

Huan Liu

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7725958/publications.pdf>

Version: 2024-02-01

95
papers

2,625
citations

136950

32
h-index

233421

45
g-index

96
all docs

96
docs citations

96
times ranked

1061
citing authors

#	ARTICLE	IF	CITATIONS
1	Microstructure and mechanical property of Mg ₁₀ Gd ₂ Y _{1.5} Zn _{0.5} Zr alloy processed by eight-pass equal-channel angular pressing. <i>Rare Metals</i> , 2023, 42, 1371-1377.	7.1	10
2	The effect of enzymes on the in vitro degradation behavior of Mg alloy wires in simulated gastric fluid and intestinal fluid. <i>Bioactive Materials</i> , 2022, 7, 217-226.	15.6	29
3	Effect of grain size and volume fraction of eutectic structure on mechanical properties and corrosion behavior of as-cast Zn-Mg binary alloys. <i>Journal of Materials Research and Technology</i> , 2022, 16, 1673-1685.	5.8	42
4	Ultrasonic-vibration-enhanced plasticity of an entropic alloy at room temperature. <i>Acta Materialia</i> , 2022, 225, 117569.	7.9	30
5	Enhanced tensile strength and ductility of an Al-6Si-3Cu alloy processed by room temperature rolling. <i>Journal of Alloys and Compounds</i> , 2022, 899, 163321.	5.5	28
6	Microstructure and mechanical properties of AZ31 alloy prepared by cyclic expansion extrusion with asymmetrical extrusion cavity. <i>Transactions of Nonferrous Metals Society of China</i> , 2022, 32, 122-133.	4.2	7
7	Recent progress of novel biodegradable zinc alloys: from the perspective of strengthening and toughening. <i>Journal of Materials Research and Technology</i> , 2022, 17, 244-269.	5.8	46
8	Dual self-healing inorganic-organic hybrid coating on biomedical Mg. <i>Corrosion Science</i> , 2022, 200, 110230.	6.6	31
9	Achieving high-strain-rate and low-temperature superplasticity in an ECAP-processed Mg-Y-Er-Zn alloy via Ag addition. <i>Journal of Magnesium and Alloys</i> , 2022, , .	11.9	2
10	Anisotropy investigation of an ECAP-processed Mg-Al-Ca-Mn alloy with synergistically enhanced mechanical properties and corrosion resistance. <i>Journal of Alloys and Compounds</i> , 2022, 911, 165046.	5.5	19
11	Achieving ultra-high strength using densely ultra-fine LPSO phase. <i>Journal of Materials Science and Technology</i> , 2022, 129, 135-138.	10.7	10
12	Evolution of grain size and texture of Zn-0.5Cu ECAP alloy during annealing at 200 °C and its impact on mechanical properties. <i>Journal of Alloys and Compounds</i> , 2022, 919, 165871.	5.5	5
13	A high strength and ductility Zn-Cu-Mg alloy achieved by bandlike distribution of ultra-fine CuZn ₅ and Mg ₂ Zn ₁₁ particles. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 850, 143584.	5.6	6
14	Different Tribological Behaviors of SiCp/AZ91 Composites Induced by Tailoring the Distribution of SiC Particles. <i>Metals and Materials International</i> , 2021, 27, 556-569.	3.4	4
15	Enhancing Mechanical Properties of Mg ₆ Zn Alloy by Deformation-Induced Nanoprecipitation. <i>Acta Metallurgica Sinica (English Letters)</i> , 2021, 34, 217-226.	2.9	5
16	Insights into self-healing behavior and mechanism of dicalcium phosphate dihydrate coating on biomedical Mg. <i>Bioactive Materials</i> , 2021, 6, 158-168.	15.6	46
17	Pt-on-Pd bimetallic nanodendrites stereoassembled on MXene nanosheets for use as high-efficiency electrocatalysts toward the methanol oxidation reaction. <i>Journal of Materials Chemistry A</i> , 2021, 9, 15432-15440.	10.3	103
18	Microstructure evolution during superplastic deformation process and its impact on superplastic behavior of a Mg-Gd-Y-Zn-Zr alloy. <i>Materials Characterization</i> , 2021, 172, 110879.	4.4	21

