

Bin Shen

List of Publications by Year in descending order

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112
papers

1,690
citations

331670

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all docs

112
docs citations

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times ranked

789
citing authors

#	ARTICLE	IF	CITATIONS
1	Deposition and friction properties of ultra-smooth composite diamond films on Co-cemented tungsten carbide substrates. <i>Diamond and Related Materials</i> , 2009, 18, 238-243.	3.9	114
2	Fabrication and application of nano-microcrystalline composite diamond films on the interior hole surfaces of Co cemented tungsten carbide substrates. <i>Diamond and Related Materials</i> , 2009, 18, 276-282.	3.9	93
3	Tribological properties and cutting performance of boron and silicon doped diamond films on Co-cemented tungsten carbide inserts. <i>Diamond and Related Materials</i> , 2013, 33, 54-62.	3.9	73
4	Study on tribological behavior and cutting performance of CVD diamond and DLC films on Co-cemented tungsten carbide substrates. <i>Applied Surface Science</i> , 2010, 256, 2479-2489.	6.1	62
5	Effect of boron and silicon doping on improving the cutting performance of CVD diamond coated cutting tools in machining CFRP. <i>International Journal of Refractory Metals and Hard Materials</i> , 2013, 41, 285-292.	3.8	61
6	Tribological behavior between micro- and nano-crystalline diamond films under dry sliding and water lubrication. <i>Tribology International</i> , 2014, 69, 118-127.	5.9	49
7	Influence of pretreatment and deposition parameters on the properties and cutting performance of NCD coated PCB micro drills. <i>International Journal of Refractory Metals and Hard Materials</i> , 2014, 43, 30-41.	3.8	45
8	Tribological and cutting behavior of silicon nitride tools coated with monolayer- and multilayer-microcrystalline HFCVD diamond films. <i>Applied Surface Science</i> , 2013, 265, 850-859.	6.1	41
9	Simulation of temperature and gas density field distribution in diamond films growth on silicon wafer by hot filament CVD. <i>Journal of Crystal Growth</i> , 2012, 343, 55-61.	1.5	39
10	Simulation and experimental research on the substrate temperature distribution in HFCVD diamond film growth on the inner hole surface. <i>Surface and Coatings Technology</i> , 2013, 219, 109-118.	4.8	38
11	Optimization on the HFCVD setup for the mass-production of diamond-coated micro-tools based on the FVM temperature simulation. <i>Surface and Coatings Technology</i> , 2014, 253, 123-131.	4.8	32
12	Application of ultra-smooth composite diamond film coated WC-Co drawing dies under water-lubricating conditions. <i>Transactions of Nonferrous Metals Society of China</i> , 2013, 23, 161-169.	4.2	30
13	Fracture and solid particle erosion of micro-crystalline, nano-crystalline and boron-doped diamond films. <i>International Journal of Refractory Metals and Hard Materials</i> , 2014, 45, 31-40.	3.8	30
14	Evaluation on residual stresses of silicon-doped CVD diamond films using X-ray diffraction and Raman spectroscopy. <i>Transactions of Nonferrous Metals Society of China</i> , 2012, 22, 3021-3026.	4.2	28
15	Investigations on the fabrication and erosion behavior of the composite diamond coated nozzles. <i>Wear</i> , 2013, 304, 126-137.	3.1	28
16	Synergistic friction-reducing and anti-wear behaviors of graphene with micro- and nano-crystalline diamond films. <i>Diamond and Related Materials</i> , 2017, 73, 25-32.	3.9	28
17	Fabrication and application of boron-doped diamond coated rectangular-hole shaped drawing dies. <i>International Journal of Refractory Metals and Hard Materials</i> , 2013, 41, 422-431.	3.8	27
18	Cathodic electrophoretic deposition of magnesium nitrate modified graphene coating as a macro-scale solid lubricant. <i>Carbon</i> , 2019, 145, 297-310.	10.3	27

