Junjie Zhang

List of Publications by Year in Descending Order

91 papers	892 citations	17 h-index	25 g-index
99 ext. papers	1,227 ext. citations	3.7 avg, IF	4.53 L-index

#	Paper	IF	Citations
91	Coupled effect of tool geometry and tool-particle position on diamond cutting of SiCp/Al. *Journal of Materials Processing Technology*, **2022**, 303, 117510	5.3	0
90	Experimental investigation of laser surface texturing and related biocompatibility of pure titanium. *International Journal of Advanced Manufacturing Technology*, **2022**, 119, 5993	3.2	2
89	Growth of highly oriented graphite by ultraviolet nanosecond pulsed laser ablation of monocrystalline diamond. *Applied Surface Science*, **2022**, 578, 151995	6.7	1
88	Atomic-scale study of dislocation-grain boundary interactions in Cu bicrystal by Berkovich nanoindentation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2022**, 840, 143012	5.3	1
87	Fabrication of Sinusoidal Microstructures on Curved Copper Surface by Ultra-Precision Diamond Cutting with a Rotary B-Axis and Fast Tool Servo System. *Applied Sciences (Switzerland)*, **2021**, 11, 10302	2.6	0
86	Finite element analysis and experimental investigation of ultrasonic testing of internal defects in SiCp/Al composites. *Ceramics International*, **2021**, 48, 5972-5972	5.1	0
85	Finite Element Modeling of Brittle and Ductile Modes in Cutting of 3C-SiC. *Crystals*, **2021**, 11, 1286	2.3	0
84	In situ investigation of nanometric cutting of 3C-SiC using scanning electron microscope. *International Journal of Advanced Manufacturing Technology*, **2021**, 115, 2299-2312	3.2	3
83	Manufacturing of high-precision surface micro-structures on stainless steel by ultrasonic impact peening. *International Journal of Advanced Manufacturing Technology*, **2021**, 116, 915-930	3.2	1
82	Effect of tool rake angle on the material removal mechanism transition of single-crystal silicon: a molecular dynamics study. *International Journal of Advanced Manufacturing Technology*, **2021**, 115, 3631-3644	3.2	1
81	Coordinated attitude control for flexible spacecraft formation with actuator configuration misalignment. *Chinese Journal of Aeronautics*, **2021**, 34, 176-186	3.7	1
80	Cutting path-dependent machinability of SiCp/Al composite under multi-step ultra-precision diamond cutting. *Chinese Journal of Aeronautics*, **2021**, 34, 241-252	3.7	8
79	Depth-sensing ductile and brittle deformation in 3C-SiC under Berkovich nanoindentation. *Materials and Design*, **2021**, 197, 109223	8.1	8
78	Atomistic origin of brittle-to-ductile transition behavior of polycrystalline 3C-SiC in diamond cutting. *Ceramics International*, **2021**, 47, 23895-23904	5.1	4
77	Coupled thermo-mechanical sticking-sliding friction model along tool-chip interface in diamond cutting of copper. *Journal of Manufacturing Processes*, **2021**, 70, 578-592	5	1
76	Effect of fiber orientation on depth sensing intra-laminar failure of unidirectional CFRP under nano-scratching. *Composites Part B: Engineering*, **2021**, 224, 109211	10	3
75	Numerical investigation on material removal mechanism in elliptical vibration cutting of single-crystal silicon. *Materials Science in Semiconductor Processing*, **2021**, 134, 106019	4.3	2

