Nd Stepanov

List of Publications by Year
in descending order

120 papers	6,337 citations	87888 38 h-index	71685 76 g-index
121 all docs	121 docs citations	121 times ranked	2619 citing authors

#	Article	IF	Citations
1	Effect of Mn and V on structure and mechanical properties of high-entropy alloys based on CoCrFeNi system. Journal of Alloys and Compounds, 2014, 591, 11-21.	5.5	492
2	Effect of cryo-deformation on structure and properties of CoCrFeNiMn high-entropy alloy. Intermetallics, 2015, 59, 8-17.	3.9	334
3	Effect of V content on microstructure and mechanical properties of the CoCrFeMnNiVx high entropy alloys. Journal of Alloys and Compounds, 2015, 628, 170-185.	5.5	312
4	Structure and mechanical properties of a light-weight AlNbTiV high entropy alloy. Materials Letters, 2015, 142, 153-155.	2.6	296
5	Tensile properties of an AlCrCuNiFeCo high-entropy alloy in as-cast and wrought conditions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 533, 107-118.	5.6	283
6	Structure and mechanical properties of the AlCrxNbTiV (xÂ=Â0, 0.5, 1, 1.5) high entropy alloys. Journal of Alloys and Compounds, 2015, 652, 266-280.	5.5	222
7	Effect of carbon content and annealing on structure and hardness of the CoCrFeNiMn-based high entropy alloys. Journal of Alloys and Compounds, 2016, 687, 59-71.	5.5	210
8	High temperature deformation behavior and dynamic recrystallization in CoCrFeNiMn high entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 636, 188-195.	5.6	200
9	Structure and mechanical properties of B2 ordered refractory AlNbTiVZrx (x = 0â€“1.5) high-entropy alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 704, 82-90.	5.6	189
10	Effect of thermomechanical processing on microstructure and mechanical properties of the carbon-containing CoCrFeNiMn high entropy alloy. Journal of Alloys and Compounds, 2017, 693, 394-405.	5.5	171
11	Laves-phase formation criterion for high-entropy alloys. Materials Science and Technology, 2017, 33, 17-22.	1.6	140
12	Second phase formation in the CoCrFeNiMn high entropy alloy after recrystallization annealing. Materials Letters, 2016, 185, 1-4.	2.6	137
13	Aging behavior of the HfNbTaTiZr high entropy alloy. Materials Letters, 2018, 211, 87-90.	2.6	126
14	Effect of second phase particles on mechanical properties and grain growth in a CoCrFeMnNi high entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 748, 228-235.	5.6	126
15	Novel Fe36Mn21Cr18Ni15Al10 high entropy alloy with bcc/B2 dual-phase structure. Journal of Alloys and Compounds, 2017, 705, 756-763.	5.5	114
16	Effect of Al content on structure and mechanical properties of the AlxCrNbTiVZr (x=0; 0.25; 0.5; 1) high-entropy alloys. Materials Characterization, 2016, 121, 125-134.	4.4	106
17	An AlNbTiVZr0.5 high-entropy alloy combining high specific strength and good ductility. Materials Letters, 2015, 161, 136-139.	2.6	105
18	Effect of Al on structure and mechanical properties of Al_xNbTiVZr (xâ€‰=â€‰0, 0.5, 1, 1.5) high entropy alloys. Materials Science and Technology, 2015, 31, 1184-1193.	1.6	104

