Huan Liu

List of Publications by Year
in descending order

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Version: 2024-02-01

95	2,625	136950	233421
papers	citations	32	45
		h-index	g-index

96	96	96	1061
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A two-step dynamic recrystallization induced by LPSO phases and its impact on mechanical property of severe plastic deformation processed Mg97Y2Zn1 alloy. Journal of Alloys and Compounds, 2017, 704, 509-517.	5.5	146
2	Pt-on-Pd bimetallic nanodendrites stereoassembled on MXene nanosheets for use as high-efficiency electrocatalysts toward the methanol oxidation reaction. Journal of Materials Chemistry A, 2021, 9, 15432-15440.	10.3	103
3	Comparative studies on evolution behaviors of 14H LPSO precipitates in as-cast and as-extruded Mgâ€“Yâ€“Zn alloys during annealing at 773K. Materials and Design, 2016, 93, 9-18.	7.0	97
4	Potential of multi-pass ECAP on improving the mechanical properties of a high-calcium-content Mg-Al-Ca-Mn alloy. Journal of Magnesium and Alloys, 2019, 7, 617-627.	11.9	94
5	Microstructure and anisotropic mechanical behavior of the high-strength and ductility AZ91 Mg alloy processed by hot extrusion and multi-pass RD-ECAP. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 780, 139191.	5.6	80
6	High strength and ductility AZ91 magnesium alloy with multi-heterogenous microstructures prepared by high-temperature ECAP and short-time aging. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 734, 485-490.	5.6	77
7	Microstructure and Mechanical Properties of Mgâ€“REâ€“TM Cast Alloys Containing Long Period Stacking Ordered Phases: A Review. Acta Metallurgica Sinica (English Letters), 2019, 32, 269-285.	2.9	65
8	Recent Advances in LPSO-Containing Wrought Magnesium Alloys: Relationships Between Processing, Microstructure, and Mechanical Properties. Jom, 2019, 71, 3314-3327.	1.9	64
9	Effect of heat treatment and deformation temperature on the mechanical properties of ECAP processed ZK60 magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 677, 125-132.	5.6	59
10	Managing strength and ductility in AZ91 magnesium alloy through ECAP combined with prior and post aging treatment. Materials Characterization, 2019, 152, 213-222.	4.4	57
11	Effect of substitution of 1 at% Ni for Zn on the microstructure and mechanical properties of Mg94Y4Zn2 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 585, 387-395.	5.6	55
12	Effect of ECAP process on as-cast and as-homogenized Mg-Al-Ca-Mn alloys with different Mg2Ca morphologies. Journal of Alloys and Compounds, 2019, 793, 259-270.	5.5	54
13	Achieving excellent ductility in high-strength Mg-10.6Gd-2â€Ag alloy via equal channel angular pressing. Journal of Alloys and Compounds, 2020, 817, 152688.	5.5	52
14	Effect of heat treatments on the microstructure and mechanical properties of an extruded Mg95.5Y3Zn1.5 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 585, 261-267.	5.6	51
15	Evolution of Mgâ€“Zn second phases during ECAP at different processing temperatures and its impact on mechanical properties of Zn-1.6Mg (wt.%) alloys. Journal of Alloys and Compounds, 2019, 811, 151987.	5.5	50
16	Improving toughness of a Mg2Ca-containing Mg-Al-Ca-Mn alloy via refinement and uniform dispersion of Mg2Ca particles. Journal of Materials Science and Technology, 2020, 59, 61-71.	10.7	50
17	Microstructure and mechanical property of a high-strength Mgâ€“10Gdâ€“6Yâ€“1.5Znâ€“0.5Zr alloy prepared by multi-pass equal channel angular pressing. Journal of Magnesium and Alloys, 2017, 5, 231-237.	11.9	49
18	Enhanced quasi-isotropic ductility in bi-textured AZ91 Mg alloy processed by up-scaled RD-ECAP processing. Journal of Alloys and Compounds, 2019, 780, 443-451.	5.5	49

