

# Hao Wang

## List of Publications by Year in descending order

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108  
papers

2,936  
citations

147801

31  
h-index

197818

49  
g-index

112  
all docs

112  
docs citations

112  
times ranked

1750  
citing authors

#	ARTICLE	IF	CITATIONS
1	Study of cohesion and adhesion properties of asphalt concrete with molecular dynamics simulation. Computational Materials Science, 2016, 112, 161-169.	3.0	223
2	Molecular dynamics study of interfacial mechanical behavior between asphalt binder and mineral aggregate. Construction and Building Materials, 2016, 121, 246-254.	7.2	138
3	Materializing efficient methanol oxidation via electron delocalization in nickel hydroxide nanoribbon. Nature Communications, 2020, 11, 4647.	12.8	117
4	Effect of heat treatment on the microstructure and mechanical properties of maraging steel by selective laser melting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 760, 105-117.	5.6	114
5	A theoretical and experimental investigation of the tool-tip vibration and its influence upon surface generation in single-point diamond turning. International Journal of Machine Tools and Manufacture, 2010, 50, 241-252.	13.4	105
6	Surface quality and material removal in magnetic abrasive finishing of selective laser melted 316L stainless steel. Journal of Manufacturing Processes, 2019, 45, 710-719.	5.9	97
7	A review on ductile mode cutting of brittle materials. Frontiers of Mechanical Engineering, 2018, 13, 251-263.	4.3	79
8	Investigation on the influence of tool-tip vibration on surface roughness and its representative measurement in ultra-precision diamond turning. International Journal of Machine Tools and Manufacture, 2013, 69, 20-29.	13.4	76
9	Dual interfacial characterization and property in multi-material selective laser melting of 316L stainless steel and C52400 copper alloy. Materials Characterization, 2020, 167, 110489.	4.4	64
10	Influence of scanning strategy and building direction on microstructure and corrosion behaviour of selective laser melted 316L stainless steel. Materials and Design, 2021, 209, 109999.	7.0	64
11	Enhancement of surface finish using water-miscible nano-cutting fluid in ultra-precision turning. International Journal of Machine Tools and Manufacture, 2013, 73, 62-70.	13.4	60
12	A Review of Post-Processing Technologies in Additive Manufacturing. Journal of Manufacturing and Materials Processing, 2021, 5, 38.	2.2	60
13	Rehbinder effect in ultraprecision machining of ductile materials. International Journal of Machine Tools and Manufacture, 2018, 133, 47-60.	13.4	58
14	Investigation on the microstructure and machinability of ASTM A131 steel manufactured by directed energy deposition. Journal of Materials Processing Technology, 2020, 276, 116410.	6.3	52
15	Microstructure and machinability of selective laser melted high-strength maraging steel with heat treatment. Journal of Materials Processing Technology, 2021, 288, 116906.	6.3	51
16	Experimental and theoretical study of internal finishing by a novel magnetically driven polishing tool. International Journal of Machine Tools and Manufacture, 2020, 153, 103552.	13.4	49
17	A review on processing polycrystalline magnesium aluminate spinel (MgAl <sub>2</sub> O <sub>4</sub> ): Sintering techniques, material properties and machinability. Materials and Design, 2020, 193, 108858.	7.0	47
18	Additively manufactured CuCrZr alloy: Microstructure, mechanical properties and machinability. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 819, 141528.	5.6	46

