Ruirun Chen

List of Publications by Year
in descending order

64 papers	1,673 citations	304368 22 h-index	301761 39 g-index
65 all docs	65 docs citations	65 times ranked	825 citing authors

#	Article	IF	Citations
1	Composition design of high entropy alloys using the valence electron concentration to balance strength and ductility. Acta Materialia, 2018, 144, 129-137.	3.8	268
2	Strengthening FCC-CoCrFeMnNi high entropy alloys by Mo addition. Journal of Materials Science and Technology, 2019, 35, 578-583.	5.6	126
3	Effect of Co content on phase formation and mechanical properties of (AlCoCrFeNi)100-Co high-entropy alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 710, 200-205.	2.6	102
4	Microstructures and mechanical properties of Nb-alloyed CoCrCuFeNi high-entropy alloys. Journal of Materials Science and Technology, 2018, 34, 365-369.	5.6	78
5	Variations of microstructure and tensile property of Î³-TiAl alloys with 0â€“0.5 at% C additives. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 700, 198-208.	2.6	73
6	A novel face-centered-cubic high-entropy alloy strengthened by nanoscale precipitates. Scripta Materialia, 2019, 172, 51-55.	2.6	64
7	Effects and mechanism of ultrasonic irradiation on solidification microstructure and mechanical properties of binary TiAl alloys. Ultrasonics Sonochemistry, 2017, 38, 120-133.	3.8	55
8	Enhanced strength and ductility in Ti46Al4Nb1Mo alloys via boron addition. Journal of Materials Science and Technology, 2022, 102, 16-23.	5.6	51
9	An as-cast high-entropy alloy with remarkable mechanical properties strengthened by nanometer precipitates. Nanoscale, 2020, 12, 3965-3976.	2.8	49
10	Directional solidification of titanium alloys by electromagnetic confinement in cold crucible. Materials Letters, 2005, 59, 741-745.	1.3	46
11	CoCrFeMnNi high-entropy alloys reinforced with Laves phase by adding Nb and Ti elements. Journal of Materials Research, 2019, 34, 1011-1020.	1.2	46
12	High-density deformation nanotwin induced significant improvement in the plasticity of polycrystalline Î³-TiAl-based intermetallic alloys. Nanoscale, 2018, 10, 11365-11374.	2.8	42
13	Microstructure control and mechanical properties of Ti44Al6Nb1.0Cr2.0V alloy by cold crucible directional solidification. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 614, 67-74.	2.6	40
14	High-entropy alloys: a review of mechanical properties and deformation mechanisms at cryogenic temperatures. Journal of Materials Science, 2022, 57, 6573-6606.	1.7	40
15	Role of graphite on microstructural evolution and mechanical properties of ternary TiAl alloy prepared by arc melting method. Materials and Design, 2018, 156, 300-310.	3.3	39
16	Microstructure, Mechanical Properties, and Crack Propagation Behavior in High-Nb TiAl Alloys by Directional Solidification. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 4555-4564.	1.1	39
17	The effects of the formation of a multi-scale reinforcing phase on the microstructure evolution and mechanical properties of a Ti₂AlC/TiAl alloy. Nanoscale, 2021, 13, 12565-12576.	2.8	38
18	Mechanism and evolution of heat transfer in mushy zone during cold crucible directionally solidifying TiAl alloys. International Journal of Heat and Mass Transfer, 2013, 63, 216-223.	2.5	33

