Qin Yu

List of Publications by Year
in descending order

		185998	149479
58	3,190	28	56
papers	citations	h-index	g-index

59	59	59	2000
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Tunable stacking fault energies by tailoring local chemical order in CrCoNi medium-entropy alloys. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8919-8924.	3.3	495
2	Twinâ€“twin interactions in magnesium. Acta Materialia, 2014, 77, 28-42.	3.8	243
3	Making ultrastrong steel tough by grain-boundary delamination. Science, 2020, 368, 1347-1352.	6.0	200
4	Cryoforged nanotwinned titanium with ultrahigh strength and ductility. Science, 2021, 373, 1363-1368.	6.0	155
5	Direct observation of twinningâ€“detwinningâ€“retwinning on magnesium single crystal subjected to strain-controlled cyclic tensionâ€“compression in [0â€‰0â€‰0â€‰1] direction. Philosophical Magazine Letters, 2011, 91, 757-765.	0.5	131
6	An experimental study of cyclic deformation of extruded AZ61A magnesium alloy. International Journal of Plasticity, 2011, 27, 768-787.	4.1	127
7	An experimental study of cyclic plastic deformation of extruded ZK60 magnesium alloy under uniaxial loading at room temperature. International Journal of Plasticity, 2014, 53, 107-124.	4.1	122
8	Multiaxial fatigue of extruded AZ61A magnesium alloy. International Journal of Fatigue, 2011, 33, 437-447.	2.8	91
9	Helical van der Waals crystals with discretized Eshelby twist. Nature, 2019, 570, 358-362.	13.7	91
10	Co-zone {1Â¯012} Twin Interaction in Magnesium Single Crystal. Materials Research Letters, 2014, 2, 82-88.	4.1	89
11	On the exceptional damage-tolerance of gradient metallic materials. Materials Today, 2020, 32, 94-107.	8.3	89
12	Multiaxial fatigue of extruded AZ31B magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 546, 119-128.	2.6	88
13	An experimental study on cyclic deformation and fatigue of extruded ZK60 magnesium alloy. International Journal of Fatigue, 2012, 36, 47-58.	2.8	87
14	3D printed Mg-NiTi interpenetrating-phase composites with high strength, damping capacity, and energy absorption efficiency. Science Advances, 2020, 6, eaba5581.	4.7	87
15	Effect of strain amplitude on tensionâ€“compression fatigue behavior of extruded Mg6Al1ZnA magnesium alloy. Scripta Materialia, 2010, 62, 778-781.	2.6	77
16	Effects of cryogenic temperature and grain size on fatigue-crack propagation in the medium-entropy CrCoNi alloy. Acta Materialia, 2020, 200, 351-365.	3.8	76
17	Fatigue damage development in pure polycrystalline magnesium under cyclic tensionâ€“compression loading. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7816-7826.	2.6	74
18	Temperature and load-ratio dependent fatigue-crack growth in the CrMnFeCoNi high-entropy alloy. Journal of Alloys and Compounds, 2019, 794, 525-533.	2.8	74

#	Article	IF	Citations
19	On the impact toughness of gradient-structured metals. Acta Materialia, 2020, 193, 125-137.	3.8	70
20	Characteristic cyclic plastic deformation in ZK60 magnesium alloy. International Journal of Plasticity, 2017, 91, 25-47.	4.1	68
21	Cyclic deformation and fatigue damage in single-crystal magnesium under fully reversed strain-controlled tensionâ€“compression in the [1 0<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mrow><mml:mover accent="true"><mml:mrow><mml:mn mathvariant="bold">1</mml:mn></mml:mrow><mml:mrow><mml:mo>Â¯</mml:mo></mml:mrow></mml:mover></mml:mrow></mml: direction. Scripta Materialia, 2015, 96, 41-44.	2.6	58
22	On the damage tolerance of 3-D printed Mg-Ti interpenetrating-phase composites with bioinspired architectures. Nature Communications, 2022, 13, .	5.8	58
23	Effect of strain ratio on cyclic deformation and fatigue of extruded AZ61A magnesium alloy. International Journal of Fatigue, 2012, 44, 225-233.	2.8	43
24	Electron backscatter diffraction observations of twinningâ€“detwinning evolution in a magnesium alloy subjected to large strain amplitude cyclic loading. Materials & Design, 2015, 65, 762-765.	5.1	42
25	Deformation of extruded ZK60 magnesium alloy under uniaxial loading in different material orientations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 710, 206-213.	2.6	38
26	An experimental study of fatigue crack propagation in extruded AZ31B magnesium alloy. International Journal of Fatigue, 2013, 47, 174-183.	2.8	37
27	Cyclic deformation and fatigue of extruded AZ31B magnesium alloy under different strain ratios. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 649, 93-103.	2.6	37
28	Twinning-Associated Boundaries in Hexagonal Close-Packed Metals. Jom, 2014, 66, 95-101.	0.9	36
29	Microstructure and deformation mechanism of Mg6Al1ZnA alloy experienced tensionâ€“compression cyclic loading. Scripta Materialia, 2011, 64, 233-236.	2.6	27
30	Loading history effect on fatigue crack growth of extruded AZ31B magnesium alloy. Engineering Fracture Mechanics, 2013, 114, 42-54.	2.0	26
31	Pre-compression effect on microstructure evolution of extruded pure polycrystalline magnesium during reversed tension load. Materials Characterization, 2017, 134, 41-48.	1.9	24
32	Effects of texture and twinning on the torsional behavior of magnesium alloy solid rod: A crystal plasticity approach in comparison with uniaxial tension/compression. International Journal of Mechanical Sciences, 2021, 191, 106062.	3.6	20
33	Twinning in rolled AZ31B magnesium alloy under free-end torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 801, 140405.	2.6	19
34	Twinning characteristics in rolled AZ31B magnesium alloy under three stress states. Materials Characterization, 2021, 175, 111050.	1.9	19
35	In situ observation of cross-grain twin pair formation in pure magnesium. Philosophical Magazine Letters, 2018, 98, 139-146.	0.5	16
36	Compressive properties of 3-D printed Mgâ€“NiTi interpenetrating-phase composite: Effects of strain rate and temperature. Composites Part B: Engineering, 2021, 215, 108783.	5.9	16

