

Shizhong Wei

List of Publications by Year in descending order

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120
papers

2,446
citations

201674

27
h-index

289244

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120
all docs

120
docs citations

120
times ranked

1342
citing authors

#	ARTICLE	IF	CITATIONS
1	The application of CeO ₂ -based materials in electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2019, 7, 17675-17702.	10.3	128
2	Application of Co ₃ O ₄ -based materials in electrocatalytic hydrogen evolution reaction: A review. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 21205-21220.	7.1	91
3	Effects of carbides on abrasive wear properties and failure behaviours of high speed steels with different alloy element content. <i>Wear</i> , 2017, 376-377, 968-974.	3.1	89
4	Research on wear resistance of high speed steel with high vanadium content. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 404, 138-145.	5.6	88
5	Effects of vanadium and carbon on microstructures and abrasive wear resistance of high speed steel. <i>Tribology International</i> , 2006, 39, 641-648.	5.9	76
6	Self-supporting transition metal chalcogenides on metal substrates for catalytic water splitting. <i>Chemical Engineering Journal</i> , 2021, 421, 129645.	12.7	62
7	Effects of carbon on microstructures and properties of high vanadium high-speed steel. <i>Materials & Design</i> , 2006, 27, 58-63.	5.1	55
8	Graphene-based interlayer for high-performance lithium-sulfur batteries: A review. <i>Materials and Design</i> , 2021, 211, 110171.	7.0	52
9	Preparation and characterization of Mo/Al ₂ O ₃ composites. <i>International Journal of Refractory Metals and Hard Materials</i> , 2016, 54, 186-195.	3.8	48
10	Study on relative wear resistance and wear stability of high-speed steel with high vanadium content. <i>Wear</i> , 2007, 262, 253-261.	3.1	46
11	Oxidation behavior of Mo-Si-B alloys at medium-to-high temperatures. <i>Journal of Materials Science and Technology</i> , 2021, 60, 113-127.	10.7	45
12	WO ₃ -Based Materials as Electrocatalysts for Hydrogen Evolution Reaction. <i>Frontiers in Materials</i> , 2020, 7, .	2.4	44
13	Microstructure and high temperature deformation behavior of the Mo-ZrO ₂ alloys. <i>Journal of Alloys and Compounds</i> , 2017, 716, 321-329.	5.5	42
14	Microstructure and wear properties of high-speed steel with high molybdenum content under rolling-sliding wear. <i>Tribology International</i> , 2017, 116, 39-46.	5.9	40
15	Preparation and characterization of Mo/ZrO ₂ -Y ₂ O ₃ composites. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018, 75, 202-210.	3.8	40
16	Effect of slippage rate on frictional wear behaviors of high-speed steel with dual-scale tungsten carbides (M ₆ C) under high-pressure sliding-rolling condition. <i>Tribology International</i> , 2021, 154, 106719.	5.9	38
17	Effects of carbon content and sliding ratio on wear behavior of high-vanadium high-speed steel (HVHSS) under high-stress rolling-sliding contact. <i>Tribology International</i> , 2014, 70, 34-41.	5.9	37
18	Tribological behaviors of B ₄ C-hBN ceramic composites used as pins or discs coupled with B ₄ C ceramic under dry sliding condition. <i>Ceramics International</i> , 2017, 43, 1578-1583.	4.8	36

