

Dierk Raabe

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7273757/publications.pdf>

Version: 2024-02-01

1,036
papers

78,825
citations

315

138
h-index

1109

231
g-index

1088
all docs

1088
docs citations

1088
times ranked

26807
citing authors

#	ARTICLE	IF	CITATIONS
1	Metastable high-entropy dual-phase alloys overcome the strength–ductility trade-off. <i>Nature</i> , 2016, 534, 227-230.	13.7	2,612
2	High-entropy alloys. <i>Nature Reviews Materials</i> , 2019, 4, 515-534.	23.3	2,188
3	Overview of constitutive laws, kinematics, homogenization and multiscale methods in crystal plasticity finite-element modeling: Theory, experiments, applications. <i>Acta Materialia</i> , 2010, 58, 1152-1211.	3.8	1,558
4	Orientation gradients and geometrically necessary dislocations in ultrafine grained dual-phase steels studied by 2D and 3D EBSD. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 2738-2746.	2.6	1,482
5	Enhanced strength and ductility in a high-entropy alloy via ordered oxygen complexes. <i>Nature</i> , 2018, 563, 546-550.	13.7	988
6	Ultrastrong steel via minimal lattice misfit and high-density nanoprecipitation. <i>Nature</i> , 2017, 544, 460-464.	13.7	843
7	Dislocation and twin substructure evolution during strain hardening of an Fe–22wt.% Mn–0.6wt.% C TWIP steel observed by electron channeling contrast imaging. <i>Acta Materialia</i> , 2011, 59, 6449-6462.	3.8	697
8	Decomposition of the single-phase high-entropy alloy CrMnFeCoNi after prolonged anneals at intermediate temperatures. <i>Acta Materialia</i> , 2016, 112, 40-52.	3.8	653
9	Deformation and fracture mechanisms in fine- and ultrafine-grained ferrite/martensite dual-phase steels and the effect of aging. <i>Acta Materialia</i> , 2011, 59, 658-670.	3.8	618
10	Design of a twinning-induced plasticity high entropy alloy. <i>Acta Materialia</i> , 2015, 94, 124-133.	3.8	618
11	The effect of grain size and grain orientation on deformation twinning in a Fe–22wt.% Mn–0.6wt.% C TWIP steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 3552-3560.	2.6	583
12	Steels in additive manufacturing: A review of their microstructure and properties. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 772, 138633.	2.6	549
13	A novel, single phase, non-equiatomic FeMnNiCoCr high-entropy alloy with exceptional phase stability and tensile ductility. <i>Scripta Materialia</i> , 2014, 72-73, 5-8.	2.6	534
14	Overview of processing, microstructure and mechanical properties of ultrafine grained bcc steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 441, 1-17.	2.6	498
15	The relation between ductility and stacking fault energies in Mg and Mg–Y alloys. <i>Acta Materialia</i> , 2012, 60, 3011-3021.	3.8	481
16	A TRIP-assisted dual-phase high-entropy alloy: Grain size and phase fraction effects on deformation behavior. <i>Acta Materialia</i> , 2017, 131, 323-335.	3.8	474
17	The crustacean exoskeleton as an example of a structurally and mechanically graded biological nanocomposite material. <i>Acta Materialia</i> , 2005, 53, 4281-4292.	3.8	472
18	An Overview of Dual-Phase Steels: Advances in Microstructure-Oriented Processing and Micromechanically Guided Design. <i>Annual Review of Materials Research</i> , 2015, 45, 391-431.	4.3	469

#	ARTICLE	IF	CITATIONS
19	Grain boundary segregation engineering in metallic alloys: A pathway to the design of interfaces. <i>Current Opinion in Solid State and Materials Science</i> , 2014, 18, 253-261.	5.6	466
20	Corrosion behavior of an equiatomic CoCrFeMnNi high-entropy alloy compared with 304 stainless steel in sulfuric acid solution. <i>Corrosion Science</i> , 2018, 134, 131-139.	3.0	465
21	DAMASK – The Düsseldorf Advanced Material Simulation Kit for modeling multi-physics crystal plasticity, thermal, and damage phenomena from the single crystal up to the component scale. <i>Computational Materials Science</i> , 2019, 158, 420-478.	1.4	440
22	Revealing the strain-hardening behavior of twinning-induced plasticity steels: Theory, simulations, experiments. <i>Acta Materialia</i> , 2013, 61, 494-510.	3.8	429
23	Design of a novel Mn-based 1GPa duplex stainless TRIP steel with 60% ductility by a reduction of austenite stability. <i>Acta Materialia</i> , 2011, 59, 4653-4664.	3.8	422
24	Strain localization and damage in dual phase steels investigated by coupled in-situ deformation experiments and crystal plasticity simulations. <i>International Journal of Plasticity</i> , 2014, 63, 198-210.	4.1	412
25	Multistage strain hardening through dislocation substructure and twinning in a high strength and ductile weight-reduced Fe–Mn–Al–C steel. <i>Acta Materialia</i> , 2012, 60, 5791-5802.	3.8	409
26	On the formation and growth of intermetallic phases during interdiffusion between low-carbon steel and aluminum alloys. <i>Acta Materialia</i> , 2011, 59, 1586-1600.	3.8	397
27	Ab initio thermodynamics of the CoCrFeMnNi high entropy alloy: Importance of entropy contributions beyond the configurational one. <i>Acta Materialia</i> , 2015, 100, 90-97.	3.8	389
28	Micromechanical and macromechanical effects in grain scale polycrystal plasticity experimentation and simulation. <i>Acta Materialia</i> , 2001, 49, 3433-3441.	3.8	388
29	Work hardening in heterogeneous alloys – a microstructural approach based on three internal state variables. <i>Acta Materialia</i> , 2000, 48, 4181-4189.	3.8	379
30	Hydrogen-assisted decohesion and localized plasticity in dual-phase steel. <i>Acta Materialia</i> , 2014, 70, 174-187.	3.8	366
31	The influence of stacking fault energy on the microstructural and strain-hardening evolution of Fe–Mn–Al–Si steels during tensile deformation. <i>Acta Materialia</i> , 2015, 100, 178-190.	3.8	359
32	Hot cracking mechanism affecting a non-weldable Ni-based superalloy produced by selective electron Beam Melting. <i>Acta Materialia</i> , 2018, 142, 82-94.	3.8	344
33	A dislocation density based constitutive model for crystal plasticity FEM including geometrically necessary dislocations. <i>Acta Materialia</i> , 2006, 54, 2169-2179.	3.8	329
34	Experimental and numerical study on geometrically necessary dislocations and non-homogeneous mechanical properties of the ferrite phase in dual phase steels. <i>Acta Materialia</i> , 2011, 59, 4387-4394.	3.8	325
35	The role of heterogeneous deformation on damage nucleation at grain boundaries in single phase metals. <i>International Journal of Plasticity</i> , 2009, 25, 1655-1683.	4.1	304
36	Hierarchical crack buffering triples ductility in eutectic herringbone high-entropy alloys. <i>Science</i> , 2021, 373, 912-918.	6.0	304

