List of Publications by Year in descending order

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		172207	205818
121	3,063	29	48
papers	citations	h-index	g-index
122	122	122	2320
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Effect of carbon content on variant pairing of martensite in Fe–C alloys. Acta Materialia, 2012, 60, 7265-7274.	3.8	161
2	Deformation Microstructure and Deformation-Induced Martensite in Austenitic Fe-Cr-Ni Alloys Depending on Stacking Fault Energy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 1-7.	1.1	150
3	An improved thermodynamic modeling of the Fe–Cr system down to zero kelvin coupled with key experiments. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2011, 35, 355-366.	0.7	141
4	Quantitative Evaluation of Spinodal Decomposition in Fe-Cr by Atom Probe Tomography and Radial Distribution Function Analysis. Microscopy and Microanalysis, 2013, 19, 665-675.	0.2	96
5	Microwave assisted combustion synthesis of nanocrystalline yttria and its powder characteristics. Powder Technology, 2009, 191, 309-314.	2.1	92
6	Combustion synthesis of Y2O3 and Yb–Y2O3. Journal of Materials Processing Technology, 2008, 208, 415-422.	3.1	82
7	Stepwise transformation behavior of the strain-induced martensitic transformation in a metastable stainless steel. Scripta Materialia, 2007, 56, 213-216.	2.6	72
8	Load Partitioning and Strain-Induced Martensite Formation during Tensile Loading of a Metastable Austenitic Stainless Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 1039-1048.	1.1	71
9	<i>In situ</i> small-angle x-ray scattering study of nanostructure evolution during decomposition of arc evaporated TiAlN coatings. Applied Physics Letters, 2009, 94, .	1.5	59
10	Concurrent phase separation and clustering in the ferrite phase during low temperature stress aging of duplex stainless steel weldments. Acta Materialia, 2012, 60, 5818-5827.	3.8	58
11	The 475°C embrittlement in Fe–20Cr and Fe–20Cr–X (X=Ni, Cu, Mn) alloys studied by mechanical testing and atom probe tomography. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 574, 123-129.	2.6	55
12	Exploring the relationship between the microstructure and strength of fresh and tempered martensite in a maraging stainless steel Fe–15Cr–5Ni. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 745, 420-428.	2.6	54
13	Direct Observation that Bainite can Grow Below MS. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 4984-4988.	1.1	53
14	Nanostructure evolution and mechanical property changes during aging of a super duplex stainless steel at 300 °C. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 647, 241-248.	2.6	51
15	Quantitative electron microscopy and physically based modelling of Cu precipitation in precipitation-hardening martensitic stainless steel 15-5 PH. Materials and Design, 2018, 143, 141-149.	3.3	50
16	Load partitioning between single bulk grains in a two-phase duplex stainless steel during tensile loading. Acta Materialia, 2010, 58, 734-744.	3.8	49
17	Micromechanics and microstructure evolution during in situ uniaxial tensile loading of TRIP-assisted duplex stainless steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 734, 281-290.	2.6	48
18	Synthesis and phase separation of (Ti,Zr)C. Acta Materialia, 2014, 66, 209-218.	3.8	47

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19	Microstructural evolution and superplastic behavior of a fine-grained Mg–Gd alloy processed by constrained groove pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 754, 390-399.	2.6	47
20	High-Temperature Confocal Laser Scanning Microscopy Studies of Ferrite Formation in Inclusion-Engineered Steels: A Review. Jom, 2018, 70, 2283-2295.	0.9	46
21	Machine Learning to Predict the Martensite Start Temperature in Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 2081-2091.	1.1	45
22	A phase-field and electron microscopy study of phase separation in Fe–Cr alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 534, 552-556.	2.6	44
23	On the three-dimensional structure of WC grains in cemented carbides. Acta Materialia, 2013, 61, 4726-4733.	3.8	42