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19	Effect of nano-sized ZrO ₂ on high temperature performance of Mo-ZrO ₂ alloy. Journal of Alloys and Compounds, 2018, 768, 81-87.	5.5	36
20	Fabrication and mechanical properties of tungsten alloys reinforced with c-ZrO ₂ particles. Journal of Alloys and Compounds, 2018, 769, 694-705.	5.5	35
21	Optimization of heat treatment technique of high-vanadium high-speed steel based on back-propagation neural networks. Materials & Design, 2007, 28, 1425-1432.	5.1	32
22	Preparation, microstructure and properties of molybdenum alloys reinforced by in-situ Al ₂ O ₃ particles. International Journal of Refractory Metals and Hard Materials, 2012, 30, 208-212.	3.8	31
23	Lead-Free Perovskite Narrow-Bandgap Oxide Semiconductors of Rare-Earth Manganates. ACS Omega, 2020, 5, 8766-8776.	3.5	31
24	Dry sliding tribological properties of self-mated couples of B ₄ C-hBN ceramic composites. Ceramics International, 2017, 43, 162-166.	4.8	30
25	Study on preparation and properties of molybdenum alloys reinforced by nano-sized ZrO ₂ particles. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	29
26	A hybrid microstructure design strategy achieving W-ZrO ₂ (Y) alloy with high compressive strength and critical failure strain. Journal of Alloys and Compounds, 2017, 708, 202-212.	5.5	29
27	Preparation, microstructure, and constitutive equation of W-0.25wt% Al ₂ O ₃ alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 744, 79-85.	5.6	29
28	Facile Synthesis of Antimony Tungstate Nanosheets as Anodes for Lithium-Ion Batteries. Nanomaterials, 2019, 9, 1689.	4.1	28
29	Hatted 1T/2Hâ€Phase MoS ₂ on Ni ₃ S ₂ Nanorods for Efficient Overall Water Splitting in Alkaline Media. Chemistry - A European Journal, 2020, 26, 2034-2040.	3.3	27
30	Flow behavior and processing map for hot deformation of W-1.5ZrO ₂ alloy. Journal of Alloys and Compounds, 2019, 802, 118-128.	5.5	26
31	Effect of sintering temperature on fine-grained Cu W composites with high copper. Materials Characterization, 2019, 153, 121-127.	4.4	26
32	Microstructure and mechanical properties of W-ZrO ₂ alloys by different preparation techniques. Journal of Alloys and Compounds, 2019, 774, 210-221.	5.5	26
33	Influences of hBN content and test mode on dry sliding tribological characteristics of B ₄ C-hBN ceramics against bearing steel. Ceramics International, 2018, 44, 6443-6450.	4.8	25
34	Few-Layered WS ₂ Anchored on Co, N-Doped Carbon Hollow Polyhedron for Oxygen Evolution and Hydrogen Evolution. ACS Applied Materials & Interfaces, 2022, 14, 22030-22040.	8.0	25
35	Preparation of wâ€cu nano-composite powders with high copper content using a chemical co-deposition technique. Advanced Powder Technology, 2018, 29, 1323-1330.	4.1	24
36	Low-temperature solution synthesis and characterization of enhanced titanium dioxide photocatalyst on tailored mesoporous Î³-Al ₂ O ₃ support. Composites Communications, 2020, 19, 82-89.	6.3	24