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19	Dynamic precipitation behavior and mechanical property of an Mg94Y4Zn2 alloy prepared by multi-pass successive equal channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 682, 255-259.	5.6	47
20	Insights into self-healing behavior and mechanism of dicalcium phosphate dihydrate coating on biomedical Mg. Bioactive Materials, 2021, 6, 158-168.	15.6	46
21	Recent progress of novel biodegradable zinc alloys: from the perspective of strengthening and toughening. Journal of Materials Research and Technology, 2022, 17, 244-269.	5.8	46
22	Revealing the effect of minor Ca and Sr additions on microstructure evolution and mechanical properties of Zn-0.6ÂMg alloy during multi-pass equal channel angular pressing. Journal of Alloys and Compounds, 2020, 844, 155923.	5.5	43
23	Effect of grain size and volume fraction of eutectic structure on mechanical properties and corrosion behavior of as-cast Znâ€“Mg binary alloys. Journal of Materials Research and Technology, 2022, 16, 1673-1685.	5.8	42
24	Effect of Multi-Pass Equal Channel Angular Pressing on the Microstructure and Mechanical Properties of a Heterogeneous Mg88Y8Zn4 Alloy. Journal of Materials Science and Technology, 2016, 32, 1274-1281.	10.7	40
25	Microstructure characterization and corrosion behavior of Mgâ€“Yâ€“Zn alloys with different long period stacking ordered structures. Journal of Magnesium and Alloys, 2020, 8, 1208-1220.	11.9	40
26	Tension-compression asymmetry of the AZ91 magnesium alloy with multi-heterogenous microstructure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 759, 703-707.	5.6	39
27	Preparation of a high strength and high ductility Mg-6Zn alloy wire by combination of ECAP and hot drawing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 739, 513-518.	5.6	39
28	The precipitation behavior of MgZn2 and Mg4Zn7 phase in Mg-6Zn (wt.%) alloy during equal-channel angular pressing. Journal of Magnesium and Alloys, 2017, 5, 336-339.	11.9	37
29	A High-Strength and Biodegradable Znâ€“Mg Alloy with Refined Ternary Eutectic Structure Processed by ECAP. Acta Metallurgica Sinica (English Letters), 2020, 33, 1191-1200.	2.9	35
30	Developing an industrial-scale ECAP Mg-Al-Zn alloy with multi-heterostructure for synchronously high strength and good ductility. Materials Characterization, 2020, 164, 110341.	4.4	34
31	Formation Behavior of 14H Long Period Stacking Ordered Structure in Mgâ€“Yâ€“Zn Cast Alloys with Different Î±-Mg Fractions. Journal of Materials Science and Technology, 2016, 32, 1267-1273.	10.7	33
32	Multimodal Microstructure and Mechanical Properties of AZ91 Mg Alloy Prepared by Equal Channel Angular Pressing plus Aging. Metals, 2018, 8, 763.	2.3	33
33	3D-cubic interconnected porous Mg-based scaffolds for bone repair. Journal of Magnesium and Alloys, 2020, 9, 1329-1329.	11.9	31
34	Dual self-healing inorganic-organic hybrid coating on biomedical Mg. Corrosion Science, 2022, 200, 110230.	6.6	31
35	Tailoring the corrosion behavior and mechanism of AZ31 magnesium alloys by different Ca contents for marine application. Corrosion Science, 2021, 192, 109842.	6.6	30
36	Ultrasonic-vibration-enhanced plasticity of an entropic alloy at room temperature. Acta Materialia, 2022, 225, 117569.	7.9	30