#	ARTICLE	IF	CITATIONS
37	Strategies for improving the sustainability of structural metals. <i>Nature</i> , 2019, 575, 64-74.	13.7	301
38	Ultrastrong Medium-Entropy Single-Phase Alloys Designed via Severe Lattice Distortion. <i>Advanced Materials</i> , 2019, 31, e1807142.	11.1	301
39	The influence of manganese content on the stacking fault and austenite/ μ -martensite interfacial energies in Fe-Mn-(Al-Si) steels investigated by experiment and theory. <i>Acta Materialia</i> , 2014, 68, 238-253.	3.8	300
40	Mechanical properties of an ultrafine grained C-Mn steel processed by warm deformation and annealing. <i>Acta Materialia</i> , 2005, 53, 4881-4892.	3.8	299
41	Investigation of the indentation size effect through the measurement of the geometrically necessary dislocations beneath small indents of different depths using EBSD tomography. <i>Acta Materialia</i> , 2009, 57, 559-569.	3.8	297
42	Bone-like crack resistance in hierarchical metastable nanolaminate steels. <i>Science</i> , 2017, 355, 1055-1057.	6.0	297
43	Hierarchical microstructure design to tune the mechanical behavior of an interstitial TRIP-TWIP high-entropy alloy. <i>Acta Materialia</i> , 2019, 163, 40-54.	3.8	296
44	Effect of grain refinement to $1\frac{1}{4}\mu\text{m}$ on strength and toughness of dual-phase steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 7832-7840.	2.6	294
45	Revealing the Design Principles of High-Performance Biological Composites Using Ab initio and Multiscale Simulations: The Example of Lobster Cuticle. <i>Advanced Materials</i> , 2010, 22, 519-526.	11.1	285
46	Integrated experimental-simulation analysis of stress and strain partitioning in multiphase alloys. <i>Acta Materialia</i> , 2014, 81, 386-400.	3.8	285
47	Atomic-Scale Quantification of Grain Boundary Segregation in Nanocrystalline Material. <i>Physical Review Letters</i> , 2014, 112, 126103.	2.9	284
48	Three-dimensional investigation of the texture and microstructure below a nanoindent in a Cu single crystal using 3D EBSD and crystal plasticity finite element simulations. <i>Acta Materialia</i> , 2006, 54, 1863-1876.	3.8	282
49	Interstitial atoms enable joint twinning and transformation induced plasticity in strong and ductile high-entropy alloys. <i>Scientific Reports</i> , 2017, 7, 40704.	1.6	279
50	Strain hardening by dynamic slip band refinement in a high-Mn lightweight steel. <i>Acta Materialia</i> , 2016, 116, 188-199.	3.8	276
51	Cellular Automata in Materials Science with Particular Reference to Recrystallization Simulation. <i>Annual Review of Materials Research</i> , 2002, 32, 53-76.	4.3	275
52	Ab initio assisted design of quinary dual-phase high-entropy alloys with transformation-induced plasticity. <i>Acta Materialia</i> , 2017, 136, 262-270.	3.8	275
53	Influence of Al content and precipitation state on the mechanical behavior of austenitic high-Mn low-density steels. <i>Scripta Materialia</i> , 2013, 68, 343-347.	2.6	274
54	Atomic-scale mechanisms of deformation-induced cementite decomposition in pearlite. <i>Acta Materialia</i> , 2011, 59, 3965-3977.	3.8	269

#	ARTICLE	IF	CITATIONS
55	Microstructure and crystallographic texture of an ultrafine grained Ca ²⁺ Mn steel and their evolution during warm deformation and annealing. <i>Acta Materialia</i> , 2005, 53, 845-858.	3.8	264
56	Segregation engineering enables nanoscale martensite to austenite phase transformation at grain boundaries: A pathway to ductile martensite. <i>Acta Materialia</i> , 2013, 61, 6132-6152.	3.8	264
57	Efficient and accurate simulations of deformable particles immersed in a fluid using a combined immersed boundary lattice Boltzmann finite element method. <i>Computers and Mathematics With Applications</i> , 2011, 61, 3485-3505.	1.4	262
58	High-strength Damascus steel by additive manufacturing. <i>Nature</i> , 2020, 582, 515-519.	13.7	260
59	Assessment of geometrically necessary dislocation levels derived by 3D EBSD. <i>Acta Materialia</i> , 2015, 99, 402-414.	3.8	259
60	Investigation of three-dimensional aspects of grain-scale plastic surface deformation of an aluminum oligocrystal. <i>International Journal of Plasticity</i> , 2008, 24, 2278-2297.	4.1	258
61	Chemical gradients across phase boundaries between martensite and austenite in steel studied by atom probe tomography and simulation. <i>Acta Materialia</i> , 2011, 59, 364-374.	3.8	255
62	Ductility improvement of Mg alloys by solid solution: Ab initio modeling, synthesis and mechanical properties. <i>Acta Materialia</i> , 2014, 70, 92-104.	3.8	250
63	Nanoprecipitate-hardened 1.5GPa steels with unexpected high ductility. <i>Scripta Materialia</i> , 2009, 60, 1141-1144.	2.6	248
64	Orientation dependence of nanoindentation pile-up patterns and of nanoindentation microtextures in copper single crystals. <i>Acta Materialia</i> , 2004, 52, 2229-2238.	3.8	247
65	Grain size effect on strain hardening in twinning-induced plasticity steels. <i>Scripta Materialia</i> , 2012, 66, 992-996.	2.6	232
66	Boron doped ultrastrong and ductile high-entropy alloys. <i>Acta Materialia</i> , 2018, 151, 366-376.	3.8	230
67	Grain boundary segregation engineering and austenite reversion turn embrittlement into toughness: Example of a 9 wt.% medium Mn steel. <i>Acta Materialia</i> , 2015, 86, 182-192.	3.8	229
68	Overview of hydrogen embrittlement in high-Mn steels. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 12706-12723.	3.8	228
69	Microstructure and crystallographic texture of the chitin-protein network in the biological composite material of the exoskeleton of the lobster <i>Homarus americanus</i> . <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 421, 143-153.	2.6	227
70	Linear complexions: Confined chemical and structural states at dislocations. <i>Science</i> , 2015, 349, 1080-1083.	6.0	227
71	Influence of Structural Principles on the Mechanics of a Biological Fiber-Based Composite Material with Hierarchical Organization: The Exoskeleton of the Lobster <i>Homarus americanus</i> . <i>Advanced Materials</i> , 2009, 21, 391-400.	11.1	225
72	Smaller is less stable: Size effects on twinning vs. transformation of reverted austenite in TRIP-maraging steels. <i>Acta Materialia</i> , 2014, 79, 268-281.	3.8	225

