Bin Shen

List of Publications by Year
in descending order

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112 papers	1,690 citations	331259 21 h-index	377514 34 g-index
112 all docs	112 docs citations	112 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. Diamond and Related Materials, 2009, 18, 238-243.	1.8	114
2	Fabrication and application of nanoâ€“microcrystalline composite diamond films on the interior hole surfaces of Co cemented tungsten carbide substrates. Diamond and Related Materials, 2009, 18, 276-282.	1.8	93
3	Tribological properties and cutting performance of boron and silicon doped diamond films on Co-cemented tungsten carbide inserts. Diamond and Related Materials, 2013, 33, 54-62.	1.8	73
4	Study on tribological behavior and cutting performance of CVD diamond and DLC films on Co-cemented tungsten carbide substrates. Applied Surface Science, 2010, 256, 2479-2489.	3.1	62
5	Effect of boron and silicon doping on improving the cutting performance of CVD diamond coated cutting tools in machining CFRP. International Journal of Refractory Metals and Hard Materials, 2013, 41, 285-292.	1.7	61
6	Tribological behavior between micro- and nano-crystalline diamond films under dry sliding and water lubrication. Tribology International, 2014, 69, 118-127.	3.0	49
7	Influence of pretreatment and deposition parameters on the properties and cutting performance of NCD coated PCB micro drills. International Journal of Refractory Metals and Hard Materials, 2014, 43, 30-41.	1.7	45
8	Tribological and cutting behavior of silicon nitride tools coated with monolayer- and multilayer-microcrystalline HFCVD diamond films. Applied Surface Science, 2013, 265, 850-859.	3.1	41
9	Simulation of temperature and gas density field distribution in diamond films growth on silicon wafer by hot filament CVD. Journal of Crystal Growth, 2012, 343, 55-61.	0.7	39
10	Simulation and experimental research on the substrate temperature distribution in HFCVD diamond film growth on the inner hole surface. Surface and Coatings Technology, 2013, 219, 109-118.	2.2	38
11	Optimization on the HFCVD setup for the mass-production of diamond-coated micro-tools based on the FVM temperature simulation. Surface and Coatings Technology, 2014, 253, 123-131.	2.2	32
12	Application of ultra-smooth composite diamond film coated WCâ€“Co drawing dies under water-lubricating conditions. Transactions of Nonferrous Metals Society of China, 2013, 23, 161-169.	1.7	30
13	Fracture and solid particle erosion of micro-crystalline, nano-crystalline and boron-doped diamond films. International Journal of Refractory Metals and Hard Materials, 2014, 45, 31-40.	1.7	30
14	Evaluation on residual stresses of silicon-doped CVD diamond films using X-ray diffraction and Raman spectroscopy. Transactions of Nonferrous Metals Society of China, 2012, 22, 3021-3026.	1.7	28
15	Investigations on the fabrication and erosion behavior of the composite diamond coated nozzles. Wear, 2013, 304, 126-137.	1.5	28
16	Synergistic friction-reducing and anti-wear behaviors of graphene with micro- and nano-crystalline diamond films. Diamond and Related Materials, 2017, 73, 25-32.	1.8	28
17	Fabrication and application of boron-doped diamond coated rectangular-hole shaped drawing dies. International Journal of Refractory Metals and Hard Materials, 2013, 41, 422-431.	1.7	27
18	Cathodic electrophoretic deposition of magnesium nitrate modified graphene coating as a macro-scale solid lubricant. Carbon, 2019, 145, 297-310.	5.4	27

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19	Erosion mechanism of the boron-doped diamond films of different thicknesses. Wear, 2014, 312, 1-10.	1.5	26
20	Influence of boron doping level on the basic mechanical properties and erosion behavior of boron-doped micro-crystalline diamond (BDMCD) film. Diamond and Related Materials, 2017, 73, 218-231.	1.8	25