#	ARTICLE	IF	CITATIONS
19	Achieving single-pass high-reduction rolling and enhanced mechanical properties of AZ91 alloy by RD-ECAP pre-processing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 804, 140717.	5.6	16
20	Achieving Exceptional High Ductility in Binary Mg–6Zn Alloy Wire by Grain Boundary Strengthening and Twinning–Induced Plasticity. <i>Advanced Engineering Materials</i> , 2021, 23, 2001476.	3.5	2
21	Discharge properties of ECAP processed AZ31–¼Ca alloys as anodes for seawater-activated battery. <i>Journal of Materials Research and Technology</i> , 2021, 11, 1031-1044.	5.8	15
22	A novel method for improving the strength and ductility of Mg–Y–Er–Zn alloy using rotary-die equal-channel angular pressing. <i>Journal of Materials Research and Technology</i> , 2021, 13, 1752-1758.	5.8	14
23	Preparation and characterization of antibacterial oxide film with deposited silver on Al alloy. <i>Materials Research Express</i> , 2021, 8, 106515.	1.6	2
24	Effect of ECAP temperature on formation of triple heterogeneous microstructure and mechanical properties of Zn–1Cu alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 826, 141990.	5.6	27
25	Improvement of ductility and work hardening ability in a high strength Zn-Mg-Y alloy via micron-sized and submicron-sized YZn ₁₂ particles. <i>Journal of Alloys and Compounds</i> , 2021, 877, 160268.	5.5	16
26	Tailoring the corrosion behavior and mechanism of AZ31 magnesium alloys by different Ca contents for marine application. <i>Corrosion Science</i> , 2021, 192, 109842.	6.6	30
27	Recent Progress on Corrosion Behavior and Mechanism of Mg–RE Based Alloys with Long Period Stacking Ordered Structure. <i>Metals and Materials International</i> , 2020, 26, 551-563.	3.4	15
28	Achieving excellent ductility in high-strength Mg-10.6Gd–2Ag alloy via equal channel angular pressing. <i>Journal of Alloys and Compounds</i> , 2020, 817, 152688.	5.5	52
29	A study of a biodegradable braided Mg stent for biliary reconstruction. <i>Journal of Materials Science</i> , 2020, 55, 17170-17182.	3.7	24
30	Multi-interactions of dislocations and refined microstructure in a high strength and toughness Zn-Mg-Mn alloy. <i>Journal of Materials Research and Technology</i> , 2020, 9, 14116-14121.	5.8	23
31	3D-cubic interconnected porous Mg-based scaffolds for bone repair. <i>Journal of Magnesium and Alloys</i> , 2020, 9, 1329-1329.	11.9	31
32	Fragmentation of 18R LPSO phases through multi-pass equal channel angular pressing and its impact on rollability of Mg ₉₇ Y ₂ Zn ₁ (at%) alloy. <i>Journal of Materials Research and Technology</i> , 2020, 9, 14865-14877.	5.8	18
33	Developing an industrial-scale ECAP Mg-Al-Zn alloy with multi-heterostructure for synchronously high strength and good ductility. <i>Materials Characterization</i> , 2020, 164, 110341.	4.4	34
34	Shrinking tension-compression asymmetry of Au nanowires by designed nanotwin boundaries. <i>Materials Chemistry and Physics</i> , 2020, 252, 123267.	4.0	1
35	Improving toughness of a Mg ₂ Ca-containing Mg-Al-Ca-Mn alloy via refinement and uniform dispersion of Mg ₂ Ca particles. <i>Journal of Materials Science and Technology</i> , 2020, 59, 61-71.	10.7	50
36	A High-Strength and Biodegradable Zn–Mg Alloy with Refined Ternary Eutectic Structure Processed by ECAP. <i>Acta Metallurgica Sinica (English Letters)</i> , 2020, 33, 1191-1200.	2.9	35