#	ARTICLE	IF	CITATIONS
73	Segregation Stabilizes Nanocrystalline Bulk Steel with Near Theoretical Strength. <i>Physical Review Letters</i> , 2014, 113, 106104.	2.9	224
74	Massive nanoprecipitation in an Fe-19Ni-xAl maraging steel triggered by the intrinsic heat treatment during laser metal deposition. <i>Acta Materialia</i> , 2017, 129, 52-60.	3.8	224
75	Rolling and recrystallization textures of bcc steels. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 1991, 62, 567-575.	0.2	223
76	Strong and Ductile Non-equiatomic High-Entropy Alloys: Design, Processing, Microstructure, and Mechanical Properties. <i>Jom</i> , 2017, 69, 2099-2106.	0.9	222
77	Precipitation and austenite reversion behavior of a maraging steel produced by selective laser melting. <i>Journal of Materials Research</i> , 2014, 29, 2072-2079.	1.2	221
78	The composition of the exoskeleton of two crustacea: The American lobster <i>Homarus americanus</i> and the edible crab <i>Cancer pagurus</i> . <i>Thermochimica Acta</i> , 2007, 463, 65-68.	1.2	220
79	Theory-guided bottom-up design of β -titanium alloys as biomaterials based on first principles calculations: Theory and experiments. <i>Acta Materialia</i> , 2007, 55, 4475-4487.	3.8	220
80	Hydrogen-assisted failure in a twinning-induced plasticity steel studied under in situ hydrogen charging by electron channeling contrast imaging. <i>Acta Materialia</i> , 2013, 61, 4607-4618.	3.8	218
81	Hierarchical microstructure of explosive joints: Example of titanium to steel cladding. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 2641-2647.	2.6	214
82	Electron channeling contrast imaging of twins and dislocations in twinning-induced plasticity steels under controlled diffraction conditions in a scanning electron microscope. <i>Scripta Materialia</i> , 2009, 61, 737-740.	2.6	213
83	Microstructural evolution of a Ni-based superalloy (617B) at 700°C studied by electron microscopy and atom probe tomography. <i>Acta Materialia</i> , 2012, 60, 1731-1740.	3.8	212
84	Influence of intermetallic phases and Kirkendall-porosity on the mechanical properties of joints between steel and aluminium alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 4630-4642.	2.6	209
85	Improvement of the work hardening rate of ultrafine grained steels through second phase particles. <i>Scripta Materialia</i> , 2005, 52, 1075-1080.	2.6	208
86	Grain-scale micromechanics of polycrystal surfaces during plastic straining. <i>Acta Materialia</i> , 2003, 51, 1539-1560.	3.8	207
87	Nanolaminate transformation-induced plasticity—twinning-induced plasticity steel with dynamic strain partitioning and enhanced damage resistance. <i>Acta Materialia</i> , 2015, 85, 216-228.	3.8	207
88	Basal and non-basal dislocation slip in Mg—Y. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 576, 61-68.	2.6	206
89	Atomic-scale analysis of carbon partitioning between martensite and austenite by atom probe tomography and correlative transmission electron microscopy. <i>Acta Materialia</i> , 2014, 65, 215-228.	3.8	205
90	Three-Dimensional Orientation Microscopy in a Focused Ion Beam—Scanning Electron Microscope: A New Dimension of Microstructure Characterization. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2008, 39, 374-389.	1.1	200

#	ARTICLE	IF	CITATIONS
91	Textures of ferritic stainless steels. <i>Materials Science and Technology</i> , 1993, 9, 302-312.	0.8	198
92	On the consideration of interactions between dislocations and grain boundaries in crystal plasticity finite element modeling – Theory, experiments, and simulations. <i>Acta Materialia</i> , 2006, 54, 2181-2194.	3.8	198
93	Using texture components in crystal plasticity finite element simulations. <i>International Journal of Plasticity</i> , 2004, 20, 339-361.	4.1	196
94	The effects of prior austenite grain boundaries and microstructural morphology on the impact toughness of intercritically annealed medium Mn steel. <i>Acta Materialia</i> , 2017, 122, 199-206.	3.8	196
95	Theory of orientation gradients in plastically strained crystals. <i>Acta Materialia</i> , 2002, 50, 421-440.	3.8	195
96	Carbon partitioning during quenching and partitioning heat treatment accompanied by carbide precipitation. <i>Acta Materialia</i> , 2015, 86, 137-147.	3.8	194
97	3D structural and atomic-scale analysis of lath martensite: Effect of the transformation sequence. <i>Acta Materialia</i> , 2015, 95, 366-377.	3.8	191
98	On the mechanism of {332} twinning in metastable β^2 titanium alloys. <i>Acta Materialia</i> , 2016, 111, 173-186.	3.8	191
99	Phase stability of non-equiatomic CoCrFeMnNi high entropy alloys. <i>Acta Materialia</i> , 2015, 98, 288-296.	3.8	190
100	Multiple mechanisms of lath martensite plasticity. <i>Acta Materialia</i> , 2016, 121, 202-214.	3.8	190
101	Coupling of a crystal plasticity finite-element model with a probabilistic cellular automaton for simulating primary static recrystallization in aluminium. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2000, 8, 445-462.	0.8	189
102	Segregation assisted grain boundary precipitation in a model Al-Zn-Mg-Cu alloy. <i>Acta Materialia</i> , 2018, 156, 318-329.	3.8	189
103	Evolution of strength and microstructure during annealing of heavily cold-drawn 6.3 GPa hypereutectoid pearlitic steel wire. <i>Acta Materialia</i> , 2012, 60, 4005-4016.	3.8	187
104	β phase acts as a switch between dislocation channeling and joint twinning- and transformation-induced plasticity in a metastable β^2 titanium alloy. <i>Acta Materialia</i> , 2018, 151, 67-77.	3.8	187
105	On the room temperature deformation mechanisms of a Mg-Y-Zn alloy with long-period-stacking-ordered structures. <i>Acta Materialia</i> , 2015, 82, 414-423.	3.8	186
106	Relationship between rolling textures and shear textures in f.c.c. and b.c.c. metals. <i>Acta Metallurgica Et Materialia</i> , 1994, 42, 879-886.	1.9	185
107	Effects of retained austenite volume fraction, morphology, and carbon content on strength and ductility of nanostructured TRIP-assisted steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 636, 551-564.	2.6	183
108	High resolution in situ mapping of microstrain and microstructure evolution reveals damage resistance criteria in dual phase steels. <i>Acta Materialia</i> , 2015, 96, 399-409.	3.8	182