21	Mussel-Inspired Graphene Film with Enhanced Durability as a Macroscale Solid Lubricant. ACS Applied Materials & Interfaces, 2019, 11, 31386-31392.	4.0	22
22	Corrosion- and wear-resistant composite film of graphene and mussel adhesive proteins on carbon steel. Corrosion Science, 2020, 164, 108351.	3.0	22
23	Graphenization of Diamond. Chemistry of Materials, 2022, 34, 3941-3947.	3.2	22
24	Effect of Boron-Doped Diamond Interlayer on Cutting Performance of Diamond Coated Micro Drills for Graphite Machining. Materials, 2013, 6, 3128-3138.	1.3	21
25	Influence of amorphous ceramic interlayers on tribological properties of CVD diamond films. Applied Surface Science, 2014, 313, 918-925.	3.1	21
26	The influence of normal load on the tribological performance of electrophoretic deposition prepared graphene coating on micro-crystalline diamond surface. Diamond and Related Materials, 2017, 76, 50-57.	1.8	21
27	The effect of boron doping on the morphology and growth rate of micron diamond powders synthesized by HFCVD method. Diamond and Related Materials, 2013, 40, 82-88.	1.8	20
28	Comparison of chemical vapor deposition diamond-, diamond-like carbon- and TiAlN-coated microdrills in graphite machining. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2013, 227, 1299-1309.	1.5	20
29	Comparisons of HFCVD diamond nucleation and growth using different carbon sources. Diamond and Related Materials, 2015, 54, 26-33.	1.8	20
30	Enhancement on the tribological performance of diamond films by utilizing graphene coating as a solid lubricant. Surface and Coatings Technology, 2017, 311, 35-45.	2.2	20
31	Electrochemical behaviour of EPD synthesized graphene coating on titanium alloys for orthopedic implant application. Procedia CIRP, 2018, 71, 322-328.	1.0	20
32	Friction and wear performance of boron doped, undoped microcrystalline and fine grained composite diamond films. Chinese Journal of Mechanical Engineering (English Edition), 2015, 28, 155-163.	1.9	19
33	Effects of deposition parameters on HFCVD diamond films growth on inner hole surfaces of WCâ€“Co substrates. Transactions of Nonferrous Metals Society of China, 2015, 25, 791-802.	1.7	18
34	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, 2015, 59, 21-29.	1.8	18
35	Optimization of diamond coated microdrills in aluminum alloy 7075 machining: A case study. Diamond and Related Materials, 2015, 54, 79-90.	1.8	18
36	Elucidating the atomic mechanism of the lubricity of graphene on the diamond substrate. Applied Surface Science, 2020, 504, 144372.	3.1	18

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37	Molecular dynamics investigation on the atomic-scale indentation and friction behaviors between diamond tips and copper substrate. Diamond and Related Materials, 2010, 19, 723-728.	1.8	17
38	Effect of deposition parameters on micro- and nano-crystalline diamond films growth on WCâ€“Co substrates by HFCVD. Transactions of Nonferrous Metals Society of China, 2014, 24, 3181-3188.	1.7	16
39	The effect of deposition parameters on the morphology of micron diamond powders synthesized by HFCVD method. Journal of Crystal Growth, 2013, 372, 49-56.	0.7	15
40	Tribological properties of SiC-based MCD films synthesized using different carbon sources when sliding against Si 3 N 4. Applied Surface Science, 2016, 369, 448-459.	3.1	15
41	Influence of Stone-Wales defect on graphene friction: Pinning effect and wrinkle modification. Computational Materials Science, 2020, 173, 109423.	1.4	15
42	Application of spindle power signals in tool condition monitoring based on HHT algorithm. International Journal of Advanced Manufacturing Technology, 2020, 106, 1385-1395.	1.5	15
43	Ranking the relative CO2 electrochemical reduction activity in carbon materials. Carbon, 2019, 154, 108-114.	5.4	14
