Bin Shen

List of Publications by Year
in descending order

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112 papers	1,690 citations	331670 21 h-index	377865 34 g-index
112 all docs	112 docs citations	112 times ranked	789 citing authors

#	Article	IF	Citations
1	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
2	High-temperature wear mechanism of diamond at the nanoscale: A reactive molecular dynamics study. Applied Surface Science, 2022, 585, 152614.	6.1	6
3	Graphenization of Diamond. Chemistry of Materials, 2022, 34, 3941-3947.	6.7	22
4	Atomic-scale interfacial diffusion of diamond into titanium: Phase transition and layer dependence. Surfaces and Interfaces, 2022, 31, 101993.	3.0	0
5	Substrateâ€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
6	CVD diamond coated drawing dies: a review. Materials and Manufacturing Processes, 2021, 36, 381-408.	4.7	7
7	Performance analysis and application on Ti-6Al-4V of micro-forging system. Chinese Journal of Aeronautics, 2021, 34, 188-198.	5.3	1
8	Controlled friction on graphene via substrate deformation induced atomic pinning effect. Computational Materials Science, 2021, 190, 110315.	3.0	6
9	Microscopic Mechanisms Behind the High Friction and Failure Initiation of Graphene Wrinkles. Langmuir, 2021, 37, 6776-6782.	3.5	8
10	A novel growth model for depositing ultrananocrystalline diamond films in CH4/H2 chemistry. Surface and Coatings Technology, 2021, 419, 127280.	4.8	10
11	High-temperature wear behavior of micro- and ultrananocrystalline diamond films against titanium alloy. Surface and Coatings Technology, 2021, 422, 127537.	4.8	11
12	Interactions in Composite Film Formation of Mefp-1/graphene on Carbon Steel. Coatings, 2021, 11, 1161.	2.6	2
13	Enhanced lubricity of CVD diamond films by in-situ synthetization of top-layered graphene sheets. Carbon, 2021, 184, 680-688.	10.3	12
14	Strain-Induced Nonlinear Frictional Behavior of Graphene Nanowall Films. ACS Applied Materials & Interfaces, 2021, 13, 51608-51617.	8.0	2
15	Influence of Stone-Wales defect on graphene friction: Pinning effect and wrinkle modification. Computational Materials Science, 2020, 173, 109423.	3.0	15
16	Elucidating the atomic mechanism of the lubricity of graphene on the diamond substrate. Applied Surface Science, 2020, 504, 144372.	6.1	18
17	Application of spindle power signals in tool condition monitoring based on HHT algorithm. International Journal of Advanced Manufacturing Technology, 2020, 106, 1385-1395.	3.0	15
18	Corrosion- and wear-resistant composite film of graphene and mussel adhesive proteins on carbon steel. Corrosion Science, 2020, 164, 108351.	6.6	22

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19	The Interior Failure of Singleâ€Layer Graphene Activated by the Nanosized Asperity on the Substrate Surface. Advanced Materials Interfaces, 2020, 7, 2000281.	3.7	1
20	Deposition of mirror-like surface finish ultrananocrystalline diamond films on tungsten carbide by optimizing the substrate pretreatment. Surface and Coatings Technology, 2020, 394, 125885.	4.8	8
21	Mussel-Inspired Graphene Film with Enhanced Durability as a Macroscale Solid Lubricant. ACS Applied Materials & Interfaces, 2019, 11, 31386-31392.	8.0	22
22	Ranking the relative CO2 electrochemical reduction activity in carbon materials. Carbon, 2019, 154, 108-114.	10.3	14
23	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
24	Double-Vacancy Controlled Friction on Graphene: The Enhancement of Atomic Pinning. Langmuir, 2019, 35, 12898-12907.	3.5	14
25	Cathodic electrophoretic deposition of magnesium nitrate modified graphene coating as a macro-scale solid lubricant. Carbon, 2019, 145, 297-310.	10.3	27
26	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.	4.8	12
27	Electrochemical behaviour of EPD synthesized graphene coating on titanium alloys for orthopedic implant application. Procedia CIRP, 2018, 71, 322-328.	1.9	20
28	Study on the friction reducing effect of graphene coating prepared by electrophoretic deposition. Procedia CIRP, 2018, 71, 335-340.	1.9	8
29	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.	4.2	10
30	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.	3.9	21
31	Enhancement on the tribological performance of diamond films by utilizing graphene coating as a solid lubricant. Surface and Coatings Technology, 2017, 311, 35-45.	4.8	20
32	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.	3.9	25
33	Synergistic friction-reducing and anti-wear behaviors of graphene with micro- and nano-crystalline diamond films. Diamond and Related Materials, 2017, 73, 25-32.	3.9	28
34	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.	3.8	11
35	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.	6.1	12
36	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