#	ARTICLE	IF	CITATIONS
109	Engineering atomic-level complexity in high-entropy and complex concentrated alloys. <i>Nature Communications</i> , 2019, 10, 2090.	5.8	182
110	Metallic composites processed via extreme deformation: Toward the limits of strength in bulk materials. <i>MRS Bulletin</i> , 2010, 35, 982-991.	1.7	180
111	Strengthening and strain hardening mechanisms in a precipitation-hardened high-Mn lightweight steel. <i>Acta Materialia</i> , 2017, 140, 258-273.	3.8	179
112	Experimental investigation of plastic grain interaction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2002, 336, 81-87.	2.6	177
113	A crystal plasticity model for twinning- and transformation-induced plasticity. <i>Acta Materialia</i> , 2016, 118, 140-151.	3.8	175
114	Alloy Design, Combinatorial Synthesis, and Microstructure-Property Relations for Low-Density Fe-Mn-Al-C Austenitic Steels. <i>Jom</i> , 2014, 66, 1845-1856.	0.9	172
115	Hydrogen embrittlement associated with strain localization in a precipitation-hardened Fe-Mn-Al-C light weight austenitic steel. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 4634-4646.	3.8	170
116	Overview of the lattice Boltzmann method for nano- and microscale fluid dynamics in materials science and engineering. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2004, 12, R13-R46.	0.8	169
117	Hydrogen-induced cracking at grain and twin boundaries in an Fe-Mn-C austenitic steel. <i>Scripta Materialia</i> , 2012, 66, 459-462.	2.6	168
118	Elemental partitioning and mechanical properties of Ti- and Ta-containing Co-Al-W-base superalloys studied by atom probe tomography and nanoindentation. <i>Acta Materialia</i> , 2014, 78, 78-85.	3.8	168
119	Rapid alloy prototyping: Compositional and thermo-mechanical high throughput bulk combinatorial design of structural materials based on the example of 30Mn-1.2C-xAl triplex steels. <i>Acta Materialia</i> , 2012, 60, 4950-4959.	3.8	167
120	Nanoscale austenite reversion through partitioning, segregation and kinetic freezing: Example of a ductile 2GPa Fe-Cr-C steel. <i>Acta Materialia</i> , 2012, 60, 2790-2804.	3.8	167
121	Bidirectional Transformation Enables Hierarchical Nanolaminate Dual-Phase High-Entropy Alloys. <i>Advanced Materials</i> , 2018, 30, e1804727.	11.1	167
122	Non-equiatomic high entropy alloys: Approach towards rapid alloy screening and property-oriented design. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 648, 183-192.	2.6	166
123	Retention of the Goss orientation between microbands during cold rolling of an Fe ₃ Si single crystal. <i>Acta Materialia</i> , 2007, 55, 2519-2530.	3.8	165
124	Atomic-scale grain boundary engineering to overcome hot-cracking in additively-manufactured superalloys. <i>Acta Materialia</i> , 2019, 177, 209-221.	3.8	165
125	Atomic-scale insights into surface species of electrocatalysts in three dimensions. <i>Nature Catalysis</i> , 2018, 1, 300-305.	16.1	161
126	The role of lattice defects, element partitioning and intrinsic heat effects on the microstructure in selective laser melted Ti-6Al-4V. <i>Acta Materialia</i> , 2019, 167, 136-148.	3.8	160

#	ARTICLE	IF	CITATIONS
127	Investigation of orientation gradients around a hard Laves particle in a warm-rolled Fe ₃ Al-based alloy using a 3D EBSD-FIB technique. <i>Acta Materialia</i> , 2006, 54, 1369-1380.	3.8	159
128	DAMASK: the Düsseldorf Advanced Material Simulation Kit for studying crystal plasticity using an FE based or a spectral numerical solver. <i>Procedia IUTAM</i> , 2012, 3, 3-10.	1.2	159
129	Mechanical alloying and amorphization in Cu-Nb-Ag in situ composite wires studied by transmission electron microscopy and atom probe tomography. <i>Acta Materialia</i> , 2009, 57, 5254-5263.	3.8	158
130	From High-Entropy Alloys to High-Entropy Steels. <i>Steel Research International</i> , 2015, 86, 1127-1138.	1.0	158
131	On the influence of the grain boundary misorientation on the plastic deformation of aluminum bicrystals. <i>Acta Materialia</i> , 2003, 51, 4719-4735.	3.8	156
132	Interaction between recrystallization and phase transformation during intercritical annealing in a cold-rolled dual-phase steel: A cellular automaton model. <i>Acta Materialia</i> , 2013, 61, 5504-5517.	3.8	156
133	The influence of sterilization processes on the micromechanical properties of carbon fiber-reinforced PEEK composites for bone implant applications. <i>Acta Biomaterialia</i> , 2007, 3, 209-220.	4.1	155
134	In-situ SEM observation of phase transformation and twinning mechanisms in an interstitial high-entropy alloy. <i>Acta Materialia</i> , 2018, 147, 236-246.	3.8	152
135	Lattice Distortions in the FeCoNiCrMn High Entropy Alloy Studied by Theory and Experiment. <i>Entropy</i> , 2016, 18, 321.	1.1	151
136	Orientation informed nanoindentation of α -titanium: Indentation pileup in hexagonal metals deforming by prismatic slip. <i>Journal of Materials Research</i> , 2012, 27, 356-367.	1.2	150
137	A virtual laboratory using high resolution crystal plasticity simulations to determine the initial yield surface for sheet metal forming operations. <i>International Journal of Plasticity</i> , 2016, 80, 111-138.	4.1	147
138	Degradation of iridium oxides via oxygen evolution from the lattice: correlating atomic scale structure with reaction mechanisms. <i>Energy and Environmental Science</i> , 2019, 12, 3548-3555.	15.6	147
139	Development of microstructure and texture of medium carbon steel during heavy warm deformation. <i>Acta Materialia</i> , 2004, 52, 2209-2220.	3.8	146
140	Atom probe tomography study of ultrahigh nanocrystallization rates in FeSiNbBCu soft magnetic amorphous alloys on rapid annealing. <i>Acta Materialia</i> , 2014, 68, 295-309.	3.8	146
141	Microtexture and Chitin/Calcite Orientation Relationship in the Mineralized Exoskeleton of the American Lobster. <i>Advanced Functional Materials</i> , 2008, 18, 3307-3314.	7.8	145
142	Structure, composition, and mechanical properties of shark teeth. <i>Journal of Structural Biology</i> , 2012, 178, 290-299.	1.3	144
143	Spectral TRIP enables ductile 1.1 GPa martensite. <i>Acta Materialia</i> , 2016, 111, 262-272.	3.8	141
144	The nucleation of Mo-rich Laves phase particles adjacent to M ₂₃ C ₆ micrograin boundary carbides in 12% Cr tempered martensite ferritic steels. <i>Acta Materialia</i> , 2015, 90, 94-104.	3.8	140

#	ARTICLE	IF	CITATIONS
145	Comparison of Maraging Steel Micro- and Nanostructure Produced Conventionally and by Laser Additive Manufacturing. <i>Materials</i> , 2017, 10, 8.	1.3	139
146	Atomic-scale compositional characterization of a nanocrystalline AlCrCuFeNiZn high-entropy alloy using atom probe tomography. <i>Acta Materialia</i> , 2013, 61, 4696-4706.	3.8	138
147	Deformation mechanism of γ -enriched Ti-Nb-based gum metal: Dislocation channeling and deformation induced $\gamma \rightarrow \beta$ transformation. <i>Acta Materialia</i> , 2015, 100, 290-300.	3.8	138
148	Unraveling the temperature dependence of the yield strength in single-crystal tungsten using atomistically-informed crystal plasticity calculations. <i>International Journal of Plasticity</i> , 2016, 78, 242-265.	4.1	137
149	Element-Resolved Corrosion Analysis of Stainless-Type Glass-Forming Steels. <i>Science</i> , 2013, 341, 372-376.	6.0	136
150	Dynamic strain aging studied at the atomic scale. <i>Acta Materialia</i> , 2015, 86, 34-42.	3.8	136
151	Hydrogen-assisted failure in Ni-based superalloy 718 studied under in situ hydrogen charging: The role of localized deformation in crack propagation. <i>Acta Materialia</i> , 2017, 128, 365-374.	3.8	136
152	Using ab initio calculations in designing bcc Mg-Li alloys for ultra-lightweight applications. <i>Acta Materialia</i> , 2009, 57, 69-76.	3.8	135
153	Composition Dependence of Phase Stability, Deformation Mechanisms, and Mechanical Properties of the CoCrFeMnNi High-Entropy Alloy System. <i>Jom</i> , 2014, 66, 1993-2001.	0.9	135
154	Intrinsic and extrinsic size effects in the deformation of amorphous CuZr/nanocrystalline Cu nanolaminates. <i>Acta Materialia</i> , 2014, 80, 94-106.	3.8	135
155	Texture and microstructure evolution during cold rolling of a strip cast and of a hot rolled austenitic stainless steel. <i>Acta Materialia</i> , 1997, 45, 1137-1151.	3.8	134
156	Lattice Boltzmann modeling of dendritic growth in a forced melt convection. <i>Acta Materialia</i> , 2009, 57, 1755-1767.	3.8	134
157	Combining structural and chemical information at the nanometer scale by correlative transmission electron microscopy and atom probe tomography. <i>Ultramicroscopy</i> , 2015, 153, 32-39.	0.8	134
158	Making sustainable aluminum by recycling scrap: The science of "dirty" alloys. <i>Progress in Materials Science</i> , 2022, 128, 100947.	16.0	134
159	Atomic scale effects of alloying, partitioning, solute drag and austempering on the mechanical properties of high-carbon bainitic-austenitic TRIP steels. <i>Acta Materialia</i> , 2012, 60, 6183-6199.	3.8	133
160	The exoskeleton of the lobster <i>Homarus americanus</i> as an example of a smart anisotropic biological material. <i>Acta Biomaterialia</i> , 2007, 3, 301-309.	4.1	132
161	A microstructural investigation of adiabatic shear bands in an interstitial free steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007, 457, 205-218.	2.6	132
162	Direct evidence for the formation of ordered carbides in a ferrite-based low-density Fe-Mn-Al-C alloy studied by transmission electron microscopy and atom probe tomography. <i>Scripta Materialia</i> , 2013, 68, 348-353.	2.6	132

