Chao Xu

List of Publications by Year
in descending order

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67	3,893	94433 37	123424 61
papers	citations	h-index	g-index

68	68	68	1255
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Unveiling the formation of basal texture variations based on twinning and dynamic recrystallization in AZ31 magnesium alloy during extrusion. Acta Materialia, 2018, 157, 53-71.	7.9	352
2	Role of layered structure in ductility improvement of layered Ti-Al metal composite. Acta Materialia, 2018, 153, 235-249.	7.9	244
3	Ultra high-strength Mgâ€“Gdâ€“Yâ€“Znâ€“Zr alloy sheets processed by large-strain hot rolling and ageing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 547, 93-98.	5.6	214
4	Strong and ductile age-hardening Mg-Al-Ca-Mn alloy that can be extruded as fast as aluminum alloys. Acta Materialia, 2017, 130, 261-270.	7.9	163
5	Rare earth texture and improved ductility in a Mg-Zn-Gd alloy after high-speed extrusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 667, 233-239.	5.6	138
6	Deformation Behavior of Ultra-Strong and Ductile Mg-Gd-Y-Zn-Zr Alloy with Bimodal Microstructure. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1931-1947.	2.2	135
7	Effect of LPSO and SFs on microstructure evolution and mechanical properties of Mg-Gd-Y-Zn-Zr alloy. Scientific Reports, 2017, 7, 40846.	3.3	110
8	Microstructures and mechanical properties of high-strength Mgâ€“Gdâ€“Yâ€“Znâ€“Zr alloy sheets processed by severe hot rolling. Journal of Alloys and Compounds, 2012, 524, 46-52.	5.5	101
9	Development of dilute Mgâ€“Znâ€“Caâ€–Mn alloy with high performance via extrusion. Journal of Alloys and Compounds, 2016, 668, 13-21.	5.5	101
10	Effect of Ca/Al ratio on microstructure and mechanical properties of Mg-Al-Ca-Mn alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 682, 423-432.	5.6	96
11	Microstructure evolution and mechanical properties of a high strength Mg-11.7Gd-4.9Y-0.3Zr (wt%) alloy prepared by pre-deformation annealing, hot extrusion and ageing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 703, 348-358.	5.6	95
12	High-speed extrusion of dilute Mg-Zn-Ca-Mn alloys and its effect on microstructure, texture and mechanical properties. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 678, 329-338.	5.6	83
13	Ultrahigh strength as-extruded Mgâ€“10.3Znâ€–6.4Yâ€–0.4Zrâ€–0.5Ca alloy containing W phase. Materials and Design, 2016, 108, 391-399.	7.0	79
14	Microstructures and mechanical properties of as-cast and as-extruded Mg-4.50Zn-1.13Ca (wt%) alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 576, 6-13.	5.6	74
15	Enhancing strength and creep resistance of Mgâ€“Gdâ€“Yâ€–Znâ€–Zr alloy by substituting Mn for Zr. Journal of Magnesium and Alloys, 2019, 7, 388-399.	11.9	73
16	Ageing behavior of extruded Mgâ€–8.2Gdâ€–3.8Yâ€–1.0Znâ€–0.4Zr (wt.%) alloy containing LPSO phase and Î³â€² precipitates. Scientific Reports, 2017, 7, 43391.	3.3	72
17	Effects of pre-annealing on microstructure and mechanical properties of as-extruded Mg-Gd-Y-Zn-Zr alloy. Journal of Alloys and Compounds, 2017, 729, 627-637.	5.5	71
18	Microstructure evolution and mechanical properties of as-extruded Mg-Gd-Y-Zr alloy with Zn and Nd additions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 713, 234-243.	5.6	70