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19	Effect of carbon on cryogenic tensile behavior of CoCrFeMnNi-type high entropy alloys. Journal of Alloys and Compounds, 2019, 811, 152000.	5.5	96
20	Precipitation-strengthened refractory Al 0.5 CrNbTi 2 V 0.5 high entropy alloy. Materials Letters, 2017, 188, 162-164.	2.6	94
21	Phase Composition and Superplastic Behavior of a Wrought AlCoCrCuFeNi High-Entropy Alloy. Jom, 2013, 65, 1815-1828.	1.9	93
22	Tensile properties of the Crâ€“Feâ€“Niâ€“Mn non-equiatomic multicomponent alloys with different Cr contents. Materials and Design, 2015, 87, 60-65.	7.0	89
23	Effect of cold rolling on microstructure and mechanical properties of copper subjected to ECAP with various numbers of passes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 554, 105-115.	5.6	87
24	Effect of Cr and Zr on phase stability of refractory Al-Cr-Nb-Ti-V-Zr high-entropy alloys. Journal of Alloys and Compounds, 2018, 757, 403-414.	5.5	84
25	Laser beam welding of a CoCrFeNiMn-type high entropy alloy produced by self-propagating high-temperature synthesis. Intermetallics, 2018, 96, 63-71.	3.9	83
26	Effect of Al on structure and mechanical properties of Fe-Mn-Cr-Ni-Al non-equiatomic high entropy alloys with high Fe content. Journal of Alloys and Compounds, 2019, 770, 194-203.	5.5	80
27	Friction stir welding of a Ñarbon-doped CoCrFeNiMn high-entropy alloy. Materials Characterization, 2018, 145, 353-361.	4.4	77
28	Microstructure and Mechanical Properties Evolution of the Al, C-Containing CoCrFeNiMn-Type High-Entropy Alloy during Cold Rolling. Materials, 2018, 11, 53.	2.9	75
29	Effect of nitrogen on mechanical properties of CoCrFeMnNi high entropy alloy at room and cryogenic temperatures. Journal of Alloys and Compounds, 2020, 849, 156633.	5.5	71
30	Evolution of microstructure and mechanical properties in Cuâ€“14%Fe alloy during severe cold rolling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 564, 264-272.	5.6	63
31	Fatigue behaviour of a laser beam welded CoCrFeNiMn-type high entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 766, 138358.	5.6	59
32	Structure and high temperature mechanical properties of novel non-equiatomic Fe-(Co,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 222 Td (M	3.9	56
33	Evolution of microstructure and mechanical properties of Ti/TiB metal-matrix composite during isothermal multiaxial forging. Journal of Alloys and Compounds, 2019, 770, 840-848.	5.5	56
34	Mechanical properties of a new high entropy alloy with a duplex ultra-fine grained structure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 728, 54-62.	5.6	55
35	Effect of carbon on recrystallised microstructures and properties of CoCrFeMnNi-type high-entropy alloys. Journal of Alloys and Compounds, 2021, 851, 156839.	5.5	53
36	Recrystallized microstructures and mechanical properties of a C-containing CoCrFeNiMn-type high-entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 740-741, 201-210.	5.6	52

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37	Superplasticity of AlCoCrCuFeNi High Entropy Alloy. Materials Science Forum, 0, 735, 146-151.	0.3	48
38	Deformation behavior and microstructure evolution of a Ti/TiB metal-matrix composite during high-temperature compression tests. Materials and Design, 2016, 112, 17-26.	7.0	47
39	Plastic deformation of solid-solution strengthened Hf-Nb-Ta-Ti-Zr body-centered cubic medium/high-entropy alloys. Scripta Materialia, 2021, 200, 113927.	5.2	43
40	Hot deformation behavior and processing maps of B and Gd containing Î²-solidified TiAl based alloy. Intermetallics, 2018, 94, 138-151.	3.9	37
41	Microstructure evolution of a novel low-density Tiâ€“Crâ€“Nbâ€“V refractory high entropy alloy during cold rolling and subsequent annealing. Materials Characterization, 2019, 158, 109980.	4.4	37
42	The predicted rate-dependent deformation behaviour and multistage strain hardening in a model heterostructured body-centered cubic high entropy alloy. International Journal of Plasticity, 2021, 145, 103073.	8.8	37
43	Structure and hardness of B2 ordered refractory AlNbTiVZr0.5 high entropy alloy after high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 716, 308-315.	5.6	36
44	Evolution of Microstructure and Mechanical Properties of a CoCrFeMnNi High-Entropy Alloy during High-Pressure Torsion at Room and Cryogenic Temperatures. Metals, 2018, 8, 123.	2.3	35
45	Design and characterization of eutectic refractory high entropy alloys. Materialia, 2021, 16, 101057.	2.7	35
46	Orientation relationship in a Ti/TiB metal-matrix composite. Materials Letters, 2017, 186, 168-170.	2.6	33
47	Oxidation Behavior of Refractory AlNbTiVZr0.25 High-Entropy Alloy. Materials, 2018, 11, 2526.	2.9	32
48	Mechanical behavior and thermal activation analysis of HfNbTaTiZr body-centered cubic high-entropy alloy during tensile deformation at 77ÂK. Scripta Materialia, 2020, 188, 118-123.	5.2	32
49	A new refractory Ti-Nb-Hf-Al high entropy alloy strengthened by orthorhombic phase particles. International Journal of Refractory Metals and Hard Materials, 2020, 92, 105322.	3.8	31
50	Gum-like mechanical behavior of a partially ordered Al5Nb24Ti40V5Zr26 high entropy alloy. Intermetallics, 2020, 116, 106652.	3.9	30
51	Effect of nitrogen on microstructure and mechanical properties of the CoCrFeMnNi high-entropy alloy after cold rolling and subsequent annealing. Journal of Alloys and Compounds, 2021, 888, 161452.	5.5	30
52	Exceptionally high strain-hardening and ductility due to transformation induced plasticity effect in Ti-rich high-entropy alloys. Scientific Reports, 2020, 10, 13293.	3.3	29
53	Structure and mechanical properties of an in situ refractory Al20Cr10Nb15Ti20V25Zr10 high entropy alloy composite. Materials Letters, 2020, 264, 127372.	2.6	29
54	Structures and mechanical properties of Ti-Nb-Cr-V-Ni-Al refractory high entropy alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 786, 139409.	5.6	29