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37	Artificial neural network prediction of retained austenite content and impact toughness of high-vanadium high-speed steel (HVHSS). <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 433, 251-256.	5.6	23
38	Mechanical properties and strengthening mechanism of the hydrothermal synthesis of nano-sized Al_2O_3 ceramic particle reinforced molybdenum alloy. <i>Ceramics International</i> , 2020, 46, 10400-10408.	4.8	23
39	Graphene induced growth of Sb_2WO_6 nanosheets for high-performance pseudocapacitive lithium-ion storage. <i>Journal of Alloys and Compounds</i> , 2020, 839, 155614.	5.5	23
40	Uniform nanosized oxide particles dispersion strengthened tungsten alloy fabricated involving hydrothermal method and hot isostatic pressing. <i>Journal of Alloys and Compounds</i> , 2020, 824, 153894.	5.5	22
41	Solvothermal preparation and characterization of ordered-mesoporous $\text{ZrO}_2/\text{TiO}_2$ composites for photocatalytic degradation of organic dyes. <i>Ceramics International</i> , 2021, 47, 7632-7641.	4.8	22
42	Application of Manganese-Based Materials in Aqueous Rechargeable Zinc-Ion Batteries. <i>Frontiers in Energy Research</i> , 2020, 8, .	2.3	21
43	Fabrication and wear property of in-situ micro-nano dual-scale vanadium carbide ceramics strengthened wear-resistant composite layers. <i>Ceramics International</i> , 2021, 47, 953-964.	4.8	21
44	Microstructure and preparation of an ultra-fine-grained $\text{W-Al}_2\text{O}_3$ composite via hydrothermal synthesis and spark plasma sintering. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018, 72, 149-156.	3.8	20
45	Development of tungsten heavy alloy reinforced by cubic zirconia through liquid-liquid doping and mechanical alloying methods. <i>International Journal of Refractory Metals and Hard Materials</i> , 2019, 78, 1-8.	3.8	20
46	Template-free hydrothermal synthesis of 3D hollow aggregate spherical structure WO_3 nano-plates and photocatalytic properties. <i>Materials Research Bulletin</i> , 2018, 101, 280-286.	5.2	19
47	Effect of spark plasma sintering temperature on structure and performance characteristics of $\text{Cu-20wt}\% \text{W}$ composite. <i>Journal of Alloys and Compounds</i> , 2022, 912, 165246.	5.5	19
48	Fine structure and interface characteristic of Al_2O_3 in molybdenum alloy. <i>International Journal of Refractory Metals and Hard Materials</i> , 2013, 41, 483-488.	3.8	18
49	Preparation, microstructure, and properties of tungsten alloys reinforced by ZrO_2 particles. <i>International Journal of Refractory Metals and Hard Materials</i> , 2017, 64, 40-46.	3.8	18
50	Enhanced photocatalytic performance of $\text{WO}_3\text{-x}$ with oxygen vacancies via heterostructuring. <i>Composites Communications</i> , 2019, 16, 106-110.	6.3	18
51	Hydrothermal synthesis of nanoplates assembled hierarchical h-WO_3 microspheres and phase evolution in preparing cubic Zr(Y)O_2 -doped tungsten powders. <i>Advanced Powder Technology</i> , 2018, 29, 2633-2643.	4.1	17
52	Effect of ZrO_2 content on microstructure and mechanical properties of W alloys fabricated by spark plasma sintering. <i>International Journal of Refractory Metals and Hard Materials</i> , 2019, 79, 79-89.	3.8	17
53	Modification of the silicon phase and mechanical properties in Al-40Zn-6Si alloy with Eu addition. <i>Materials and Design</i> , 2020, 186, 108268.	7.0	17
54	Evaluating compressive property and hot deformation behavior of molybdenum alloy reinforced by nanoscale zirconia particles. <i>Journal of Alloys and Compounds</i> , 2021, 860, 158289.	5.5	17