#	ARTICLE	IF	CITATIONS
19	Enhancement of the machinability of silicon by hydrogen ion implantation for ultra-precision micro-cutting. <i>International Journal of Machine Tools and Manufacture</i> , 2013, 74, 50-55.	13.4	44
20	Effect of material anisotropy on ultra-precision machining of Ti-6Al-4V alloy fabricated by selective laser melting. <i>Journal of Alloys and Compounds</i> , 2020, 848, 156457.	5.5	44
21	Dry mechanical-electrochemical polishing of selective laser melted 316L stainless steel. <i>Materials and Design</i> , 2020, 193, 108840.	7.0	43
22	Optical surface generation on additively manufactured AlSiMg0.75 alloys with ultrasonic vibration-assisted machining. <i>Journal of Materials Processing Technology</i> , 2020, 280, 116597.	6.3	42
23	Effects of machining surface and laser beam scanning strategy on machinability of selective laser melted Ti6Al4V alloy in milling. <i>Materials and Design</i> , 2020, 194, 108880.	7.0	41
24	Finite element modelling of shear angle and cutting force variation induced by material anisotropy in ultra-precision diamond turning. <i>International Journal of Machine Tools and Manufacture</i> , 2013, 75, 82-86.	13.4	40
25	Microstructure and anisotropic mechanical properties of selective laser melted Ti6Al4V alloy under different scanning strategies. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 831, 142236.	5.6	40
26	A novel magnetically driven polishing technique for internal surface finishing. <i>Precision Engineering</i> , 2018, 54, 222-232.	3.4	39
27	On the mechanism of asymmetric ductile-brittle transition in microcutting of (111) CaF <sub>2</sub> single crystals. <i>Scripta Materialia</i> , 2016, 114, 21-26.	5.2	38
28	Current understanding of surface effects in microcutting. <i>Materials and Design</i> , 2020, 192, 108688.	7.0	37
29	Dynamic modelling of shear band formation and tool-tip vibration in ultra-precision diamond turning. <i>International Journal of Machine Tools and Manufacture</i> , 2011, 51, 512-519.	13.4	35
30	Effect of cutting tool geometries on the ductile-brittle transition of monocrystalline sapphire. <i>International Journal of Mechanical Sciences</i> , 2018, 148, 565-577.	6.7	35
31	Time-optimal tool motion planning with tool-tip kinematic constraints for robotic machining of sculptured surfaces. <i>Robotics and Computer-Integrated Manufacturing</i> , 2020, 65, 101969.	9.9	34
32	A study of regularly spaced shear bands and morphology of serrated chip formation in microcutting process. <i>Scripta Materialia</i> , 2010, 63, 227-230.	5.2	31
33	Removability of 316L stainless steel cone and block support structures fabricated by Selective Laser Melting (SLM). <i>Materials and Design</i> , 2020, 191, 108691.	7.0	31
34	Enhancing Water Harvesting through the Cascading Effect. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 27464-27469.	8.0	30
35	Geometrically necessary dislocations distribution in face-centred cubic alloy with varied grain size. <i>Materials Characterization</i> , 2020, 162, 110205.	4.4	30
36	Evolution mechanism of surface morphology and internal hole defect of 18Ni300 maraging steel fabricated by selective laser melting. <i>Journal of Materials Processing Technology</i> , 2022, 299, 117328.	6.3	30