#	ARTICLE	IF	CITATIONS
163	Hydrogen enhances strength and ductility of an equiatomic high-entropy alloy. <i>Scientific Reports</i> , 2017, 7, 9892.	1.6	132
164	The effect of chromium and cobalt segregation at dislocations on nickel-based superalloys. <i>Scripta Materialia</i> , 2018, 145, 76-80.	2.6	132
165	Orientation dependence of shear banding in face-centered-cubic single crystals. <i>Acta Materialia</i> , 2012, 60, 3415-3434.	3.8	129
166	Origin of shear induced β^2 to β transition in Ti-Nb-based alloys. <i>Acta Materialia</i> , 2015, 92, 55-63.	3.8	129
167	A rare-earth free magnesium alloy with improved intrinsic ductility. <i>Scientific Reports</i> , 2017, 7, 10458.	1.6	129
168	Rolling and Annealing Textures of BCC Metals. <i>Materials Science Forum</i> , 1994, 157-162, 597-610.	0.3	127
169	Enhanced strength and ductility in a friction stir processing engineered dual phase high entropy alloy. <i>Scientific Reports</i> , 2017, 7, 16167.	1.6	127
170	Beating hydrogen with its own weapon: Nano-twin gradients enhance embrittlement resistance of a high-entropy alloy. <i>Materials Today</i> , 2018, 21, 1003-1009.	8.3	127
171	Recent progress in microstructural hydrogen mapping in steels: Quantification, kinetic analysis, and multi-scale characterisation. <i>Materials Science and Technology</i> , 2017, 33, 1481-1496.	0.8	125
172	An integrated crystal plasticity-phase field model for spatially resolved twin nucleation, propagation, and growth in hexagonal materials. <i>International Journal of Plasticity</i> , 2018, 106, 203-227.	4.1	125
173	Dislocation mechanism based size-dependent crystal plasticity modeling and simulation of gradient nano-grained copper. <i>International Journal of Plasticity</i> , 2019, 113, 52-73.	4.1	125
174	Precipitation Reactions in Age-Hardenable Alloys During Laser Additive Manufacturing. <i>Jom</i> , 2016, 68, 943-949.	0.9	123
175	Joint contribution of transformation and twinning to the high strength-ductility combination of a FeMnCoCr high entropy alloy at cryogenic temperatures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 759, 437-447.	2.6	123
176	A hybrid model for mesoscopic simulation of recrystallization. <i>Computational Materials Science</i> , 2001, 21, 69-78.	1.4	122
177	Effect of ruthenium on the precipitation of topologically close packed phases in Ni-based superalloys of 3rd and 4th generation. <i>Acta Materialia</i> , 2015, 95, 274-283.	3.8	121
178	Effects of initial orientation, sample geometry and friction on anisotropy and crystallographic orientation changes in single crystal microcompression deformation: A crystal plasticity finite element study. <i>Acta Materialia</i> , 2007, 55, 4567-4583.	3.8	120
179	Chemical boundary engineering: A new route toward lean, ultrastrong yet ductile steels. <i>Science Advances</i> , 2020, 6, eaay1430.	4.7	120
180	Ultrastrong lightweight compositionally complex steels via dual-nanoprecipitation. <i>Science Advances</i> , 2020, 6, .	4.7	118

#	ARTICLE	IF	CITATIONS
181	Simulation of rolling textures of b.c.c. metals considering grain interactions and crystallographic slip on {110}, {112} and {123} planes. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1995, 197, 31-37.	2.6	117
182	Introduction of a scalable three-dimensional cellular automaton with a probabilistic switching rule for the discrete mesoscale simulation of recrystallization phenomena. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1999, 79, 2339-2358.	0.8	117
183	Texture inhomogeneity in a Ti-Nb-based β -titanium alloy after warm rolling and recrystallization. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 479, 236-247.	2.6	117
184	High strength and ductile low density austenitic FeMnAlC steels: Simplex and alloys strengthened by nanoscale ordered carbides. <i>Materials Science and Technology</i> , 2014, 30, 1099-1104.	0.8	117
185	Advanced Scale Bridging Microstructure Analysis of Single Crystal Ni-Base Superalloys. <i>Advanced Engineering Materials</i> , 2015, 17, 216-230.	1.6	117
186	On the Effect of Manganese on Grain Size Stability and Hardenability in Ultrafine-Grained Ferrite/Martensite Dual-Phase Steels. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 37-46.	1.1	116
187	Multi-scale and spatially resolved hydrogen mapping in a Ni-Nb model alloy reveals the role of the β' phase in hydrogen embrittlement of alloy 718. <i>Acta Materialia</i> , 2016, 109, 69-81.	3.8	116
188	A strong and ductile medium-entropy alloy resists hydrogen embrittlement and corrosion. <i>Nature Communications</i> , 2020, 11, 3081.	5.8	116
189	On the dependence of in-grain subdivision and deformation texture of aluminum on grain interaction. <i>Acta Materialia</i> , 2002, 50, 4379-4394.	3.8	115
190	Smaller is stronger: The effect of strain hardening. <i>Acta Materialia</i> , 2009, 57, 5996-6005.	3.8	115
191	Large recovery strain in Fe-Mn-Si-based shape memory steels obtained by engineering annealing twin boundaries. <i>Nature Communications</i> , 2014, 5, 4964.	5.8	115
192	Current Challenges and Opportunities in Microstructure-Related Properties of Advanced High-Strength Steels. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020, 51, 5517-5586.	1.1	115
193	Reducing hot tearing by grain boundary segregation engineering in additive manufacturing: example of an Al _x CoCrFeNi high-entropy alloy. <i>Acta Materialia</i> , 2021, 204, 116505.	3.8	115
194	Yield strength increase of a CoCrNi medium entropy alloy by interstitial nitrogen doping at maintained ductility. <i>Scripta Materialia</i> , 2020, 178, 391-397.	2.6	114
195	2D cellular automaton simulation of the recrystallization texture of an IF sheet steel under consideration of Zener pinning. <i>Computational Materials Science</i> , 2005, 34, 299-313.	1.4	112
196	Hierarchical Modeling of the Elastic Properties of Bone at Submicron Scales: The Role of Extrafibrillar Mineralization. <i>Biophysical Journal</i> , 2008, 94, 4220-4232.	0.2	112
197	Scaling Monte Carlo kinetics of the Potts model using rate theory. <i>Acta Materialia</i> , 2000, 48, 1617-1628.	3.8	111
198	Microstructure and texture evolution in dual-phase steels: Competition between recovery, recrystallization, and phase transformation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 4161-4168.	2.6	111

