Zhiyi Liu

List of Publications by Year
in descending order

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102 papers	2,349 citations	172207 29 h-index	276539 41 g-index
102 all docs	102 docs citations	102 times ranked	1106 citing authors

#	Article	IF	Citations
1	Microstructures and fatigue fracture behavior of an Alâ€“Cuâ€“Mgâ€“Ag alloy with addition of rare earth Er. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 1806-1814.	2.6	77
2	Microstructure and mechanical properties of ZK60â€“Yb magnesium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 478, 101-107.	2.6	72
3	On strain-induced dissolution of Î¸â€² and Î¸ particles in Alâ€“Cu binary alloy during equal channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 2217-2222.	2.6	69
4	Mechanisms for Goss-grains induced crack deflection and enhanced fatigue crack propagation resistance in fatigue stage II of an AA2524 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 625, 271-277.	2.6	63
5	Evolution of the Brass texture in an Al-Cu-Mg alloy during hot rolling. Journal of Alloys and Compounds, 2017, 691, 786-799.	2.8	62
6	Reprecipitation behavior in Alâ€“Cu binary alloy after severe plastic deformation-induced dissolution of Î¸â€² particles. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 546, 26-33.	2.6	61
7	Effects of Ag variations on the microstructures and mechanical properties of Alâ€“Cuâ€“Mg alloys at elevated temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 611, 69-76.	2.6	54
8	Enhanced fatigue crack propagation resistance in a superhigh strength Alâ€“Znâ€“Mgâ€“Cu alloy by modifying RRA treatment. Materials Characterization, 2016, 118, 438-445.	1.9	54
9	Effects of natural aging on the formation and strengthening effect of G.P. zones in a retrogression and re-aged Alâ€“Znâ€“Mgâ€“Cu alloy. Journal of Alloys and Compounds, 2020, 829, 154469.	2.8	54
10	Slip band formation in plastic deformation zone at crack tip in fatigue stage II of 2xxx aluminum alloys. International Journal of Fatigue, 2016, 91, 68-78.	2.8	52
11	Enhanced fracture toughness in an annealed Al-Cu-Mg alloy by increasing Goss/Brass texture ratio. Materials Characterization, 2016, 119, 47-54.	1.9	51
12	Microstructures and fatigue fracture behavior of an Alâ€“Cuâ€“Mgâ€“Ag alloy with a low Cu/Mg ratio. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 530, 473-480.	2.6	47
13	Quantitative transmission electron microscopy and atom probe tomography study of Ag-dependent precipitation of Î© phase in Al-Cu-Mg alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 687, 8-16.	2.6	47
14	Grain Refinement of the Al-Cu-Mg-Ag Alloy with Er and Sc Additions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2853-2858.	1.1	45
15	Deformation behavior of an Alâ€“Cuâ€“Mgâ€“Mnâ€“Zr alloy during hot compression. Journal of Materials Science, 2011, 46, 3708-3715.	1.7	45
16	Strain-induced dissolution of Cuâ€“Mg co-clusters and dynamic recrystallization near a fatigue crack tip of an underaged Alâ€“Cuâ€“Mg alloy during cyclic loading at ambient temperature. Scripta Materialia, 2011, 64, 1133-1136.	2.6	44
17	On the role of texture in governing fatigue crack propagation behavior of 2524 aluminum alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 669, 367-378.	2.6	44
18	Effects of Ge and Ag additions on quench sensitivity and mechanical properties of an Alâ€“Znâ€“Mgâ€“Cu alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 682, 640-647.	2.6	44

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19	Mg-controlled formation of Mgâ€“Ag co-clusters in initial aged Alâ€“Cuâ€“Mgâ€“Ag alloys. Journal of Alloys and Compounds, 2014, 602, 193-198.	2.8	41