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37	Compression fatigue properties and damage mechanisms of a bioinspired nacre-like ceramic-polymer composite. Scripta Materialia, 2021, 203, 114089.	2.6	16
38	Bioinspired tungsten-copper composites with Bouligand-type architectures mimicking fish scales. Journal of Materials Science and Technology, 2022, 96, 21-30.	5.6	16
39	Tension-compression-tension tertiary twins in coarse-grained polycrystalline pure magnesium at room temperature. Philosophical Magazine Letters, 2015, 95, 194-201.	0.5	12
40	Fatigue-crack propagation behavior in a high-carbon chromium SUJ2 bearing steel: Role of microstructure. International Journal of Fatigue, 2022, 156, 106693.	2.8	11
41	On the torsional and coupled torsion-tension/compression behavior of magnesium alloy solid rod: A crystal plasticity evaluation. International Journal of Plasticity, 2022, 151, 103213.	4.1	11
42	A discrete element method representation of an anisotropic elastic continuum. Journal of the Mechanics and Physics of Solids, 2018, 121, 363-386.	2.3	9
43	An experimental study of the mechanical behavior of rolled AZ31B magnesium alloy under combined axial-torsion loading. International Journal of Plasticity, 2022, 155, 103319.	4.1	9
44	Inverse Slip Accompanying Twinning and Detwinning during Cyclic Loading of Magnesium Single Crystal. Journal of Materials, 2013, 2013, 1-8.	0.1	8
45	Tensile Elastic Behavior of a Zrâ€“Cuâ€“Agâ€“Al Bulk Metallic Glass. Journal of Materials Science and Technology, 2014, 30, 595-598.	5.6	8
46	Uniaxial Ratcheting of Extruded Mg-10Gd-3Y Alloy under Stress-Controlled Cyclic Tension. Journal of Materials Engineering and Performance, 2020, 29, 2103-2112.	1.2	8
47	Dual-gradient structure leads to optimized combination of high fracture resistance and strength-ductility synergy with minimized final catastrophic failure. Journal of Materials Research and Technology, 2021, 15, 901-910.	2.6	7
48	Bioinspired fish-scale-like magnesium composites strengthened by contextures of continuous titanium fibers: Lessons from nature. Journal of Magnesium and Alloys, 2023, 11, 869-881.	5.5	6
49	An experimental study of anisotropic fracture behavior of rolled AZ31B magnesium alloy under monotonic tension. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 831, 142193.	2.6	6
50	A critical dislocation velocity for serration mechanism transition in a nickel-chromium solid solution alloy. International Journal of Plasticity, 2021, 145, 103071.	4.1	3
51	Use of Nanoindentation, Finite Element Simulations, and a Combined Experimental/Numerical Approach to Characterize Elastic Moduli of Individual Porous Silica Particles. Particulate Science and Technology, 2015, 33, 213-218.	1.1	2
52	Developing a Crystal Plasticity Model for Metallic Materials Based on the Discrete Element Method. MRS Advances, 2017, 2, 2609-2614.	0.5	2
53	On the intrusion-like co-zone twin-twin structure: An in situ observation. Materials Letters, 2021, 286, 129140.	1.3	2
54	Response to Comment on â€œCryoforged nanotwinned titanium with ultrahigh strength and ductilityâ€• Science, 2022, 376, eabo5247.	6.0	2

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55	4D-STEM Imaging of nanostructural heterogeneities in Ni-20Cr after corrosion in molten salt. Microscopy and Microanalysis, 2021, 27, 2134-2135.	0.2	1
56	In situ observations and measurements of plastic deformation, phase transformations and fracture with 4D-STEM. Microscopy and Microanalysis, 2021, 27, 1494-1495.	0.2	1
57	Numerical Study of Multiaxial Loading Behavior of Mg Alloy AZ31 Extruded Bar. Minerals, Metals and Materials Series, 2021, , 101-105.	0.3	0
58	Compression Fatigue Properties and Damage Mechanisms of a Bioinspired Nacre-Like Ceramic-Polymer Composite. SSRN Electronic Journal, 0, , .	0.4	0