Alexander Kauffmann

List of Publications by Year
in descending order

71 papers	2,506 citations	201674 27 h-index	206112 48 g-index
71 all docs	71 docs citations	71 times ranked	1866 citing authors

#	Article	IF	Citations
1	Microstructure and mechanical properties at elevated temperatures of a new Al-containing refractory high-entropy alloy Nb-Mo-Cr-Ti-Al. Journal of Alloys and Compounds, 2016, 661, 206-215.	5.5	171
2	High temperature oxidation behavior of an equimolar refractory metal-based alloy 20Nb 20Mo 20Cr 20Ti 20Al with and without Si addition. Journal of Alloys and Compounds, 2016, 688, 468-477.	5.5	163
3	Role of stacking fault energy in strengthening due to cryo-deformation of FCC metals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 7624-7630.	5.6	147
4	High-Temperature Oxidation Behavior of Refractory High-Entropy Alloys: Effect of Alloy Composition. Oxidation of Metals, 2017, 88, 339-349.	2.1	126
5	On the oxidation mechanism of refractory high entropy alloys. Corrosion Science, 2019, 159, 108161.	6.6	119
6	High strength and ductile ultrafine-grained Cuâ€“Ag alloy through bimodal grain size, dislocation density and solute distribution. Acta Materialia, 2013, 61, 228-238.	7.9	110
7	Current Status of Research on the Oxidation Behavior of Refractory High Entropy Alloys. Advanced Engineering Materials, 2021, 23, 2001047.	3.5	99
8	Contribution of Lattice Distortion to Solid Solution Strengthening in a Series of Refractory High Entropy Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 772-781.	2.2	91
9	Effect of stacking fault energy on deformation behavior of cryo-rolled copper and copper alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 529, 230-236.	5.6	88
10	High Upper Critical Fields and Evidence of Weak-Link Behavior in Superconducting<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>LaFeAsO</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi></mml:mrow></mml:msub><mml:msub><mml:mi mathvariant="bold">F</mml:mi><mml:mi>x</mml:mi></mml:msub></mml:math>Thin Films. Physical Review Letters, 2010, 104, 077001.	7.8	71
11	Superior low-cycle fatigue properties of CoCrNi compared to CoCrFeMnNi. Scripta Materialia, 2021, 194, 113667.	5.2	66
12	A new strategy to intrinsically protect refractory metal based alloys at ultra high temperatures. Corrosion Science, 2020, 166, 108475.	6.6	63
13	Critical Current Scaling and Anisotropy in Oxypnictide Superconductors. Physical Review Letters, 2011, 106, 137001.	7.8	60
14	Peculiarities of deformation of CoCrFeMnNi at cryogenic temperatures. Journal of Materials Research, 2018, 33, 3287-3300.	2.6	56
15	Effect of microalloying with silicon on high temperature oxidation resistance of novel refractory high-entropy alloy Ta-Mo-Cr-Ti-Al. Materials at High Temperatures, 2018, 35, 168-176.	1.0	54
16	Constitution, oxidation and creep of eutectic and eutectoid Mo-Si-Ti alloys. Intermetallics, 2019, 104, 133-142.	3.9	44
17	Deformation mechanisms of CoCrFeMnNi high-entropy alloy under low-cycle-fatigue loading. Acta Materialia, 2021, 215, 117089.	7.9	44
18	Combinatorial exploration of the High Entropy Alloy System Co-Cr-Fe-Mn-Ni. Surface and Coatings Technology, 2017, 325, 174-180.	4.8	43