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55	Interface microstructure and growth mechanism of brazing Cu/Al joint with BA188Si filler metal. Vacuum, 2020, 181, 109641.	3.5	16
56	Convenient fabrication of a core-shell Sn@TiO ₂ anode for lithium storage from tinplate electroplating sludge. Chemical Communications, 2020, 56, 10187-10190.	4.1	16
57	Achieving an unprecedented strength-ductility balance of molybdenum alloy by homogeneously distributing yttrium-cerium oxide. Journal of Alloys and Compounds, 2022, 897, 163110.	5.5	16
58	Research on high-temperature properties of the molybdenum sheet doped with 1.0 wt% Al ₂ O ₃ particles. Journal of Alloys and Compounds, 2018, 769, 340-346.	5.5	15
59	Shining light on transition metal tungstate-based nanomaterials for electrochemical applications: Structures, progress, and perspectives. Nano Research, 2022, 15, 6924-6960.	10.4	15
60	Microstructure and High-Temperature Frictional Wear Property of Mo-Based Composites Reinforced by Aluminum and Lanthanum Oxides. Tribology Transactions, 2013, 56, 833-840.	2.0	14
61	Establishment of processing map, microstructure and high-temperature tensile properties of W-0.25 wt% Al ₂ O ₃ alloys. Journal of Alloys and Compounds, 2020, 831, 154751.	5.5	14
62	Extremely uniform nanosized oxide particles dispersion strengthened tungsten alloy with high tensile and compressive strengths fabricated involving liquid-liquid method. Journal of Alloys and Compounds, 2021, 878, 160335.	5.5	14
63	Research on the hot deformation behavior of Cu-20 wt% W composite under different temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 830, 142326.	5.6	14
64	Microstructure characterization and properties of YSZ particles doped tungsten alloy prepared by liquid phase method. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 832, 142483.	5.6	14
65	Effect of Carbides on Wear Characterization of High-Alloy Steels under High-Stress Rolling Sliding Condition. Tribology Transactions, 2014, 57, 631-636.	2.0	13
66	Microstructure and properties characterization of W-25Cu composite materials liquid-liquid doped with La ₂ O ₃ . International Journal of Refractory Metals and Hard Materials, 2018, 71, 115-121.	3.8	13
67	Effect of Graphene Oxide Concentration in Electrolyte on Corrosion Behavior of Electrodeposited Zn Electrochemical Reduction Graphene Composite Coatings. Coatings, 2019, 9, 758.	2.6	13
68	Two-step alcoholothermal synthesis and characterization of enhanced visible-light-active WO ₃ -coated TiO ₂ heterostructure. Ceramics International, 2020, 46, 2102-2109.	4.8	13
69	Deformation behavior of Mo ₅ SiB ₂ at elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 623, 124-132.	5.6	12
70	Phase evolution of hydrothermal synthesis oxide-doped molybdenum powders. International Journal of Refractory Metals and Hard Materials, 2020, 86, 105085.	3.8	12
71	Erosion-Wear Behaviors of High-Chromium Cast Iron with High Nitrogen Content in Water-Sand Slurry and Acid-Sand Slurry. Tribology Transactions, 2020, 63, 325-335.	2.0	12
72	Cracking Behavior of René 104 Nickel-Based Superalloy Prepared by Selective Laser Melting Using Different Scanning Strategies. Materials, 2020, 13, 2149.	2.9	12

