Xuan Liu

List of Publications by Year in descending order

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48 papers	1,559 citations	257357 24 h-index	315616 38 g-index
48 all docs	48 docs citations	48 times ranked	771 citing authors

#	Article	IF	Citations
1	Effects of the combinative Ca, Sm and La additions on the electrochemical behaviors and discharge performance of the as-extruded AZ91 anodes for Mg-air batteries. Journal of Power Sources, 2019, 414, 174-182.	4.0	120
2	Discharge performance of the magnesium anodes with different phase constitutions for Mg-air batteries. Journal of Power Sources, 2018, 396, 667-674.	4.0	111
3	Microstructures, mechanical properties and corrosion behaviors of Mgâ€“Yâ€“Znâ€“Zr alloys with specific Y/Zn mole ratios. Journal of Alloys and Compounds, 2015, 624, 116-125.	2.8	95
4	Effects of phase composition and content on the microstructures and mechanical properties of high strength Mgâ€“Yâ€“Znâ€“Zr alloys. Materials and Design, 2015, 88, 915-923.	3.3	85
5	Discharge and corrosion behaviors of the Î±-Mg and Î²-Li based Mg alloys for Mg-air batteries at different current densities. Materials and Design, 2018, 160, 138-146.	3.3	82
6	A comprehensive review of the development of magnesium anodes for primary batteries. Journal of Materials Chemistry A, 2021, 9, 12367-12399.	5.2	72
7	Effects of Extrusion Speed on the Microstructure and Mechanical Properties of Mg9Gd3Y1.5Zn0.8Zr alloy. Journal of Materials Science and Technology, 2016, 32, 313-319.	5.6	69
8	Effects of Zn/Gd ratio on the microstructures and mechanical properties of Mg-Zn-Gd-Zr alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 695, 135-143.	2.6	69
9	Electrochemical behaviors and discharge performance of the as-extruded Mg-1.5â€¯wt%Ca alloys as anode for Mg-air battery. Journal of Alloys and Compounds, 2019, 790, 822-828.	2.8	66
10	The role of Al2Gd cuboids in the discharge performance and electrochemical behaviors of AZ31-Gd anode for Mg-air batteries. Energy, 2019, 189, 116314.	4.5	53
11	The role of micro-naoscale AlSb precipitates in improving the discharge performance of Al-Sb alloy anodes for Al-air batteries. Journal of Power Sources, 2019, 425, 186-194.	4.0	53
12	High energy efficiency of Al-based anodes for Al-air battery by simultaneous addition of Mn and Sb. Chemical Engineering Journal, 2021, 417, 128006.	6.6	51
13	Effects of Nd/Gd value on the microstructures and mechanical properties of Mgâ€“Gdâ€“Yâ€“Ndâ€“Zr alloys. Journal of Magnesium and Alloys, 2016, 4, 214-219.	5.5	46
14	Study on hydrogen removal of AZ91 alloys using ultrasonic argon degassing process. Ultrasonics Sonochemistry, 2015, 26, 73-80.	3.8	45
15	The role of ultrasound in hydrogen removal and microstructure refinement by ultrasonic argon degassing process. Ultrasonics Sonochemistry, 2017, 38, 455-462.	3.8	45
16	Microstructures and mechanical properties of high performance Mgâ€“6Gdâ€“3Yâ€“2Ndâ€“0.4Zr alloy by indirect extrusion and aging treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 612, 380-386.	2.6	40
17	The role of Al ₂ Ca and Al ₂ (Sm,Ca,La) particles in the microstructures and electrochemical discharge performance of asâ€extruded Mgâ€3wt.%Alâ€1wt.%Znâ€based alloys for primary Mgâ€air batteries. International Journal of Energy Research, 2019, 43, 4569-4579.	2.2	39
18	The role of microstructural evolution in improving energy conversion of Al-based anodes for metal-air batteries. Journal of Power Sources, 2020, 451, 227806.	4.0	38

