of chemical vapour deposition diamond growth. Journal of Physics Condensed Matter, 2009, 21, 364203.	0.7	24
59	The New Diamond Age?. Science, 2008, 319, 1490-1491.	6.0	102
60	High resolution Deep Level Transient Spectroscopy of p-n diodes formed from p-type polycrystalline diamond on n-type silicon.. Optoelectronic and Microelectronic Materials and Devices (COMMAD), Conference on, 2008, , .	0.0	0
61	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.	1.5	102
62	Growth of self-assembled ZnO nanoleaf from aqueous solution by pulsed laser ablation. Nanotechnology, 2007, 18, 215602.	1.3	38
63	Symmetric organization of self-assembled carbon nitride. Nanotechnology, 2007, 18, 335605.	1.3	4
64	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.	1.1	117
65	Hierarchical architecture of self-assembled carbon nitride nanocrystals. Journal of Materials Chemistry, 2007, 17, 1255.	6.7	16
66	Optimizing Biosensing Properties on Undecylenic Acid-Functionalized Diamond. Langmuir, 2007, 23, 5824-5830.	1.6	43
67	Ultra fine carbon nitride nanocrystals synthesized by laser ablation in liquid solution. Journal of Nanoparticle Research, 2007, 9, 1181-1185.	0.8	51
68	Direct Growth of Highly Organized Crystalline Carbon Nitride from Liquid-Phase Pulsed Laser Ablation. Chemistry of Materials, 2006, 18, 5058-5064.	3.2	58
69	Reevaluation of the mechanism for ultrananocrystalline diamond deposition from Ar-CH ₄ -H ₂ gas mixtures. Journal of Applied Physics, 2006, 99, 104907.	1.1	100
70	Raman spectroscopy of nanocrystalline diamond: Anab initioapproach. Physical Review B, 2006, 74, .	1.1	93
71	Experiment and modeling of the deposition of ultrananocrystalline diamond films using hot filament chemical vapor deposition and Ar-CH ₄ -H ₂ gas mixtures: A generalized mechanism for ultrananocrystalline diamond growth. Journal of Applied Physics, 2006, 100, 024301.	1.1	53
72	Raman spectroscopy of diamondoids. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2006, 64, 681-692.	2.0	64

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73	Infrared spectroscopic investigation of higher diamondoids. <i>Journal of Molecular Spectroscopy</i> , 2006, 238, 158-167.	0.4	45
74	Growth and characterization of self-assembled carbon nitride leaf-like nanostructures. <i>Nanotechnology</i> , 2006, 17, 5798-5804.	1.3	14
75	High temperature properties of SiC and diamond CVD-monofilaments. <i>Journal of the European Ceramic Society</i> , 2005, 25, 1929-1942.	2.8	47
76	Phosphorus carbides: theory and experiment. <i>Dalton Transactions</i> , 2004, , 3085.	1.6	75
77	Isolation and Structural Proof of the Large Diamond Molecule, Cyclohexamantane (C ₂₆ H ₃₀). <i>Angewandte Chemie</i> , 2003, 115, 2086-2090.	1.6	21
78	Titelbild: Isolation and Structural Proof of the Large Diamond Molecule, Cyclohexamantane (C ₂₆ H ₃₀) (Angew. Chem. 18/2003). <i>Angewandte Chemie</i> , 2003, 115, 2029-2029.	1.6	0
79	Isolation and Structural Proof of the Large Diamond Molecule, Cyclohexamantane (C ₂₆ H ₃₀). <i>Angewandte Chemie - International Edition</i> , 2003, 42, 2040-2044.	7.2	116
80	Cover Picture: Isolation and Structural Proof of the Large Diamond Molecule, Cyclohexamantane (C ₂₆ H ₃₀) (Angew. Chem. Int. Ed. 18/2003). <i>Angewandte Chemie - International Edition</i> , 2003, 42, 1983-1983.	7.2	0
81	Binary phosphorus-carbon compounds: The series P ₄ C ₃ +8n. <i>International Journal of Quantum Chemistry</i> , 2003, 95, 546-553.	1.0	16
82	Structural characterisation of CN _x thin films deposited by pulsed laser ablation. <i>Diamond and Related Materials</i> , 2003, 12, 1049-1054.	1.8	40
83	Sulfur doping of diamond films: Spectroscopic, electronic, and gas-phase studies. <i>Journal of Applied Physics</i> , 2002, 91, 3605-3613.	1.1	35
84	DIAMOND-FIBRE REINFORCED PLASTIC COMPOSITES. <i>International Journal of Modern Physics B</i> , 2002, 16, 906-911.	1.0	4
85	Sulfur addition to microwave activated CH ₄ /CO ₂ gas mixtures used for diamond CVD: growth studies and gas phase investigations. <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 5199-5206.	1.3	5
86	Solid phosphorus carbide?. <i>Chemical Communications</i> , 2002, , 2494-2495.	2.2	16
87	Unravelling aspects of the gas phase chemistry involved in diamond chemical vapour deposition. <i>Physical Chemistry Chemical Physics</i> , 2001, 3, 3471-3485.	1.3	89
88	Modeling of the gas-phase chemistry in C ⁺ /O gas mixtures for diamond chemical vapor deposition. <i>Journal of Applied Physics</i> , 2001, 89, 5219-5223.	1.1	13
89	Low temperature diamond growth using CO ₂ /CH ₄ plasmas: Molecular beam mass spectrometry and computer simulation investigations. <i>Journal of Applied Physics</i> , 2001, 89, 1484-1492.	1.1	59
90	Sputtering of grains in C-type shocks. <i>Monthly Notices of the Royal Astronomical Society</i> , 2000, 318, 809-816.	1.6	66

