Peng Zhang

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

109 papers	2,954 citations	29 h-index	51 g-index
116 ext. papers	3,587 ext. citations	5.6 avg, IF	5.49 L-index

#	Paper	IF	Citations
109	General relationship between strength and hardness. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 529, 62-73	5.3	592
108	Influence of shot peening on high cycle fatigue properties of the high-strength wrought magnesium alloy AZ80. *Scripta Materialia*, **2005**, 52, 485-490	5.6	126
107	Low-cycle and extremely-low-cycle fatigue behaviors of high-Mn austenitic TRIP/TWIP alloys: Property evaluation, damage mechanisms and life prediction. *Acta Materialia*, **2016**, 103, 781-795	8.4	106
106	Fatigue cracking at twin boundaries: Effects of crystallographic orientation and stacking fault energy. *Acta Materialia*, **2012**, 60, 3113-3127	8.4	99
105	Simultaneous improvement of strength and plasticity: Additional work-hardening from gradient microstructure. *Acta Materialia*, **2018**, 145, 413-428	8.4	93
104	Revealing the deformation mechanisms of Cu□Al alloys with high strength and good ductility. *Acta Materialia*, **2016**, 110, 61-72	8.4	79
103	Improvement of low-cycle fatigue resistance in TWIP steel by regulating the grain size and distribution. *Acta Materialia*, **2017**, 134, 128-142	8.4	76
102	Extremely-low-cycle fatigue behaviors of Cu and Cu□Al alloys: Damage mechanisms and life prediction. *Acta Materialia*, **2015**, 83, 341-356	8.4	74
101	High strength and utilizable ductility of bulk ultrafine-grained Cu□Al alloys. *Applied Physics Letters*, **2008**, 92, 201915	3.4	72
100	Notch Effect of Materials: Strengthening or Weakening?. *Journal of Materials Science and Technology*, **2014**, 30, 599-608	9.1	62
99	Twin boundary: Stronger or weaker interface to resist fatigue cracking?. *Scripta Materialia*, **2012**, 66, 854-859	5.6	61
98	Twin boundaries: Strong or weak?. *Scripta Materialia*, **2008**, 59, 1131-1134	5.6	60
97	Microstructures, strengthening mechanisms and fracture behavior of Cu□Ag alloys processed by high-pressure torsion. *Acta Materialia*, **2012**, 60, 269-281	8.4	59
96	Optimizing strength and ductility of Cu□Zn alloys through severe plastic deformation. *Scripta Materialia*, **2012**, 67, 871-874	5.6	58
95	Controllable fatigue cracking mechanisms of copper bicrystals with a coherent twin boundary. *Nature Communications*, **2014**, 5, 3536	17.4	51
94	A remarkable improvement of low-cycle fatigue resistance of high-Mn austenitic TWIP alloys with similar tensile properties: Importance of slip mode. *Acta Materialia*, **2016**, 118, 196-212	8.4	50
93	Effects of dislocation slip mode on high-cycle fatigue behaviors of ultrafine-grained Cu□Zn alloy processed by equal-channel angular pressing. *Scripta Materialia*, **2013**, 68, 389-392	5.6	49