24	A Transmission Electron Microscopy Study of Plate Martensite Formation in High-carbon Low Alloy Steels. Journal of Materials Science and Technology, 2013, 29, 373-379.	5.6	40
25	Microstructure development in a high-nickel austenitic stainless steel using EBSD during in situ tensile deformation. Materials Characterization, 2018, 135, 228-237.	1.9	37
26	Recent Developments of Crystallographic Analysis Methods in the Scanning Electron Microscope for Applications in Metallurgy. Critical Reviews in Solid State and Materials Sciences, 2018, 43, 455-474.	6.8	36
27	Effect of heat treatment above the miscibility gap on nanostructure formation due to spinodal decomposition in Fe-52.85 at.%Cr. Acta Materialia, 2018, 145, 347-358.	3.8	34
28	Effect of Zn addition on dynamic recrystallization behavior of Mg-2Gd alloy during high-temperature deformation. Journal of Alloys and Compounds, 2019, 806, 1200-1206.	2.8	34
29	Spontaneous and Deformationâ€Induced Martensite in Austenitic Stainless Steels with Different Stability. Steel Research International, 2011, 82, 337-345.	1.0	32
30	A high-resolution analytical scanning transmission electron microscopy study of the early stages of spinodal decomposition in binary Fe–Cr. Materials Characterization, 2015, 109, 216-221.	1.9	32
31	Microstructure, texture, and strain-hardening behavior of extruded Mg–Cd–Zn alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 772, 138833.	2.6	32
32	Microstructure, grain size distribution and grain shape in WC–Co alloys sintered at different carbon activities. International Journal of Refractory Metals and Hard Materials, 2014, 43, 205-211.	1.7	31
33	Comparing the deformation-induced martensitic transformation with the athermal martensitic transformation in Fe-Cr-Ni alloys. Journal of Alloys and Compounds, 2018, 766, 131-139.	2.8	31
34	Initial clustering – a key factor for phase separation kinetics in Fe–Cr-based alloys. Scripta Materialia, 2014, 75, 62-65.	2.6	30
35	Effect of Zn content on the microstructural stability and grain growth kinetics of fine-grained extruded Mg–Gd–Zn alloys. Journal of Alloys and Compounds, 2020, 831, 154766.	2.8	30
36	A phase-field study of the physical concepts of martensitic transformations in steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 538, 173-181.	2.6	29

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37	Effect of carbon activity and powder particle size on WC grain coarsening during sintering of cemented carbides. International Journal of Refractory Metals and Hard Materials, 2014, 42, 30-35.	1.7	29
38	Effect of cooling rate after solution treatment on subsequent phase separation during aging of Fe-Cr alloys: A small-angle neutron scattering study. Acta Materialia, 2017, 134, 221-229.	3.8	29
39	Elastic strain evolution and ε-martensite formation in individual austenite grains during in situ loading of a metastable stainless steel. Materials Letters, 2008, 62, 338-340.	1.3	28
40	Self-organizing nanostructured lamellar (Ti,Zr)C — A superhard mixed carbide. International Journal of Refractory Metals and Hard Materials, 2015, 51, 25-28.	1.7	28
41	The experimental phase diagram study of the binary polyols system erythritol-xylitol. Solar Energy Materials and Solar Cells, 2018, 174, 248-262.	3.0	27
42	Precipitation of multiple carbides in martensitic CrMoV steels - experimental analysis and exploration of alloying strategy through thermodynamic calculations. Materialia, 2020, 9, 100630.	1.3	27
43	Microstructure and superplasticity of Mg–2Gd–xZn alloys processed by equal channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 808, 140921.	2.6	26
44	Cu precipitation-mediated formation of reverted austenite during ageing of a 15–5 PH stainless steel. Scripta Materialia, 2021, 202, 114007.	2.6	26
45	Ferrite Formation Dynamics and Microstructure Due to Inclusion Engineering in Low-Alloy Steels by Ti2O3 and TiN Addition. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 2133-2147.	1.0	25
46	Heat treatment, microstructure and mechanical properties of a C–Mn–Al–P hot dip galvanizing TRIP steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 674, 151-157.	2.6	25
47	Structural Characterization of Phase Separation in Fe-Cr: A Current Comparison of Experimental Methods. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 5942-5952.	1.1	25