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91	Diamond thin films: a 21st-century material. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2000, 358, 473-495.	1.6	573
92	FIELD EMISSION STUDIES OF NITROGEN-DOPED DIAMOND-LIKE CARBON FILMS DEPOSITED USING CH ₄ /N ₂ /Ne and CH ₄ /NH ₃ /Ne RF PLASMAS. International Journal of Modern Physics B, 2000, 14, 295-300.	1.0	4
93	Impedance studies of boron-doped CVD diamond electrodes. Diamond and Related Materials, 2000, 9, 1181-1183.	1.8	46
94	Field emission from chemical vapor deposited diamond and diamond-like carbon films: Investigations of surface damage and conduction mechanisms. Journal of Applied Physics, 1998, 84, 1618-1625.	1.1	54
95	Field emission conduction mechanisms in chemical vapor deposited diamond and diamondlike carbon films. Applied Physics Letters, 1998, 72, 2182-2184.	1.5	63
96	Review of the Molecule of the Month Website in 1997. Molecules, 1998, 3, 16-19.	1.7	4
97	Sputtering of the refractory cores of interstellar grains. Monthly Notices of the Royal Astronomical Society, 1997, 285, 839-846.	1.6	27
98	Field emission properties of diamond films of different qualities. Applied Physics Letters, 1997, 71, 2337-2339.	1.5	48
99	Laser Raman Studies of Polycrystalline and Amorphous Diamond Films. Physica Status Solidi A, 1996, 154, 255-268.	1.7	18
100	The structure of MHD shocks in molecular outflows: grain sputtering and SiO formation. Monthly Notices of the Royal Astronomical Society, 1996, 280, 447-457.	1.6	45
101	Gas phase composition measurements during chlorine assisted chemical vapor deposition of diamond: A molecular beam mass spectrometric study. Journal of Applied Physics, 1996, 79, 7264-7273.	1.1	51
102	A technique for the manufacture of long hollow diamond fibres by chemical vapour deposition. Journal of Materials Science Letters, 1995, 14, 1448-1450.	0.5	8
103	CVD diamond: a new technology for the future?. Endeavour, 1995, 19, 101-106.	0.1	87
104	Preparation of solid and hollow diamond fibres and the potential for diamond fibre metal matrix composites. Journal of Materials Science Letters, 1994, 13, 247-249.	0.5	17
105	Thin film diamond by chemical vapour deposition methods. Chemical Society Reviews, 1994, 23, 21.	18.7	192
106	Chemical vapour deposited diamond fibres: manufacture and potential properties. Materials Science and Technology, 1994, 10, 177-189.	0.8	19
107	Potential for diamond fibres and diamond fibre composites. Materials Science and Technology, 1994, 10, 505-512.	0.8	22
108	Monte Carlo simulations of electron distributions in the sheath region of reactive etching plasmas. Journal of Applied Physics, 1993, 73, 1634-1643.	1.1	21

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109	Modeling radioâ€frequency discharges: Effects of collisions upon ion and neutral particle energy distributions. Journal of Applied Physics, 1992, 71, 3721-3730.	1.1	51
110	Ion energy distributions in radioâ€frequency discharges. Journal of Applied Physics, 1991, 70, 82-92.	1.1	56