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37	The effect of enzymes on the in vitro degradation behavior of Mg alloy wires in simulated gastric fluid and intestinal fluid. Bioactive Materials, 2022, 7, 217-226.	15.6	29
38	Enhanced tensile strength and ductility of an Al-6Si-3Cu alloy processed by room temperature rolling. Journal of Alloys and Compounds, 2022, 899, 163321.	5.5	28
39	Effect of ECAP temperature on formation of triple heterogeneous microstructure and mechanical properties of Znâ€“1Cu alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 826, 141990.	5.6	27
40	Effects of Heat Treatments on Microstructures and Precipitation Behaviour ofÂMg94Y4Zn2 Extruded Alloy. Journal of Materials Science and Technology, 2014, 30, 128-133.	10.7	24
41	Exceptional mechanical properties of an Mg97Y2Zn1 alloy wire strengthened by dispersive LPSO particle clusters. Materials Letters, 2019, 242, 87-90.	2.6	24
42	A study of a biodegradable braided Mg stent for biliary reconstruction. Journal of Materials Science, 2020, 55, 17170-17182.	3.7	24
43	Preparation, Microstructure Evolutions, and Mechanical Property of an Ultra-Fine Grained Mg-10Gd-4Y-1.5Zn-0.5Zr Alloy. Metals, 2017, 7, 398.	2.3	23
44	Multi-interactions of dislocations and refined microstructure in a high strength and toughness Zn-Mg-Mn alloy. Journal of Materials Research and Technology, 2020, 9, 14116-14121.	5.8	23
45	Preparation of a single-phase Mgâ€“6Zn alloy via ECAP-stimulated solution treatment. Journal of Magnesium and Alloys, 2019, 7, 305-314.	11.9	22
46	Microstructure evolution during superplastic deformation process and its impact on superplastic behavior of a Mg-Gd-Y-Zn-Zr alloy. Materials Characterization, 2021, 172, 110879.	4.4	21
47	Microstructure and Mechanical Properties of a Mg94Y4Ni2 Alloy with Long Period Stacking Ordered Structure. Journal of Materials Engineering and Performance, 2013, 22, 3500-3506.	2.5	20
48	Mechanical and Biological Properties of a Biodegradable Mgâ€Znâ€Ca Porous Alloy. Orthopaedic Surgery, 2018, 10, 160-168.	1.8	19
49	Anisotropy investigation of an ECAP-processed Mg-Al-Ca-Mn alloy with synergistically enhanced mechanical properties and corrosion resistance. Journal of Alloys and Compounds, 2022, 911, 165046.	5.5	19
50	Precipitation behavior of 14H LPSO structure in single 18R phase Mgâ€“Yâ€“Zn alloy during annealing at 773 K. Transactions of Nonferrous Metals Society of China, 2017, 27, 63-72.	4.2	18
51	Fragmentation of 18R LPSO phases through multi-pass equal channel angular pressing and its impact on rollability of Mg97Y2Zn1 (at%) alloy. Journal of Materials Research and Technology, 2020, 9, 14865-14877.	5.8	18
52	Controlling Corrosion Resistance of a Biodegradable Mgâ€“Yâ€“Zn Alloy with LPSO Phases via Multi-pass ECAP Process. Acta Metallurgica Sinica (English Letters), 2020, 33, 1180-1190.	2.9	18
53	Fabrication of an Ultra-Fine Grained Pure Titanium with High Strength and Good Ductility via ECAP plus Cold Rolling. Metals, 2017, 7, 563.	2.3	17
54	Biodegradable Behaviors of Ultrafine-Grained ZE41A Magnesium Alloy in DMEM Solution. Metals, 2016, 6, 3.	2.3	16