#	ARTICLE	IF	CITATIONS
199	Coupling of Electron Channeling with EBSD: Toward the Quantitative Characterization of Deformation Structures in the SEM. <i>Jom</i> , 2013, 65, 1229-1236.	0.9	110
200	Effect of climb on dislocation mechanisms and creep rates in $\hat{\gamma}$ -strengthened Ni base superalloy single crystals: A discrete dislocation dynamics study. <i>Acta Materialia</i> , 2013, 61, 3709-3723.	3.8	110
201	Hydrogen trapping and embrittlement in high-strength Al alloys. <i>Nature</i> , 2022, 602, 437-441.	13.7	109
202	Revealing fracture mechanisms of medium manganese steels with and without delta-ferrite. <i>Acta Materialia</i> , 2019, 164, 683-696.	3.8	108
203	On the origin of size effects in small-strain elasticity of solid polymers. <i>International Journal of Solids and Structures</i> , 2007, 44, 1582-1592.	1.3	107
204	Plastic anisotropy of $\hat{\beta}$ -TiAl revealed by axisymmetric indentation. <i>Acta Materialia</i> , 2010, 58, 3516-3530.	3.8	104
205	The role of metastable LPSO building block clusters in phase transformations of an Mg-Y-Zn alloy. <i>Acta Materialia</i> , 2016, 112, 171-183.	3.8	104
206	On the origin of deformation-induced rotation patterns below nanoindents. <i>Acta Materialia</i> , 2008, 56, 31-42.	3.8	103
207	Dislocation density distribution around an indent in single-crystalline nickel: Comparing nonlocal crystal plasticity finite-element predictions with experiments. <i>Acta Materialia</i> , 2014, 71, 333-348.	3.8	103
208	Segregation-driven grain boundary spinodal decomposition as a pathway for phase nucleation in a high-entropy alloy. <i>Acta Materialia</i> , 2019, 178, 1-9.	3.8	102
209	A novel type of Co-Ti-Cr-base $\hat{\gamma}$ -strengthened superalloys with low mass density. <i>Acta Materialia</i> , 2017, 135, 244-251.	3.8	101
210	Phase nucleation through confined spinodal fluctuations at crystal defects evidenced in Fe-Mn alloys. <i>Nature Communications</i> , 2018, 9, 1137.	5.8	101
211	Unveiling the Re effect in Ni-based single crystal superalloys. <i>Nature Communications</i> , 2020, 11, 389.	5.8	101
212	Designing Ultrahigh Strength Steels with Good Ductility by Combining Transformation Induced Plasticity and Martensite Aging. <i>Advanced Engineering Materials</i> , 2009, 11, 547-555.	1.6	99
213	Microstructure design and mechanical properties in a near- $\hat{\gamma}$ Ti-4Mo alloy. <i>Acta Materialia</i> , 2015, 97, 291-304.	3.8	99
214	Ab initio and atomistic study of generalized stacking fault energies in Mg and Mg-Y alloys. <i>New Journal of Physics</i> , 2013, 15, 043020.	1.2	97
215	Combined atom probe tomography and density functional theory investigation of the Al off-stoichiometry of $\hat{\gamma}$ -carbides in an austenitic Fe-Mn-Al-C low density steel. <i>Acta Materialia</i> , 2016, 106, 229-238.	3.8	97
216	Strain rate dependency of dislocation plasticity. <i>Nature Communications</i> , 2021, 12, 1845.	5.8	97

#	ARTICLE	IF	CITATIONS
217	Processing, microstructure, and properties of ternary high-strength Cu-Cr-Ag in situ composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2000, 291, 186-197.	2.6	96
218	Discovery of a honeycomb structure in the twisted plywood patterns of fibrous biological nanocomposite tissue. <i>Journal of Crystal Growth</i> , 2005, 283, 1-7.	0.7	96
219	Hydrogen embrittlement of an interstitial equimolar high-entropy alloy. <i>Corrosion Science</i> , 2018, 136, 403-408.	3.0	96
220	Size and orientation effects in partial dislocation-mediated deformation of twinning-induced plasticity steel micro-pillars. <i>Acta Materialia</i> , 2015, 98, 391-404.	3.8	95
221	Macroscopic to nanoscopic in situ investigation on yielding mechanisms in ultrafine grained medium Mn steels: Role of the austenite-ferrite interface. <i>Acta Materialia</i> , 2019, 178, 10-25.	3.8	95
222	Experimental investigation of the elastic-plastic deformation of mineralized lobster cuticle by digital image correlation. <i>Journal of Structural Biology</i> , 2006, 155, 409-425.	1.3	94
223	Shear stress in lattice Boltzmann simulations. <i>Physical Review E</i> , 2009, 79, 046704.	0.8	94
224	Elasto-viscoplastic phase field modelling of anisotropic cleavage fracture. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 99, 19-34.	2.3	94
225	Effect of retained beta layer on slip transmission in Ti-6Al-2Zr-1Mo-1V near alpha titanium alloy during tensile deformation at room temperature. <i>Materials & Design</i> , 2014, 56, 937-942.	5.1	93
226	Crystal plasticity simulation study on the influence of texture on earing in steel. <i>Computational Materials Science</i> , 2005, 34, 221-234.	1.4	92
227	Deformation mechanisms in an austenitic single-phase duplex microstructured steel with nanotwinned grains. <i>Acta Materialia</i> , 2014, 81, 487-500.	3.8	92
228	Effect of Si on the acceleration of bainite transformation by pre-existing martensite. <i>Acta Materialia</i> , 2016, 116, 250-262.	3.8	92
229	Superior mechanical properties of a selective-laser-melted AlZnMgCuScZr alloy enabled by a tunable hierarchical microstructure and dual-nanoprecipitation. <i>Materials Today</i> , 2022, 52, 90-101.	8.3	92
230	Robustness and optimal use of design principles of arthropod exoskeletons studied by ab initio-based multiscale simulations. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 129-145.	1.5	91
231	In situ observation of collective grain-scale mechanics in Mg and Mg-rare earth alloys. <i>Acta Materialia</i> , 2014, 80, 77-93.	3.8	91
232	On the role of zinc on the formation and growth of intermetallic phases during interdiffusion between steel and aluminium alloys. <i>Acta Materialia</i> , 2015, 96, 203-211.	3.8	91
233	Overview of Microstructure and Microtexture Development in Grain-oriented Silicon Steel. <i>Journal of Magnetism and Magnetic Materials</i> , 2006, 304, 183-186.	1.0	90
234	Precipitation hardening effects on extension twinning in magnesium alloys. <i>International Journal of Plasticity</i> , 2018, 106, 186-202.	4.1	89