20	Goss texture intensity effect on fatigue crack propagation resistance in an Al-Cu-Mg alloy. Journal of Alloys and Compounds, 2018, 730, 318-326.	2.8	40
21	Multistage-aging process effect on formation of GP zones and mechanical properties in Alâ€“Znâ€“Mgâ€“Cu alloy. Transactions of Nonferrous Metals Society of China, 2016, 26, 1183-1190.	1.7	39
22	Microstructure evolution and mechanical properties of the electron-beam welded joints of cast Alâ€“Cuâ€“Mgâ€“Ag alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 801, 140363.	2.6	39
23	Enhanced fatigue crack propagation resistance of Al-Cu-Mg alloy by intensifying Goss texture and refining Goss grains. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 679, 204-214.	2.6	38
24	Analysis of empirical relation between microstructure, texture evolution and fatigue properties of an Al-Cu-Li alloy during different pre-deformation processes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 726, 309-319.	2.6	37
25	The dissolution behavior of Î¸â€² phase in Alâ€“Cu binary alloy during equal channel angular pressing and multi-axial compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 4300-4305.	2.6	36
26	Enhanced Fatigue Crack Propagation Resistance in an Al-Zn-Mg-Cu Alloy by Retrogression and Reaging Treatment. Journal of Materials Engineering and Performance, 2012, 21, 2345-2353.	1.2	34
27	The influence of preaging on the strength and precipitation behavior of a deformed Al-Cu-Mg-Ag alloy. Journal of Alloys and Compounds, 2018, 764, 62-72.	2.8	34
28	Effects of Ag Addition on Precipitation and Fatigue Crack Propagation Behavior of a Medium-Strength Alâ€“Znâ€“Mg Alloy. Journal of Materials Science and Technology, 2018, 34, 534-540.	5.6	32
29	A Review of Texture Evolution Mechanisms During Deformation by Rolling in AluminumÂAlloys. Journal of Materials Engineering and Performance, 2018, 27, 3350-3373.	1.2	31
30	Severe plastic deformation-induced dissolution of Î¸" particles in Alâ€“Cu binary alloy and subsequent nature aging behavior. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 556, 801-806.	2.6	30
31	Atom probe tomography study of Mg-dependent precipitation of Î© phase in initial aged Al-Cuâ€“Mgâ€“Ag alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 637, 183-188.	2.6	30
32	Quantitative study of the solute clustering and precipitation in a pre-stretched Al-Cu-Mg-Ag alloy. Journal of Alloys and Compounds, 2017, 725, 1288-1296.	2.8	30
33	Effects of pre-strain on the surface residual stress and corrosion behavior of an Al-Zn-Mg-Cu alloy plate. Materials Characterization, 2020, 160, 110129.	1.9	30
34	Dynamic dissolution and texture evolution of an Alâ€“Cuâ€“Mgâ€“Ag alloy during hot rolling. Journal of Alloys and Compounds, 2020, 827, 154254.	2.8	29
35	Anisotropy in fatigue crack propagation behavior of Al-Cu-Li alloy thick plate. Materials Characterization, 2017, 131, 440-449.	1.9	27
36	The influence of various Ag additions on the nucleation and thermal stability of Î© phase in Alâ€“Cuâ€“Mg alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 564, 186-191.	2.6	26

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37	Stress-induced thickening of Î© phase in Alâ€“Cuâ€“Mg alloys containing various Ag additions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 589, 89-96.	2.6	25
38	Effects of small Er addition on the microstructural evolution and strength properties of an Alâ€“Cuâ€“Mgâ€“Ag alloy aged at 200Â°C. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 766, 138351.	2.6	25