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55	Brittle-to-ductile transition in a Tiâ€“TiB metal-matrix composite. Materials Letters, 2017, 187, 28-31.	2.6	27
56	Influence of carbon on the mechanical behavior and microstructure evolution of CoCrFeMnNi processed by high pressure torsion. Materialia, 2021, 16, 101059.	2.7	27
57	Microstructure and texture evolution of a high manganese TWIP steel during cryo-rolling. Materials Characterization, 2017, 132, 20-30.	4.4	26
58	Microstructure and Mechanical Properties Evolution in HfNbTaTiZr Refractory Highâ€Entropy Alloy During Cold Rolling. Advanced Engineering Materials, 2020, 22, 2000105.	3.5	26
59	Refractory high entropy alloy with ductile intermetallic B2 matrix / hard bcc particles and exceptional strain hardening capacity. Materialia, 2021, 20, 101225.	2.7	26
60	Microband-induced plasticity in a Ti-rich high-entropy alloy. Journal of Alloys and Compounds, 2020, 842, 155868.	5.5	24
61	Refractory TaTiNb, TaTiNbZr, and TaTiNbZrX (XÂ=ÂMo, W) high entropy alloys by combined use of high energy ball milling and spark plasma sintering: Structural characterization, mechanical properties, electrical resistivity, and thermal conductivity. Journal of Alloys and Compounds, 2022, 893, 162030.	5.5	24
62	Effect of heat treatment on the structure and hardness of high-entropy alloys CoCrFeNiMnV x (x =) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.0	23
63	Cross-kink unpinning controls the medium- to high-temperature strength of body-centered cubic NbTiZr medium-entropy alloy. Scripta Materialia, 2022, 209, 114367.	5.2	23
64	Phase Evolution of the AlxNbTiVZr (x = 0; 0.5; 1; 1.5) High Entropy Alloys. Metals, 2016, 6, 298.	2.3	22
65	Laser Beam Welding of a Low Density Refractory High Entropy Alloy. Metals, 2019, 9, 1351.	2.3	22
66	Mechanical Behavior and Microstructure Evolution of a Ti-15Mo/TiB Titaniumâ€“Matrix Composite during Hot Deformation. Metals, 2019, 9, 1175.	2.3	22
67	Effect of Hot Rolling on the Microstructure and Mechanical Properties of a Ti-15Mo/TiB Metal-Matrix Composite. Metals, 2020, 10, 40.	2.3	22
68	Creep behavior of an AlTiVNbZr0.25 high entropy alloy at 1073ÂK. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 783, 139291.	5.6	21
69	Effect of High-Pressure Torsion on Structure and Properties of Ti-15Mo/TiB Metal-Matrix Composite. Materials, 2018, 11, 2426.	2.9	20
70	Unique precipitations in a novel refractory Nb-Mo-Ti-Co high-entropy superalloy. Materials Research Letters, 2022, 10, 78-87.	8.7	20
71	Mechanisms of the Reverse Martensite-to-Austenite Transformation in a Metastable Austenitic Stainless Steel. Metals, 2021, 11, 599.	2.3	18
72	Gradient soft magnetic materials produced by additive manufacturing from non-magnetic powders. Journal of Materials Processing Technology, 2022, 300, 117393.	6.3	18