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37	Micromachining of ferrous metal with an ion implanted diamond cutting tool. Carbon, 2019, 152, 598-608.	10.3	27
38	Stiffness modeling of an industrial robot with a gravity compensator considering link weights. Mechanism and Machine Theory, 2021, 161, 104331.	4.5	27
39	Static Electropulsing-Induced Microstructural Changes and Their Effect on the Ultra-Precision Machining of Cold-Rolled AZ91 Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1341-1346.	2.2	26
40	Preparation of transparent MgO·1.8Al <sub>2</sub> O <sub>3</sub> spinel ceramics by aqueous gelcasting, presintering and hot isostatic pressing. Journal of the European Ceramic Society, 2018, 38, 4057-4063.	5.7	25
41	Effect of ultrasonic elliptical vibration assistance on the surface layer defect of M-plane sapphire in microcutting. Materials and Design, 2020, 192, 108755.	7.0	25
42	Beneficial stress of a coating on ductile-mode cutting of single-crystal brittle material. International Journal of Machine Tools and Manufacture, 2021, 168, 103787.	13.4	25
43	Enhancing Ductile-mode Cutting of Calcium Fluoride Single Crystals with Solidified Coating. International Journal of Precision Engineering and Manufacturing - Green Technology, 2020, 7, 1019-1029.	4.9	24
44	Microstructure and mechanical properties of additively manufactured multi-material component with maraging steel on CrMn steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 802, 140630.	5.6	24
45	Fundamental study on damage-free machining of sapphire: Revealing damage mechanisms via combining elastic stress fields and crystallographic structure. Ceramics International, 2019, 45, 20684-20696.	4.8	23
46	Quality design of fixture planning for sheet metal assembly. International Journal of Advanced Manufacturing Technology, 2007, 32, 690-697.	3.0	22
47	Surface quality characterisation of diamond cut V-groove structures made of rapidly solidified aluminium RSA-905. Precision Engineering, 2018, 53, 120-133.	3.4	22
48	Generic model of time-variant tool influence function and dwell-time algorithm for deterministic polishing. International Journal of Mechanical Sciences, 2021, 211, 106795.	6.7	21
49	Effect of surface-active media on chip formation in micromachining. Journal of Materials Processing Technology, 2019, 271, 325-335.	6.3	19
50	Improvement in compressive creep resistance of Al-0.2Zr alloy with L12 structured Sc-enriched precipitates. Materials Characterization, 2020, 159, 110024.	4.4	18
51	A study of the fabrication of v-groove structure in ultra-precision milling. International Journal of Computer Integrated Manufacturing, 2014, 27, 986-996.	4.6	17
52	Molecular Dynamics Simulation on the Influences of Nanostructure Shape, Interfacial Adhesion Energy, and Mold Insert Material on the Demolding Process of Micro-Injection Molding. Polymers, 2019, 11, 1573.	4.5	17
53	Microstructural modulation of TiAl alloys for controlling ultra-precision machinability. International Journal of Machine Tools and Manufacture, 2022, 174, 103851.	13.4	17
54	Vibration-assisted conformal polishing of additively manufactured structured surface. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2019, 233, 4154-4164.	2.1	16

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55	Densification Behavior and Influence of Building Direction on High Anisotropy in Selective Laser Melting of High-Strength 18Ni-Co-Mo-Ti Maraging Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 5861-5879.	2.2	16
56	A novel method to improve the removability of cone support structures in selective laser melting of 316L stainless steel. Journal of Alloys and Compounds, 2021, 854, 157133.	5.5	16
57	Effect of a weak magnetic field on ductile-brittle transition in micro-cutting of single-crystal calcium fluoride. Journal of Materials Science and Technology, 2022, 112, 96-113.	10.7	16
58	On the effect of grain structure in micro-cutting of polycrystalline aluminate magnesium spinel (PAMS) crystals. International Journal of Mechanical Sciences, 2019, 160, 372-385.	6.7	15
59	The effect of support structures on maraging steel MS1 parts fabricated by selective laser melting at different building angles. Rapid Prototyping Journal, 2020, 26, 1465-1476.	3.2	13
60	Transmission electron microscopy (TEM) study of anisotropic surface damages in micro-cutting polycrystalline aluminate magnesium spinel (PAMS) crystals. Ceramics International, 2020, 46, 20570-20575.	4.8	13
61	Formation Mechanism of Residual Stresses in Micro-Injection Molding of PMMA: A Molecular Dynamics Simulation. Polymers, 2020, 12, 1368.	4.5	13
62	Low-temperature superplasticity of $\hat{\Gamma}^2$ -stabilized Ti-43Al-9V-Y alloy sheet with bimodal $\hat{\Gamma}^3$ -grain-size distribution. Journal of Materials Science and Technology, 2021, 95, 225-236.	10.7	13
63	On the theoretical foundation for the microcutting of calcium fluoride single crystals at elevated temperatures. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2018, 232, 1123-1129.	2.4	12
64	Investigation on Surface Integrity of Rapidly Solidified Aluminum RSA 905 by Magnetic Field-Assisted Finishing. Micromachines, 2018, 9, 146.	2.9	12
65	Tool Path Optimization for Robotic Surface Machining by Using Sampling-Based Motion Planning Algorithms. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2021, 143, .	2.2	12
66	Novel design and characterisation of surface modification in wire electrical discharge machining using assisting electrodes. Journal of Materials Processing Technology, 2017, 244, 136-149.	6.3	11
67	Damage mechanisms of polycrystalline aluminate magnesium spinel (PAMS) under different loading conditions of indentation and micro-cutting tests. Ceramics International, 2020, 46, 7235-7252.	4.8	11
68	Magnetically driven internal finishing of AISI 316L stainless steel tubes generated by laser powder bed fusion. Journal of Manufacturing Processes, 2022, 76, 155-166.	5.9	11
69	High-temperature nanoindentation size effect in fluorite material. International Journal of Mechanical Sciences, 2019, 159, 459-466.	6.7	10
70	Investigation of Interface Thermal Resistance between Polymer and Mold Insert in Micro-Injection Molding by Non-Equilibrium Molecular Dynamics. Polymers, 2020, 12, 2409.	4.5	10
71	Joint-Smooth Toolpath Planning by Optimized Differential Vector for Robot Surface Machining Considering the Tool Orientation Constraints. IEEE/ASME Transactions on Mechatronics, 2022, 27, 2301-2311.	5.8	10
72	Ultra-precision micro-cutting of maraging steel 3J33C under the influence of a surface-active medium. Journal of Materials Processing Technology, 2021, 292, 117054.	6.3	10