74	Finite element investigation on pretreatment temperature-dependent orthogonal cutting of unidirectional CFRP. *Composite Structures*, **2021**, 278, 114678	5.3	0
73	Influence of vibration parameters on ultrasonic elliptical vibration cutting of reaction-bonded silicon carbide. *International Journal of Advanced Manufacturing Technology*, **2020**, 108, 427-437	3.2	6
72	Anisotropy-Related Machining Characteristics in Ultra-Precision Diamond Cutting of Crystalline Copper. *Nanomanufacturing and Metrology*, **2020**, 3, 123-132	3.4	10
71	A simulation investigation on elliptical vibration cutting of single-crystal silicon. *International Journal of Advanced Manufacturing Technology*, **2020**, 108, 2231-2243	3.2	4
70	On the crystallographic anisotropy of plastic zone size in single crystalline copper under Berkovich nanoindentation. *Materials Today Communications*, **2020**, 25, 101314	2.5	1
69	Finite element investigation on the wave-particle interactions in ultrasonic inspection of SiCp/Al composites. *Materials Research Express*, **2020**, 7, 036534	1.7	1
68	Desensitising effect of water film on initial decomposition of HMX crystal under nano-cutting conditions by ReaxFF MD simulations. *Molecular Simulation*, **2020**, 46, 530-540	2	2
67	Phased array ultrasonic testing of micro-flaws in additive manufactured titanium block. *Materials Research Express*, **2020**, 7, 016572	1.7	7
66	Molecular dynamic simulation of tool groove wear in nanoscale cutting of silicon. *AIP Advances*, **2020**, 10, 015327	1.5	3
65	Nanocutting mechanism of 6H-SiC investigated by scanning electron microscope online observation and stress-assisted and ion implant-assisted approaches. *International Journal of Advanced Manufacturing Technology*, **2020**, 106, 3869-3880	3.2	8
64	Finite element analysis of synergetic deformation in precision cutting of polymer bonded explosive. *Materials and Design*, **2020**, 188, 108471	8.1	5
63	Finite Element Investigation of the Influence of SiC Particle Distribution on Diamond Cutting of SiCp/Al Composites. *Nanomanufacturing and Metrology*, **2020**, 3, 251-259	3.4	4
62	Crystal anisotropy-dependent shear angle variation in orthogonal cutting of single crystalline copper. *Precision Engineering*, **2020**, 63, 41-48	2.9	19
61	Machinability of single crystal calcium fluoride by applying elliptical vibration diamond cutting. *Precision Engineering*, **2020**, 66, 306-314	2.9	6
60	Towards an understanding of grain boundary step in diamond cutting of polycrystalline copper. *Journal of Materials Processing Technology*, **2020**, 276, 116400	5.3	10
59	Influence of micro grooves of diamond tool on silicon cutting: a molecular dynamic study. *Molecular Simulation*, **2020**, 46, 92-101	2	4
58	Finite element analysis of the effect of tool rake angle on brittle-to-ductile transition in diamond cutting of silicon. *International Journal of Advanced Manufacturing Technology*, **2019**, 104, 881-891	3.2	12
57	Frictional properties of surface textures fabricated on hardened steel by elliptical vibration diamond cutting. *Precision Engineering*, **2019**, 59, 66-72	2.9	24

