

Qiuming Wei

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118
papers

5,568
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h-index

73
g-index

120
ext. papers

6,168
ext. citations

5.3
avg, IF

5.67
L-index

#	Paper	IF	Citations
118	Effect of nanocrystalline and ultrafine grain sizes on the strain rate sensitivity and activation volume: fcc versus bcc metals. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 381, 71-79	5.3	666
117	The design of accurate micro-compression experiments. <i>Scripta Materialia</i> , 2006 , 54, 181-186	5.6	332
116	Microstructure and mechanical properties of super-strong nanocrystalline tungsten processed by high-pressure torsion. <i>Acta Materialia</i> , 2006 , 54, 4079-4089	8.4	264
115	Strain rate effects in the ultrafine grain and nanocrystalline regimes Influence on some constitutive responses. <i>Journal of Materials Science</i> , 2007 , 42, 1709-1727	4.3	257
114	Evolution and microstructure of shear bands in nanostructured Fe. <i>Applied Physics Letters</i> , 2002 , 81, 1240-1242	2.47	247
113	Adiabatic shear banding in ultrafine-grained Fe processed by severe plastic deformation. <i>Acta Materialia</i> , 2004 , 52, 1859-1869	8.4	224
112	Influence of specimen dimensions on the tensile behavior of ultrafine-grained Cu. <i>Scripta Materialia</i> , 2008 , 59, 627-630	5.6	199
111	Influence of specimen dimensions and strain measurement methods on tensile stress-strain curves. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 525, 68-77	5.3	167
110	Size-independent strength and deformation mode in compression of a Pd-based metallic glass. <i>Acta Materialia</i> , 2008 , 56, 5091-5100	8.4	161
109	Strong strain hardening in nanocrystalline nickel. <i>Physical Review Letters</i> , 2009 , 103, 205504	7.4	133
108	Effect of low-temperature rolling on the tensile behavior of commercially pure tungsten. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 491, 62-69	5.3	113
107	Microstructure and mechanical properties of tantalum after equal channel angular extrusion (ECAE). <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 358, 266-272	5.3	108
106	Structural characteristics of AlN films deposited by pulsed laser deposition and reactive magnetron sputtering: A comparative study. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1998 , 16, 2804-2815	2.9	100
105	Microstructure and mechanical properties at different length scales and strain rates of nanocrystalline tantalum produced by high-pressure torsion. <i>Acta Materialia</i> , 2011 , 59, 2423-2436	8.4	96
104	Bulk and microscale compressive properties of a Pd-based metallic glass. <i>Scripta Materialia</i> , 2007 , 57, 517-520	5.6	92
103	Plastic flow localization in bulk tungsten with ultrafine microstructure. <i>Applied Physics Letters</i> , 2005 , 86, 101907	3.4	90
102	Grain size engineering of bcc refractory metals: Top-down and bottom-up Application to tungsten. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 467, 33-43	5.3	86