39	Effects of yttrium additions on microstructures and mechanical properties of cast Al-Cu-Mg-Ag alloys. Journal of Alloys and Compounds, 2021, 870, 159435.	2.8	25
40	Effect of Ag additions on the lengthening rate of Î© plates and formation of Ïƒ phase in Al-Cu-Mg alloys during thermal exposure. Materials Characterization, 2017, 123, 1-8.	1.9	24
41	Alloying behavior of erbium in an Alâ€“Cuâ€“Mg alloy. Journal of Alloys and Compounds, 2010, 505, 201-205.	2.8	22
42	Enhanced mechanical properties in an Alâ€“Cuâ€“Mgâ€“Ag alloy by duplex aging. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 8060-8064.	2.6	22
43	On the interface and mechanical property of Ti/Alâ€“6%Cuâ€“0.5%Mgâ€“0.4%Ag bimetal composite produced by cold-roll bonding and subsequent annealing treatment. Materials Letters, 2012, 74, 89-92.	1.3	22
44	Effects of germanium on quench sensitivity in Alâ€“Znâ€“Mgâ€“Zr alloy. Materials and Design, 2015, 86, 679-685.	3.3	22
45	Solute cluster size effect on the fatigue crack propagation resistance of an underaged Alâ€“Cuâ€“Mg alloy. International Journal of Fatigue, 2016, 84, 104-112.	2.8	22
46	Fatigue crack propagation within Al-Cu-Mg single crystals based on crystal plasticity and XFEM combined with cohesive zone model. Materials and Design, 2021, 210, 110015.	3.3	21
47	Effect of Sc addition on the microstructures and age-hardening behavior of an Al Cu Mg Ag alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 756, 258-267.	2.6	19
48	Hot Deformation Behavior Considering Strain Effects and Recrystallization Mechanism of an Al-Zn-Mg-Cu Alloy. Materials, 2020, 13, 1743.	1.3	19
49	Dependence of Competitive Grain Growth on Secondary Dendrite Orientation During Directional Solidification of a Ni-based Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 5113-5121.	1.1	18
50	Effects of Severe Cold Rolling on Exfoliation Corrosion Behavior of Al-Zn-Mg-Cu-Cr Alloy. Journal of Materials Engineering and Performance, 2012, 21, 1070-1075.	1.2	17
51	Analysis of modulus hardening in an artificial aged Alâ€“Cuâ€“Mg alloy by atom probe tomography. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 629, 23-28.	2.6	17
52	Dislocation interaction with Î© phase in crept Alâ€“Cuâ€“Mgâ€“Ag alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 651, 399-405.	2.6	17
53	Effects of pre-strain on Cu-Mg co-clustering and mechanical behavior in a naturally aged Al-Cu-Mg alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 704, 18-24.	2.6	17
54	Effect of S phase characteristics on the formation of recrystallization textures of an Al-Cu-Mg alloy. Journal of Alloys and Compounds, 2018, 747, 293-305.	2.8	17

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55	Grain-orientation induced stress formation in AA2024 monocrystal and bicrystal using Crystal Plasticity Finite Element Method. Materials and Design, 2021, 206, 109794.	3.3	17
56	Fatigue crack propagation across grain boundary of Al-Cu-Mg bicrystal based on crystal plasticity XFEM and cohesive zone model. Journal of Materials Science and Technology, 2022, 126, 275-287.	5.6	17
57	Evolution of Goss texture in an Alâ€“Cuâ€“Mg alloy during cold rolling. Archives of Civil and Mechanical Engineering, 2020, 20, 1.	1.9	16
58	Transition of crack propagation from a transgranular to an intergranular path in an overaged Al-Zn-Mg-Cu alloy during cyclic loading. Metals and Materials International, 2013, 19, 197-203.	1.8	15
59	Coincidence site lattice boundary mechanism for the preferred growth of Goss and Cube grains during annealing in an Al-Cu-Mg alloy. Materials Characterization, 2018, 141, 193-211.	1.9	15