56	Nanosecond Pulsed Laser Ablation on Stainless Steel – Combining Finite Element Modeling and Experimental Work. *Advanced Engineering Materials*, **2019**, 21, 1900193	3.5	13
55	Nanosecond pulsed laser ablation of silicon – finite element simulation and experimental validation. *Journal of Micromechanics and Microengineering*, **2019**, 29, 075009	2	14
54	Crystal plasticity finite element simulation and experiment investigation of nanoscratching of single crystalline copper. *Wear*, **2019**, 430-431, 100-107	3.5	7
53	Molecular dynamics research on geometric effect of nanostructured diamond-like carbon substrates on potassium stearate adsorption. *Applied Surface Science*, **2019**, 484, 1041-1051	6.7	1
52	Brittle-to-ductile transition in elliptical vibration-assisted diamond cutting of reaction-bonded silicon carbide. *Journal of Manufacturing Processes*, **2019**, 45, 670-681	5	31
51	The interaction between grain boundary and tool geometry in nanocutting of a bi-crystal copper. *International Journal of Extreme Manufacturing*, **2019**, 1, 045001	7.9	10
50	Molecular dynamics study of mechanical properties of HMX/PS interface. *AIMS Materials Science*, **2019**, 6, 111-118	1.9	2
49	MD simulation of stress-assisted nanometric cutting mechanism of 3C silicon carbide. *Industrial Lubrication and Tribology*, **2019**, 71, 686-691	1.3	8
48	Fundamentals of Nanometric Cutting of Nanotwinned Copper. *Springer Tracts in Mechanical Engineering*, **2019**, 1-22	0.3	
47	Crystal plasticity finite element modeling and simulation of diamond cutting of polycrystalline copper. *Journal of Manufacturing Processes*, **2019**, 38, 187-195	5	31
46	Laser Surface Texturing of Stainless Steel – Effect of Pulse Duration on Texture, Morphology and Frictional Response. *Advanced Engineering Materials*, **2019**, 21, 1801016	3.5	11
45	Surface Textures Fabricated by Laser Surface Texturing and Diamond Cutting – Influence of Texture Depth on Friction and Wear. *Advanced Engineering Materials*, **2018**, 20, 1700995	3.5	16
44	In situ TEM observation of rebonding on fractured silicon carbide. *Nanoscale*, **2018**, 10, 6261-6269	7.7	30
43	Influence of surface morphology on adsorption of potassium stearate molecules on diamond-like carbon substrate: A molecular dynamics study. *Applied Surface Science*, **2018**, 441, 708-717	6.7	4
42	Theoretical and Experimental Studies of Over-Polishing of Silicon Carbide in Annular Polishing. *Machines*, **2018**, 6, 15	2.9	2
41	Atomistic and Experimental Investigation of the Effect of Depth of Cut on Diamond Cutting of Cerium. *Micromachines*, **2018**, 9,	3.3	9
40	Topic Review: Application of Raman Spectroscopy Characterization in Micro/Nano-Machining. *Micromachines*, **2018**, 9,	3.3	60
39	Simulation and experimental investigations of thermal degradation of polystyrene under femtosecond laser ablation. *Applied Physics A: Materials Science and Processing*, **2018**, 124, 1	2.6	5

38	Experimental Optimization of Annular Polishing Parameters for Silicon Carbide. *Advances in Materials Science and Engineering*, **2018**, 2018, 1-6	1.5	
37	Atomistic Investigation of Anisotropic Nanoindentation Behavior of Nanotwinned Aluminum Containing Inclined Twin Boundaries. *Nanomaterials*, **2018**, 8,	5.4	1
36	Molecular Dynamics Investigation of Residual Stress and Surface Roughness of Cerium under Diamond Cutting. *Micromachines*, **2018**, 9,	3.3	6
35	Coupled effect of crystallographic orientation and indenter geometry on nanoindentation of single crystalline copper. *International Journal of Mechanical Sciences*, **2018**, 148, 531-539	5.5	19
34	Interaction between phase transformations and dislocations at incipient plasticity of monocrystalline silicon under nanoindentation. *Computational Materials Science*, **2017**, 131, 55-61	3.2	29
33	Chemisorption of hydrogen on graphene: insights from atomistic simulations. *Journal of Physics Condensed Matter*, **2017**, 29, 195001	1.8	2
32	Sculpturing of single crystal silicon microstructures by elliptical vibration cutting. *Journal of Manufacturing Processes*, **2017**, 29, 389-398	5	45
31	An investigation of the adsorption of potassium stearate molecules on diamond-like carbon substrate using molecular dynamics simulation. *Applied Surface Science*, **2017**, 425, 384-392	6.7	2
30	Molecular Dynamics Modeling and Simulation of Diamond Cutting of Cerium. *Nanoscale Research Letters*, **2017**, 12, 464	5	14
29	Atomistic origins of material removal rate anisotropy in mechanical polishing of diamond crystal. *Carbon*, **2016**, 99, 186-194	10.4	27
28	Concise Review: Recent Advances in Molecular Dynamics Simulation of Nanomachining of Metals. *Current Nanoscience*, **2016**, 12, 653-665	1.4	4
27	Atomistic investigation of wear mechanisms of a copper bi-crystal. *Wear*, **2015**, 332-333, 941-948	3.5	16
26	Atomistic investigation of ablation of amorphous polystyrene under femtosecond laser pulse. *Science China: Physics, Mechanics and Astronomy*, **2015**, 58, 1-7	3.6	4
25	Crystallographic orientation-dependent pattern replication in direct imprint of aluminum nanostructures. *Nanoscale Research Letters*, **2015**, 10, 96	5	6
24	Effects of Pre-Existing Defects on Nanoimprint Process Investigated by Molecular Dynamics Simulation. *International Journal of Nanoscience*, **2015**, 14, 1460020	0.6	1
23	Effect of tool geometry in nanometric cutting of nanotwinned Cu: a molecular dynamics study. *International Journal of Nanomanufacturing*, **2015**, 11, 138	0.7	3
22	Femtosecond laser ablation of polystyrene: A molecular dynamics study. *Journal of Applied Polymer Science*, **2015**, 132, n/a-n/a	2.9	1
21	Experimental and Theoretical Investigation of Crystallographic Orientation Dependence of Nanoscratching of Single Crystalline Copper. *PLoS ONE*, **2015**, 10, e0131886	3.7	18