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73	Development of a new high-density iron-tungsten alloy (FWA) reinforced by Fe ₇ W ₆ and Fe ₂ W particles with high tensile strength and specific strength. <i>Journal of Alloys and Compounds</i> , 2021, 854, 157323.	5.5	12
74	A review of end-point carbon prediction for BOF steelmaking process. <i>High Temperature Materials and Processes</i> , 2020, 39, 653-662.	1.4	12
75	The Mechanical Properties of the Mo-0.5Ti and Mo-0.1Zr Alloys at Room Temperature and High Temperature Annealing. <i>High Temperature Materials and Processes</i> , 2017, 36, 167-173.	1.4	11
76	Effect of Carbon Content on Abrasive Impact Wear Behavior of Cr-Si-Mn Low Alloy Wear Resistant Cast Steels. <i>Frontiers in Materials</i> , 2019, 6, .	2.4	11
77	Tribological performance of self-matching pairs of B ₄ C/hBN composite ceramics under different frictional loads. <i>Ceramics International</i> , 2020, 46, 996-1001.	4.8	11
78	Strengthening mechanism and effect of Al ₂ O ₃ particle on high-temperature tensile properties and microstructure evolution of W- α -Al ₂ O ₃ alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 835, 142678.	5.6	11
79	Characterization of Al ₂ O ₃ in High-Strength Mo Alloy Sheets by High-Resolution Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2016, 22, 122-130.	0.4	10
80	Preparation and Properties of ZrO ₂ /Mo Alloys. <i>High Temperature Materials and Processes</i> , 2017, 36, 163-166.	1.4	10
81	Study on thermal fatigue performance of the molybdenum plate doped with Al ₂ O ₃ particles. <i>Journal of Alloys and Compounds</i> , 2020, 823, 153748.	5.5	10
82	Research on preparation process for the in situ nanosized Zr(Y)O ₂ particles dispersion-strengthened tungsten alloy through synthesizing doped hexagonal (NH ₄) _{0.33} WO ₃ . <i>Journal of Alloys and Compounds</i> , 2020, 843, 156059.	5.5	10
83	Research on the effect of liquid-liquid doping processes on the doped powders and microstructures of W- α -ZrO ₂ (Y) alloys. <i>Journal of Alloys and Compounds</i> , 2021, 855, 157335.	5.5	10
84	Microstructure and mechanical properties of brazing joint of silver-based composite filler metal. <i>Nanotechnology Reviews</i> , 2020, 9, 1034-1043.	5.8	10
85	Microproperties and interface behavior of the BAg25TS brazed joint. <i>Vacuum</i> , 2019, 169, 108928.	3.5	9
86	Thermodynamic evaluation and investigation of solidification microstructure in the Fe-Cr-Ni-C system. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2020, 69, 101763.	1.6	9
87	Microstructure and erosion wear properties of high chromium cast iron added nitrogen by high pressure in alkaline sand slurry. <i>Wear</i> , 2021, 476, 203655.	3.1	9
88	Effect of rotary swaging and subsequent annealing on microstructure and mechanical properties of W-1.5ZrO ₂ alloys. <i>Journal of Alloys and Compounds</i> , 2021, 875, 160041.	5.5	9
89	Fabrication of nano-ZrO ₂ strengthened WMoNbTaV refractory high-entropy alloy by spark plasma sintering. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 843, 143113.	5.6	9
90	Microstructure evolution of W-1.0 α -ZrO ₂ alloy during high temperature deformation. <i>Journal of Alloys and Compounds</i> , 2022, 921, 166153.	5.5	9

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91	Investigation on erosion-wear behaviors of high-chromium cast iron with high nitrogen content in salt sand slurry. <i>Materials Research Express</i> , 2019, 6, 106558.	1.6	8
92	Effect of zirconia on low cycle fatigue and energy absorption of molybdenum alloy. <i>Journal of Alloys and Compounds</i> , 2021, 867, 159118.	5.5	8
93	Constitutive Modeling of High-Temperature Flow Behavior of an Nb Micro-alloyed Hot Stamping Steel. <i>Journal of Materials Engineering and Performance</i> , 2016, 25, 948-959.	2.5	7
94	Studies on Kinetics, Isotherms, Thermodynamics and Adsorption Mechanism of Methylene Blue by N and S Co-Doped Porous Carbon Spheres. <i>Nanomaterials</i> , 2021, 11, 1819.	4.1	7
95	Effect of Al ₂ O ₃ content and swaging on microstructure and mechanical properties of Al ₂ O ₃ /W alloys. <i>International Journal of Refractory Metals and Hard Materials</i> , 2020, 86, 105082.	3.8	6
96	Dislocation climb in Mo 5 SiB 2 during high-temperature deformation. <i>International Journal of Refractory Metals and Hard Materials</i> , 2016, 61, 115-120.	3.8	5
97	Effect of Tempering Temperature on Impact Wear Behavior of 30Cr3Mo2WNi Hot-Working Die Steel. <i>Frontiers in Materials</i> , 2019, 6, .	2.4	5
98	Different Influences of Rare Earth Eu Addition on Primary Si Refinement in Hypereutectic Al-Si Alloys with Varied Purity. <i>Materials</i> , 2019, 12, 3505.	2.9	5
99	A New Predicting Method of Build-up Rate of Steering Tools Based on Kriging Surrogate Model. <i>Arabian Journal for Science and Engineering</i> , 2018, 43, 4949-4956.	3.0	4
100	Synthesis, densification and characterization of ultra-fine W-Al ₂ O ₃ composite powder. <i>Materials Characterization</i> , 2018, 142, 245-251.	4.4	4
101	Preparation and wear properties of high-vanadium alloy composite layer. <i>Friction</i> , 2022, 10, 1166-1179.	6.4	4
102	Effects of CeO ₂ Content on Friction and Wear Properties of SiCp/Al-Si Composite Prepared by Powder Metallurgy. <i>Materials</i> , 2020, 13, 4547.	2.9	3
103	Phase analysis and corrosion behavior of brazing Cu/Al dissimilar metal joint with BA188Si filler metal. <i>Nanotechnology Reviews</i> , 2021, 10, 1318-1328.	5.8	3
104	Effect of blowing parameters on bath mixing efficiency during basic oxygen furnace steelmaking process. <i>Engineering Reports</i> , 2021, 3, e12359.	1.7	3
105	Microstructure and abrasive wear properties of high-vanadium-chromium wear resistant alloy. <i>Materials Research Express</i> , 2021, 8, 026501.	1.6	3
106	Load-Carrying Capacity Analysis on Derrick of Offshore Module Drilling Rig. <i>Open Petroleum Engineering Journal</i> , 2014, 7, 29-40.	0.6	3
107	Hydrothermal synthesis and adsorption property of porous spherical Al ₂ O ₃ nanoparticles. <i>Materials Research Express</i> , 2019, 6, 075023.	1.6	2
108	Numerical Calculation of the Tee Local Resistance Coefficient. <i>The Open Mechanical Engineering Journal</i> , 2015, 9, 876-881.	0.3	2