#	ARTICLE	IF	CITATIONS
37	Microstructure and anisotropic mechanical behavior of the high-strength and ductility AZ91 Mg alloy processed by hot extrusion and multi-pass RD-ECAP. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 780, 139191.	5.6	80
38	Microstructure characterization and corrosion behavior of Mg-Y-Zn alloys with different long period stacking ordered structures. <i>Journal of Magnesium and Alloys</i> , 2020, 8, 1208-1220.	11.9	40
39	Revealing the effect of minor Ca and Sr additions on microstructure evolution and mechanical properties of Zn-0.6Mg alloy during multi-pass equal channel angular pressing. <i>Journal of Alloys and Compounds</i> , 2020, 844, 155923.	5.5	43
40	Effect of Necklace-Type Distribution of SiC Particles on Dry Sliding Wear Behavior of As-Cast AZ91D/SiCp Composites. <i>Crystals</i> , 2020, 10, 296.	2.2	8
41	Controlling Corrosion Resistance of a Biodegradable Mg-Y-Zn Alloy with LPSO Phases via Multi-pass ECAP Process. <i>Acta Metallurgica Sinica (English Letters)</i> , 2020, 33, 1180-1190.	2.9	18
42	Microstructure and texture evolution of the β -Mg ₁₇ Al ₁₂ phase in a Mg alloy with an ultra-high Al content. <i>Journal of Materials Science and Technology</i> , 2020, 52, 89-99.	10.7	11
43	Improving Strength and Ductility of a Mg-3.7Al-1.8Ca-0.4Mn Alloy with Refined and Dispersed Al ₂ Ca Particles by Industrial-Scale ECAP Processing. <i>Metals</i> , 2019, 9, 767.	2.3	13
44	Preparation of a single-phase Mg ₆ Zn alloy via ECAP-stimulated solution treatment. <i>Journal of Magnesium and Alloys</i> , 2019, 7, 305-314.	11.9	22
45	Evolution of Mg-Zn second phases during ECAP at different processing temperatures and its impact on mechanical properties of Zn-1.6Mg (wt.%) alloys. <i>Journal of Alloys and Compounds</i> , 2019, 811, 151987.	5.5	50
46	Exceptional mechanical properties of an Mg ₉₇ Y ₂ Zn ₁ alloy wire strengthened by dispersive LPSO particle clusters. <i>Materials Letters</i> , 2019, 242, 87-90.	2.6	24
47	Recent Advances in LPSO-Containing Wrought Magnesium Alloys: Relationships Between Processing, Microstructure, and Mechanical Properties. <i>Jom</i> , 2019, 71, 3314-3327.	1.9	64
48	Managing strength and ductility in AZ91 magnesium alloy through ECAP combined with prior and post aging treatment. <i>Materials Characterization</i> , 2019, 152, 213-222.	4.4	57
49	Tension-compression asymmetry of the AZ91 magnesium alloy with multi-heterogenous microstructure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 759, 703-707.	5.6	39
50	Effect of ECAP process on as-cast and as-homogenized Mg-Al-Ca-Mn alloys with different Mg ₂ Ca morphologies. <i>Journal of Alloys and Compounds</i> , 2019, 793, 259-270.	5.5	54
51	High Mechanical Properties of AZ91 Mg Alloy Processed by Equal Channel Angular Pressing and Rolling. <i>Metals</i> , 2019, 9, 386.	2.3	9
52	Microstructure evolution and mechanical improvement by rapid solidification of polycrystalline Co ₃₅ Ni ₃₂ Al ₃₂ Dy alloy. <i>Materials Research Express</i> , 2019, 6, 126545.	1.6	5
53	Potential of multi-pass ECAP on improving the mechanical properties of a high-calcium-content Mg-Al-Ca-Mn alloy. <i>Journal of Magnesium and Alloys</i> , 2019, 7, 617-627.	11.9	94
54	Preparation of a high strength and high ductility Mg-6Zn alloy wire by combination of ECAP and hot drawing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 739, 513-518.	5.6	39