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55	Achieving single-pass high-reduction rolling and enhanced mechanical properties of AZ91 alloy by RD-ECAP pre-processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 804, 140717.	5.6	16
56	Improvement of ductility and work hardening ability in a high strength Zn-Mg-Y alloy via micron-sized and submicron-sized YZn12 particles. Journal of Alloys and Compounds, 2021, 877, 160268.	5.5	16
57	Recent Progress on Corrosion Behavior and Mechanism of Mgâ€“RE Based Alloys with Long Period Stacking Ordered Structure. Metals and Materials International, 2020, 26, 551-563.	3.4	15
58	Discharge properties of ECAP processed AZ31ï¼Ca alloys as anodes for seawater-activated battery. Journal of Materials Research and Technology, 2021, 11, 1031-1044.	5.8	15
59	Microstructures and Mechanical Properties of Mg-2Y-xZn (x=1, 2, 3 at%) Alloys. Rare Metal Materials and Engineering, 2014, 43, 570-574.	0.8	14
60	A novel method for improving the strength and ductility of Mgâ€“Yâ€“Erâ€“Zn alloy using rotary-die equal-channel angular pressing. Journal of Materials Research and Technology, 2021, 13, 1752-1758.	5.8	14
61	Hot Workability of the as-Cast 21Cr Economical Duplex Stainless Steel Through Processing Map and Microstructural Studies Using Different Instability Criteria. Acta Metallurgica Sinica (English) Tj ETQq1 1 0.784314 gBT /Overlock 10	2.8	13
62	Improving Strength and Ductility of a Mg-3.7Al-1.8Ca-0.4Mn Alloy with Refined and Dispersed Al2Ca Particles by Industrial-Scale ECAP Processing. Metals, 2019, 9, 767.	2.3	13
63	Microstructure and corrosion resistance of yellow MAO coatings. Surface Engineering, 2019, 35, 334-342.	2.2	13
64	Deformation mechanisms at multiple pop-ins under spherical nanoindentation of (1â€¯1â€¯1) Si. Computational Materials Science, 2018, 143, 480-485.	3.0	12
65	Microstructure, Martensite Transition and Mechanical Properties Investigations of Polycrystalline Co-Ni-Al Alloys with Er Doping. Journal of Materials Engineering and Performance, 2017, 26, 1062-1068.	2.5	11
66	Stress Corrosion Cracking Behavior of Fine-Grained AZ61 Magnesium Alloys Processed by Equal-Channel Angular Pressing. Metals, 2017, 7, 343.	2.3	11
67	Microstructure and texture evolution of the Î²-Mg17A12 phase in a Mg alloy with an ultra-high Al content. Journal of Materials Science and Technology, 2020, 52, 89-99.	10.7	11
68	Microstructure and mechanical property of Mgâ€“10Gdâ€“2Yâ€“1.5Znâ€“0.5Zr alloy processed by eight-pass equal-channel angular pressing. Rare Metals, 2023, 42, 1371-1377.	7.1	10
69	Achieving ultra-high strength using densely ultra-fine LPSO phase. Journal of Materials Science and Technology, 2022, 129, 135-138.	10.7	10
70	High Mechanical Properties of AZ91 Mg Alloy Processed by Equal Channel Angular Pressing and Rolling. Metals, 2019, 9, 386.	2.3	9
71	Martensite Transformation and Mechanical Properties of Polycrystalline Co-Ni-Al Alloys with Gd Doping. Metals, 2018, 8, 848.	2.3	8
72	Rebuilding the Strain Hardening at a Large Strain in Twinned Au Nanowires. Nanomaterials, 2018, 8, 848.	4.1	8