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19	Erosion mechanism of the boron-doped diamond films of different thicknesses. <i>Wear</i> , 2014, 312, 1-10.	3.1	26
20	Influence of boron doping level on the basic mechanical properties and erosion behavior of boron-doped micro-crystalline diamond (BDMCD) film. <i>Diamond and Related Materials</i> , 2017, 73, 218-231.	3.9	25
21	Mussel-Inspired Graphene Film with Enhanced Durability as a Macroscale Solid Lubricant. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 31386-31392.	8.0	22
22	Corrosion- and wear-resistant composite film of graphene and mussel adhesive proteins on carbon steel. <i>Corrosion Science</i> , 2020, 164, 108351.	6.6	22
23	Graphenization of Diamond. <i>Chemistry of Materials</i> , 2022, 34, 3941-3947.	6.7	22
24	Effect of Boron-Doped Diamond Interlayer on Cutting Performance of Diamond Coated Micro Drills for Graphite Machining. <i>Materials</i> , 2013, 6, 3128-3138.	2.9	21
25	Influence of amorphous ceramic interlayers on tribological properties of CVD diamond films. <i>Applied Surface Science</i> , 2014, 313, 918-925.	6.1	21
26	The influence of normal load on the tribological performance of electrophoretic deposition prepared graphene coating on micro-crystalline diamond surface. <i>Diamond and Related Materials</i> , 2017, 76, 50-57.	3.9	21
27	The effect of boron doping on the morphology and growth rate of micron diamond powders synthesized by HFCVD method. <i>Diamond and Related Materials</i> , 2013, 40, 82-88.	3.9	20
28	Comparison of chemical vapor deposition diamond-, diamond-like carbon- and TiAlN-coated microdrills in graphite machining. <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 2013, 227, 1299-1309.	2.4	20
29	Comparisons of HFCVD diamond nucleation and growth using different carbon sources. <i>Diamond and Related Materials</i> , 2015, 54, 26-33.	3.9	20
30	Enhancement on the tribological performance of diamond films by utilizing graphene coating as a solid lubricant. <i>Surface and Coatings Technology</i> , 2017, 311, 35-45.	4.8	20
31	Electrochemical behaviour of EPD synthesized graphene coating on titanium alloys for orthopedic implant application. <i>Procedia CIRP</i> , 2018, 71, 322-328.	1.9	20
32	Friction and wear performance of boron doped, undoped microcrystalline and fine grained composite diamond films. <i>Chinese Journal of Mechanical Engineering (English Edition)</i> , 2015, 28, 155-163.	3.7	19
33	Effects of deposition parameters on HFCVD diamond films growth on inner hole surfaces of WC-Co substrates. <i>Transactions of Nonferrous Metals Society of China</i> , 2015, 25, 791-802.	4.2	18
34	A study of CVD diamond deposition on cemented carbide ball-end milling tools with high cobalt content using amorphous ceramic interlayers. <i>Diamond and Related Materials</i> , 2015, 59, 21-29.	3.9	18
35	Optimization of diamond coated microdrills in aluminum alloy 7075 machining: A case study. <i>Diamond and Related Materials</i> , 2015, 54, 79-90.	3.9	18
36	Elucidating the atomic mechanism of the lubricity of graphene on the diamond substrate. <i>Applied Surface Science</i> , 2020, 504, 144372.	6.1	18