92	Improved fatigue properties of ultrafine-grained copper under cyclic torsion loading. *Acta Materialia*, **2013**, 61, 5857-5868	8.4	39
91	Exploring the fatigue strength improvement of Cu-Al alloys. *Acta Materialia*, **2018**, 144, 613-626	8.4	38
90	High-cycle fatigue properties and damage mechanisms of pre-strained Fe-30Mn-0.9C twinning-induced plasticity steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 679, 258-271	5.3	36
89	Competition between slip and twinning in face-centered cubic metals. *Journal of Applied Physics*, **2014**, 116, 163512	2.5	36
88	Varying tensile fracture mechanisms of Cu and Cu□n alloys with reduced grain size: From necking to shearing instability. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2014**, 594, 309-320	5.3	34
87	Strength, damage and fracture behaviors of high-nitrogen austenitic stainless steel processed by high-pressure torsion. *Scripta Materialia*, **2015**, 96, 5-8	5.6	32
86	Simultaneous improvement in strength and plasticity of Ti-24Nb-4Zr-8Sn manufactured by selective laser melting. *Materials and Design*, **2018**, 157, 52-59	8.1	32
85	Effect of crystallographic orientation and grain boundary character on fatigue cracking behaviors of coaxial copper bicrystals. *Acta Materialia*, **2013**, 61, 425-438	8.4	32
84	The premature necking of twinning-induced plasticity steels. *Acta Materialia*, **2017**, 136, 1-10	8.4	32
83	Strain localization and fatigue cracking behaviors of Cu bicrystal with an inclined twin boundary. *Acta Materialia*, **2014**, 73, 167-176	8.4	31
82	Higher fatigue cracking resistance of twin boundaries than grain boundaries in Cu bicrystals. *Scripta Materialia*, **2011**, 65, 505-508	5.6	31
81	Improving the fatigue strength of 7075 alloy through aging. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 738, 24-30	5.3	31
80	Microcompression and cyclic deformation behaviors of coaxial copper bicrystals with a single twin boundary. *Scripta Materialia*, **2013**, 69, 199-202	5.6	28
79	Recovery of strain-hardening rate in Ni-Si alloys. *Scientific Reports*, **2015**, 5, 15532	4.9	28
78	Distinct fatigue cracking modes of grain boundaries with coplanar slip systems. *Acta Materialia*, **2016**, 120, 120-129	8.4	26
77	Optimizing strength and ductility of austenitic stainless steels through equal-channel angular pressing and adding nitrogen element. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2013**, 587, 185-191	5.3	26
76	Optimizing the fatigue strength of 18Ni maraging steel through ageing treatment. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 707, 674-688	5.3	24
75	Low-cycle fatigue-cracking mechanisms in fcc crystalline materials. *Philosophical Magazine*, **2011**, 91, 229-249	1.6	22

74	Cyclic deformation and fatigue cracking behaviour of polycrystalline Cu, Cu–10 wt% Zn and Cu–32 wt% Zn. *Philosophical Magazine*, **2008**, 88, 2487-2503	1.6	21
73	Cyclic softening behaviors of ultra-fine grained Cu-Zn alloys. *Acta Materialia*, **2016**, 121, 331-342	8.4	21
72	Generalized energy failure criterion. *Scientific Reports*, **2016**, 6, 23359	4.9	21
71	Crack propagation mechanisms of AISI 4340 steels with different strength and toughness. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 729, 130-140	5.3	21
70	Intrinsic impact toughness of relatively high strength alloys. *Acta Materialia*, **2018**, 142, 226-235	8.4	20
69	Fatigue strength plateau induced by microstructure inhomogeneity. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 702, 259-264	5.3	20
68	Microstructure and Mechanical Properties of High-Nitrogen Austenitic Stainless Steels Subjected to Equal-Channel Angular Pressing. *Acta Metallurgica Sinica (English Letters)*, **2016**, 29, 140-149	2.5	19
67	Exceptional high fatigue strength in Cu-15at.%Al alloy with moderate grain size. *Scientific Reports*, **2016**, 6, 27433	4.9	19
66	The quantitative relationship between fracture toughness and impact toughness in high-strength steels. *Engineering Fracture Mechanics*, **2019**, 211, 362-370	4.2	18
65	Dislocation arrangements within slip bands during fatigue cracking. *Materials Characterization*, **2018**, 145, 96-100	3.9	18
64	The synchronous improvement of strength and plasticity (SISP) in new Ni-Co based disc superalloys by controling stacking fault energy. *Scientific Reports*, **2017**, 7, 8046	4.9	17
63	Twin boundary: Controllable interface to fatigue cracking. *Journal of Materials Science and Technology*, **2017**, 33, 603-606	9.1	16
62	Surface strengthening behaviors of four structural steels processed by surface spinning strengthening. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 704, 262-273	5.3	16
61	Fatigue Behavior of Al-Cu Alloy Subjected to Different Numbers of ECAP Passes. *Advanced Engineering Materials*, **2007**, 9, 860-866	3.5	16
60	Intrinsically higher fatigue cracking resistance of the penetrable and movable incoherent twin boundary. *Scientific Reports*, **2014**, 4, 3744	4.9	15
59	Synchronous improvement of the strength and plasticity of Ni-Co based superalloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 736, 100-104	5.3	14
58	Size Effects on the Mechanical Properties of Nanoporous Graphene Networks. *Advanced Functional Materials*, **2019**, 29, 1900311	15.6	13
57	Tensile Fracture Modes in Fe-22Mn-0.6C and Fe-30Mn-3Si-3Al Twinning-Induced Plasticity (TWIP) Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2017**, 48, 4458-4462	2.3	13