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73	Magneto-plasticity in micro-cutting of single-crystal copper. <i>Journal of Materials Science and Technology</i> , 2022, 124, 121-134.	10.7	10
74	Understanding the damage evolution of sapphire under scratching from AE signals. <i>Ceramics International</i> , 2020, 46, 26085-26099.	4.8	9
75	Characterizing crack morphology toward improving ductile mode cutting of calcium fluoride. <i>Ceramics International</i> , 2021, 47, 28543-28556.	4.8	9
76	Analysis of the Warpage Phenomenon of Micro-Sized Parts with Precision Injection Molding by Experiment, Numerical Simulation, and Grey Theory. <i>Polymers</i> , 2022, 14, 1845.	4.5	9
77	Suppression of Polycrystalline Diamond Tool Wear with Mechanochemical Effects in Micromachining of Ferrous Metal. <i>Journal of Manufacturing and Materials Processing</i> , 2020, 4, 81.	2.2	8
78	Additive Manufacturing of Stable Energy Storage Devices Using a Multinozzle Printing System. <i>Advanced Functional Materials</i> , 2021, 31, 2008280.	14.9	8
79	Extraordinary Antiwear Properties of Graphene-Reinforced Ti Composites Induced by Interfacial Decoration. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 27118-27129.	8.0	8
80	Mechanochemical effect on the microstructure and mechanical properties in ultraprecision machining of AA6061 alloy. <i>Journal of Materials Science and Technology</i> , 2021, 69, 228-238.	10.7	7
81	Microstructure evaluation of shear bands of microcutting chips in AA6061 alloy under the mechanochemical effect. <i>Journal of Materials Science and Technology</i> , 2021, 91, 178-186.	10.7	7
82	Dynamic Electropulsing Induced Phase Transformations and Their Effects on Single Point Diamond Turning of AZ91 Alloy. <i>Journal of Surface Engineered Materials and Advanced Technology</i> , 2012, 02, 16-21.	0.2	7
83	Analysis and simulation for a parallel drill point grinder. <i>International Journal of Advanced Manufacturing Technology</i> , 2006, 30, 221-226.	3.0	6
84	Analysis and simulation for a parallel drill point grinder. <i>International Journal of Advanced Manufacturing Technology</i> , 2007, 31, 915-925.	3.0	6
85	Effect of cutting speed on surface integrity and chip formation in micro-cutting of Zr-based bulk metallic glass. <i>International Journal of Advanced Manufacturing Technology</i> , 2021, 114, 3301-3310.	3.0	6
86	Fabrication and tribological properties of self-assembled monolayers of alkanethiols on nickel substrates. <i>Applied Surface Science</i> , 2021, 559, 149963.	6.1	6
87	Electropulsing-induced phase transformations and their effects on the single point diamond turning of a tempered alloy AZ91. <i>International Journal of Materials Research</i> , 2012, 103, 1205-1209.	0.3	6
88	Thermally Assisted Microcutting of Calcium Fluoride Single Crystals. <i>Springer Tracts in Mechanical Engineering</i> , 2019, , 77-102.	0.3	5
89	Experimental and Numerical Study Determining the Warpage Phenomenon of Thin-Wall Injection Molding. <i>Advances in Polymer Technology</i> , 2020, 2020, 1-13.	1.7	5
90	Surface Texture Transformation in Micro-Cutting of AA6061-T6 with the Rehbinder Effect. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2021, 8, 1151-1162.	4.9	4

