Sophie Primig

List of Publications by Year
in descending order

110 papers	2,488 citations	201385 27 h-index	243296 44 g-index
111 all docs	111 docs citations	111 times ranked	1691 citing authors

#	Article	IF	Citations
1	Additive manufacturing of steels: a review of achievements and challenges. Journal of Materials Science, 2021, 56, 64-107.	1.7	289
2	A novel approach for site-specific atom probe specimen preparation by focused ion beam and transmission electron backscatter diffraction. Ultramicroscopy, 2014, 144, 9-18.	0.8	107
3	Effect of cyclic rapid thermal loadings on the microstructural evolution of a CrMnFeCoNi high-entropy alloy manufactured by selective laser melting. Acta Materialia, 2020, 196, 609-625.	3.8	89
4	On conventional versus direct ageing of Alloy 718. Acta Materialia, 2018, 156, 116-124.	3.8	81
5	Origin of high temperature oxidation resistance of Tiâ€“Alâ€“Taâ€“N coatings. Surface and Coatings Technology, 2014, 257, 78-86.	2.2	77
6	On the recrystallization behavior of technically pure molybdenum. International Journal of Refractory Metals and Hard Materials, 2010, 28, 703-708.	1.7	67
7	Morphology change of retained austenite during austempering of carbide-free bainitic steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 664, 236-246.	2.6	59
8	On the early stages of precipitation during direct ageing of Alloy 718. Acta Materialia, 2020, 188, 492-503.	3.8	58
9	Separation of overlapping retained austenite decomposition and cementite precipitation reactions during tempering of martensitic steel by means of thermal analysis. Thermochimica Acta, 2011, 526, 111-117.	1.2	53
10	Evolution of microstructure and mechanical properties in 2205 duplex stainless steels during additive manufacturing and heat treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 835, 142695.	2.6	53
11	How grain boundary chemistry controls the fracture mode of molybdenum. Materials and Design, 2018, 142, 36-43.	3.3	52
12	Experimental and numerical investigations of the Î³â€³ and Î³â€² precipitation kinetics in Alloy 718. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 723, 314-323.	2.6	50
13	Structural characterization of â€œcarbide-freeâ€•bainite in a Feâ€“0.2Câ€“1.5Siâ€“2.5Mn steel. Materials Characterization, 2015, 102, 85-91.	1.9	49
14	Correlating Atom Probe Crystallographic Measurements with Transmission Kikuchi Diffraction Data. Microscopy and Microanalysis, 2017, 23, 279-290.	0.2	46
15	On grain boundary segregation in molybdenum materials. Materials and Design, 2017, 135, 204-212.	3.3	46
16	Atom probe study of grain boundary segregation in technically pure molybdenum. Materials Characterization, 2014, 87, 95-103.	1.9	43
17	Textural Evolution During Dynamic Recovery and Static Recrystallization of Molybdenum. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 4794-4805.	1.1	41
18	Grain boundary character distribution in an additively manufactured austenitic stainless steel. Scripta Materialia, 2021, 192, 115-119.	2.6	39

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19	The effect of cold-rolling on the microstructure and corrosion behaviour of 316L alloy in FLiNaK molten salt. Corrosion Science, 2018, 142, 133-144.	3.0	38
20	Grain boundary study of technically pure molybdenum by combining APT and TKD. Ultramicroscopy, 2015, 159, 445-451.	0.8	36
21	Influence of the heating rate on the recrystallization behavior of molybdenum. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 535, 316-324.	2.6	32
22	Multimodal Î³â€² precipitation in Inconel-738 Ni-based superalloy during electron-beam powder bed fusion additive manufacturing. Journal of Materials Science, 2020, 55, 13342-13350.	1.7	31
23	Orientation dependent recovery and recrystallization behavior of hot-rolled molybdenum. International Journal of Refractory Metals and Hard Materials, 2015, 48, 179-186.	1.7	30
24	Induction Tempering vs Conventional Tempering of a Heat-Treatable Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 3694-3702.	1.1	30
25	Guidelines for increasing the oxidation resistance of Ti-Al-N based coatings. Thin Solid Films, 2019, 688, 137290.	0.8	30
26	On the evolution of secondary hardening carbides during continuous versus isothermal heat treatment of high speed steel HS 6-5-2. Materials Characterization, 2016, 120, 323-330.	1.9	29
27	Five-parameter characterization of intervariant boundaries in additively manufactured Ti-6Al-4V. Materials and Design, 2020, 196, 109177.	3.3	29
28	On the hot-worked microstructure of a face-centered cubic Al0.3CoCrFeNi high entropy alloy. Scripta Materialia, 2020, 178, 144-149.	2.6	28
29	Dynamic recrystallization in AlXCoCrFeNi duplex high entropy alloys. Journal of Alloys and Compounds, 2020, 830, 154720.	2.8	28
30	Microstructure-property relationships in directly aged Alloy 718 turbine disks. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 776, 138967.	2.6	28
31	Impact of the B2 ordering behavior on the mechanical properties of a FeCoMo alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 662, 511-518.	2.6	25
32	3D electron backscatter diffraction study of Î± lath morphology in additively manufactured Ti-6Al-4V. Ultramicroscopy, 2020, 218, 113073.	0.8	25
33	Introducing transformation twins in titanium alloys: an evolution of Î±-variants during additive manufacturing. Materials Research Letters, 2021, 9, 119-126.	4.1	25
34	Phase transformation pathways in Ti-6Al-4V manufactured via electron beam powder bed fusion. Acta Materialia, 2021, 215, 117131.	3.8	25
35	Multi-scale characterisation of microstructure and texture of 316L stainless steel manufactured by laser powder bed fusion. Materials Characterization, 2022, 184, 111663.	1.9	25
36	Influence of Deformation on the Precipitation Behavior of Nb(CN) in Austenite and Ferrite. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4210-4219.	1.1	24