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73	Excellent strength-toughness synergy in metastable austenitic stainless steel due to gradient structure formation. Materials Letters, 2021, 303, 130585.	2.6	17
74	Outstanding cryogenic strength-ductility properties of a cold-rolled medium-entropy TRIP Fe65(CoNi)25Cr9Â·5C0.5 alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 836, 142720.	5.6	16
75	Oxidation behaviour of eutectic refractory high-entropy alloys at 800â€“1000ÂÂ°C. Corrosion Science, 2022, 205, 110464.	6.6	16
76	Effect of High-Pressure Torsion on Structure and Microhardness of Ti/TiB Metalâ€“Matrix Composite. Metals, 2017, 7, 507.	2.3	14
77	Oxidation resistance and thermal stability of a Î²-solidified Î³-TiAl based alloy after nitrogen ion implantation. Corrosion Science, 2020, 177, 109003.	6.6	14
78	Laser Beam Welding of a Ti-15Mo/TiB Metalâ€“Matrix Composite. Metals, 2021, 11, 506.	2.3	14
79	Machine Learning-Based Strength Prediction for Refractory High-Entropy Alloys of the Al-Cr-Nb-Ti-V-Zr System. Materials, 2021, 14, 7213.	2.9	14
80	Structure and Properties of High-Entropy Nitride Coatings. Metals, 2022, 12, 847.	2.3	13
81	Prediction of strength characteristics of high-entropy alloys Al-Cr-Nb-Ti-V-Zr systems. Materials Today: Proceedings, 2021, 38, 1535-1540.	1.8	12
82	Effect of multiaxial deformation on structure, mechanical properties, and corrosion resistance of a Mg-Ca alloy. Journal of Magnesium and Alloys, 2022, 10, 266-280.	11.9	12
83	Performance-oriented multistage design for multi-principal element alloys with low cost yet high efficiency. Materials Horizons, 2022, 9, 1518-1525.	12.2	12
84	Mechanical Behavior and Microstructure Evolution during Superplastic Deformation of the Fine-Grained AlCoCrCuFeNi High Entropy Alloy. Materials Science Forum, 0, 838-839, 302-307.	0.3	11
85	Effect of pre-heating and post-weld heat treatment on structure and mechanical properties of laser beam-welded Ti2AlNb-based joints. Intermetallics, 2022, 143, 107466.	3.9	11
86	The effect of Gd addition on the kinetics of Î±2â†'Î³ transformation in Î³-TiAl based alloys. Intermetallics, 2020, 120, 106759.	3.9	10
87	Friction Stir Welding of a TRIP Fe49Mn30Cr10Co10C1 High Entropy Alloy. Metals, 2021, 11, 66.	2.3	10
88	On the yield stress anomaly in a B2-ordered refractory AlNbTiVZr0.25 high-entropy alloy. Materials Letters, 2022, 311, 131584.	2.6	9
89	Effect of multiaxial forging on microstructure and mechanical properties of Mg-0.8Ca alloy. IOP Conference Series: Materials Science and Engineering, 2014, 63, 012075.	0.6	8
90	Use of Novel Welding Technologies for High-Entropy Alloys Joining. Materials Science Forum, 0, 941, 919-924.	0.3	8