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19	Ultrahigh strength Mg-Al-Ca-Mn extrusion alloys with various aluminum contents. Journal of Alloys and Compounds, 2019, 792, 130-141.	5.5	70
20	Improving tensile properties of dilute Mg-0.27Al-0.13Ca-0.21Mn (at.%) alloy by low temperature high speed extrusion. Journal of Alloys and Compounds, 2015, 648, 428-437.	5.5	69
21	Improving mechanical properties and yield asymmetry in high-speed extrudable Mg-1.1Al-0.24Ca (wt%) alloy by high Mn addition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 712, 12-19.	5.6	66
22	Influence of rolling temperature on the microstructure and mechanical properties of Mgâ€“Gdâ€“Yâ€“Znâ€“Zr alloy sheets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 559, 615-622.	5.6	63
23	Enhanced strength in pure Ti via design of alternating coarse- and fine-grain layers. Acta Materialia, 2021, 206, 116627.	7.9	62
24	Microstructure and mechanical properties of the Mgâ€“Gdâ€“Yâ€“Znâ€“Zr alloy fabricated by semi-continuous casting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 549, 128-135.	5.6	61
25	Effect of cooling rate on the microstructure evolution and mechanical properties of homogenized Mgâ€“Gdâ€“Yâ€“Znâ€“Zr alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 559, 364-370.	5.6	61
26	Effect of extrusion parameters on microstructure and mechanical properties of Mg-7.5Gd-2.5Y-3.5Zn-0.9Ca-0.4Zr (wt%) alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 685, 159-167.	5.6	61
27	Microstructure and mechanical properties of a nanostructured Mg-8.2Gd-3.8Y-1.0Zn-0.4Zr supersaturated solid solution prepared by high pressure torsion. Materials and Design, 2017, 135, 366-376.	7.0	59
28	Hot compression deformation behavior of Mg-9Gd-2.9Y-1.9Zn-0.4Zr-0.2Ca (wt%) alloy. Materials Characterization, 2017, 124, 40-49.	4.4	55
29	Effect of ageing treatment on the microstructure, texture and mechanical properties of extruded Mgâ€“8.2Gdâ€“3.8Yâ€“1Znâ€“0.4Zr (wt%) alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 565, 112-117.	5.6	54
30	Influence of Ca-Ce/La synergistic alloying on the microstructure and mechanical properties of extruded Mgâ€“Zn alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 708, 11-20.	5.6	52
31	Optimization of Mn content for high strengths in high-speed extruded Mg-0.3Al-0.3Ca (wt%) dilute alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 673, 443-449.	5.6	51
32	Effect of final rolling reduction on the microstructure and mechanical properties of Mgâ€“Gdâ€“Yâ€“Znâ€“Zr alloy sheets. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 559, 232-240.	5.6	49
33	Correlation between dynamic recrystallization and formation of rare earth texture in a Mg-Zn-Gd magnesium alloy during extrusion. Scientific Reports, 2018, 8, 16800.	3.3	49
34	New Mgâ€“Al based alloy sheet with good room-temperature stretch formability and tensile properties. Scripta Materialia, 2020, 180, 16-22.	5.2	46
35	Influence of size and distribution of W phase on strength and ductility of high strength Mg-5.1Zn-3.2Y-0.4Zr-0.4Ca alloy processed by indirect extrusion. Journal of Materials Science and Technology, 2018, 34, 277-283.	10.7	42
36	Enhancing strength and ductility of Mg-Zn-Gd alloy via slow-speed extrusion combined with pre-forging. Journal of Alloys and Compounds, 2017, 694, 1214-1223.	5.5	41