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73	Effect of Necklace-Type Distribution of SiC Particles on Dry Sliding Wear Behavior of As-Cast AZ91D/SiCp Composites. Crystals, 2020, 10, 296.	2.2	8
74	Microstructure, Magnetism and Magnetic Field Induced-Strain in Er-Doped Co-Ni-Al Polycrystalline Alloy. Journal of Electronic Materials, 2017, 46, 2540-2547.	2.2	7
75	Microstructure and mechanical properties of AZ31 alloy prepared by cyclic expansion extrusion with asymmetrical extrusion cavity. Transactions of Nonferrous Metals Society of China, 2022, 32, 122-133.	4.2	7
76	Polyethylene glycol-assisted preparation of beta-tricalcium phosphate by direct precipitation method. Powder Technology, 2016, 301, 255-260.	4.2	6
77	Size Effect and Deformation Mechanism in Twinned Copper Nanowires. Metals, 2017, 7, 438.	2.3	6
78	Optimization of the Experimental Parameters Affecting the Corrosion Behavior for Mgâ€“Yâ€“Znâ€“Mn Alloy via Response Surface Methodology. Metals and Materials International, 0, , 1.	3.4	6
79	A high strength and ductility Znâ€“Cuâ€“Mg alloy achieved by bandlike distribution of ultra-fine CuZn5 and Mg2Zn11 particles. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 850, 143584.	5.6	6
80	Comparative Study of Two Aging Treatments on Microstructure and Mechanical Properties of an Ultra-Fine Grained Mg-10Y-6Gd-1.5Zn-0.5Zr Alloy. Metals, 2018, 8, 658.	2.3	5
81	Microstructure evolution and mechanical improvement by rapid solidification of polycrystalline Co₃₅Ni₃₂Al₃₂Dy alloy. Materials Research Express, 2019, 6, 126545.	1.6	5
82	Enhancing Mechanical Properties of Mgâ€“6Zn Alloy by Deformation-Induced Nanoprecipitation. Acta Metallurgica Sinica (English Letters), 2021, 34, 217-226.	2.9	5
83	Evolution of grain size and texture of Zn-0.5Cu ECAP alloy during annealing at 200Ââ„ƒ and its impact on mechanical properties. Journal of Alloys and Compounds, 2022, 919, 165871.	5.5	5
84	Microstructure and mechanical properties of Mg94Zn2Y4 extruded alloy with long-period stacking ordered structure. Transactions of Nonferrous Metals Society of China, 2013, 23, 3598-3603.	4.2	4
85	Different Tribological Behaviors of SiCp/AZ91 Composites Induced by Tailoring the Distribution of SiC Particles. Metals and Materials International, 2021, 27, 556-569.	3.4	4
86	Structure and Martensitic Transformation in Rapidly Solidified CoNiAlFe Alloy. Metals, 2017, 7, 473.	2.3	3
87	Study of Flux on Wetting Behavior of Sn-Zn Lead-Free Solders. Advanced Materials Research, 2011, 189-193, 3230-3237.	0.3	2
88	Achieving Exceptional High Ductility in Binary Mgâ€“6Zn Alloy Wire by Grain Boundary Strengthening and Twinningâ€Induced Plasticity. Advanced Engineering Materials, 2021, 23, 2001476.	3.5	2
89	Preparation and characterization of antibacterial oxide film with deposited silver on Al alloy. Materials Research Express, 2021, 8, 106515.	1.6	2
90	Achieving high-strain-rate and low-temperature superplasticity in an ECAP-processed Mg-Y-Er-Zn alloy via Ag addition. Journal of Magnesium and Alloys, 2022, , .	11.9	2

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91	Shrinking tension-compression asymmetry of Au nanowires by designed nanotwin boundaries. Materials Chemistry and Physics, 2020, 252, 123267.	4.0	1
92	MICROSTRUCTURES AND MECHANICAL PROPERTIES OF Mg-(2, 3, 4)Y-lZn ALLOYS WITH LONG PERIOD STACKING ORDERED STRUCTURE. Jinshu Xuebao/Acta Metallurgica Sinica, 2013, 49, 236.	0.3	1
93	Influence of Y/Zn Mole Ratio on the Phase Composition and Mechanical Properties of Mg-Y-Zn Alloys. , 2013, , 1291-1298.		1
94	EFFECTS OF HIGH TEMPERATURE ANNEALING ON MORPHOLOGY OF LONG PERIOD STACKING ORDERED STRUCTURES IN AS-CASE AND AS-EXTRUDED Mg97Y2Zn1ALLOY. Jinshu Xuebao/Acta Metallurgica Sinica, 2013, 49, 1255.	0.3	0
95	The Microstructure and Mechanical Properties of Magnetic Shape Memory Alloys NiCo40+xAl30-x [X=0ã€•3ã€•6ã€•10]. , 2014, , 101-113.		0