56	The Relationship between Strength and Toughness in Tempered Steel: Trade-Off or Invariable?. *Advanced Engineering Materials*, **2019**, 21, 1801116	3.5	13
55	Evaluating the fatigue cracking risk of surface strengthened 50CrMnMoVNb spring steel with abnormal life time distribution. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 732, 192-204	5.3	13
54	Butterfly effect in low-cycle fatigue: Importance of microscopic damage mechanism. *Scripta Materialia*, **2017**, 140, 76-81	5.6	12
53	Nanoparticle additions promote outstanding fracture toughness and fatigue strength in a cast Al□u alloy. *Materials and Design*, **2020**, 186, 108221	8.1	12
52	Improving the fatigue strength of A7N01 aluminum alloy by adjusting Si content. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 742, 15-22	5.3	12
51	Synchronously improved fatigue strength and fatigue crack growth resistance in twinning-induced plasticity steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 711, 533-542	5.3	12
50	Effect of Build Direction on Fatigue Performance of L-PBF 316L Stainless Steel. *Acta Metallurgica Sinica (English Letters)*, **2020**, 33, 539-550	2.5	11
49	The anisotropy and diverse mechanical properties of rolled Mg□% Al□% Zn alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2014**, 618, 523-532	5.3	10
48	Fatigue cracking at twin boundary: Effect of dislocation reactions. *Applied Physics Letters*, **2012**, 101, 011907	3.4	10
47	New method for determining P-S-N curves in terms of equivalent fatigue lives. *Fatigue and Fracture of Engineering Materials and Structures*, **2019**, 42, 2340-2353	3	9
46	Fatigue cracking and fracture behaviors of coarse-grained copper under cyclic tension□ompression and torsion loadings. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2013**, 574, 113-122	5.3	9
45	Analytic approximations for the elastic moduli of two-phase materials. *Physical Review B*, **2017**, 95,	3.3	9
44	Stepwise work hardening induced by individual grain boundary in Cu bicrystal micropillars. *Scientific Reports*, **2015**, 5, 15631	4.9	9
43	Predicting the variation of stacking fault energy for binary Cu alloys by first-principles calculations. *Journal of Materials Science and Technology*, **2020**, 53, 61-65	9.1	8
42	An optimization criterion for fatigue strength of metallic materials. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 736, 105-110	5.3	8
41	Investigation on the cracking resistances of different ageing treated 18Ni maraging steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2020**, 771, 138553	5.3	8
40	Improving the high-cycle fatigue properties of twinning-induced plasticity steel by a novel surface treatment process. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 740-741, 28-33	5.3	8
39	Difference in fatigue cracking behaviors of Cu bicrystals with the same component grains but different twin boundaries. *Scripta Materialia*, **2015**, 95, 19-22	5.6	7

38	Thermal Cycling Effect on the Wear Resistance of Bionic Laser Processed Gray Iron. *Journal of Bionic Engineering*, **2014**, 11, 288-295	2.7	7
37	Mechanical Properties and Tensile Fracture Mechanisms of Fe□Mn□(Al, Si) TRIP/TWIP Steels with Different Ferrite Volume Fractions. *Advanced Engineering Materials*, **2015**, 17, 1675-1682	3.5	7
36	A practical model for efficient anti-fatigue design and selection of metallic materials: I. Model building and fatigue strength prediction. *Journal of Materials Science and Technology*, **2021**, 70, 233-249	9.1	7
35	Forecasting Low-Cycle Fatigue Performance of Twinning-Induced Plasticity Steels: Difficulty and Attempt. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2017**, 48, 5833-5848	2.3	6
34	The Minimum Energy Density Criterion for the Competition between Shear and Flat Fracture. *Advanced Engineering Materials*, **2018**, 20, 1800150	3.5	6
33	In situ bending of layered compounds: The role of anisotropy in Ti2AlC microcantilevers. *Scripta Materialia*, **2014**, 89, 21-24	5.6	6
32	Improvement of notch fatigue properties of ultra-high CM400 maraging steel through shot peening. *Journal of Materials Research*, **2017**, 32, 4424-4432	2.5	6
31	Shear fatigue cracking of twin boundary and grain boundary without dislocation impingement. *Scripta Materialia*, **2015**, 100, 28-31	5.6	6
30	Tensile Deformation Behaviors of Cu?Ni Alloy Processed by Equal Channel Angular Pressing. *Advanced Engineering Materials*, **2010**, 12, 304-311	3.5	6
29	Microstructure and fatigue behavior of laser-powder bed fusion austenitic stainless steel. *Journal of Materials Science and Technology*, **2020**, 46, 191-200	9.1	6
28	A practical model for efficient anti-fatigue design and selection of metallic materials: II. Parameter analysis and fatigue strength improvement. *Journal of Materials Science and Technology*, **2021**, 70, 250-267	9.1	6
27	Deformation behaviors of Cu bicrystals with an inclined twin boundary at multiple scales. *Journal of Materials Science and Technology*, **2017**, 33, 698-702	9.1	5
26	The synchronous improvement of the strength and plasticity of Ni alloys assisted by vacancies. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2017**, 680, 405-410	5.3	5
25	Effects of inclusion types on the high-cycle fatigue properties of high-strength steel. *Scripta Materialia*, **2022**, 206, 114232	5.6	5
24	Declined Fatigue Crack Propagation Rate of a High-Strength Steel by Electropulsing Treatment. *Advanced Engineering Materials*, **2019**, 21, 1801345	3.5	4
23	Effect of Pre-strain on the Solute Clustering, Mechanical Properties, and Work-Hardening of a Naturally Aged Al-Cu-Mg Alloy. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2017**, 48, 4121-4134	2.3	4
22	High-cycle fatigue behavior of TWIP steel with graded grains: breaking the rule of mixture. *Materials Research Letters*, **2019**, 7, 26-32	7.4	4
21	Effective Stacking Fault Energy in Face-Centered Cubic Metals. *Acta Metallurgica Sinica (English Letters)*, **2018**, 31, 873-877	2.5	3