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37	Molecular dynamics investigation on the atomic-scale indentation and friction behaviors between diamond tips and copper substrate. <i>Diamond and Related Materials</i> , 2010, 19, 723-728.	3.9	17
38	Effect of deposition parameters on micro- and nano-crystalline diamond films growth on WC-Co substrates by HFCVD. <i>Transactions of Nonferrous Metals Society of China</i> , 2014, 24, 3181-3188.	4.2	16
39	The effect of deposition parameters on the morphology of micron diamond powders synthesized by HFCVD method. <i>Journal of Crystal Growth</i> , 2013, 372, 49-56.	1.5	15
40	Tribological properties of SiC-based MCD films synthesized using different carbon sources when sliding against Si ₃ N ₄ . <i>Applied Surface Science</i> , 2016, 369, 448-459.	6.1	15
41	Influence of Stone-Wales defect on graphene friction: Pinning effect and wrinkle modification. <i>Computational Materials Science</i> , 2020, 173, 109423.	3.0	15
42	Application of spindle power signals in tool condition monitoring based on HHT algorithm. <i>International Journal of Advanced Manufacturing Technology</i> , 2020, 106, 1385-1395.	3.0	15
43	Ranking the relative CO ₂ electrochemical reduction activity in carbon materials. <i>Carbon</i> , 2019, 154, 108-114.	10.3	14
44	Double-Vacancy Controlled Friction on Graphene: The Enhancement of Atomic Pinning. <i>Langmuir</i> , 2019, 35, 12898-12907.	3.5	14
45	CVD Diamond Films as Wear-Resistant Coatings for Relief Valve Components in the Coal Liquefaction Equipment. <i>Solid State Phenomena</i> , 0, 175, 219-225.	0.3	13
46	Effect of pressure on the growth of boron and nitrogen doped HFCVD diamond films on WC-Co substrate. <i>Surface and Interface Analysis</i> , 2015, 47, 572-586.	1.8	13
47	Simulation optimization of filament parameters for uniform depositions of diamond films on surfaces of ultra-large circular holes. <i>Applied Surface Science</i> , 2016, 388, 593-603.	6.1	12
48	High-rate synthesis of ultra-nanocrystalline diamond in an argon-free hot filament chemical vapor deposition atmosphere for tribological films. <i>Surface and Coatings Technology</i> , 2019, 378, 124999.	4.8	12
49	Enhanced lubricity of CVD diamond films by in-situ synthetization of top-layered graphene sheets. <i>Carbon</i> , 2021, 184, 680-688.	10.3	12
50	SIMULATION AND EXPERIMENTAL STUDIES ON SUBSTRATE TEMPERATURE AND GAS DENSITY FIELD IN HFCVD DIAMOND FILMS GROWTH ON WC-Co DRILL TOOLS. <i>Surface Review and Letters</i> , 2013, 20, 1350020.	1.1	11
51	Mechanical properties and solid particle erosion of MCD films synthesized using different carbon sources by BE-HFCVD. <i>International Journal of Refractory Metals and Hard Materials</i> , 2016, 54, 370-377.	3.8	11
52	High-temperature wear behavior of micro- and ultrananocrystalline diamond films against titanium alloy. <i>Surface and Coatings Technology</i> , 2021, 422, 127537.	4.8	11
53	Friction Behaviors of the Hot Filament Chemical Vapor Deposition Diamond Film under Ambient Air and Water Lubricating Conditions. <i>Chinese Journal of Mechanical Engineering (English Edition)</i> , 2009, 22, 658.	3.7	11
54	Simulation of Substrate Temperature Distribution in Diamond Films Growth on Cemented Carbide Inserts by Hot Filament CVD. <i>Applied Mechanics and Materials</i> , 2008, 10-12, 864-868.	0.2	10

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55	Numerical and experimental investigation of trapezoidal wire cold drawing through a series of shaped dies. <i>International Journal of Advanced Manufacturing Technology</i> , 2015, 76, 1383-1391.	3.0	10
56	Tribological Properties of MCD Films Synthesized Using Different Carbon Sources When Sliding Against Stainless Steel. <i>Tribology Letters</i> , 2016, 61, 1.	2.6	10
57	Effect of deposition temperature on properties of boron-doped diamond films on tungsten carbide substrate. <i>Transactions of Nonferrous Metals Society of China</i> , 2018, 28, 729-738.	4.2	10
58	A novel growth model for depositing ultrananocrystalline diamond films in CH ₄ /H ₂ chemistry. <i>Surface and Coatings Technology</i> , 2021, 419, 127280.	4.8	10
59	Deposition and Application of CVD Diamond Films on the Interior-Hole Surface of Silicon Carbide Compacting Dies. <i>Key Engineering Materials</i> , 2012, 499, 45-50.	0.4	9
60	Erosive wear performance of boron-doped diamond films on different substrates. <i>Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology</i> , 2014, 228, 352-361.	1.8	9
61	Molecular dynamics investigation on the atomic-scale friction behaviors between copper(001) and diamond(111) surfaces. <i>Applied Surface Science</i> , 2009, 255, 7663-7668.	6.1	8
62	Study on the friction reducing effect of graphene coating prepared by electrophoretic deposition. <i>Procedia CIRP</i> , 2018, 71, 335-340.	1.9	8
63	Deposition of mirror-like surface finish ultrananocrystalline diamond films on tungsten carbide by optimizing the substrate pretreatment. <i>Surface and Coatings Technology</i> , 2020, 394, 125885.	4.8	8
64	Microscopic Mechanisms Behind the High Friction and Failure Initiation of Graphene Wrinkles. <i>Langmuir</i> , 2021, 37, 6776-6782.	3.5	8
65	The Cutting Performance of Ultra-Smooth Composite Diamond Coated WC-Co Inserts in Dry Turning Al/SiC-MMC. <i>Advanced Materials Research</i> , 0, 325, 400-405.	0.3	7
66	Fabrication and Applications of Ultra-Smooth Composite Diamond Coated WC-Co Drawing Dies. <i>Solid State Phenomena</i> , 0, 175, 233-238.	0.3	7
67	SIMULATION OPTIMIZATION OF THE HEAT TRANSFER CONDITIONS IN HFCVD DIAMOND FILM GROWTH INSIDE HOLES. <i>Surface Review and Letters</i> , 2013, 20, 1350031.	1.1	7
68	Investigation on the long-duration tribological performance of bilayered diamond/diamond-like carbon films. <i>Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology</i> , 2014, 228, 628-641.	1.8	7
69	CVD diamond coated drawing dies: a review. <i>Materials and Manufacturing Processes</i> , 2021, 36, 381-408.	4.7	7
70	Cutting Performances of Boron Doped Diamond-Coated Milling Tools in Machining Graphite. <i>Materials Science Forum</i> , 2011, 697-698, 458-461.	0.3	6
71	Frictional and Wear Behavior of Micro-Crystalline and Nano-Crystalline Diamond Films. <i>Advanced Materials Research</i> , 2013, 797, 719-724.	0.3	6
72	Amorphous SiO ₂ interlayers for deposition of adherent diamond films onto WC-Co inserts. <i>Transactions of Nonferrous Metals Society of China</i> , 2015, 25, 3012-3022.	4.2	6