48	Microstructure of Martensite in Fe–C–Cr and its Implications for Modelling of Carbide Precipitation during Tempering. ISIJ International, 2014, 54, 2649-2656.	0.6	24
49	Nanostructure, microstructure and mechanical properties of duplex stainless steels 25Cr-7 Ni and 22Cr-5Ni (wt.%) aged at 325†°C. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 754, 512-520.	2.6	24
50	Investigation of Lath and Plate Martensite in a Carbon Steel. Solid State Phenomena, 0, 172-174, 61-66.	0.3	23
51	Combination of In Situ Microscopy and Calorimetry to Study Austenite Decomposition in Inclusion Engineered Steels. Steel Research International, 2016, 87, 10-14.	1.0	23
52	Quantitative modeling and experimental verification of carbide precipitation in a martensitic Fe–0.16wt%C–4.0wt%Cr alloy. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2016, 53, 39-48.	0.7	23
53	Martensite formation during incremental cooling of Fe-Cr-Ni alloys: An in-situ bulk X-ray study of the grain-averaged and single-grain behavior. Scripta Materialia, 2017, 136, 124-127.	2.6	22
54	Mechanical Behavior of Fresh and Tempered Martensite in a CrMoV-Alloyed Steel Explained by Microstructural Evolution and Strength Modeling. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 5077-5087.	1.1	22

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55	High-Resolution Microscopical Studies of Contact Killing Mechanisms on Copper-Based Surfaces. ACS Applied Materials & Interfaces, 2021, 13, 49402-49413.	4.0	22
56	Early stages of spinodal decomposition in Fe–Cr resolved by in-situ small-angle neutron scattering. Applied Physics Letters, 2015, 106, 061911.	1.5	20
57	Effect of Heat Treatment on Microstructure and Mechanical Properties of Ti-alloyed Hypereutectic High Chromium Cast Iron. ISIJ International, 2012, 52, 2288-2294.	0.6	19
58	Predicting strain-induced martensite in austenitic steels by combining physical modelling and machine learning. Materials and Design, 2021, 197, 109199.	3.3	19
59	Langer–Schwartz–Kampmann–Wagner precipitation simulations: assessment of models and materials design application for Cu precipitation in PH stainless steels. Journal of Materials Science, 2021, 56, 2650-2671.	1.7	19
60	On the Symmetry Among the Diffusional Transformation Products of Austenite. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 1558-1574.	1.1	18
61	Tailoring the texture of an extruded Mg sheet through constrained groove pressing for achieving low mechanical anisotropy and high yield strength. Scripta Materialia, 2020, 186, 253-258.	2.6	18
62	Effect of Solute Silicon on the Lattice Parameter of Ferrite in Ductile Irons. ISIJ International, 2014, 54, 248-250.	0.6	17
63	Direct atom probe tomography observations of concentration fluctuations in Fe–Cr solid solution. Scripta Materialia, 2015, 98, 13-15.	2.6	17
64	Effect of solution treatment on spinodal decomposition during aging of an Fe-46.5 at.% Cr alloy. Journal of Materials Science, 2017, 52, 326-335.	1.7	17
65	Dynamic Precipitation Behavior of Secondary M7C3 Carbides in Ti-alloyed High Chromium Cast Iron. ISIJ International, 2013, 53, 1237-1244.	0.6	16
66	Microstructure evolution during phase separation in Ti-Zr-C. International Journal of Refractory Metals and Hard Materials, 2016, 61, 238-248.	1.7	16
67	EBSD analysis of surface and bulk microstructure evolution during interrupted tensile testing of a Fe-19Cr-12Ni alloy. Materials Characterization, 2018, 141, 8-18.	1.9	16
68	A Microstructural Investigation of Athermal and Deformation-induced Martensite in Fe-Cr-Ni Alloys. Materials Today: Proceedings, 2015, 2, S687-S690.	0.9	15
69	A Thermodynamic-Based Model to Predict the Fraction of Martensite in Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 4404-4410.	1.1	15
70	Microstructure evolution during tempering of martensitic Fe–C–Cr alloys at 700°C. Journal of Materials Science, 2018, 53, 6939-6950.	1.7	15
71	Porosity and shape of airborne wear microparticles generated by sliding contact between a low-metallic friction material and a cast iron. Journal of Aerosol Science, 2017, 113, 130-140.	1.8	14