#	ARTICLE	IF	CITATIONS
55	Microstructure and Mechanical Properties of Mg-RE™ Cast Alloys Containing Long Period Stacking Ordered Phases: A Review. <i>Acta Metallurgica Sinica (English Letters)</i> , 2019, 32, 269-285.	2.9	65
56	Enhanced quasi-isotropic ductility in bi-textured AZ91 Mg alloy processed by up-scaled RD-ECAP processing. <i>Journal of Alloys and Compounds</i> , 2019, 780, 443-451.	5.5	49
57	Microstructure and corrosion resistance of yellow MAO coatings. <i>Surface Engineering</i> , 2019, 35, 334-342.	2.2	13
58	Deformation mechanisms at multiple pop-ins under spherical nanoindentation of (111) Si. <i>Computational Materials Science</i> , 2018, 143, 480-485.	3.0	12
59	Martensite Transformation and Mechanical Properties of Polycrystalline Co-Ni-Al Alloys with Gd Doping. <i>Metals</i> , 2018, 8, 848.	2.3	8
60	Comparative Study of Two Aging Treatments on Microstructure and Mechanical Properties of an Ultra-Fine Grained Mg-10Y-6Gd-1.5Zn-0.5Zr Alloy. <i>Metals</i> , 2018, 8, 658.	2.3	5
61	Multimodal Microstructure and Mechanical Properties of AZ91 Mg Alloy Prepared by Equal Channel Angular Pressing plus Aging. <i>Metals</i> , 2018, 8, 763.	2.3	33
62	Rebuilding the Strain Hardening at a Large Strain in Twinned Au Nanowires. <i>Nanomaterials</i> , 2018, 8, 848.	4.1	8
63	Mechanical and Biological Properties of a Biodegradable Mg-Zn-Ca Porous Alloy. <i>Orthopaedic Surgery</i> , 2018, 10, 160-168.	1.8	19
64	High strength and ductility AZ91 magnesium alloy with multi-heterogenous microstructures prepared by high-temperature ECAP and short-time aging. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 734, 485-490.	5.6	77
65	Precipitation behavior of 14H LPSO structure in single 18R phase Mg-Y-Zn alloy during annealing at 773 K. <i>Transactions of Nonferrous Metals Society of China</i> , 2017, 27, 63-72.	4.2	18
66	A two-step dynamic recrystallization induced by LPSO phases and its impact on mechanical property of severe plastic deformation processed Mg97Y2Zn1 alloy. <i>Journal of Alloys and Compounds</i> , 2017, 704, 509-517.	5.5	146
67	Microstructure, Magnetism and Magnetic Field Induced-Strain in Er-Doped Co-Ni-Al Polycrystalline Alloy. <i>Journal of Electronic Materials</i> , 2017, 46, 2540-2547.	2.2	7
68	Microstructure, Martensite Transition and Mechanical Properties Investigations of Polycrystalline Co-Ni-Al Alloys with Er Doping. <i>Journal of Materials Engineering and Performance</i> , 2017, 26, 1062-1068.	2.5	11
69	Microstructure and mechanical property of a high-strength Mg-10Gd-6Y-1.5Zn-0.5Zr alloy prepared by multi-pass equal channel angular pressing. <i>Journal of Magnesium and Alloys</i> , 2017, 5, 231-237.	11.9	49
70	Hot Workability of the as-Cast 21Cr Economical Duplex Stainless Steel Through Processing Map and Microstructural Studies Using Different Instability Criteria. <i>Acta Metallurgica Sinica (English)</i> Tj ETQq0 0 0 rgBT /Overlock 10 150 137 T		
71	The precipitation behavior of MgZn2 and Mg4Zn7 phase in Mg-6Zn (wt.%) alloy during equal-channel angular pressing. <i>Journal of Magnesium and Alloys</i> , 2017, 5, 336-339.	11.9	37
72	Dynamic precipitation behavior and mechanical property of an Mg94Y4Zn2 alloy prepared by multi-pass successive equal channel angular pressing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 682, 255-259.	5.6	47