#	ARTICLE	IF	CITATIONS
235	On the diffusive phase transformation mechanism assisted by extended dislocations during creep of a single crystal CoNi-based superalloy. <i>Acta Materialia</i> , 2018, 155, 362-371.	3.8	89
236	Ti and its alloys as examples of cryogenic focused ion beam milling of environmentally-sensitive materials. <i>Nature Communications</i> , 2019, 10, 942.	5.8	89
237	Characterization of Grain Boundaries in Cu(In,Ga)Se ₂ Films Using Atom-Probe Tomography. <i>IEEE Journal of Photovoltaics</i> , 2011, 1, 207-212.	1.5	87
238	Non-crystallographic shear banding in crystal plasticity FEM simulations: Example of texture evolution in α -brass. <i>Acta Materialia</i> , 2012, 60, 1099-1115.	3.8	87
239	Annealing effects on the microstructure and texture of a multifilamentary Cu-Nb composite wire. <i>Scripta Materialia</i> , 2004, 51, 1099-1104.	2.6	86
240	Evaluation of the Crystallographic Orientation Relationships between FCC and BCC Phases in TRIP Steels. <i>ISIJ International</i> , 2009, 49, 1601-1609.	0.6	86
241	Modeling and experiments on the indentation deformation and recrystallization of a single-crystal nickel-base superalloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007, 454-455, 433-440.	2.6	85
242	The role of grain boundaries in the initial oxidation behavior of austenitic stainless steel containing alloyed Cu at 700°C for advanced thermal power plant applications. <i>Corrosion Science</i> , 2015, 96, 52-66.	3.0	85
243	Grain boundary segregation in Fe-Mn-C twinning-induced plasticity steels studied by correlative electron backscatter diffraction and atom probe tomography. <i>Acta Materialia</i> , 2015, 83, 37-47.	3.8	85
244	Dislocation interactions and low-angle grain boundary strengthening. <i>Acta Materialia</i> , 2011, 59, 7125-7134.	3.8	84
245	Hardness and elastic properties of dehydrated cuticle from the lobster <i>Homarus americanus</i> obtained by nanoindentation. <i>Journal of Materials Research</i> , 2006, 21, 1987-1995.	1.2	83
246	Mechanical and microstructural single-crystal Bauschinger effects: Observation of reversible plasticity in copper during bending. <i>Acta Materialia</i> , 2010, 58, 6055-6063.	3.8	83
247	Combinatorial metallurgical synthesis and processing of high-entropy alloys. <i>Journal of Materials Research</i> , 2018, 33, 3156-3169.	1.2	83
248	Nonbasal Slip Systems Enable a Strong and Ductile Hexagonal-Close-Packed High-Entropy Phase. <i>Physical Review Letters</i> , 2019, 122, 075502.	2.9	83
249	Chemical heterogeneity enhances hydrogen resistance in high-strength steels. <i>Nature Materials</i> , 2021, 20, 1629-1634.	13.3	83
250	Texture and microstructure of rolled and annealed tantalum. <i>Materials Science and Technology</i> , 1994, 10, 299-305.	0.8	82
251	Comparison of finite element and fast Fourier transform crystal plasticity solvers for texture prediction. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2010, 18, 085005.	0.8	81
252	Dislocation density measurement by electron channeling contrast imaging in a scanning electron microscope. <i>Scripta Materialia</i> , 2012, 66, 343-346.	2.6	81

#	ARTICLE	IF	CITATIONS
253	Recovery and Recrystallization: Phenomena, Physics, Models, Simulation. , 2014, , 2291-2397.		81
254	Segregation of boron at prior austenite grain boundaries in a quenched martensitic steel studied by atom probe tomography. Scripta Materialia, 2015, 96, 13-16.	2.6	81
255	Characterizing solute hydrogen and hydrides in pure and alloyed titanium at the atomic scale. Acta Materialia, 2018, 150, 273-280.	3.8	81
256	On the interaction of precipitates and tensile twins in magnesium alloys. Acta Materialia, 2019, 178, 146-162.	3.8	80
257	On the mechanism of extraordinary strain hardening in an interstitial high-entropy alloy under cryogenic conditions. Journal of Alloys and Compounds, 2019, 781, 734-743.	2.8	80
258	Texture and microstructure of hot rolled steel. Scripta Metallurgica Et Materialia, 1992, 26, 1221-1226.	1.0	79
259	Simulation of dislocation penetration through a general low-angle grain boundary. Acta Materialia, 2012, 60, 5380-5390.	3.8	79
260	Suppression of twinning and phase transformation in an ultrafine grained 2 GPa strong metastable austenitic steel: Experiment and simulation. Acta Materialia, 2015, 97, 305-315.	3.8	79
261	Atom probe informed simulations of dislocationâ€“precipitate interactions reveal the importance of local interface curvature. Acta Materialia, 2015, 92, 33-45.	3.8	79
262	A phase field model for damage in elasto-viscoplastic materials. Computer Methods in Applied Mechanics and Engineering, 2016, 312, 167-185.	3.4	79
263	Deformation-driven bidirectional transformation promotes bulk nanostructure formation in a metastable interstitial high entropy alloy. Acta Materialia, 2019, 167, 23-39.	3.8	79
264	The mechanical size effect as a mean-field breakdown phenomenon: Example of microscale single crystal beam bending. Acta Materialia, 2010, 58, 1876-1886.	3.8	78
265	Orientation dependent deformation by slip and twinning in magnesium during single crystal indentation. Acta Materialia, 2015, 91, 267-288.	3.8	78
266	Dislocation activities at the martensite phase transformation interface in metastable austenitic stainless steel: An in-situ TEM study. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 703, 236-243.	2.6	78
267	Effects of strain rate on mechanical properties and deformation behavior of an austenitic Fe-25Mn-3Al-3Si TWIP-TRIP steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 711, 78-92.	2.6	78
268	Dependence of hydrogen embrittlement mechanisms on microstructure-driven hydrogen distribution in medium Mn steels. Acta Materialia, 2020, 183, 313-328.	3.8	78
269	Crossover from tumbling to tank-treading-like motion in dense simulated suspensions of red blood cells. Soft Matter, 2013, 9, 9008-9015.	1.2	77
270	Interface-directed spinodal decomposition in TiAlN/CrN multilayer hard coatings studied by atom probe tomography. Acta Materialia, 2013, 61, 7534-7542.	3.8	77