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73	Tribological behaviors of diamond films and their applications in metal drawing production in water-lubricating condition. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2016, 230, 656-666.	1.8	6
74	Bilayer graphene film synthesized by hot filament chemical vapor deposition as a nanoscale solid lubricant. Surface and Coatings Technology, 2019, 380, 125061.	4.8	6
75	Controlled friction on graphene via substrate deformation induced atomic pinning effect. Computational Materials Science, 2021, 190, 110315.	3.0	6
76	High-temperature wear mechanism of diamond at the nanoscale: A reactive molecular dynamics study. Applied Surface Science, 2022, 585, 152614.	6.1	6
77	Study on the Friction Behavior of HFCVD Diamond Films on Silicon Nitride Substrates. Advanced Materials Research, 2010, 135, 143-148.	0.3	5
78	Simulation of Temperature Distribution in HFCVD Diamond Films Growth on WC-Co Drill Tools in Large Quantities. Key Engineering Materials, 0, 589-590, 399-404.	0.4	5
79	Simulation of temperature distribution in hot filament chemical vapor deposition diamond films growth on SiC seals. Journal of Shanghai Jiaotong University (Science), 2016, 21, 541-547.	0.9	5
80	FRICITION PROPERTIES OF POLISHED CVD DIAMOND FILMS SLIDING AGAINST DIFFERENT METALS. Surface Review and Letters, 2016, 23, 1550096.	1.1	5
81	Reprint of "A study of CVD diamond deposition on cemented carbide ball-end milling tools with high cobalt content using amorphous ceramic interlayers". Diamond and Related Materials, 2016, 63, 51-59.	3.9	5
82	Tribo-Map of CVD Diamond Film Sliding against Silicon Nitride in Air. Key Engineering Materials, 2013, 589-590, 405-410.	0.4	4
83	SIMULATION-BASED OPTIMAL DESIGN OF HFCVD EQUIPMENT ADOPTED FOR MASS PRODUCTION OF DIAMOND FILMS ON INNER-HOLE SURFACES. Surface Review and Letters, 2014, 21, 1450066.	1.1	4
84	THE EFFECT OF THE DOUBLE-DECK FILAMENT SETUP ON ENHANCING THE UNIFORMITY OF TEMPERATURE FIELD ON LONG-FLUTE CUTTING TOOLS. Surface Review and Letters, 2014, 21, 1450078.	1.1	4
85	Wear behavior of diamond-coated drawing dies. Transactions of Tianjin University, 2011, 17, 259-263.	6.4	3
86	Fabrication and drilling tests of chemical vapor deposition diamond coated drills in machining carbon fiber reinforced plastics. Journal of Shanghai Jiaotong University (Science), 2013, 18, 394-400.	0.9	3
87	EFFECT OF SILICON DOPING IN CVD DIAMOND FILMS FROM MICROCRYSTALLINE TO NANOCRYSTALLINE ON WC-Co SUBSTRATES. Surface Review and Letters, 2013, 20, 1350055.	1.1	3
88	EFFECT OF POLISHING ON THE FRICTION BEHAVIORS AND CUTTING PERFORMANCE OF BORON-DOPED DIAMOND FILMS ON WC-Co INSERTS. Surface Review and Letters, 2014, 21, 1450037.	1.1	3
89	The mechanisms of friction enhancements on graphene surfaces with folds: The reinforcement of atomic pinning or attraction. Tribology International, 2022, 165, 107297.	5.9	3
90	Optimization of Diamond-Coated Drawing Dies for Stainless Steel Tubes Based on the FEM Simulation. Advanced Materials Research, 0, 418-420, 865-869.	0.3	2