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37	Quasi-in-situ observing the rare earth texture evolution in an extruded Mg-Zn-Gd alloy with bimodal microstructure. Journal of Magnesium and Alloys, 2021, 9, 1797-1805.	11.9	40
38	Origin of texture weakening in a rolled ZEX4101 alloy sheet and its effect on room temperature formability and tensile property. Journal of Alloys and Compounds, 2019, 782, 304-314.	5.5	39
39	Achieving an ultra-high strength and moderate ductility in Mgâ€“Gdâ€“Yâ€“Znâ€“Zr alloy via a decreased-temperature multi-directional forging. Materials Characterization, 2021, 171, 110804.	4.4	38
40	Effect of forced-air cooling on the microstructure and age-hardening response of extruded Mg-Gd-Y-Zn-Zr alloy full with LPSO lamella. Journal of Materials Science and Technology, 2021, 73, 66-75.	10.7	38
41	Effect of trace zinc on the microstructure and mechanical properties of extruded Mg-Gd-Y-Zr alloy. Journal of Alloys and Compounds, 2019, 789, 416-427.	5.5	36
42	Enhancing mechanical properties of rolled Mg-Al-Ca-Mn alloy sheet by Zn addition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 737, 223-229.	5.6	35
43	Effect of extrusion ratio and temperature on microstructures and tensile properties of extruded Mg-Gd-Y-Mn-Sc alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 800, 140330.	5.6	34
44	Improving creep property of Mgâ€“Gdâ€“Zn alloy via trace Ca addition. Scripta Materialia, 2017, 139, 34-38.	5.2	32
45	Improving tensile properties of a room-temperature formable and heat-treatable Mgâ€“6Zn-0.2Ca (wt.%) alloy sheet via micro-alloying of Al and Mn. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 772, 138690.	5.6	31
46	Enhanced strength by precipitate modification in wrought Mgâ€“Alâ€“Ca alloy with trace Mn addition. Journal of Alloys and Compounds, 2020, 836, 154689.	5.5	31
47	Effect of Aging Treatment on the Precipitation Behavior and Mechanical Properties of Mg-9Gd-3Y-1.5Zn-0.5Zr Alloy. Journal of Materials Engineering and Performance, 2017, 26, 5963-5972.	2.5	30
48	Improving room-temperature stretch formability of a high-alloyed Mgâ€“Alâ€“Caâ€“Mn alloy sheet by a high-temperature solution-treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 801, 140399.	5.6	26
49	Superior strength-ductility synergy of layered aluminum under uniaxial tensile loading: The roles of local stress state and local strain state. International Journal of Plasticity, 2022, 152, 103240.	8.8	24
50	Microstructure and mechanical properties of extruded Mgâ€“Gdâ€“Yâ€“Zn alloy with Mn or Zr addition. Journal of Materials Science, 2019, 54, 10473-10488.	3.7	23
51	Effects of the layer thickness ratio on the enhanced ductility of laminated aluminum. Journal of Materials Science and Technology, 2022, 111, 256-267.	10.7	23
52	Improvement of strength and ductility synergy in a room-temperature stretch-formable Mg-Al-Mn alloy sheet by twin-roll casting and low-temperature annealing. Journal of Magnesium and Alloys, 2022, 10, 1066-1074.	11.9	22
53	Formation of anomalous twinning and its effect on texture development in a cold-rolled Mg-Zn-Ca alloy sheet. Materials Characterization, 2021, 181, 111507.	4.4	15
54	Development of corrosion-resistant Mg-Al-Ca-Mn-Zn alloy sheet with good tensile properties and stretch formability. Journal of Alloys and Compounds, 2022, 910, 164752.	5.5	15

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55	High elongation achieved by band-like distribution of reinforcements in aluminum matrix composites. Materials Characterization, 2018, 144, 42-47.	4.4	13
56	Effect of grain boundary segregation on microstructure and mechanical properties of ultra-fine grained Mgâ€“Alâ€“Caâ€“Mn alloy wires. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 848, 143423.	5.6	11
57	Fabrication and deformation behavior of a novel laminated TiAl matrix composite. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 821, 141603.	5.6	10
58	Fabrication and strengthening mechanisms of magnesium matrix composites with bimodal microstructure induced by graphene nanoplatelets. Journal of Materials Research, 2021, 36, 764-774.	2.6	9
59	Effects of La Addition on the Microstructure, Thermal Conductivity and Mechanical Properties of Mg-3Al-0.3Mn Alloys. Materials, 2022, 15, 1078.	2.9	9
60	Role of homogenization on tensile properties and microstructures in a dilute Mgâ€“Znâ€“Caâ€“Mn alloy sheet. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 833, 142541.	5.6	8
61	Effect of Partially Substituting Ca with Mischmetal on the Microstructure and Mechanical Properties of Extruded Mgâ€“Alâ€“Caâ€“Mn-Based Alloys. Acta Metallurgica Sinica (English Letters), 2019, 32, 205-217.	2.9	6
62	Microtexture-induced anomalous anisotropic tensile behavior in Mgâ€“Alâ€“Zn alloy sheet. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 840, 143002.	5.6	4
63	3D Visualized Characterization of Fracture Behavior of Structural Metals Using Synchrotron Radiation Computed Microtomography. Quantum Beam Science, 2019, 3, 5.	1.2	2
64	Intermediate-Temperature Tensile Behavior of a Hot-Rolled Mg-Li-Al-Cd-Zn Alloy. Materials, 2022, 15, 1686.	2.9	2
65	Effect of Al Addition on Grain Refinement and Phase Transformation of the Mg-Gd-Y-Zn-Mn Alloy Containing LPSO Phase. Materials, 2022, 15, 1632.	2.9	2
66	2D/3D local strain analysis of layered metal composites with a strength-ductility synergy. IOP Conference Series: Materials Science and Engineering, 2019, 580, 012038.	0.6	0
67	Development of a Low-Cost and Room-Temperature Formable Mg Alloy Sheet with In-Plane Isotropic Tensile Properties. Minerals, Metals and Materials Series, 2021, , 13-18.	0.4	0