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19	Microstructure evolution and strengthening mechanism study of Mg-Li alloys during deformation and heat treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 704, 344-359.	2.6	33
20	Influences of warm rolling and annealing processes on microstructure and mechanical properties of three parent structures containing Mg-Li alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 711, 1-11.	2.6	28
21	Hydrogen as a carrier of renewable energies toward carbon neutrality: State-of-the-art and challenging issues. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 1073-1089.	2.4	27
22	Fabrication of high strength Î±, Î±+Î², Î² phase containing Mg-Li alloys with 0.2%Y by extruding and annealing process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 675, 55-64.	2.6	25
23	Segregation behaviors of Sc and unique primary Al3Sc in Al-Sc alloys prepared by molten salt electrolysis. Journal of Materials Science and Technology, 2019, 35, 1422-1431.	5.6	25
24	Electrical resistivity behaviors of liquid Pbâ€“Sn binary alloy in the presence of ultrasonic field. Ultrasonics, 2015, 55, 6-9.	2.1	24
25	Precipitation evolution during annealing of Mg-Li alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 689, 332-344.	2.6	22
26	Current progresses and future prospects on aluminiumâ€“air batteries. International Materials Reviews, 2022, 67, 734-764.	9.4	17
27	Evaluating the Discharge Performance of Heat-Treated Al-Sb Alloys for Al-Air Batteries. Journal of Materials Engineering and Performance, 2019, 28, 5476-5484.	1.2	16
28	Ultrasonic-assisted hydrothermal synthesis of cobalt oxide/nitrogen-doped graphene oxide hybrid as oxygen reduction reaction catalyst for Al-air battery. Ultrasonics Sonochemistry, 2021, 72, 105457.	3.8	15
29	Improving energy efficiency of commercial aluminum alloy as anodes for Al-air battery through introducing micro-nanoscale AlSb precipitates. Electrochimica Acta, 2022, 417, 140331.	2.6	15
30	Electrochemical and corrosion behaviors of the wrought Mgâ€“Yâ€“Zn based alloys with high Y/Zn mole ratios. Journal of Magnesium and Alloys, 2020, , .	5.5	13
31	Effects of casting process on microstructures and flow stress behavior of Mgâ€“9Gdâ€“3Yâ€“1.5Znâ€“0.8Zr semi-continuous casting billets. Journal of Magnesium and Alloys, 2014, 2, 342-348.	5.5	12
32	Effects of radiator shapes on the bubble diving and dispersion of ultrasonic argon process. Ultrasonics Sonochemistry, 2018, 41, 600-607.	3.8	12
33	Effect of limestone ores on grain refinement of as-cast commercial AZ31 magnesium alloys. Transactions of Nonferrous Metals Society of China, 2018, 28, 1103-1113.	1.7	12
34	The Effects of ZnO Particles on the Grain Refinement and Mechanical Properties of AZ31 Magnesium Alloys. Transactions of the Indian Institute of Metals, 2016, 69, 1911-1918.	0.7	10
35	Fabrication of Al-Si-Sc alloy bearing AlSi2Sc2 phase using ultrasonically assisted molten salt electrolysis. Journal of Alloys and Compounds, 2019, 797, 883-889.	2.8	10
36	Effects of synergetic ultrasound on the Sc yield and primary Al3Sc in the Al-Sc alloy prepared by the molten salts electrolysis. Ultrasonics Sonochemistry, 2019, 52, 33-40.	3.8	10

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37	Investigation of the hydrogen states in magnesium alloys and their effects on mechanical properties. Materials and Design, 2017, 134, 446-454.	3.3	9
38	The role of TiB2 particles in the creep and penetrating resistance of graphite-based composite. Ceramics International, 2021, 47, 12096-12103.	2.3	9
39	Microstructures and mechanical properties of the Alâ€“Cuâ€“Sc alloys prepared by ultrasound-assisted molten salt electrolysis. Journal of Alloys and Compounds, 2020, 818, 152870.	2.8	8
40	Optimisation of the bottom blowing process for a 200 t converter. Ironmaking and Steelmaking, 2023, 50, 1-12.	1.1	7
41	Effects of cooling rate on casting ternary Alâ€“Cu-Sc alloy prepared by ultrasound-assisted molten salt electrolysis. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 771, 138657.	2.6	6
42	Study on Fabrication of AA4032/AA6069 Cladding Billet Using Direct Chill Casting Process. Journal of Materials Engineering and Performance, 2016, 25, 1317-1326.	1.2	4
43	Phase-Species-Dependent Electrochemical and Corrosion Behaviors of Wrought Mg-Y-Zn-Based Alloys. Journal of Materials Engineering and Performance, 2020, 29, 5028-5040.	1.2	3
44	The effect of low frequency-electromagnetic field on temperature field and microstructure during magnesium slab casting process. International Journal of Cast Metals Research, 2016, 29, 228-235.	0.5	2
45	Effects of Y Content on the Microstructures and Mechanical Properties of Mg-5Zn-xY-0.6Zr Alloys. Journal Wuhan University of Technology, Materials Science Edition, 2019, 34, 138-144.	0.4	2
46	Microstructure and mechanical properties of pitch based mixture modified by additions of graphene oxide precursor and TiB2 particles. Chemical Engineering Journal, 2022, 443, 136402.	6.6	2
47	The thermoelectric power of Al-0.99 wt.% Fe alloys in the AC magnetic field. Journal of Physics Condensed Matter, 2017, 29, 155101.	0.7	1
48	Editorial for special issue on advanced energy storage and materials for the 70th Anniversary of USTB. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 905-908.	2.4	1