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37	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.	6.1	15
38	FRICTION PROPERTIES OF POLISHED CVD DIAMOND FILMS SLIDING AGAINST DIFFERENT METALS. Surface Review and Letters, 2016, 23, 1550096.	1.1	5
39	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.	3.9	5
40	Tribological Properties of MCD Films Synthesized Using Different Carbon Sources When Sliding Against Stainless Steel. Tribology Letters, 2016, 61, 1.	2.6	10
41	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
42	Amorphous SiO2 interlayers for deposition of adherent diamond films onto WCâ€“Co inserts. Transactions of Nonferrous Metals Society of China, 2015, 25, 3012-3022.	4.2	6
43	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.	1.8	13
44	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.	3.7	19
45	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.	3.0	10
46	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.	4.2	18
47	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.	3.9	18
48	Optimization of diamond coated microdrills in aluminum alloy 7075 machining: A case study. Diamond and Related Materials, 2015, 54, 79-90.	3.9	18
49	Comparisons of HFCVD diamond nucleation and growth using different carbon sources. Diamond and Related Materials, 2015, 54, 26-33.	3.9	20
50	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
51	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
52	THE EFFECT OF THE GAS INLET ON THE FLUID FIELD DURING FABRICATING HFCVD DIAMOND-COATED CUTTING TOOLS. Surface Review and Letters, 2014, 21, 1450068.	1.1	0
53	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.	1.8	7
54	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.	1.8	9

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55	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
56	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
57	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.	4.2	16
58	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.	1.1	0
59	Erosion mechanism of the boron-doped diamond films of different thicknesses. Wear, 2014, 312, 1-10.	3.1	26
60	Tribological behavior between micro- and nano-crystalline diamond films under dry sliding and water lubrication. Tribology International, 2014, 69, 118-127.	5.9	49
61	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.	3.8	30
62	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.	3.8	45
63	Influence of amorphous ceramic interlayers on tribological properties of CVD diamond films. Applied Surface Science, 2014, 313, 918-925.	6.1	21
64	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
65	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.	4.8	32
66	The effect of deposition parameters on the morphology of micron diamond powders synthesized by HFCVD method. Journal of Crystal Growth, 2013, 372, 49-56.	1.5	15
67	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
68	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.	3.9	20
69	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.	4.8	38
70	Tribological and cutting behavior of silicon nitride tools coated with monolayer- and multilayer-microcrystalline HFCVD diamond films. Applied Surface Science, 2013, 265, 850-859.	6.1	41
71	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.	3.9	73
72	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.	3.8	27

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73	Investigations on the fabrication and erosion behavior of the composite diamond coated nozzles. Wear, 2013, 304, 126-137.	3.1	28
74	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.	4.2	30
75	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.	3.8	61
76	CVD Micron Diamond Powders. Advanced Materials Research, 2013, 797, 495-499.	0.3	1
77	Effect of Boron-Doped Diamond Interlayer on Cutting Performance of Diamond Coated Micro Drills for Graphite Machining. Materials, 2013, 6, 3128-3138.	2.9	21
78	Frictional and Wear Behavior of Micro-Crystalline and Nano-Crystalline Diamond Films. Advanced Materials Research, 2013, 797, 719-724.	0.3	6
79	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.	1.1	11
80	Tribo-Map of CVD Diamond Film Sliding against Silicon Nitride in Air. Key Engineering Materials, 2013, 589-590, 405-410.	0.4	4
81	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.	2.4	20
82	Fabrication and Application of Si-Doped Diamond Coated Welding Dies. Key Engineering Materials, 2013, 589-590, 623-628.	0.4	0
83	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
84	SIMULATION OPTIMIZATION OF THE HEAT TRANSFER CONDITIONS IN HFCVD DIAMOND FILM GROWTH INSIDE HOLES. Surface Review and Letters, 2013, 20, 1350031.	1.1	7
85	Cutting Performances of Boron-Doped Diamond Coated Milling Tools in Machining PCB. Materials Science Forum, 2012, 723, 280-285.	0.3	0
86	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
87	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
88	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.	1.5	39
89	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.	4.2	28
90	Wear behavior of diamond-coated drawing dies. Transactions of Tianjin University, 2011, 17, 259-263.	6.4	3

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91	Cutting Performances of Boron Doped Diamond-Coated Milling Tools in Machining Graphite. Materials Science Forum, 2011, 697-698, 458-461.	0.3	6
92	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
93	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.	6.1	62
94	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
95	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
96	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
97	Study on the Friction Behavior of HFCVD Diamond Films on Silicon Nitride Substrates. Advanced Materials Research, 2010, 135, 143-148.	0.3	5
98	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.	3.9	17
99	Molecular dynamics investigation on the atomic-scale friction behaviors between copper(001) and diamond(111) surfaces. Applied Surface Science, 2009, 255, 7663-7668.	6.1	8
100	Deposition and friction properties of ultra-smooth composite diamond films on Co-cemented tungsten carbide substrates. Diamond and Related Materials, 2009, 18, 238-243.	3.9	114
101	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.	3.9	93
102	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.	3.7	11
103	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
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	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
106	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
107	Cutting Performances of Diamond Coated Milling Tools in Machining Aluminum Alloy. Advanced Materials Research, 0, 188, 122-127.	0.3	0
108	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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109	Fabrication and Applications of Ultra-Smooth Composite Diamond Coated WC-Co Drawing Dies. Solid State Phenomena, 0, 175, 233-238.	0.3	7
110	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
111	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
112	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