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37	On the pitting corrosion of 2205 duplex stainless steel produced by laser powder bed fusion additive manufacturing in the as-built and post-processed conditions. Materials and Design, 2021, 212, 110260.	3.3	24
38	On the microstructure and texture evolution in 17-4 PH stainless steel during laser powder bed fusion: Towards textural design. Journal of Materials Science and Technology, 2022, 117, 183-195.	5.6	23
39	Formation of a transition V-rich structure during the Î±' to Î±Â+ÂÎ² phase transformation process in additively manufactured Ti-6Al-4 V. Acta Materialia, 2022, 235, 118104.	3.8	22
40	Transformation from continuous-to-isothermal aging applied on a maraging steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 4399-4405.	2.6	21
41	Induction Hardening vs Conventional Hardening of a Heat Treatable Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 5657-5666.	1.1	20
42	Microalloying effects of Mo versus Cr in HSLA steels with ultrafine-grained ferrite microstructures. Materials and Design, 2020, 185, 108278.	3.3	20
43	On the chemistry of the carbides in a molybdenum base Mo-Hf-C alloy produced by powder metallurgy. Journal of Alloys and Compounds, 2016, 654, 445-454.	2.8	19
44	High-resolution characterization of the martensite-austenite constituent in a carbide-free bainitic steel. Materials Characterization, 2018, 144, 182-190.	1.9	19
45	Interplay of dislocation substructure and elastic strain evolution in additively manufactured Inconel 625. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 785, 139380.	2.6	18
46	Effects of processing heterogeneities on the micro- to nanostructure strengthening mechanisms of an alloy 718 turbine disk. Materials and Design, 2021, 212, 110295.	3.3	18
47	Static Recrystallization of Molybdenum After Deformation Below 0.5*T M (K). Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 4806-4818.	1.1	17
48	Atom probe study of vanadium interphase precipitates and randomly distributed vanadium precipitates in ferrite. Micron, 2013, 54-55, 57-64.	1.1	16
49	An observation of the binder microstructure in WC-(Co+Ru) cemented carbides using transmission Kikuchi diffraction. Scripta Materialia, 2020, 183, 55-60.	2.6	16
50	Fracture Behavior and Delamination Toughening of Molybdenum in Charpy Impact Tests. Jom, 2016, 68, 2854-2863.	0.9	14
51	Modeling of precipitation strengthening in Inconel 718 including non-sphericalÎ³â€³ precipitates. Modelling and Simulation in Materials Science and Engineering, 2017, 25, 055005.	0.8	14
52	Atom Probe Microscopy of Strengthening Effects in Alloy 718. Microscopy and Microanalysis, 2019, 25, 470-480.	0.2	14
53	Correlative analysis of grain boundary precipitates in Ni-based superalloy RenÃ© 41. Materials Characterization, 2021, 178, 111250.	1.9	14
54	Enhancing the repassivation ability and localised corrosion resistance of an additively manufactured duplex stainless steel by post-processing heat treatment. Corrosion Science, 2022, 198, 110106.	3.0	14