72	A comparative study of microstructure and magnetic properties of a Ni Fe cemented carbide: Influence of carbon content. International Journal of Refractory Metals and Hard Materials, 2019, 80, 181-187.	1.7	14

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73	A generic and extensible model for the martensite start temperature incorporating thermodynamic data mining and deep learning framework. Journal of Materials Science and Technology, 2022, 128, 31-43.	5.6	14
74	Reverse Martensitic Transformation and Resulting Microstructure in a Cold Rolled Metastable Austenitic Stainless Steel. Steel Research International, 2008, 79, 433-439.	1.0	13
75	Modelling of the Fraction of Martensite in Low-alloy Steels. Materials Today: Proceedings, 2015, 2, S561-S564.	0.9	13
76	Correlating temperature-dependent stacking fault energy and in-situ bulk deformation behavior for a metastable austenitic stainless steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 832, 142403.	2.6	13
77	Early stages of cementite precipitation during tempering of 1C–1Cr martensitic steel. Journal of Materials Science, 2019, 54, 9222-9234.	1.7	11
78	Quantum Rod‧ensitized Solar Cells. ChemSusChem, 2011, 4, 1741-1744.	3.6	10
79	Effect of synthesis temperature and aging on the microstructure and hardness of Ti-Zr-C. International Journal of Refractory Metals and Hard Materials, 2018, 73, 99-105.	1.7	10
80	Effect of carbon content on the Curie temperature of WC-NiFe cemented carbides. International Journal of Refractory Metals and Hard Materials, 2019, 78, 27-31.	1.7	10
81	In-Situ High-Energy X-ray Diffraction Study of Austenite Decomposition During Rapid Cooling and Isothermal Holding in Two HSLA Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 1812-1825.	1.1	9
82	Effect of Si on bainitic transformation kinetics in steels explained by carbon partitioning, carbide formation, dislocation densities, and thermodynamic conditions. Materials Characterization, 2022, 185, 111774.	1.9	9
83	Small-angle neutron scattering quantification of phase separation and the corresponding embrittlement of a super duplex stainless steel after long-term aging at 300°C. Materialia, 2020, 12, 100771.	1.3	8
84	On coarsening of cementite during tempering of martensitic steels. Materials Science and Technology, 2020, 36, 887-893.	0.8	8
85	On the role of transmission electron microscopy for precipitation analysis in metallic materials. Critical Reviews in Solid State and Materials Sciences, 2022, 47, 388-414.	6.8	8
86	Influence of alloying elements on Ni distribution in PM steels. Powder Metallurgy, 2014, 57, 111-118.	0.9	7
87	In Situ Bulk Observations and Ab Initio Calculations Revealing the Temperature Dependence of Stacking Fault Energy in Fe–Cr–Ni Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 5357-5366.	1.1	7
88	Experimental study of the Î <sup>3</sup> -surface of austenitic stainless steels. Acta Materialia, 2019, 173, 34-43.	3.8	6
89	Effect of Tempering on the Bainitic Microstructure Evolution Correlated with the Hardness in a Low-Alloy Medium-Carbon Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 6470-6481.	1.1	6
90	Initial atmospheric corrosion studies of copper from macroscale to nanoscale in a simulated indoor atmospheric environment. Corrosion Science, 2022, 195, 109995.	3.0	6

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91	Evaluating magnetic properties of composites from model alloys – Application to alternative binder cemented carbides. Scripta Materialia, 2019, 168, 96-99.	2.6	5
92	Revealing the Unexpected Two Variant Pairing Shifts Due to Temperature Change in a Single Bainitic Medium Carbon Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 4546-4557.	1.1	5
93	Quantification of nano-scale interface structures to guide mechanistic modelling of WC grain coarsening inhibition in V-doped hard metals. Materials and Design, 2021, 207, 109825.	3.3	5
94	Quantitative Nanostructure and Hardness Evolution in Duplex Stainless Steels: Under Real Low-Temperature Service Conditions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 723-735.	1.1	5