#	ARTICLE	IF	CITATIONS
73	Stress Corrosion Cracking Behavior of Fine-Grained AZ61 Magnesium Alloys Processed by Equal-Channel Angular Pressing. <i>Metals</i> , 2017, 7, 343.	2.3	11
74	Size Effect and Deformation Mechanism in Twinned Copper Nanowires. <i>Metals</i> , 2017, 7, 438.	2.3	6
75	Structure and Martensitic Transformation in Rapidly Solidified CoNiAlFe Alloy. <i>Metals</i> , 2017, 7, 473.	2.3	3
76	Fabrication of an Ultra-Fine Grained Pure Titanium with High Strength and Good Ductility via ECAP plus Cold Rolling. <i>Metals</i> , 2017, 7, 563.	2.3	17
77	Preparation, Microstructure Evolutions, and Mechanical Property of an Ultra-Fine Grained Mg-10Gd-4Y-1.5Zn-0.5Zr Alloy. <i>Metals</i> , 2017, 7, 398.	2.3	23
78	Biodegradable Behaviors of Ultrafine-Grained ZE41A Magnesium Alloy in DMEM Solution. <i>Metals</i> , 2016, 6, 3.	2.3	16
79	Effect of Multi-Pass Equal Channel Angular Pressing on the Microstructure and Mechanical Properties of a Heterogeneous Mg88Y8Zn4 Alloy. <i>Journal of Materials Science and Technology</i> , 2016, 32, 1274-1281.	10.7	40
80	Effect of heat treatment and deformation temperature on the mechanical properties of ECAP processed ZK60 magnesium alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 677, 125-132.	5.6	59
81	Formation Behavior of 14H Long Period Stacking Ordered Structure in Mg _{1-x} Zn _x Cast Alloys with Different \pm -Mg Fractions. <i>Journal of Materials Science and Technology</i> , 2016, 32, 1267-1273.	10.7	33
82	Polyethylene glycol-assisted preparation of beta-tricalcium phosphate by direct precipitation method. <i>Powder Technology</i> , 2016, 301, 255-260.	4.2	6
83	Comparative studies on evolution behaviors of 14H LPSO precipitates in as-cast and as-extruded Mg ₉₄ Y ₄ Zn ₂ alloys during annealing at 773K. <i>Materials and Design</i> , 2016, 93, 9-18.	7.0	97
84	Microstructures and Mechanical Properties of Mg-2Y-xZn (x=1, 2, 3 at%) Alloys. <i>Rare Metal Materials and Engineering</i> , 2014, 43, 570-574.	0.8	14
85	Effects of Heat Treatments on Microstructures and Precipitation Behaviour of Mg ₉₄ Y ₄ Zn ₂ Extruded Alloy. <i>Journal of Materials Science and Technology</i> , 2014, 30, 128-133.	10.7	24
86	The Microstructure and Mechanical Properties of Magnetic Shape Memory Alloys NiCo _{40+x} Al _{30-x} [X=0-30]., 2014, , 101-113.		0
87	Microstructure and Mechanical Properties of a Mg ₉₄ Y ₄ Ni ₂ Alloy with Long Period Stacking Ordered Structure. <i>Journal of Materials Engineering and Performance</i> , 2013, 22, 3500-3506.	2.5	20
88	Effect of substitution of 1 at% Ni for Zn on the microstructure and mechanical properties of Mg ₉₄ Y ₄ Zn ₂ alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 585, 387-395.	5.6	55
89	Microstructure and mechanical properties of Mg ₉₄ Zn ₂ Y ₄ extruded alloy with long-period stacking ordered structure. <i>Transactions of Nonferrous Metals Society of China</i> , 2013, 23, 3598-3603.	4.2	4
90	Effect of heat treatments on the microstructure and mechanical properties of an extruded Mg _{95.5} Y ₃ Zn _{1.5} alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 585, 261-267.	5.6	51

#	ARTICLE	IF	CITATIONS
91	MICROSTRUCTURES AND MECHANICAL PROPERTIES OF Mg-(2, 3, 4)Y-Zn ALLOYS WITH LONG PERIOD STACKING ORDERED STRUCTURE. Jinshu Xuebao/Acta Metallurgica Sinica, 2013, 49, 236.	0.3	1
92	Influence of Y/Zn Mole Ratio on the Phase Composition and Mechanical Properties of Mg-Y-Zn Alloys. , 2013, , 1291-1298.		1
93	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
94	Study of Flux on Wetting Behavior of Sn-Zn Lead-Free Solders. Advanced Materials Research, 2011, 189-193, 3230-3237.	0.3	2
95	Optimization of the Experimental Parameters Affecting the Corrosion Behavior for Mg-Y-Zn-Mn Alloy via Response Surface Methodology. Metals and Materials International, 0, , 1.	3.4	6