

Zhe-Feng Zhang

List of Publications by Year in descending order

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84
papers

2,601
citations

172443

29
h-index

206102

48
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85
all docs

85
docs citations

85
times ranked

2162
citing authors

#	ARTICLE	IF	CITATIONS
1	Unified Tensile Fracture Criterion. <i>Physical Review Letters</i> , 2005, 94, 094301.	7.8	213
2	Effect of aspect ratio on the compressive deformation and fracture behaviour of Zr-based bulk metallic glass. <i>Philosophical Magazine Letters</i> , 2005, 85, 513-521.	1.2	145
3	Significant contribution of stacking faults to the strain hardening behavior of Cu-15%Al alloy with different grain sizes. <i>Scientific Reports</i> , 2015, 5, 16707.	3.3	127
4	Microscopic mechanisms contributing to the synchronous improvement of strength and plasticity (SISP) for TWIP copper alloys. <i>Scientific Reports</i> , 2015, 5, 9550.	3.3	87
5	Fatigue and fracture behavior of bulk metallic glass. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2004, 35, 3489-3498.	2.2	85
6	Relations between fatigue strength and other mechanical properties of metallic materials. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2014, 37, 958-976.	3.4	81
7	Controllable fatigue cracking mechanisms of copper bicrystals with a coherent twin boundary. <i>Nature Communications</i> , 2014, 5, 3536.	12.8	72
8	Shear fracture and fragmentation mechanisms of bulk metallic glasses. <i>Philosophical Magazine Letters</i> , 2006, 86, 643-650.	1.2	69
9	Effect of annealing on the mechanical properties and fracture mechanisms of aZr56.2Ti13.8Nb5.0Cu6.9Ni5.6Be12.5bulk-metallic-glass composite. <i>Physical Review B</i> , 2007, 75, .	3.2	65
10	Influence of stacking-fault energy on the accommodation of severe shear strain in Cu-Al alloys during equal-channel angular pressing. <i>Journal of Materials Research</i> , 2009, 24, 3636-3646.	2.6	63
11	Mechanical Behaviors of Ultrafine-Grained 301 Austenitic Stainless Steel Produced by Equal-Channel Angular Pressing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011, 42, 2061-2071.	2.2	61
12	Design of ductile bulk metallic glasses by adding "soft" atoms. <i>Applied Physics Letters</i> , 2012, 100, .	3.3	60
13	Remarkable shape memory effect of a natural biopolymer in aqueous environment. <i>Biomaterials</i> , 2015, 65, 13-21.	11.4	59
14	Ductile Metallic Glasses in Supercooled Martensitic Alloys. <i>Materials Transactions</i> , 2006, 47, 2606-2609.	1.2	55
15	Tensile fracture morphologies of bulk metallic glass. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	53
16	The effect of primary crystallizing phases on mechanical properties of Cu46Zr47Al7 bulk metallic glass composites. <i>Journal of Materials Research</i> , 2006, 21, 2638-2645.	2.6	52
17	Microstructural percolation assisted breakthrough of trade-off between strength and ductility in CuZr-based metallic glass composites. <i>Scientific Reports</i> , 2014, 4, 4167.	3.3	52
18	Structure and mechanical properties of naturally occurring lightweight foam-filled cylinder "The peacock"™s tail coverts shaft and its components. <i>Acta Biomaterialia</i> , 2015, 17, 137-151.	8.3	48