95	Revealing the interdependence of microstructure evolution, micromechanics and macroscopic mechanical behavior of multi-phase medium Mn steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 839, 142857.	2.6	5
96	Observations of copper clustering in a 25Cr-7Ni super duplex stainless steel during low-temperature aging under load. Philosophical Magazine Letters, 0, , 1-8.	0.5	4
97	Cu redistribution during sintering of Fe–2Cu and Fe–2Cu–0·5C compacts. Powder Metallurgy, 2014, 57, 373-379.	0.9	4
98	Liquid Phase Sintering of (Ti,Zr)C with WC-Co. Materials, 2017, 10, 57.	1.3	4
99	Very-small angle neutron scattering study on grain coarsening inhibition by V-doping of WC-Co composites. Scripta Materialia, 2019, 173, 106-109.	2.6	4
100	Continuum plasticity modelling of work hardening for precipitation-hardened martensitic steel guided by atom probe tomography. Materials and Design, 2022, 215, 110463.	3.3	4
101	Design, synthesis, structure, and stability of novel multi-principal element (Ti,Zr,Hf,W)C ceramic with a miscibility gap. Journal of the European Ceramic Society, 2022, 42, 4429-4435.	2.8	4
102	Carbide Precipitation during Processing of Two Low-Alloyed Martensitic Tool Steels with 0.11 and 0.17 V/Mo Ratios Studied by Neutron Scattering, Electron Microscopy and Atom Probe. Metals, 2022, 12, 758.	1.0	4
103	Effect of Cooling Rate after Solution Treatment on Subsequent Phase Separation Evolution in Super Duplex Stainless Steel 25Cr-7Ni (wt.%). Metals, 2022, 12, 890.	1.0	4
104	Early Martensitic Transformation in a 0.74C–1.15Mn–1.08Cr High Carbon Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 3034-3043.	1.1	4
105	Small-angle neutron scattering study on phase separation in a super duplex stainless steel at 300 °C – Comparing hot-rolled and TIG welded material. Materials Characterization, 2022, 190, 112044.	1.9	4
106	Prediction of Influences of Co, Ni, and W Elements on Carbide Precipitation Behavior in Fe–C–V–Cr–Mo Based High Speed Steels. Steel Research International, 2018, 89, 1800172.	1.0	3
107	Nuclear and magnetic small-angle neutron scattering in self-organizing nanostructured Fe1â^'Cr alloys. Materials Characterization, 2020, 164, 110347.	1.9	3
108	Formation of Dislocations and Stacking Faults in Embedded Individual Grains during In Situ Tensile Loading of an Austenitic Stainless Steel. Materials, 2021, 14, 5919.	1.3	3

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109	Evolution of Residual Strains in Metastable Austenitic Stainless Steels and the Accompanying Strain Induced Martensitic Transformation. Materials Science Forum, 2006, 524-525, 821-826.	0.3	2
110	Residual Stress Evolution during Decomposition of Ti <sub>(1-x)</sub> Al <sub>(x)</sub> N Coatings Using High-Energy X-Rays. Materials Science Forum, 2006, 524-525, 619-624.	0.3	2
111	Precision Thermal Treatments, Atom Probe Characterization, and Modeling to Describe the Fe-Cr Metastable Miscibility Gap. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 1453-1464.	1.1	2
112	On the Three-Dimensional Microstructure of Martensite in Carbon Steels. , 2012, , 19-24.		2
113	3D Analysis of Phase Separation in Ferritic Stainless Steels. , 2012, , 221-226.		2
114	Nanostructure in Fe0.65Cr0.35 close to the upper limit of the miscibility gap. Scripta Materialia, 2020, 180, 62-65.	2.6	2
115	Effect of Stress on Spinodal Decomposition in Binary Alloys: Atomistic Modeling and Atom Probe Tomography. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 0, , 1.	1.1	2
116	A transmission electron microscopy study of discontinuous precipitation in the high misfit system (Ti,Zr)C. Materials Today Communications, 2020, 25, 101281.	0.9	1
117	An Experimental Assessment of the α + α' Miscibility Gap in Fe-Cr. Minerals, Metals and Materials Series, 2017, , 711-718.	0.3	1
118	Nonlinearity in mass spectrometry for quantitative multi-component gas analysis in reaction processes. Analytica Chimica Acta, 2022, 1194, 339412.	2.6	1
119	Behaviour of master alloy during sintering of PM steels: redistribution and dimensional variations. Powder Metallurgy, 2015, 58, 133-141.	0.9	0
120	On the Three-Dimensional Microstructure of Martensite in Carbon Steels. , 0, , 19-24.		0
121	3D Analysis of Phase Separation in Ferritic Stainless Steels. , 0, , 221-226.		ο