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19	Microstructure evolution and mechanical properties of directionally-solidified TiAlNb alloy in different temperature gradients. Journal of Alloys and Compounds, 2015, 648, 667-675.	2.8	33
20	Numerical analysis for electromagnetic field influence on heat transfer behaviors in cold crucible used for directional solidification. International Journal of Heat and Mass Transfer, 2018, 122, 1128-1137.	2.5	30
21	Remarkable improvement in tensile strength of a polycrystalline Î³-TiAl-based intermetallic alloy by deformation nanotwins. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 823, 141692.	2.6	25
22	Heat transfer and macrostructure formation of Nb containing TiAl alloy directionally solidified by square cold crucible. Intermetallics, 2013, 42, 184-191.	1.8	23
23	Microstructures and mechanical properties of directionally solidified C-containing Î³-TiAl alloys via electromagnetic cold crucible. Intermetallics, 2019, 113, 106587.	1.8	23
24	Twin and twin intersection phenomena in a creep deformed microalloyed directionally solidified high Nb containing TiAl alloy. Journal of Materials Science and Technology, 2022, 127, 115-123.	5.6	23
25	Effect of Y2O3 particles on the fracture toughness of directionally solidified TiAl-based alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 703, 108-115.	2.6	19
26	Microstructure and elevated temperature tensile property of Tiâ€“46Alâ€“7Nb-(W,Cr,B) alloy compared with binary and ternary TiAl alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 807, 140902.	2.6	19
27	Precipitation phase and twins strengthening behaviors of as-cast non-equiatomic CoCrFeNiMo high entropy alloys. Journal of Alloys and Compounds, 2022, 918, 165584.	2.8	19
28	Design of (Nb, Mo)40Ti30Ni30 alloy membranes for combined enhancement of hydrogen permeability and embrittlement resistance. Scientific Reports, 2017, 7, 209.	1.6	17
29	Effects of Nb on Microstructure and Mechanical Properties of Ti42Al2.6C Alloys. Advanced Engineering Materials, 2018, 20, 1701112.	1.6	17
30	Using multiple regression analysis to predict directionally solidified TiAl mechanical property. Journal of Materials Science and Technology, 2022, 104, 285-291.	5.6	14
31	High deformation ability induced by phase transformation through adjusting Cr content in Co-Fe-Ni-Cr high entropy alloys. Journal of Alloys and Compounds, 2022, 895, 162564.	2.8	14
32	An investigation on the compressive strength enhancing mechanism of directionally solidified Ti-47Al-2Nb-2Cr-0.2Er alloy in case of cyclic loading. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 692, 102-112.	2.6	12
33	Numerical Research on Magnetic Field, Temperature Field and Flow Field During Melting and Directionally Solidifying TiAl Alloys by Electromagnetic Cold Crucible. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 3345-3358.	1.0	11
34	Microstructure, tensile properties and creep behavior of high-Al TiAlNb alloy using electromagnetic cold crucible continuous casting. Journal of Alloys and Compounds, 2019, 801, 166-174.	2.8	11
35	Microstructural evolution and mechanical properties of a Cr-rich Î²-solidifying TiAl-based alloy prepared by electromagnetic cold crucible continuous casting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 798, 140205.	2.6	10
36	Rapid Cellular Crystal Growth of TiAl-Based Intermetallic without Peritectic Reaction by Melt-Quenching in Gaâ€“In Liquid. Crystal Growth and Design, 2017, 17, 1716-1728.	1.4	9