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109	The Effect of Vanadium Content Coupling with Heat Treatment Process on the Properties of Low-Vanadium Wear-Resistant Alloy. <i>Materials</i> , 2022, 15, 285.	2.9	2
110	Effect of hot-working process on interface structure and ductile-to-brittle transition temperature of tungsten alloy reinforced by Al ₂ O ₃ particles. <i>International Journal of Refractory Metals and Hard Materials</i> , 2022, 108, 105945.	3.8	2
111	A study of Ti-Al-Si coatings by reactive braze coating process. <i>Materials Letters</i> , 2006, 60, 2240-2242.	2.6	1
112	Characteristic of Cu-Al ₂ O ₃ composites prepared by internal oxidation-remelting solidification. <i>Emerging Materials Research</i> , 2017, 6, 270-275.	0.7	1
113	A novel high density W-30Cu alloy prepared via hydrothermal synthesis-co-reduction and canned hot extrusion methods. <i>Metallurgical Research and Technology</i> , 2019, 116, 113.	0.7	1
114	Effects of CeO ₂ on the Si Precipitation Mechanism of SiCp/Al-Si Composite Prepared by Powder Metallurgy. <i>Materials</i> , 2020, 13, 4365.	2.9	1
115	Evaluating low cycle fatigue property of nanoscale ZrO ₂ particles strengthening molybdenum alloy. <i>Vacuum</i> , 2022, 203, 111170.	3.5	1
116	Research on Hydro-oscillator for petroleum drilling engineering. , 2016, , .		0
117	Study on the Reblow Model for Medium-High Carbon Steel Melting by Converter. <i>High Temperature Materials and Processes</i> , 2018, 37, 973-979.	1.4	0
118	Narrow-Bandgap Semiconductors of Perovskite Rare-Earth Orthoferrites (REFeO ₃). <i>Current Chinese Science</i> , 2021, 1, 438-452.	0.5	0
119	Research Progress of Alkali Doped Cu(In,Ga)Se ₂ Thin Film Solar Cells. <i>Current Chinese Science</i> , 2021, 01, .	0.5	0
120	Effect of cooling conditions on microstructure evolution and wear behavior of high chromium cast iron hardfacing layer. <i>Materials Letters</i> , 2021, 314, 131417.	2.6	0