44	Double-Vacancy Controlled Friction on Graphene: The Enhancement of Atomic Pinning. Langmuir, 2019, 35, 12898-12907.	1.6	14
45	CVD Diamond Films as Wear-Resistant Coatings for Relief Valve Components in the Coal Liquefaction Equipment. Solid State Phenomena, 0, 175, 219-225.	0.3	13
46	Effect of pressure on the growth of boron and nitrogen doped HFCVD diamond films on WCâ€“Co substrate. Surface and Interface Analysis, 2015, 47, 572-586.	0.8	13
47	Simulation optimization of filament parameters for uniform depositions of diamond films on surfaces of ultra-large circular holes. Applied Surface Science, 2016, 388, 593-603.	3.1	12
48	High-rate synthesis of ultra-nanocrystalline diamond in an argon-free hot filament chemical vapor deposition atmosphere for tribological films. Surface and Coatings Technology, 2019, 378, 124999.	2.2	12
49	Enhanced lubricity of CVD diamond films by in-situ synthetization of top-layered graphene sheets. Carbon, 2021, 184, 680-688.	5.4	12
50	SIMULATION AND EXPERIMENTAL STUDIES ON SUBSTRATE TEMPERATURE AND GAS DENSITY FIELD IN HFCVD DIAMOND FILMS GROWTH ON WCâ€“Co DRILL TOOLS. Surface Review and Letters, 2013, 20, 1350020.	0.5	11
51	Mechanical properties and solid particle erosion of MCD films synthesized using different carbon sources by BE-HFCVD. International Journal of Refractory Metals and Hard Materials, 2016, 54, 370-377.	1.7	11
52	High-temperature wear behavior of micro- and ultrananocrystalline diamond films against titanium alloy. Surface and Coatings Technology, 2021, 422, 127537.	2.2	11
53	Friction Behaviors of the Hot Filament Chemical Vapor Deposition Diamond Film under Ambient Air and Water Lubricating Conditions. Chinese Journal of Mechanical Engineering (English Edition), 2009, 22, 658.	1.9	11
54	Simulation of Substrate Temperature Distribution in Diamond Films Growth on Cemented Carbide Inserts by Hot Filament CVD. Applied Mechanics and Materials, 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. International Journal of Advanced Manufacturing Technology, 2015, 76, 1383-1391.	1.5	10
56	Tribological Properties of MCD Films Synthesized Using Different Carbon Sources When Sliding Against Stainless Steel. Tribology Letters, 2016, 61, 1.	1.2	10
57	Effect of deposition temperature on properties of boron-doped diamond films on tungsten carbide substrate. Transactions of Nonferrous Metals Society of China, 2018, 28, 729-738.	1.7	10
58	A novel growth model for depositing ultrananocrystalline diamond films in CH4/H2 chemistry. Surface and Coatings Technology, 2021, 419, 127280.	2.2	10
59	Deposition and Application of CVD Diamond Films on the Interior-Hole Surface of Silicon Carbide Compacting Dies. Key Engineering Materials, 2012, 499, 45-50.	0.4	9
60	Erosive wear performance of boron-doped diamond films on different substrates. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2014, 228, 352-361.	1.0	9
61	Molecular dynamics investigation on the atomic-scale friction behaviors between copper(001) and diamond(111) surfaces. Applied Surface Science, 2009, 255, 7663-7668.	3.1	8
62	Study on the friction reducing effect of graphene coating prepared by electrophoretic deposition. Procedia CIRP, 2018, 71, 335-340.	1.0	8
63	Deposition of mirror-like surface finish ultrananocrystalline diamond films on tungsten carbide by optimizing the substrate pretreatment. Surface and Coatings Technology, 2020, 394, 125885.	2.2	8
64	Microscopic Mechanisms Behind the High Friction and Failure Initiation of Graphene Wrinkles. Langmuir, 2021, 37, 6776-6782.	1.6	8
65	The Cutting Performance of Ultra-Smooth Composite Diamond Coated WC-Co Inserts in Dry Turning Al/SiC-MMC. Advanced Materials Research, 0, 325, 400-405.	0.3	7