20	Achieving ultra-hard surface of mechanically polished diamond crystal by thermo-chemical refinement. *Applied Surface Science*, **2014**, 316, 617-624	6.7	16
19	Molecular dynamics simulation of tensile behavior of diffusion bonded Ni/Al nanowires. *Journal of Mechanical Science and Technology*, **2013**, 27, 43-46	1.6	9
18	Detwinning-induced reduction in ductility of twinned copper nanowires. *Science Bulletin*, **2013**, 58, 684-688		13
17	Template-assisted nanostructure fabrication by glancing angle deposition: a molecular dynamics study. *Nanoscale Research Letters*, **2013**, 8, 312	5	6
16	Atomistic insight into the minimum wear depth of Cu(111) surface. *Nanoscale Research Letters*, **2013**, 8, 514	5	7
15	Effect of incident angle on thin film growth: A molecular dynamics simulation study. *Thin Solid Films* , **2013**, 544, 496-499	2.2	15
14	Molecular dynamics modelling and simulation of mechanical nanoscratching of polystyrene. *International Journal of Nanomanufacturing*, **2013**, 9, 98	0.7	4
13	Velocity-dependent Nanoscratching of Amorphous Polystyrene. *Current Nanoscience*, **2013**, 9, 153-158	1.4	3
12	Molecular dynamics study of the nanoimprint process on bi-crystal Al thin films with twin boundaries. *Microelectronic Engineering*, **2012**, 95, 116-120	2.5	7
11	Calculation of the intracellular elastic modulus based on an atomic force microscope micro-cutting system. *Science Bulletin*, **2012**, 57, 1868-1872		1
10	Atomistic investigation of scratching-induced deformation twinning in nanocrystalline Cu. *Journal of Applied Physics*, **2012**, 112, 073526	2.5	19
9	Twin boundary spacing-dependent friction in nanotwinned copper. *Physical Review B*, **2012**, 85,	3.3	26
8	Atomistic Investigation of Probe-Based Nanomachining on Cu Twin Boundaries. *Journal of Computational and Theoretical Nanoscience*, **2011**, 8, 2344-2349	0.3	5
7	Molecular dynamics investigation of incipient plasticity during nanomachining of Cu (111) surface. *International Journal of Nanomanufacturing*, **2011**, 7, 559	0.7	1
6	Molecular dynamics study of void effect on nanoimprint of single crystal aluminum. *Applied Surface Science*, **2011**, 257, 7140-7144	6.7	15
5	Atomistic study of deposition process of Al thin film on Cu substrate. *Applied Surface Science*, **2010**, 256, 5993-5997	6.7	19
4	Mechanical and tribological properties of Ni/Al multilayers: A molecular dynamics study. *Applied Surface Science*, **2010**, 257, 847-851	6.7	33
3	Molecular dynamics study of groove fabrication process using AFM-based nanometric cutting technique. *Applied Physics A: Materials Science and Processing*, **2009**, 94, 593-600	2.6	33

2	Molecular dynamics study of scratching velocity dependency in AFM-based nanometric scratching process. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2009**, 505, 65-69	5.3	45
1	Modified Wettability of Micro-structured Steel Surfaces Fabricated by Elliptical Vibration Diamond Cutting. *International Journal of Precision Engineering and Manufacturing - Green Technology*,1	3.8	1