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37	Enhanced hydrogen storage properties of ZrTiVAl_{1âˆ’<i>x</i>}Fe_{<i>x</i>} high-entropy alloys by modifying the Fe content. RSC Advances, 2022, 12, 11272-11281.	1.7	9
38	The growth behavior of columnar grains in a TiAl alloy during directional induction heat treatments. CrystEngComm, 2020, 22, 1188-1196.	1.3	8
39	Improvement of Microstructure and Mechanical Properties of Nearâ€Eutectic Alâ€“Mg₂Si Alloys by Eu Addition. Advanced Engineering Materials, 2021, 23, 2001447.	1.6	7
40	Creep Behavior of Highâ€Nb TiAl Alloy at 800â€“900â€‰Â°C by Directional Solidification. Advanced Engineering Materials, 2018, 20, 1700734.	1.6	6
41	A Comparative Study on Microstructure and Mechanical Properties of Tiâ€43/46Alâ€“5Nbâ€“0.1B Alloys Modified by Mo. Advanced Engineering Materials, 2020, 22, 1901075.	1.6	6
42	Dopant Occupancy and UVâ€“Visâ€“NIR Spectroscopy of Sc:Yb:Tm:LiNbO₃ in the 300â€“3000Ânm Wavelength Range. Crystal Research and Technology, 2020, 55, 1900176.	0.6	6
43	Evolution of rapidly grown cellular microstructure during heat treatment of TiAl-based intermetallic and its effect on micromechanical properties. Intermetallics, 2021, 132, 107166.	1.8	6
44	Improvement of Interface Bonding and Thermal Conductivity of Carbon-Fiber Reinforced Aluminum Matrix Composites with Sn-Cu Coatings. Jom, 2022, 74, 1840-1848.	0.9	6
45	Effect of heat treatment on microstructure and mechanical properties of cast and directionally solidified high-Nb contained TiAl-based alloys. Journal of Materials Research, 2015, 30, 3331-3342.	1.2	5
46	Microstructure and Oxidation Behavior of Al and Al/NiCrAlY Coatings on Pure Titanium Alloy. Journal of Thermal Spray Technology, 2017, 26, 846-856.	1.6	5
47	Study on improving microstructure and mechanical properties of directionally solidified Ti44Al6Nb1Cr alloy by cyclic DHT. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 809, 140912.	2.6	5
48	Optimizing microstructure and mechanical properties of directionally solidified Ti44Al6Nb1Cr2V alloy by directional heat treatment. Materials Characterization, 2021, 179, 111354.	1.9	5
49	Directional Solidification of Ti6Al4V Ingots with an Electromagnetic Cold Crucible by Adjusting the Meniscus. ISIJ International, 2012, 52, 1296-1300.	0.6	4
50	An innovation for microstructural modification and mechanical improvement of TiAl alloy via electric current application. Scientific Reports, 2019, 9, 5518.	1.6	4
51	Effect of mechanical combined with electromagnetic stirring on the dispersity of carbon fibers in the aluminum matrix. Scientific Reports, 2020, 10, 8106.	1.6	4
52	Research of different mechanisms in the weak/strong acoustic active zones on microstructure evolution and mechanical property of Ti48Al2Cr2Nb2.5C composites. Journal of Alloys and Compounds, 2022, 895, 162678.	2.8	4
53	Effect of Ni on Microstructures and Mechanical Properties for Multielemental Nbâ€“Si-Based Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 1793-1805.	1.1	4
54	Microstructure and nanomechanical behavior of individual phase in Î²-solidifying Ti-43Al-5Nb-3.5Cr-1Zr alloy. Journal of Materials Research and Technology, 2022, 18, 1081-1091.	2.6	4

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55	Microstructure and mechanical properties of Nb 16Si alloys with Zr additions. International Journal of Refractory Metals and Hard Materials, 2022, 105, 105832.	1.7	4
56	Effect of growth rate on microstructures and microhardness in directionally solidified Tiâ€“47Alâ€“1.0Wâ€“0.5Si alloy. Journal of Materials Research, 2016, 31, 618-626.	1.2	3
57	Study on improving directional microstructure of Ti44Al6Nb1Cr alloy by continuous regional phase transformation. Journal of Alloys and Compounds, 2021, 861, 158441.	2.8	3
58	Experimental and numerical study on formation mechanism of linear macro-segregation in low-pressure die casting of Alâ€“Cuâ€“Mnâ€“Ti Alloy. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2017, 231, 1946-1955.	1.1	1
59	Hydrogenation behavior of Tiâ€“44Alâ€“6Nb alloy and its effect on the microstructure and hot deformability. Journal of Materials Research, 2017, 32, 1304-1315.	1.2	1
60	Comparison of a Directionally Solidified TiAl Alloy by Î¦15Âmm Cylindrical and 29ÂÃ—Â6Âmm Plate Y2O3 Molds. Jom, 2017, 69, 1812-1817.	0.9	1
61	Efficient Melt Stirring Induced by the Coupled Effects of Alternating Magnetic Field and Configuration of Cold Crucible. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 28-33.	1.0	1
62	A Novel Directional Solidification of TiAl-Based Alloys by Electromagnetic Cold Crucible Zone Melting Technology with Y₂O₃ Moulds. Materials Transactions, 2018, 59, 816-821.	0.4	1
63	Improved hole wall roughness and corrosion resistance of U-shaped hole prepared by casting. International Journal of Advanced Manufacturing Technology, 2021, 117, 1557-1563.	1.5	1
64	Improved Fracture Toughness of Polycrystalline Î³â€TiAlâ€Based Intermetallic Alloys with a Favorable Deformation Mechanism of Twinning. Advanced Engineering Materials, 2022, 24, .	1.6	1