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91	Mesoplasticity approach to studies of the cutting mechanism in ultra-precision machining. Chinese Journal of Mechanical Engineering (English Edition), 2014, 27, 219-228.	3.7	3
92	Design of FG/CS-LPP and material removal uniformity experiment on ZrO2 ceramic. Composites Part A: Applied Science and Manufacturing, 2020, 138, 106048.	7.6	3
93	Abnormal thermal expansion behaviour and phase transition of laser powder bed fusion maraging steel with different thermal histories during continuous heating. Additive Manufacturing, 2022, 53, 102712.	3.0	3
94	Ultrasonic Vibration Assisted Cutting of Tungsten Carbide. Springer Series in Advanced Manufacturing, 2020, , 231-254.	0.5	2
95	Applications of Ultra-Precision Free-Form Machining Technology to Advanced Optics. Materials Science Forum, 2011, 697-698, 834-837.	0.3	1
96	Finite element modelling of squeezing effect in ultra precision diamond turning. Materials Research Innovations, 2011, 15, s175-s178.	2.3	1
97	A study on tool wear in ultra-precision diamond turning with finite element modelling. International Journal of Nanomanufacturing, 2011, 7, 500.	0.3	1
98	Ductile Mode Cutting of Calcium Fluoride. Springer Series in Advanced Manufacturing, 2020, , 179-210.	0.5	1
99	Ductile Mode Cutting of Glass. Springer Series in Advanced Manufacturing, 2020, , 135-148.	0.5	0
100	Ductile Mode Cutting Mechanism. Springer Series in Advanced Manufacturing, 2020, , 17-37.	0.5	0
101	Ductile Mode Cutting of Tungsten Carbide. Springer Series in Advanced Manufacturing, 2020, , 149-177.	0.5	0
102	Molecular Dynamics Simulation of Ductile Mode Cutting. Springer Series in Advanced Manufacturing, 2020, , 75-99.	0.5	0
103	Ductile Mode Cutting of Silicon. Springer Series in Advanced Manufacturing, 2020, , 103-134.	0.5	0
104	Thermally Assisted Ductile Mode Cutting. Springer Series in Advanced Manufacturing, 2020, , 255-285.	0.5	0
105	Ductile Mode Cutting Characteristics. Springer Series in Advanced Manufacturing, 2020, , 39-53.	0.5	0
106	Correction to: Ductile Mode Cutting of Brittle Materials. Springer Series in Advanced Manufacturing, 2020, , C1-C1.	0.5	0
107	Modelling of Ductile Mode Cutting. Springer Series in Advanced Manufacturing, 2020, , 55-73.	0.5	0
108	Support Removal on Thin-Walled Parts Produced by Laser Powder Bed Fusion. 3D Printing and Additive Manufacturing, 0, , .	2.9	0