101	Mechanical properties of diamond-like carbon composite thin films prepared by pulsed laser deposition. <i>Composites Part B: Engineering</i> , 1999 , 30, 675-684	10	85
100	Microstructure and mechanical properties of bulk nanostructured Cu ₃ Ta alloys consolidated by equal channel angular extrusion. <i>Acta Materialia</i> , 2014 , 76, 168-185	8.4	79
99	Preparation and mechanical properties of composite diamond-like carbon thin films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1999 , 17, 3406-3414	2.9	77
98	Tensile properties of nanocrystalline tantalum from molecular dynamics simulations. <i>Acta Materialia</i> , 2008 , 56, 3470-3480	8.4	75
97	Superhard diamondlike carbon: preparation, theory, and properties. <i>International Materials Reviews</i> , 2000 , 45, 133-164	16.1	75
96	The microstructure and mechanical behavior of Mg/Ti multilayers as a function of individual layer thickness. <i>Acta Materialia</i> , 2014 , 63, 216-231	8.4	74
95	Uncovering high-strain rate protection mechanism in nacre. <i>Scientific Reports</i> , 2011 , 1, 148	4.9	73
94	Nano-structured vanadium: processing and mechanical properties under quasi-static and dynamic compression. <i>Scripta Materialia</i> , 2004 , 50, 359-364	5.6	72
93	Temperature Rise Associated with Adiabatic Shear Band: Causality Clarified. <i>Physical Review Letters</i> , 2019 , 122, 015503	7.4	71
92	Design and fabrication of a metastable β -type titanium alloy with ultralow elastic modulus and high strength. <i>Scientific Reports</i> , 2015 , 5, 14688	4.9	69
91	Prevalence of shear banding in compression of Zr ₄₁ Ti ₁₄ Cu _{12.5} Ni ₁₀ Be _{22.5} pillars as small as 150nm in diameter. <i>Acta Materialia</i> , 2009 , 57, 3562-3571	8.4	62
90	A critical assessment of high-temperature dynamic mechanical testing of metals. <i>International Journal of Impact Engineering</i> , 2009 , 36, 177-184	4	59
89	A comparative study on the in situ helium irradiation behavior of tungsten: Coarse grain vs. nanocrystalline grain. <i>Acta Materialia</i> , 2018 , 147, 100-112	8.4	58
88	Statistic derivation of Taylor factors for polycrystalline metals with application to pure magnesium. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 582, 270-275	5.3	58
87	Improvement of wear resistance of pulsed laser deposited diamond-like carbon films through incorporation of metals. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 1998 , 53, 262-266	3.1	54
86	Effect of ceramic nanoparticle reinforcements on the quasistatic and dynamic mechanical properties of magnesium-based metal matrix composites. <i>Journal of Materials Research</i> , 2013 , 28, 1835-1852	2.5	52
85	Formation of nanocrystalline structure in tantalum by sliding friction treatment. <i>International Journal of Refractory Metals and Hard Materials</i> , 2014 , 45, 71-75	4.1	42
84	Microcompression of nanocrystalline nickel. <i>Applied Physics Letters</i> , 2006 , 88, 103112	3.4	42

83	High Plasticity and Substantial Deformation in Nanocrystalline NiFe Alloys Under Dynamic Loading. <i>Advanced Materials</i> , 2009 , 21, 5001-5004	24	41
82	Microstructural evolution and formation of nanocrystalline intermetallic compound during surface mechanical attrition treatment of cobalt. <i>Acta Materialia</i> , 2007 , 55, 5768-5779	8.4	41
81	A comparative study on the microstructure and mechanical behavior of titanium: Ultrafine grain vs. coarse grain. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 669, 226-245	5.3	40
80	Mechanical properties of a high strength CuTiAl composite at elevated temperature. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 638, 322-328	5.3	38
79	Hidden energy dissipation mechanism in nacre. <i>Journal of Materials Research</i> , 2014 , 29, 1573-1578	2.5	36
78	Structure and properties of novel functional diamond-like carbon coatings produced by laser ablation. <i>Surface and Coatings Technology</i> , 2001 , 146-147, 250-257	4.4	35
77	Dynamic behaviors of body-centered cubic metals with ultrafine grained and nanocrystalline microstructures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 493, 58-64	5.3	34
76	Microstructure and mechanical behavior of ECAP processed AZ31B over a wide range of loading rates under compression and tension. <i>Mechanics of Materials</i> , 2015 , 86, 55-70	3.3	33
75	Mechanical behavior of microstructure engineered multi-length-scale titanium over a wide range of strain rates. <i>Acta Materialia</i> , 2013 , 61, 3781-3798	8.4	33
74	Nanoengineering opens a new era for tungsten as well. <i>Jom</i> , 2006 , 58, 40-44	2.1	33
73	Mechanical properties of nanocrystalline and epitaxial TiN films on (100) silicon. <i>Journal of Materials Research</i> , 2001 , 16, 2733-2738	2.5	33
72	Effect of strain rate on the mechanical properties of magnesium alloy AMX602. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 649, 338-348	5.3	29
71	Microstructural evolution and mechanical properties of niobium processed by equal channel angular extrusion up to 24 passes. <i>Acta Materialia</i> , 2012 , 60, 2310-2323	8.4	29
70	Microstructure and helium irradiation performance of high purity tungsten processed by cold rolling. <i>Journal of Nuclear Materials</i> , 2016 , 479, 418-425	3.3	27
69	Effect of low-temperature rolling on the propensity to adiabatic shear banding of commercial purity tungsten. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 578, 394-401	5.3	27
68	A numerical study of microstructure effect on adiabatic shear instability: Application to nanostructured/ultrafine grained materials. <i>Mechanics of Materials</i> , 2010 , 42, 1020-1029	3.3	27
67	Atomic structure, electrical properties, and infrared range optical properties of diamondlike carbon films containing foreign atoms prepared by pulsed laser deposition. <i>Journal of Materials Research</i> , 2000 , 15, 633-641	2.5	26
66	Dynamic failure of titanium: Temperature rise and adiabatic shear band formation. <i>Journal of the Mechanics and Physics of Solids</i> , 2020 , 135, 103811	5	25