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91	Effect of Multiaxial Forging on Structure Evolution and Mechanical Properties of Oxygen Free Copper. Materials Science Forum, 2010, 667-669, 289-294.	0.3	7
92	Effect of ECAP on microstructure and mechanical properties of Cu-14Fe microcomposite alloy. IOP Conference Series: Materials Science and Engineering, 2014, 63, 012098.	0.6	6
93	Aging behavior of two refractory Ti-Nb-(Hf, Zr)-Al high entropy alloys. Journal of Alloys and Compounds, 2021, 889, 161586.	5.5	6
94	Structure and properties of an Mg-0.3% ca magnesium alloy after multiaxial deformation and equal-channel angular pressing. Russian Metallurgy (Metally), 2014, 2014, 911-919.	0.5	5
95	Wear resistance of Ti/TiB composites produced by spark plasma sintering. AIP Conference Proceedings, 2017, , .	0.4	5
96	Microstructure Evolution and Properties of Ti-6Al-4V Alloy Doped with Fe and Mo during Deformation at 800Â°C. Defect and Diffusion Forum, 0, 385, 144-149.	0.4	5
97	Structure and mechanical properties of a low-density AlCrFeTi medium entropy alloy produced by spark plasma sintering. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 795, 140018.	5.6	5
98	Influence of cold rolling and annealing on the microstructure, mechanical properties, and electrical conductivity of an artificial microcomposite Cu-18% Nb alloy. Russian Metallurgy (Metally), 2010, 2010, 1072-1079.	0.5	3
99	Effect of Cold Rolling on Structure and Mechanical Properties of Copper Subjected to Different Numbers of Passes of ECAP. Materials Science Forum, 2010, 667-669, 295-300.	0.3	3
100	Microstructure Refinement in the CoCrFeNiMn High Entropy Alloy under Plastic Straining. Materials Science Forum, 0, 879, 1853-1858.	0.3	3
101	Strengthening of a CoCrFeNiMn-Type High Entropy Alloy by Regular Arrays of Nanoprecipitates. Materials Science Forum, 2018, 941, 772-777.	0.3	3
102	Effect of Plastic Deformation on the Structure and Properties of the Ti/TiB Composite Produced by Spark Plasma Sintering. Russian Metallurgy (Metally), 2018, 2018, 638-644.	0.5	3
103	Effect of carbon content on cryogenic mechanical properties of CoCrFeMnNi high entropy alloy. IOP Conference Series: Materials Science and Engineering, 2021, 1014, 012050.	0.6	3
104	Effect of Interstitial Elements on the Cryogenic Mechanical Behavior of FCC High Entropy Alloys. Materials Science Forum, 0, 1016, 1386-1391.	0.3	3
105	Structure and Properties of Ti/TiB Metal-Matrix Composite after Isothermal Multiaxial Forging. Acta Physica Polonica A, 2018, 134, 695-698.	0.5	3
106	Design and Characterization of Al-Cr-Nb-Ti-V-Zr High-Entropy Alloys for High-Temperature Applications. Physical Mesomechanics, 2021, 24, 642-652.	1.9	3
107	Study of the Structure Formation during Compression for Selecting Multiaxial Deformation Conditions for an Mgâ€“Ca Alloy. Russian Metallurgy (Metally), 2018, 2018, 1046-1058.	0.5	2
108	Effect of friction stir welding on the structure and mechanical properties of the CoCrFeNiMn-0.9%C alloy. AIP Conference Proceedings, 2019, , .	0.4	2

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109	Structure and mechanical properties of near-eutectic refractory Al-Cr-Nb-Ti-Zr high entropy alloys. IOP Conference Series: Materials Science and Engineering, 2021, 1014, 012058.	0.6	2
110	Precipitation-hardened refractoryTi-Nb-Hf-Al-Ta high-entropy alloys. IOP Conference Series: Materials Science and Engineering, 2021, 1014, 012041.	0.6	2
111	Evolution of microstructure and mechanical properties of Ti-based metal-matrix composites during hot deformation. MATEC Web of Conferences, 2020, 321, 12016.	0.2	2
112	Effect of temperature and strain on the formation of elongated fine grained structure in middle carbon steel during large plastic deformation. IOP Conference Series: Materials Science and Engineering, 2014, 63, 012054.	0.6	1
113	Superplastic Behavior of B- and Gd-Containing Î²-Solidifying TiAl Based Alloy. Defect and Diffusion Forum, 0, 385, 131-136.	0.4	1
114	Corrosion properties of a Ti-15Mo/TiB composite produced by spark plasma sintering. AIP Conference Proceedings, 2019, , .	0.4	1
115	Mechanisms of Grain Structure Evolution in a Quenched Medium Carbon Steel during Warm Deformation. Crystals, 2020, 10, 554.	2.2	1
116	Efficiency of Microstructure Refinement in Ti-Based Alloys. Materials Science Forum, 0, 1016, 1753-1758.	0.3	1
117	Friction Stir Welding of the Carbon-Doped Dual-Phase High Entropy Alloy. Solid State Phenomena, 0, 316, 364-368.	0.3	1
118	B2 precipitates formation in Al-containing CoCrFeMnNi-type high entropy alloy. IOP Conference Series: Materials Science and Engineering, 2021, 1014, 012018.	0.6	1
119	Hot Deformation Behavior of Î²-Solidifying TiAl Based Alloy. Acta Physica Polonica A, 2018, 134, 675-677.	0.5	1
120	Design of High-Entropy Alloys. Metals, 2022, 12, 1003.	2.3	0