60	Enhanced Brass texture of hot-rolled Al-4Cu-1.6Mg alloy by 0.1% Zr addition. Materials Characterization, 2020, 169, 110643.	1.9	15
61	P-Texture Effect on the Fatigue Crack Propagation Resistance in an Al-Cu-Mg Alloy Bearing a Small Amount of Silver. Materials, 2018, 11, 2481.	1.3	14
62	Combined Effect of Ag and Mg Additions on Localized Corrosion Behavior of Al-Cu Alloys with High Cu Content. Journal of Materials Engineering and Performance, 2020, 29, 6108-6117.	1.2	14
63	Effect of various aging treatment on thermal stability of a novel Al-Zn-Mg-Cu alloy for oil drilling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 803, 140490.	2.6	13
64	Effect of artificial aging on the Cu-Mg co-clustering and mechanical behavior in a pre-strained Al-Cu-Mg alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 707, 412-418.	2.6	12
65	Effect of Overaging on Fatigue Crack Propagation and Stress Corrosion Cracking Behaviors of an Al-Zn-Mg-Cu Alloy Thick Plate. Journal of Materials Engineering and Performance, 2018, 27, 3824-3830.	1.2	12
66	Effect of T-phase on microstructure of the hot rolled Alâ€“Cuâ€“Mg alloy. Journal of Alloys and Compounds, 2020, 825, 154190.	2.8	12
67	Corrosion Resistance of Epoxy Coatings Modified by Bis-Silane Prepolymer on Aluminum Alloy. Coatings, 2021, 11, 842.	1.2	12
68	Improved Stress Corrosion Cracking Resistance and Strength of a Two-Step Aged Al-Zn-Mg-Cu Alloy Using Taguchi Method. Journal of Materials Engineering and Performance, 2015, 24, 4870-4877.	1.2	11
69	Investigation of modulus hardening of various co-clusters in aged Al-Cu-Mg-Ag alloy by atom probe tomography. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 668, 234-242.	2.6	11
70	Analysis on the dissolution behavior of various size Cu-Mg co-clusters near a fatigue crack tip of underaged Al-Cu-Mg alloy during cyclic loading. Journal of Alloys and Compounds, 2017, 699, 119-125.	2.8	11
71	Texture Evolution and Its Effect on Fatigue Crack Propagation in Two 2000 Series Alloys. Journal of Materials Engineering and Performance, 2019, 28, 1324-1336.	1.2	11
72	Effects of aging temperature on the precipitation behavior of Î© phase in an Al-Cu-Mg-Ag alloy. Metals and Materials International, 2011, 17, 1-6.	1.8	10

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73	Growth of Î© Plates and Its Effect on Mechanical Properties in Al-Cu-Mg-Ag Alloy with High Content of Silver. Journal of Materials Engineering and Performance, 2013, 22, 1708-1715.	1.2	10
74	Corrosion Resistance of Bis-Silane-Modified Epoxy Coatings on an Al-Zn-Mg-Cu Alloy. Journal of Materials Engineering and Performance, 2020, 29, 5282-5290.	1.2	10
75	Texture effect on fatigue crack propagation in aluminium alloys: An overview. Materials Science and Technology, 2019, 35, 1789-1802.	0.8	9
76	On the role of the solute partitioning and chemistry in initial precipitation of Î© plates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 766, 138339.	2.6	9
77	Coupling Effect of Grain Structures and Residual Secondary Phases on Fatigue Crack Propagation Behavior in an Al-Cu-Mg Alloy. Journal of Materials Engineering and Performance, 2021, 30, 2669-2679.	1.2	9
78	Effect of rolling temperature on mechanical properties and corrosion resistance of Al-Cu-Mg-Ag alloy. Journal of Alloys and Compounds, 2022, 897, 163168.	2.8	9
79	Enhanced damage tolerance through reconstructing residual stress and Cu-Mg co-clusters by pre-rolling in an Al-Cu-Mg alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 700, 241-249.	2.6	7
80	Improving the Fatigue Crack Propagation Resistance and Damage Tolerance of 2524-T3 Alloy with Amorphous Electroless Ni-P Coating. Journal of Materials Engineering and Performance, 2018, 27, 881-888.	1.2	7