65	Nanocrystalline refractory metals for extreme condition applications. <i>Jom</i> , 2011 , 63, 27-31	2.1	24
64	Quasi-static and high-rate mechanical behavior of aluminum-based MMC reinforced with boron carbide of various length scales. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 650, 305-316	5.3	23
63	On adiabatic shear localization in nanostructured face-centered cubic alloys with different stacking fault energies. <i>Acta Materialia</i> , 2017 , 141, 163-182	8.4	23
62	Atomistic simulations of the effect of embedded hydrogen and helium on the tensile properties of monocrystalline and nanocrystalline tungsten. <i>Journal of Nuclear Materials</i> , 2016 , 481, 190-200	3.3	23
61	Atomistic Origin of Deformation Twinning in Biomineral Aragonite. <i>Physical Review Letters</i> , 2017 , 118, 105501	7.4	22
60	In situ synthesis of nanocrystalline intermetallic layer during surface plastic deformation of zirconium. <i>Surface and Coatings Technology</i> , 2007 , 202, 583-589	4.4	21
59	Microstructural evolution of AZ31 magnesium alloy subjected to sliding friction treatment. <i>Philosophical Magazine</i> , 2018 , 98, 1576-1593	1.6	19
58	Transition in the deformation mode of nanocrystalline tantalum processed by high-pressure torsion. <i>Scripta Materialia</i> , 2012 , 67, 253-256	5.6	19
57	Mechanical behavior and dynamic failure of high-strength ultrafine grained tungsten under uniaxial compression. <i>Acta Materialia</i> , 2005 ,	8.4	19
56	Dynamic recrystallization in nanocrystalline AZ31 Mg-alloy. <i>Vacuum</i> , 2017 , 143, 236-240	3.7	18
55	The nature behind the preferentially embrittling effect of impurities on the ductility of tungsten. <i>Computational Materials Science</i> , 2014 , 93, 104-111	3.2	17
54	Effect of strain rate on the mechanical properties of a gum metal with various microstructures. <i>Acta Materialia</i> , 2017 , 132, 193-208	8.4	16
53	Ultrafine and Nanostructured Refractory Metals Processed by SPD: Microstructure and Mechanical Properties. <i>Materials Science Forum</i> , 2008 , 579, 75-90	0.4	14
52	Effect of chamber pressure and atmosphere on the microstructure and nanomechanical properties of amorphous carbon films prepared by pulsed laser deposition. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2001 , 19, 311-316	2.9	14
51	Residual stress and its effect on the mechanical properties of Y-doped Mg alloy fabricated via back-pressure assisted equal channel angular pressing (ECAP-BP). <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 669, 110-117	5.3	13
50	Compressive responses of ultrafine-grained titanium within a broad range of strain rates and temperatures. <i>Mechanics of Materials</i> , 2017 , 115, 22-33	3.3	13
49	Dynamic self-strengthening of a bio-nanostructured armor - conch shell. <i>Materials Science and Engineering C</i> , 2019 , 103, 109820	8.3	12
48	Effects of reinforcement morphology on the mechanical behavior of magnesium metal matrix composites based on crystal plasticity modeling. <i>Mechanics of Materials</i> , 2016 , 95, 1-14	3.3	12