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55	Precipitation in simultaneously nitrided and aged Mo-containing maraging steel. Materials Characterization, 2017, 131, 21-30.	1.9	13
56	Electrochemical performance and structure of Al₂W_{3â^'x}Mo_xO₁₂. CrystEngComm, 2018, 20, 1352-1360.	1.3	13
57	Effect of scanning strategy on variant selection in additively manufactured Ti-6Al-4V. Additive Manufacturing, 2020, 36, 101581.	1.7	13
58	Correlative Approach for Atom Probe Sample Preparation of Interfaces Using Plasma Focused Ion Beam Without Lift-Out. Microscopy and Microanalysis, 2022, 28, 998-1008.	0.2	13
59	Evolution of nanoscale precipitates during common Alloy 718 ageing treatments. Materials and Design, 2021, 205, 109762.	3.3	13
60	Influence of grain boundary precipitation and segregation on cracking of cast and wrought superalloys containing B and Zr. Materials Characterization, 2022, 187, 111881.	1.9	13
61	On the precipitation mechanism in the molybdenum based alloy MHC (Moâ€“Hfâ€“C). Powder Metallurgy, 2014, 57, 311-313.	0.9	12
62	Influence of Heat Treatment on Microstructure Stability and Mechanical Properties of a Carbideâ€Free Bainitic Steel. Advanced Engineering Materials, 2017, 19, 1600658.	1.6	11
63	Evolution of strain-induced hafnium carbides in a molybdenum base Moâ€“Hfâ€“C alloy studied by small-angle neutron scattering and complementary methods. Journal of Alloys and Compounds, 2016, 688, 619-631.	2.8	10
64	Early Stages of Cu Precipitation in 15-5 PH Maraging Steel Revisited â^' Part I: Experimental Analysis. Steel Research International, 2017, 88, 1600084.	1.0	10
65	3D characterization of microstructural evolution and variant selection in additively manufactured Ti-6Al-4ÂV. Journal of Materials Science, 2021, 56, 14763-14782.	1.7	10
66	Texture evolution in a CrMnFeCoNi high-entropy alloy manufactured by laser powder bed fusion. Journal of Materials Science, 2022, 57, 9714-9725.	1.7	10
67	Intergranular precipitation and chemical fluctuations in an additively manufactured 2205 duplex stainless steel. Scripta Materialia, 2022, 219, 114894.	2.6	10
68	Correlative microscopy of a carbide-free bainitic steel. Micron, 2016, 81, 1-7.	1.1	9
69	Cold pilgering of duplex steel tubes: The response of austenite and ferrite to excessive cold deformation up to high strains. Materials Characterization, 2017, 128, 257-268.	1.9	9
70	Engineering Hierarchical Microstructures via Advanced Thermo-Mechanical Processing of a Modern HSLA Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 6337-6350.	1.1	9
71	Microstructure-property gradients in Ni-based superalloy (Inconel 738) additively manufactured via electron beam powder bed fusion. Additive Manufacturing, 2021, 46, 102121.	1.7	9
72	SEM and TEM Investigations of Recovery and Recrystallization in Technically Pure Molybdenum. Praktische Metallographie/Practical Metallography, 2011, 48, 344-355.	0.1	9

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73	Al-Cu-Ce(-Zr) alloys with an exceptional combination of additive processability and mechanical properties. Additive Manufacturing, 2021, 48, 102404.	1.7	9
74	Evidence of in-situ Cu clustering as a function of laser power during laser powder bed fusion of 17â€“4 PH stainless steel. Scripta Materialia, 2022, 219, 114896.	2.6	9
75	The evolution of Y distribution during the processing route of mechanically alloyed iron studied by means of atom probe tomography. International Journal of Materials Research, 2013, 104, 1088-1095.	0.1	7
76	New findings on the atomistic mechanisms active during mechanical milling of a Fe-Y2O3model alloy. Journal of Applied Physics, 2014, 115, 124313.	1.1	7
77	Martensitic Transformation of a High-speed Tool Steel During Continuous Heat Treatment. Materials Today: Proceedings, 2015, 2, S635-S638.	0.9	7
78	3D electron backscatter diffraction characterization of fine Î± titanium microstructures: collection, reconstruction, and analysis methods. Ultramicroscopy, 2021, 230, 113394.	0.8	7
79	Formation and 3D morphology of interconnected Î± microstructures in additively manufactured Ti-6Al-4V. Materialia, 2021, 20, 101201.	1.3	7
80	EBSD Study of the Microstructural Evolution during Hot Compression Testing of a Superduplex Steel. Materials Science Forum, 0, 783-786, 973-979.	0.3	6
81	Evolution of Precipitates and Martensite Substructure During Continuous Heat Treatment. Materials Today: Proceedings, 2015, 2, S619-S622.	0.9	6
82	Atom Probe Tomography of Carbides Occurring in â€œCarbide-freeâ€•Bainitic Steels. Materials Today: Proceedings, 2015, 2, S925-S928.	0.9	6
83	Investigation of the Self Tempering Effect of Martensite by Means of Atom Probe Tomography. Praktische Metallographie/Practical Metallography, 2022, 52, 374-383.	0.1	6
84	On the detailed morphological and chemical evolution of phases during laser powder bed fusion and common post-processing heat treatments of IN718. Additive Manufacturing, 2022, 50, 102540.	1.7	6
85	The Effect of Zr Incorporation Caused by Ball Abrasion in a Milled Fe-Y2O3 Model Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 1552-1558.	1.1	5
86	Atom probe study of B2 order and A2 disorder of the FeCo matrix in an Fe-Co-Mo-alloy. Micron, 2017, 98, 24-33.	1.1	5
87	Thermodynamic evaluation of the Mo-rich corner of the Mo-Hf-C system including O impurities. Journal of Alloys and Compounds, 2017, 695, 372-381.	2.8	5
88	Correlative study of lattice imperfections in long-range ordered, nano-scale domains in a Fe-Co-Mo alloy. Ultramicroscopy, 2019, 204, 91-100.	0.8	5
89	Preparation of Carbide-Free Bainitic Steels for EBSD Investigations. Praktische Metallographie/Practical Metallography, 2022, 52, 384-395.	0.1	5
90	Lath martensite substructure evolution in low-carbon microalloyed steels. Journal of Materials Science, 2022, 57, 10359-10378.	1.7	5