81	Microstructure and Three-Point Bending Fatigue Behavior of Al-Cu-Mg-Ag Alloys with Various Mg Contents. Journal of Materials Engineering and Performance, 2019, 28, 6614-6625.	1.2	7
82	Effect of Minor Er Additions on the Microstructures and Mechanical Properties of Cast Al-Cu-Mg-Ag Alloys. Materials, 2021, 14, 4212.	1.3	7
83	Effects of Pre-Strain on Exfoliation Corrosion Behavior in Al-Cu-Mg Alloy. Journal of Materials Engineering and Performance, 2012, 21, 1479-1484.	1.2	6
84	Texture Effect on Fatigue Crack Propagation Behavior in Annealed Sheets of an Al-Cu-Mg Alloy. Journal of Materials Engineering and Performance, 2018, 27, 4693-4702.	1.2	6
85	Effects of dislocation slip behaviour and second-phase particles on hot rolled texture of an Al-Cu-Mg alloy with a high Cu/Mg ratio. Journal of Alloys and Compounds, 2022, 911, 165085.	2.8	6
86	Texture Evolution in an Al-Cu-Mg Alloy During Hot Rolling. Journal of Materials Engineering and Performance, 2018, 27, 3255-3267.	1.2	5
87	The Effect of Multistage Aging on Mechanical Properties and Microstructure of Forged 7050 Aluminum Alloys. Journal of Materials Engineering and Performance, 2019, 28, 3590-3599.	1.2	5
88	Evolution of Microstructure, Texture, and Hardness in an Al-Cu-Mg Alloy during Annealing. Journal of Materials Engineering and Performance, 2022, 31, 1419-1431.	1.2	5
89	Texture Evolution of Hot Rolled Alâ€“Cuâ€“Mgâ€“Zr Alloy During Annealing. Metals and Materials International, 2022, 28, 2947-2961.	1.8	5
90	Enhanced Heat Resistance of Al-Cu-Mg Alloy by a Combination of Pre-stretching and Underaging. Journal of Materials Engineering and Performance, 2016, 25, 3793-3801.	1.2	4

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91	Effect of cold rolling on microstructure and hardness of annealed Alâ€“Cuâ€“Mg alloy. Archives of Civil and Mechanical Engineering, 2022, 22, 1.	1.9	4
92	Existing form and effect of zirconium in pure Mg, Mg-Yb, and Mg-Zn-Yb alloys. Rare Metals, 2009, 28, 289-296.	3.6	3
93	Texture and Tempered Condition Combined Effects on Fatigue Behavior in an Al-Cu-Li Alloy. Journal of Materials Engineering and Performance, 2017, 26, 2453-2458.	1.2	3
94	Preparation and Characterization of a Silane Sealed PEO Coating on Aluminum Alloy. Coatings, 2021, 11, 549.	1.2	3
95	Tribological Behavior of Al2O3-MoO2-SiO2 Composite Ceramic Coating on Al-Zn-Mg-Cu Alloy. Coatings, 2021, 11, 915.	1.2	3
96	Effects of Temperature Distribution on Microstructure and Mechanical Properties of Hot Extruded Alâ€“Znâ€“Mgâ€“Cu Alloy Pipe with Variable Cross-Section. Metals and Materials International, 2022, 28, 2277-2287.	1.8	3
97	Pre-Aging Effect on the Formation of Î© Phase and Mechanical Properties of the Al-Cu-Mg-Ag Alloy. Metals, 2022, 12, 1208.	1.0	3
98	Making Al-Cu-Mg alloy tough by Goss-oriented grain refinement. Journal of Alloys and Compounds, 2022, 904, 164095.	2.8	2
99	Dislocation multiplication and dynamics in an aluminium alloy. Philosophical Magazine Letters, 2022, 102, 209-219.	0.5	1
100	Effects of Aging Temperature on the Mechanical Properties and Precipitation Behavior of a Pre-strained Alâ€“Cuâ€“Mgâ€“Ag Alloy. Metals and Materials International, 2023, 29, 293-302.	1.8	1
101	MICROSTRUCTURAL EVOLUTION AND FLOW BEHAVIOR OF TWIN-ROLL CAST AZ41 MAGNESIUM ALLOY DURING HOT COMPRESSION. International Journal of Modern Physics B, 2012, 26, 1250181.	1.0	0
102	STRESS DROP LED BY TWINNING DURING INITIAL STAGE OF HOT COMPRESSION OF TWIN-ROLL CAST Mgâ€“5.51%Znâ€“0.49%Zr ALLOY. International Journal of Modern Physics B, 2012, 26, 1250182.	1.0	0