47	Enhanced hydrogen absorption kinetics by introducing fine eutectic and long-period stacking ordered structure in ternary eutectic Mg ₇₁ Ni ₂₇ alloy. <i>Journal of Alloys and Compounds</i> , 2020 , 820, 153187	5.7	11
46	Gradient shear banding in a magnesium alloy induced by sliding friction treatment. <i>Vacuum</i> , 2017 , 143, 95-97	3.7	10
45	Quasi-static and dynamic mechanical properties of commercial-purity tungsten processed by ECAE at low temperatures. <i>Journal of Materials Science</i> , 2008 , 43, 7379-7384	4.3	10
44	Examining the Effect of Pileup on the Accuracy of Sharp Indentation Testing. <i>Advances in Materials Science and Engineering</i> , 2015 , 2015, 1-10	1.5	7
43	Mechanical behavior of a lanthanum-doped magnesium alloy at different strain rates. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 626, 108-121	5.3	7
42	Numerical simulations of adiabatic shear localization in textured FCC metal based on crystal plasticity finite element method. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 737, 348-363	5.3	7
41	The effect of rolling on the microstructure and compression behavior of AA5083 subjected to large-scale ECAE. <i>Journal of Alloys and Compounds</i> , 2017 , 695, 3589-3597	5.7	6
40	Critical issues related to instrumented indentation on non-uniform materials: Application to niobium subjected to high pressure torsion. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 586, 149-159	5.3	6
39	Microstructure evolution accompanying high temperature; uniaxial tensile creep of self-reinforced silicon nitride ceramics. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1999 , 272, 380-388	5.3	6
38	The Effect of High Temperature Soaking on the Microstructure and Properties of a Sintered Silicon Nitride. <i>Ceramic Engineering and Science Proceedings</i> , 3-10	0.1	6
37	Morphological and mechanical stability of HCP-based multilayer nanofilms at elevated temperatures. <i>Surface and Coatings Technology</i> , 2015 , 275, 142-147	4.4	5
36	Microstructural evolution and hydrogen storage properties of melt-spun eutectic Mg _{76.87} Ni _{12.78} Y _{10.35} alloy with low hydrides formation/decomposition enthalpy. <i>International Journal of Hydrogen Energy</i> , 2020 , 45, 16644-16653	6.7	5
35	ASB induced phase transformation in high oxygen doped commercial purity Ti. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 830, 142321	5.3	5
34	Quasi-static Tensile and Compressive Behavior of Nanocrystalline Tantalum based on Miniature Specimen Testing Part I: Materials Processing and Microstructure. <i>Jom</i> , 2016 , 68, 2832-2838	2.1	4
33	A rate dependent constitutive model for ECAE Cu based on instrumented nanoindentation results. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 597, 279-287	5.3	4
32	A modified criterion for shear band formation in bulk metallic glass under complex stress states. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 2613-2620	5.3	4
31	Tungsten-based heterogeneous multilayer structures via diffusion bonding. <i>International Journal of Refractory Metals and Hard Materials</i> , 2020 , 92, 105308	4.1	4
30	Mechanical properties and failure of ECAE processed Mg ₉₇ Y ₂ Zn ₁ at different strain rates. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 762, 138094	5.3	3