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91	Deposition and Characterization of Boron-Doped HFCVD Diamond Films on Ti, SiC, Si and Ta Substrates. Applied Mechanics and Materials, 2012, 217-219, 1062-1067.	0.2	2
92	Enhanced Tribological Performance of CVD Diamond Films Enabled by Using Graphene Layers as Solid Lubricant. Advanced Materials Research, 0, 1136, 573-578.	0.3	2
93	Interactions in Composite Film Formation of Mefp-1/graphene on Carbon Steel. Coatings, 2021, 11, 1161.	2.6	2
94	Strain-Induced Nonlinear Frictional Behavior of Graphene Nanowall Films. ACS Applied Materials & Interfaces, 2021, 13, 51608-51617.	8.0	2
95	Substrate-dependent enhancement of the durability of EPD graphene coating as a macroscale solid lubricant. Surface and Interface Analysis, 2022, 54, 978-985.	1.8	2
96	Friction and cutting properties of hot-filament chemical vapor deposition micro- and fine-grained diamond coated silicon nitride inserts. Journal of Shanghai Jiaotong University (Science), 2010, 15, 519-525.	0.9	1
97	Comparative Studies on the Cutting Performance of HFCVD Diamond and DLC Coated WC-Co Milling Tools in Dry Machining Al/SiC-MMC. Advanced Materials Research, 2010, 126-128, 220-225.	0.3	1
98	CVD Micron Diamond Powders. Advanced Materials Research, 2013, 797, 495-499.	0.3	1
99	Simulation of Temperature Distribution in HFCVD Diamond Films Growth on the Multitudinous Micro End Mills. Advanced Materials Research, 2014, 1027, 163-166.	0.3	1
100	The Interior Failure of Single-Layer Graphene Activated by the Nanosized Asperity on the Substrate Surface. Advanced Materials Interfaces, 2020, 7, 2000281.	3.7	1
101	Performance analysis and application on Ti-6Al-4V of micro-forging system. Chinese Journal of Aeronautics, 2021, 34, 188-198.	5.3	1
102	Study on the Cutting Performance of HFCVD Diamond Coated Silicon Nitride Inserts in Dry Turning Aluminum Silicon Alloy. Advanced Materials Research, 2010, 126-128, 226-231.	0.3	0
103	Study on the Fabrication and Cutting Performance of HFCVD Diamond Coated Silicon Nitride Inserts. Key Engineering Materials, 2010, 431-432, 515-518.	0.4	0
104	Comparative Studies on the Cutting Performance of CVD Diamond and DLC Coated Inserts in Turning GFRP Composite Materials. Key Engineering Materials, 0, 431-432, 466-469.	0.4	0
105	Cutting Performances of Diamond Coated Milling Tools in Machining Aluminum Alloy. Advanced Materials Research, 0, 188, 122-127.	0.3	0
106	Comparative Study on the Tribological Performance of HFCVD Diamond and DLC Films under Water Lubricating Condition. Key Engineering Materials, 0, 487, 155-159.	0.4	0
107	Cutting Performances of Boron-Doped Diamond Coated Milling Tools in Machining PCB. Materials Science Forum, 2012, 723, 280-285.	0.3	0
108	Fabrication and Application of Si-Doped Diamond Coated Welding Dies. Key Engineering Materials, 2013, 589-590, 623-628.	0.4	0

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109	THE EFFECT OF THE GAS INLET ON THE FLUID FIELD DURING FABRICATING HFCVD DIAMOND-COATED CUTTING TOOLS. <i>Surface Review and Letters</i> , 2014, 21, 1450068.	1.1	0
110	Long-Duration Frictional and Wear Performance of the Diamond/DLC Bilayered Film under Water-Lubricating Condition. <i>Advanced Materials Research</i> , 2014, 1017, 429-434.	0.3	0
111	THE EFFECT OF THE GAS OUTLET ON THE GAS VELOCITY FIELD IN MASS-PRODUCTION OF HFCVD DIAMOND-COATED DRILLS. <i>Surface Review and Letters</i> , 2014, 21, 1450051.	1.1	0
112	Atomic-scale interfacial diffusion of diamond into titanium: Phase transition and layer dependence. <i>Surfaces and Interfaces</i> , 2022, 31, 101993.	3.0	0