20	Temperature-Dependence of the Mechanical Responses for Two Types of Twinning-Induced Plasticity Steels. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2018**, 49, 1475-1480	2.3	3
19	Formation of nanograins in Ni-Co based superalloys compressed quasistatically at high temperature. *Scripta Materialia*, **2017**, 136, 92-96	5.6	2
18	A fast evaluation method for fatigue strength of maraging steel: The minimum strength principle. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2020**, 789, 139659	5.3	2
17	Torsional Fatigue Cracking and Fracture Behaviors of Cold-Drawn Copper: Effects of Microstructure and Axial Stress. *Acta Metallurgica Sinica (English Letters)*, **2019**, 32, 1521-1529	2.5	2
16	A new method to estimate the plane strain fracture toughness of materials. *Fatigue and Fracture of Engineering Materials and Structures*, **2019**, 42, 415-424	3	2
15	Examining the effect of the aging state on strength and plasticity of wrought aluminum alloys. *Journal of Materials Science and Technology*, **2022**, 122, 54-67	9.1	2
14	The dissociation behavior of dislocation arrays in face centered cubic metals. *Computational Materials Science*, **2016**, 124, 384-389	3.2	1
13	Crack propagation behavior and mechanism of coarse-grained copper in cyclic torsion with axial static tension. *International Journal of Fatigue*, **2020**, 131, 105304	5	1
12	Short fatigue crack growth behavior in 18Ni marageing steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2021**, 807, 140844	5.3	1
11	A simultaneous improvement of the strength and plasticity of spring steels by replacing Mo with Si. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2021**, 820, 141516	5.3	1
10	A Study on the Surface Integrity of 50CrMnMoVNb Spring Steels with Different Matrix Strengths Processed by Shot Peening. *Advanced Engineering Materials*, **2021**, 23, 2100444	3.5	1
9	Predictive fatigue crack growth law of high-strength steels. *Journal of Materials Science and Technology*, **2022**, 100, 46-50	9.1	1
8	Relationship between strength and uniform elongation of metals based on an exponential hardening law. *Acta Materialia*, **2022**, 231, 117866	8.4	1
7	A general physics-based hardening law for single phase metals. *Acta Materialia*, **2022**, 231, 117877	8.4	1
6	Improving the high-cycle fatigue life of a high-strength spring steel for automobiles by suitable shot peening and heat treatment. *International Journal of Fatigue*, **2022**, 161, 106891	5	1
5	Material-independent stress ratio effect on the fatigue crack growth behavior. *Engineering Fracture Mechanics*, **2021**, 259, 108116	4.2	0
4	Locating the optimal microstructural state against dynamic perforation by evaluating the strain-rate dependences of strength and hardness. *International Journal of Impact Engineering*, **2021**, 152, 103856	4	0
3	A novel top-down approach to make bulk nanostructured metal with low stacking fault energy. *Materialia*, **2019**, 5, 100201	3.2	0

2	A new fatigue crack growth mechanism of high-strength steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2022**, 840, 142969	5.3	0
1	Effects of Heat Treatment on Fatigue Properties of Double Vacuum Smelting High-Carbon Chromium-Bearing Steel. *Advanced Engineering Materials*,2200151	3.5	0