29	Preface to the special issue on ultrafine-grained materials. <i>Journal of Materials Science</i> , 2014 , 49, 6485-6486	4.96	3
28	Doping Induced Internal Stress Reduction in Diamondlike Carbon Films Deposited by Pulsed Laser Ablation. <i>Materials Research Society Symposia Proceedings</i> , 1997 , 498, 61		3
27	Microstructural changes due to heat-treatment of annealing and their effect on the creep behavior of self-reinforced silicon nitride ceramics. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2001 , 299, 141-151	5.3	3
26	Insights from the MEDE program: An overview of microstructure-property linkages in the dynamic behaviors of magnesium alloys. <i>Mechanics of Materials</i> , 2021 , 163, 104084	3.3	3
25	Microstructures and mechanical properties of Mg/Zr nanostructured multilayers with coherent interface. <i>Thin Solid Films</i> , 2020 , 712, 138314	2.2	3
24	Adiabatic shear localization of tungsten based heterogeneous multilayer structures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 801, 140393	5.3	3
23	Quasi-static Tensile and Compressive Behavior of Nanocrystalline Tantalum Based on Miniature Specimen Testing Part II: Mechanical Properties. <i>Jom</i> , 2016 , 68, 2839-2846	2.1	2
22	Microstructure and Wear Resistance of Doped Diamondlike Carbon Prepared by Pulsed Laser Deposition. <i>Materials Research Society Symposia Proceedings</i> , 1997 , 505, 331		2
21	Preparation of Superhard Functionally Graded Tetrahedral Amorphous Carbon Coatings by Pulsed Laser Deposition. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 617, 771		2
20	Novel Tungsten Carbide Nanocrystalline Composites by Pulsed Laser Deposition. <i>Materials Research Society Symposia Proceedings</i> , 2000 , 634, 611		2
19	Comparison of ALN Films Synthesized by Pulsed Laser Ablation and Magnetron Sputtering Techniques. <i>Materials Research Society Symposia Proceedings</i> , 1997 , 505, 469		1
18	Molecular Dynamics Simulation of Nanocrystalline Tantalum under Uniaxial Tension. <i>Solid State Phenomena</i> , 2008 , 139, 83-88	0.4	1
17	Microstructure and IR Range Optical Properties of Pure DLC and DLC Containing Dopants Prepared by Pulsed Laser Deposition. <i>Materials Research Society Symposia Proceedings</i> , 1998 , 526, 331		1
16	Diamondlike Carbon, Carbon Nitride, and Titanium Nitride Coatings on Metal and Polymer Substrates. <i>Materials Research Society Symposia Proceedings</i> , 1998 , 526, 355		1
15	Micro- and Nano-Mechanical Behavior of Diamondlike Carbon Containing Foreign Atoms Prepared by Pulsed Laser Deposition. <i>Materials Research Society Symposia Proceedings</i> , 1998 , 555, 303		1
14	Non-conventional hot rolling for improvement of mechanical properties in binary Mg-alloys. <i>Mechanics of Materials</i> , 2022 , 164, 104111	3.3	1
13	Superb high-temperature strength of aluminum-based nanocomposite with supra-nano stacking faults/twins. <i>Composites Communications</i> , 2021 , 25, 100753	6.7	1
12	High Temperature Uniaxial Creep Behavior of a Sintered in situ Reinforced Silicon Nitride Ceramics. <i>Ceramic Engineering and Science Proceedings</i> , 463-470	0.1	1

- 11 Comment on "Cryoforged nanotwinned titanium with ultrahigh strength and ductility".. *Science*, **2022**, 376, eabo3440 33.3 1
- 10 Ductility of Nanocrystalline Metals: Intrinsic or Extrinsic. *Materials Science Forum*, **2009**, 633-634, 151-164.4
- 9 Microstructure and Nanomechanical Properties of Amorphous Carbon Thin Films Prepared by Pulsed Laser Deposition in Various Atmospheres. *Materials Research Society Symposia Proceedings*, **2000**, 616, 217
- 8 Effect of Film Thickness on the Nanoindentation Measurements of Hard Diamondlike Carbon Films Prepared by Pulsed Laser Deposition. *Materials Research Society Symposia Proceedings*, **2000**, 649, 7201
- 7 Fabrication and Characterization of Functionally Gradient Diamond-Like Carbon Coatings. *Materials Research Society Symposia Proceedings*, **1999**, 593, 323
- 6 Electrical Behavior of Pure and Cu Doped Diamondlike Carbon Prepared by Pulsed Laser Deposition. *Materials Research Society Symposia Proceedings*, **1999**, 593, 377
- 5 Fabrication and Characterization of Functionally Gradient Diamondlike Carbon Coatings. *Materials Research Society Symposia Proceedings*, **1999**, 594, 313
- 4 Mechanical Properties of Mg Alloys AMX602 and AZXE7111 under Quasi-Static and Dynamic Loading **2012**, 371-375
- 3 Mechanical Properties of Newly Developed Mg-Alloys AMX602 AND AZXE7111 under Quasi-Static and Dynamic Loading 371-375
- 2 Ballistic Performance of Tungsten-Based Heterogeneous Multilayer Structures. *Journal of Dynamic Behavior of Materials*, 1 1.8
- 1 Effect of Heat-Treatment on Creep Behavior of a Self-Reinforced Silicon Nitride (Si₃N₄). *Ceramic Engineering and Science Proceedings*, 537-544 0.1