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19	Effects of stacking fault energy on the thermal stability and mechanical properties of nanostructured Cu-Al alloys during thermal annealing. <i>Journal of Materials Research</i> , 2011, 26, 407-415.	2.6	45
20	Structure and mechanical behaviors of protective armored pangolin scales and effects of hydration and orientation. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 56, 165-174.	3.1	44
21	Compressive properties of bulk metallic glass with small aspect ratio. <i>Journal of Materials Research</i> , 2007, 22, 501-507.	2.6	42
22	Giant panda's tooth enamel: Structure, mechanical behavior and toughening mechanisms under indentation. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016, 64, 125-138.	3.1	40
23	Strength asymmetry of ductile dendrites reinforced Zr- and Ti-based composites. <i>Journal of Materials Research</i> , 2006, 21, 2331-2336.	2.6	39
24	Formation mechanism of nanostructures in austenitic stainless steel during equal channel angular pressing. <i>Philosophical Magazine</i> , 2007, 87, 4949-4971.	1.6	38
25	Recovery of strain-hardening rate in Ni-Si alloys. <i>Scientific Reports</i> , 2015, 5, 15532.	3.3	36
26	Vickers hardness and compressive properties of bulk metallic glasses and nanostructure-dendrite composites. <i>Journal of Materials Research</i> , 2005, 20, 2632-2638.	2.6	34
27	Generalized energy failure criterion. <i>Scientific Reports</i> , 2016, 6, 23359.	3.3	34
28	Direct observations on the evolution of shear bands into cracks in metallic glass. <i>Journal of Materials Research</i> , 2009, 24, 3130-3135.	2.6	32
29	Fracture mechanism of some brittle metallic glasses. <i>Journal of Applied Physics</i> , 2009, 105, 103519.	2.5	32
30	Anisotropic mechanical behaviors and their structural dependences of crossed-lamellar structure in a bivalve shell. <i>Materials Science and Engineering C</i> , 2016, 59, 828-837.	7.3	31
31	Effects of tungsten fiber on failure mode of zirconium-based bulk metallic glassy composite. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2006, 37, 2459-2469.	2.2	29
32	What types of grain boundaries can be passed through by persistent slip bands?. <i>Journal of Materials Research</i> , 2003, 18, 1031-1034.	2.6	28
33	Tensile and Fatigue Behaviors of Aged Cu/Sn-4Ag Solder Joints. <i>Journal of Electronic Materials</i> , 2009, 38, 852-859.	2.2	26
34	Mechanical behavior of mother-of-pearl and pearl with flat and spherical laminations. <i>Materials Science and Engineering C</i> , 2016, 68, 9-17.	7.3	26
35	Influences of Substrate Alloying and Reflow Temperature on Bi Segregation Behaviors at Sn-Bi/Cu Interface. <i>Journal of Electronic Materials</i> , 2011, 40, 2320-2328.	2.2	24
36	Anisotropic compressive properties of iron subjected to single-pass equal-channel angular pressing. <i>Philosophical Magazine Letters</i> , 2006, 86, 435-441.	1.2	23

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37	Effects of Route on Microstructural Evolution and Mechanical Properties of Cu-8Wt%Pct Ag Alloy Processed by Equal Channel Angular Pressing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 2290-2303.	2.2	23
38	The synchronous improvement of strength and plasticity (SISP) in new Ni-Co based disc superalloys by controlling stacking fault energy. Scientific Reports, 2017, 7, 8046.	3.3	23
39	On the formation of deformation bands in fatigued copper single crystals. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 2002, 82, 3129-3147.	0.6	22
40	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.	2.9	22
41	On the fracture mechanisms of nacre: Effects of structural orientation. Journal of Biomechanics, 2019, 96, 109336.	2.1	22
42	Deformation and fracture behavior of tungsten fiber-reinforced bulk metallic glass composite subjected to transverse loading. Journal of Materials Research, 2006, 21, 1375-1384.	2.6	21
43	Water-assisted self-healing and property recovery in a natural dermal armor of pangolin scales. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 56, 14-22.	3.1	20
44	Growth Behavior of Intermetallic Compounds in Cu/Sn3.0Ag0.5Cu Solder Joints with Different Rates of Cooling. Journal of Electronic Materials, 2015, 44, 590-596.	2.2	19
45	The Relationship between Strength and Toughness in Tempered Steel: Trade-off or Invariable?. Advanced Engineering Materials, 2019, 21, 1801116.	3.5	19
46	Textures and compressive properties of ferromagnetic shape-memory alloy Ni ₄₈ Mn ₂₅ Ga ₂₂ Co ₅ prepared by isothermal forging process. Journal of Materials Research, 2006, 21, 691-697.	2.6	18
47	Effects of equal channel angular pressing on the strength and toughness of Al-Cu alloys. Journal of Materials Science, 2011, 46, 5002-5008.	3.7	18
48	Intrinsically higher fatigue cracking resistance of the penetrable and movable incoherent twin boundary. Scientific Reports, 2014, 4, 3744.	3.3	18
49	Shear and distensile fracture behaviour of Ti-based composites with ductile dendrites. Philosophical Magazine, 2005, 85, 897-915.	1.6	17
50	Preferential growth and orientation relationship of Ag ₃ Sn grains formed between molten Sn and (001) Ag single crystal. Journal of Materials Research, 2009, 24, 2141-2144.	2.6	17
51	Application of electron backscatter diffraction to the study on orientation distribution of intermetallic compounds at heterogeneous interfaces (Sn/Ag and Sn/Cu). Journal of Applied Physics, 2010, 108, 103518.	2.5	17
52	Achieving homogeneity in a two-phase Cu-Ag composite during high-pressure torsion. Journal of Materials Science, 2013, 48, 4606-4612.	3.7	16
53	Fatigue fracture behaviour of spot welded B1500HS steel under tensile-shear load. Fatigue and Fracture of Engineering Materials and Structures, 2015, 38, 914-922.	3.4	16
54	Nature of shear flow lines in equal-channel angular-pressed metals and alloys. Philosophical Magazine Letters, 2007, 87, 735-741.	1.2	14