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19	Dynamic recrystallisation and precipitation behaviour of high strength and highly conducting Cuâ€“Agâ€“Zr-alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 597, 139-147.	5.6	42
20	Studies on recrystallization of single-phase copper alloys by resistance measurements. Acta Materialia, 2010, 58, 2324-2329.	7.9	40
21	Severe deformation twinning in pure copper by cryogenic wire drawing. Acta Materialia, 2011, 59, 7816-7823.	7.9	39
22	High-temperature low cycle fatigue behavior of an equiatomic CoCrFeMnNi high-entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 791, 139781.	5.6	37
23	Characterisation of the oxidation and creep behaviour of novel Mo-Si-Ti alloys. Acta Materialia, 2020, 184, 132-142.	7.9	35
24	Exchange Bias Effect along Vertical Interfaces in La0.7Sr0.3MnO3:NiO Vertically Aligned Nanocomposite Thin Films Integrated on Silicon Substrates. Crystal Growth and Design, 2018, 18, 4388-4394.	3.0	33
25	Appearance of dislocation-mediated and twinning-induced plasticity in an engineering-grade FeMnNiCr alloy. Acta Materialia, 2011, 59, 7711-7723.	7.9	32
26	Formation of complex intermetallic phases in novel refractory high-entropy alloys NbMoCrTiAl and TaMoCrTiAl: Thermodynamic assessment and experimental validation. Journal of Alloys and Compounds, 2020, 842, 155726.	5.5	31
27	Microstructure Evolution in a New Refractory High-Entropy Alloy W-Mo-Cr-Ti-Al. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 961-970.	2.2	28
28	On the chemical and microstructural requirements for the pesting-resistance of Moâ€“Siâ€“Ti alloys. Journal of Materials Research and Technology, 2020, 9, 8556-8567.	5.8	27
29	Controlling crystallographic ordering in Moâ€“Crâ€“Tiâ€“Al high entropy alloys to enhance ductility. Journal of Alloys and Compounds, 2020, 823, 153805.	5.5	27
30	Face Centred Cubic Multi-Component Equiatomic Solid Solutions in the Au-Cu-Ni-Pd-Pt System. Metals, 2017, 7, 135.	2.3	25
31	Grain boundary engineering and its implications on corrosion behavior of equiatomic CoCrFeMnNi high entropy alloy. Journal of Alloys and Compounds, 2021, 888, 161500.	5.5	25
32	Solid solution strengthening and deformation behavior of single-phase Cu-base alloys under tribological load. Acta Materialia, 2020, 185, 300-308.	7.9	24
33	Al-Ti Particulate Composite: Processing and Studies on Particle Twinning, Microstructure, and Thermal Stability. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 4226-4238.	2.2	23
34	Enhanced Oxidation Resistance of Moâ€“Siâ€“Bâ€“Ti Alloys by Pack Cementation. Oxidation of Metals, 2017, 88, 267-277.	2.1	23
35	$J_{m c}$ Scaling and Anisotropies in Co-Doped Ba-122 Thin Films. IEEE Transactions on Applied Superconductivity, 2011, 21, 2887-2890.	1.7	22
36	Grain Refinement and Deformation Mechanisms in Room Temperature Severe Plastic Deformed Mg-AZ31. Metals, 2013, 3, 283-297.	2.3	22

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37	Assessment of the thermodynamic dimension of the stacking fault energy. Philosophical Magazine, 2014, 94, 2967-2979.	1.6	22
38	Properties of cryo-drawn copper with severely twinned microstructure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 588, 132-141.	5.6	21
39	Microstructural inhomogeneities in Cuâ€“Agâ€“Zr alloys due to heavy plastic deformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 606-613.	5.6	19
40	Microstructure tailoring of Al-containing compositionally complex alloys by controlling the sequence of precipitation and ordering. Acta Materialia, 2021, 218, 117217.	7.9	18
41	Glow discharge plasma as a surface preparation tool for microstructure investigations. Materials Characterization, 2014, 91, 76-88.	4.4	17
42	Solute redistribution during annealing of a cold rolled Cuâ€“Ag alloy. Journal of Alloys and Compounds, 2015, 623, 96-103.	5.5	17
43	Efficiency of the refinement by deformation twinning in wire drawn single phase copper alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 624, 71-78.	5.6	16
44	Creep of binary Fe-Al alloys with ultrafine lamellar microstructures. Intermetallics, 2017, 90, 180-187.	3.9	16
45	Micro-mechanical deformation behavior of CoCrFeMnNi high-entropy alloy. Journal of Materials Science and Technology, 2022, 100, 237-245.	10.7	16
46	Processing of Intermetallic Titanium Aluminide Wires. Metals, 2013, 3, 188-201.	2.3	15
47	Orientation relationship of eutectoid FeAl and FeAl₂. Journal of Applied Crystallography, 2016, 49, 442-449.	4.5	15
48	Thermal stability of electrical and mechanical properties of cryo-drawn Cu and CuZr wires. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 651, 567-573.	5.6	15
49	Microstructural changes in CoCrFeMnNi under mild tribological load. Journal of Materials Science, 2020, 55, 12353-12372.	3.7	14
50	Microstructural and chemical constitution of the oxide scale formed on a pesting-resistant Mo-Si-Ti alloy. Corrosion Science, 2021, 178, 109081.	6.6	13
51	Twinning Phenomena along and beyond the Bain Path. Metals, 2013, 3, 319-336.	2.3	12
52	Microstructural Investigations of Novel High Temperature Alloys Based on NiAl-(Cr,Mo). Metals, 2020, 10, 961.	2.3	11
53	Damascene Lightâ€Weight Metals. Advanced Engineering Materials, 2010, 12, 1191-1197.	3.5	10
54	Irreversibility field up to 42 T of GdBa₂Cu₃O_{7-Î´}thin films grown by PLD and its dependence on deposition parameters. Superconductor Science and Technology, 2010, 23, 105017.	3.5	10