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91	Early Stages of Cu Precipitation in 15-5 PH Maraging Steel Revisitedâ€‰-â€‰Part II: Thermokinetic Simulation. Steel Research International, 2017, 88, 1600085.	1.0	4
92	Advanced Thermo-mechanical Process for Homogenous Hierarchical Microstructures in HSLA Steels. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 5800-5815.	1.1	4
93	Formation of intergranular phases in precipitation hardening nickel-based alloy 725. Acta Materialia, 2022, 236, 118108.	3.8	4
94	Texture Evolution during Deformation of a Mo-Hf-C Alloy Studied with Electron Backscatter Diffraction. BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik, 2015, 160, 226-230.	0.4	3
95	Boron Grain Boundary Segregation in a Heat Treatable Steel. BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik, 2015, 160, 204-208.	0.4	3
96	On the constitutive relationship between solidification cells and the fatigue behaviour of IN718 fabricated by laser powder bed fusion. Additive Manufacturing, 2021, 47, 102347.	1.7	3
97	Influence of the Sample Preparation Technique on the Î¼ Phase Fraction Analysis in a Fe-25Co-15Mo Alloy by Means of XRD. Praktische Metallographie/Practical Metallography, 2015, 52, 323-333.	0.1	3
98	Local composition and nanoindentation response of Î´-phase and adjacent Î³â€²â€²-free zone in a Ni-based superalloy. Materials Research Letters, 2022, 10, 301-309.	4.1	3
99	Advanced quantification of the site-occupancy in ordered multi-component intermetallics using atom probe tomography. Intermetallics, 2022, 145, 107538.	1.8	3
100	B2 order transformation in a Fe â€“ 25 at% Co â€“ 9 at% Mo alloy. Materials Research Society Symposia Proceedings, 2015, 1760, 175.	0.1	2
101	Effect of Cyclic Thermal Loadings on the Microstructural Evolution of a Cantor Alloy in 3D Printing Processes. Microscopy and Microanalysis, 2019, 25, 2568-2569.	0.2	2
102	Influence of Finish Rolling Temperature and Molybdenum Addition on Strengthening of Low Carbon Niobium Steelsâ€”A Computational and Experimental Study. Steel Research International, 2021, 92, 2100085.	1.0	2
103	Electron Microscopy Methods. , 2022, , 203-211.		1
104	The Role of Metallography in the Development and Characterization of High-Performance Materials. Praktische Metallographie/Practical Metallography, 2015, 52, 59-74.	0.1	1
105	Temperature sensitivity maps of silicon wafers from photoluminescence imaging: The effect of gettering and hydrogenation. Progress in Photovoltaics: Research and Applications, 0, , .	4.4	1
106	Early Stages of Precipitation: Experiments and Modelling. BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik, 2014, 159, 5-11.	0.4	0
107	On the Behavior of Yttria/Yttrium during Mechanical Alloying of a Fe - Y₂O₃ Model Alloy System. Advanced Materials Research, 0, 922, 598-603.	0.3	0
108	An Initial Report on the Structureâ€“Property Relationships of a Highâ€Strength Lowâ€Alloy Steel Subjected to Advanced Thermomechanical Processing in Ferrite. Steel Research International, 2020, 91, 1900596.	1.0	0

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109	Preface to the special issue: microstructure design in metal additive manufacturingâ€"physical metallurgy revisited. Journal of Materials Science, 0, , .	1.7	0
110	Editorial: The June 2022 cover paper. Journal of Materials Science, 0, , 1.	1.7	0