66	Fabrication and Applications of Ultra-Smooth Composite Diamond Coated WC-Co Drawing Dies. Solid State Phenomena, 0, 175, 233-238.	0.3	7
67	SIMULATION OPTIMIZATION OF THE HEAT TRANSFER CONDITIONS IN HFCVD DIAMOND FILM GROWTH INSIDE HOLES. Surface Review and Letters, 2013, 20, 1350031.	0.5	7
68	Investigation on the long-duration tribological performance of bilayered diamond/diamond-like carbon films. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2014, 228, 628-641.	1.0	7
69	CVD diamond coated drawing dies: a review. Materials and Manufacturing Processes, 2021, 36, 381-408.	2.7	7
70	Cutting Performances of Boron Doped Diamond-Coated Milling Tools in Machining Graphite. Materials Science Forum, 2011, 697-698, 458-461.	0.3	6
71	Frictional and Wear Behavior of Micro-Crystalline and Nano-Crystalline Diamond Films. Advanced Materials Research, 2013, 797, 719-724.	0.3	6
72	Amorphous SiO2 interlayers for deposition of adherent diamond films onto WCâ€“Co inserts. Transactions of Nonferrous Metals Society of China, 2015, 25, 3012-3022.	1.7	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.	1.0	6
74	Bilayer graphene film synthesized by hot filament chemical vapor deposition as a nanoscale solid lubricant. Surface and Coatings Technology, 2019, 380, 125061.	2.2	6
75	Controlled friction on graphene via substrate deformation induced atomic pinning effect. Computational Materials Science, 2021, 190, 110315.	1.4	6
76	High-temperature wear mechanism of diamond at the nanoscale: A reactive molecular dynamics study. Applied Surface Science, 2022, 585, 152614.	3.1	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.	0.5	5
80	FRICTION PROPERTIES OF POLISHED CVD DIAMOND FILMS SLIDING AGAINST DIFFERENT METALS. Surface Review and Letters, 2016, 23, 1550096.	0.5	5
81	Reprint of â€œA study of CVD diamond deposition on cemented carbide ball-end milling tools with high cobalt content using amorphous ceramic interlayersâ€• Diamond and Related Materials, 2016, 63, 51-59.	1.8	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.	0.5	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.	0.5	4
85	Wear behavior of diamond-coated drawing dies. Transactions of Tianjin University, 2011, 17, 259-263.	3.3	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.	0.5	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.	0.5	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.	0.5	3
89	The mechanisms of friction enhancements on graphene surfaces with folds: The reinforcement of atomic pinning or attraction. Tribology International, 2022, 165, 107297.	3.0	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.	1.2	2
94	Strain-Induced Nonlinear Frictional Behavior of Graphene Nanowall Films. ACS Applied Materials & Interfaces, 2021, 13, 51608-51617.	4.0	2
95	Substrateâ€dependent enhancement of the durability of EPD graphene coating as a macroscale solid lubricant. Surface and Interface Analysis, 2022, 54, 978-985.	0.8	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.	0.5	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 Singleâ€Layer Graphene Activated by the Nanosized Asperity on the Substrate Surface. Advanced Materials Interfaces, 2020, 7, 2000281.	1.9	1
101	Performance analysis and application on Ti-6Al-4V of micro-forging system. Chinese Journal of Aeronautics, 2021, 34, 188-198.	2.8	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. Surface Review and Letters, 2014, 21, 1450068.	0.5	0
110	Long-Duration Frictional and Wear Performance of the Diamond/DLC Bilayered Film under Water-Lubricating Condition. Advanced Materials Research, 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. Surface Review and Letters, 2014, 21, 1450051.	0.5	0
112	Atomic-scale interfacial diffusion of diamond into titanium: Phase transition and layer dependence. Surfaces and Interfaces, 2022, 31, 101993.	1.5	0