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55	Microstructure Formation and Resistivity Change in CuCr during Rapid Solidification. Metals, 2017, 7, 478.	2.3	10
56	Effect of Y Additions on the Oxidation Behaviour of Novel Refractory High-Entropy Alloy NbMoCrTiAl at 1000ÂÂ°C in Air. Oxidation of Metals, 2020, 94, 147-163.	2.1	9
57	Phase Evolution in and Creep Properties of Nb-Rich Nb-Si-Cr Eutectics. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 763-771.	2.2	7
58	Mechanism of nanostructure formation in ball-milled Cu and Cuâ€“3wt%Zn studied by X-ray diffraction line profile analysis. Journal of Alloys and Compounds, 2014, 588, 138-143.	5.5	6
59	Highâ€Temperature Ternary Oxide Phases in Tantalum/Niobiumâ€“Alumina Composite Materials. Advanced Engineering Materials, 2022, 24, .	3.5	6
60	Microstructure evolution during annealing of an SPD- processed supersaturated Cu â€“ 3 at.% Ag alloy. IOP Conference Series: Materials Science and Engineering, 2014, 63, 012091.	0.6	5
61	Development of Oxidation Resistant Refractory High Entropy Alloys for High Temperature Applications: Recent Results and Development Strategy. Minerals, Metals and Materials Series, 2018, , 647-659.	0.4	5
62	Influence of Temperature and Plastic Strain on Deformation Mechanisms and Kink Band Formation in Homogenized HfNbTaTiZr. Crystals, 2021, 11, 81.	2.2	5
63	Flexible Powder Production for Additive Manufacturing of Refractory Metal-Based Alloys. Metals, 2021, 11, 1723.	2.3	5
64	Microstructural evolution during creep of lamellar eutectoid and off-eutectoid FeAl/FeAl2 alloys. Intermetallics, 2019, 107, 116-125.	3.9	4
65	On the impact of the mesostructure on the creep response of cellular NiAl-Mo eutectics. Acta Materialia, 2022, 226, 117626.	7.9	4
66	Isotropic behavior of critical current for MgB2 ex situ tapes with 5 wt.% carbon addition. Physica C: Superconductivity and Its Applications, 2012, 483, 222-224.	1.2	3
67	The Creep and Oxidation Behaviour of Pesting-Resistant (Mo,Ti)5Si3-Containing Eutectic-Eutectoid Mo-Si-Ti Alloys. Metals, 2021, 11, 169.	2.3	3
68	Effect of Water Vapor on the Oxidation Behavior of the Eutectic Highâ€Temperature Alloy Moâ€20Siâ€52.8Ti. Advanced Engineering Materials, 2020, 22, 2000219.	3.5	2
69	Characterization of the Microstructure after Composite Peening of Aluminum. Advanced Engineering Materials, 2021, 23, 2000575.	3.5	2
70	Oxidation Resistance, Creep Strength and Room-Temperature Fracture Toughness of Moâ€“28Tiâ€“14Siâ€“6Câ€“6B Alloy. Materialia, 2021, 16, 101108.	2.7	2
71	Revealing the Role of Cross Slip for Serrated Plastic Deformation in Concentrated Solid Solutions at Cryogenic Temperatures. Metals, 2022, 12, 514.	2.3	1