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55	Transition of Bi embrittlement of SnBi/Cu joint couples with reflow temperature. Journal of Materials Research, 2011, 26, 449-454.	2.6	14
56	Effects of Y2O3 Nanoparticles on Growth Behaviors of Cu6Sn5 Grains in Soldering Reaction. Journal of Electronic Materials, 2013, 42, 3552-3558.	2.2	14
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.	2.2	14
58	Analytic approximations for the elastic moduli of two-phase materials. Physical Review B, 2017, 95, .	3.2	14
59	Stepwise work hardening induced by individual grain boundary in Cu bicrystal micropillars. Scientific Reports, 2015, 5, 15631.	3.3	13
60	A Novel Method for Achieving Gradient Microstructure in a Cu-Al Alloy: Surface Spinning Strengthening (3S). Acta Metallurgica Sinica (English Letters), 2017, 30, 212-217.	2.9	12
61	High-cycle fatigue and fracture behaviours of Cu-Be alloy with a wide strength range. Fatigue and Fracture of Engineering Materials and Structures, 2013, 36, 168-176.	3.4	11
62	Interfacial Microstructure and Growth Kinetics of Intermetallic Compound Layers in Sn-4wt.%Ag/Cu-X (X=Zn, Ag, Sn) Couples. Journal of Electronic Materials, 2011, 40, 1542-1548.	2.2	10
63	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.	2.2	10
64	Improvement of notch fatigue properties of ultra-high CM400 maraging steel through shot peening. Journal of Materials Research, 2017, 32, 4424-4432.	2.6	10
65	Physical origin of surface slip morphologies induced by regular self-organized dislocation patterns in fatigued copper single crystals. Journal of Applied Physics, 2014, 115, 033504.	2.5	9
66	Fatigue and Fracture Behavior of a Cold-Drawn Commercially Pure Aluminum Wire. Materials, 2016, 9, 764.	2.9	9
67	Notch fatigue behavior: Metallic glass versus ultra-high strength steel. Scientific Reports, 2016, 6, 35557.	3.3	9
68	Shear localization in dynamic deformation of copper single crystals. Philosophical Magazine, 2006, 86, 5769-5786.	1.6	7
69	Tensile fracture dynamics and intrinsic plasticity of metallic glasses. Applied Physics Letters, 2013, 102, 031908.	3.3	7
70	Standing wave effect and fractal structure in dislocation evolution. Scientific Reports, 2017, 7, 4062.	3.3	7
71	Investigation on In Situ Tensile Behavior of Superalloy Bicrystals with Different GB Misorientations. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3876-3881.	2.2	5
72	Failure surfaces of high-strength materials predicted by a universal failure criterion. International Journal of Fracture, 2018, 211, 237-252.	2.2	5

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73	Influences of reflow time and strain rate on interfacial fracture behaviors of Sn-4Ag/Cu solder joints. <i>Journal of Applied Physics</i> , 2012, 112, 064508.	2.5	4
74	Tearing Toughness of Ductile Metals. <i>Acta Metallurgica Sinica (English Letters)</i> , 2016, 29, 150-155.	2.9	4
75	Effective Stacking Fault Energy in Face-Centered Cubic Metals. <i>Acta Metallurgica Sinica (English)</i> Tj ETQq1 1 0.784314 rgBT /Overlock	2.9	4
76	Temperature-Dependence of the Mechanical Responses for Two Types of Twinning-Induced Plasticity Steels. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 1475-1480.	2.2	4
77	Significant Enhancement in Cryogenic Mechanical Properties of Cu-Al Alloy via Minor Recrystallization. <i>Advanced Engineering Materials</i> , 2019, 21, 1800889.	3.5	4
78	Exploring the Possibility of Deformation Twinning in Pure Aluminum. <i>Acta Metallurgica Sinica (English Letters)</i> , 2016, 29, 647-651.	2.9	3
79	Shear of Sn-3.8Ag-0.7Cu solder balls on electrodeposited FeNi layer. , 2008, , .		2
80	The orientation and temperature dependences of dislocation velocity in Ni 3 Al single crystals. <i>Philosophical Magazine Letters</i> , 2003, 83, 563-568.	1.2	1
81	Deformation and fracture of Ti-base nanostructured composite. <i>International Journal of Materials Research</i> , 2008, 99, 985-990.	0.3	1
82	Intrinsic Strength Asymmetry Between Tension and Compression of Perfect Face-Centered-Cubic Crystals. <i>Acta Metallurgica Sinica (English Letters)</i> , 2016, 29, 755-762.	2.9	1
83	Low cycle creep-fatigue behaviors of Sn-4Ag/Cu solder joints. , 2011, , .		0
84	The criterion of anomalous slip at 0ÅK in body centered cubic metals. <i>Tungsten</i> , 0, , 1.	4.8	0