#	ARTICLE	IF	CITATIONS
271	Alloying effects on microstructure formation of dual phase steels. <i>Acta Materialia</i> , 2015, 95, 386-398.	3.8	77
272	Enhancing Hydrogen Embrittlement Resistance of Lath Martensite by Introducing Nano-Films of Interlath Austenite. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 3797-3802.	1.1	77
273	Designing duplex, ultrafine-grained Fe-Mn-Al-C steels by tuning phase transformation and recrystallization kinetics. <i>Acta Materialia</i> , 2017, 141, 374-387.	3.8	77
274	Influence of fiber orientation on global mechanical behavior and mesoscale strain localization in a short glass-fiber-reinforced epoxy polymer composite during tensile deformation investigated using digital image correlation. <i>Composites Science and Technology</i> , 2007, 67, 2417-2427.	3.8	76
275	Effects of topology on abnormal grain growth in silicon steel. <i>Acta Materialia</i> , 2003, 51, 1755-1765.	3.8	75
276	Overview on Basic Types of Hot Rolling Textures of Steels. <i>Steel Research International</i> , 2003, 74, 327-337.	1.0	75
277	Grain boundary segregation in multicrystalline silicon: correlative characterization by EBSD, EBIC, and atom probe tomography. <i>Progress in Photovoltaics: Research and Applications</i> , 2015, 23, 1742-1753.	4.4	75
278	Carbon and strain partitioning in a quenched and partitioned steel containing ferrite. <i>Acta Materialia</i> , 2019, 165, 561-576.	3.8	75
279	Design of high-strength steels by microalloying and thermomechanical treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007, 463, 138-146.	2.6	74
280	Microbanding mechanism in an Fe-Mn-C high-Mn twinning-induced plasticity steel. <i>Scripta Materialia</i> , 2013, 69, 53-56.	2.6	74
281	Ag-Segregation to Dislocations in PbTe-Based Thermoelectric Materials. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 3609-3615.	4.0	74
282	In-situ metal matrix composite steels: Effect of alloying and annealing on morphology, structure and mechanical properties of TiB ₂ particle containing high modulus steels. <i>Acta Materialia</i> , 2016, 107, 38-48.	3.8	73
283	Confined chemical and structural states at dislocations in Fe-9wt%Mn steels: A correlative TEM-atom probe study combined with multiscale modelling. <i>Acta Materialia</i> , 2017, 124, 305-315.	3.8	73
284	On the grain boundary strengthening effect of boron in γ/β Cobalt-base superalloys. <i>Acta Materialia</i> , 2018, 145, 247-254.	3.8	73
285	Revealing nano-chemistry at lattice defects in thermoelectric materials using atom probe tomography. <i>Materials Today</i> , 2020, 32, 260-274.	8.3	73
286	Microstructure and mechanical properties of a cast and wire-drawn ternary Cu-Ag-Nb in situ composite. <i>Acta Materialia</i> , 1998, 46, 5973-5984.	3.8	72
287	Concepts for Integrating Plastic Anisotropy into Metal Forming Simulations. <i>Advanced Engineering Materials</i> , 2002, 4, 169-180.	1.6	72
288	A texture optimization study for minimum earing in aluminium by use of a texture component crystal plasticity finite element method. <i>Acta Materialia</i> , 2004, 52, 1003-1012.	3.8	71

#	ARTICLE	IF	CITATIONS
289	Mesoscale simulation of spherulite growth during polymer crystallization by use of a cellular automaton. <i>Acta Materialia</i> , 2004, 52, 2653-2664.	3.8	71
290	Characterization of the microstructure and texture of nanostructured electrodeposited NiCo using electron backscatter diffraction (EBSD). <i>Acta Materialia</i> , 2006, 54, 2451-2462.	3.8	71
291	Elemental partitioning, lattice misfit and creep behaviour of Cr containing γ -strengthened Co base superalloys. <i>Materials Science and Technology</i> , 2016, 32, 220-225.	0.8	71
292	Complexion-mediated martensitic phase transformation in Titanium. <i>Nature Communications</i> , 2017, 8, 14210.	5.8	71
293	Identifying Structure-Property Relationships Through DREAM.3D Representative Volume Elements and DAMASK Crystal Plasticity Simulations: An Integrated Computational Materials Engineering Approach. <i>Jom</i> , 2017, 69, 848-855.	0.9	71
294	The use of flat punch indentation to determine the viscoelastic properties in the time and frequency domains of a soft layer bonded to a rigid substrate. <i>Acta Biomaterialia</i> , 2009, 5, 240-248.	4.1	70
295	Theory-Guided Materials Design of Multi-Phase Ti-Nb Alloys with Bone-Matching Elastic Properties. <i>Materials</i> , 2012, 5, 1853-1872.	1.3	70
296	Influences of deformation strain, strain rate and cooling rate on the Burgers orientation relationship and variants morphology during β phase transformation in a near β titanium alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 549, 20-29.	2.6	70
297	Nanocrystalline Fe-C alloys produced by ball milling of iron and graphite. <i>Acta Materialia</i> , 2013, 61, 3172-3185.	3.8	70
298	Shear-Induced Mixing Governs Codeformation of Crystalline-Amorphous Nanolaminates. <i>Physical Review Letters</i> , 2014, 113, 035501.	2.9	70
299	Phase boundary segregation-induced strengthening and discontinuous yielding in ultrafine-grained duplex medium-Mn steels. <i>Acta Materialia</i> , 2020, 200, 389-403.	3.8	70
300	Reactive wear protection through strong and deformable oxide nanocomposite surfaces. <i>Nature Communications</i> , 2021, 12, 5518.	5.8	70
301	Annealing textures of BCC metals. <i>Scripta Metallurgica Et Materialia</i> , 1992, 27, 1533-1538.	1.0	69
302	Investigation of the orientation dependence of recovery in low-carbon steel by use of single orientation determination. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 1995, 66, 222-229.	0.2	69
303	A phase-field model for incoherent martensitic transformations including plastic accommodation processes in the austenite. <i>Journal of the Mechanics and Physics of Solids</i> , 2011, 59, 2082-2102.	2.3	69
304	Impact of nanodiffusion on the stacking fault energy in high-strength steels. <i>Acta Materialia</i> , 2014, 75, 147-155.	3.8	69
305	Ultrastrong and Ductile Soft Magnetic High-Entropy Alloys via Coherent Ordered Nanoprecipitates. <i>Advanced Materials</i> , 2021, 33, e2102139.	11.1	69
306	Studying the effect of grain boundaries in dislocation density based crystal-plasticity finite element simulations. <i>International Journal of Solids and Structures</i> , 2006, 43, 7287-7303.	1.3	68

#	ARTICLE	IF	CITATIONS
307	Simulation of shear banding in heterophase co-deformation: Example of plane strain compressed Cu–Ag and Cu–Nb metal matrix composites. <i>Acta Materialia</i> , 2013, 61, 4591-4606.	3.8	68
308	Microstructure refinement for high modulus in-situ metal matrix composite steels via controlled solidification of the system Fe–TiB ₂ . <i>Acta Materialia</i> , 2015, 96, 47-56.	3.8	68
309	Influence of compositional inhomogeneity on mechanical behavior of an interstitial dual-phase high-entropy alloy. <i>Materials Chemistry and Physics</i> , 2018, 210, 29-36.	2.0	67
310	Multi-scale characterization of austenite reversion and martensite recovery in a cold-rolled medium-Mn steel. <i>Acta Materialia</i> , 2019, 166, 512-530.	3.8	67
311	Influence of microstructure on deformation anisotropy of mineralized cuticle from the lobster <i>Homarus americanus</i> . <i>Journal of Structural Biology</i> , 2008, 161, 120-132.	1.3	66
312	Ultrafine Grained Ferrite/Martensite Dual Phase Steel Fabricated by Large Strain Warm Deformation and Subsequent Intercritical Annealing. <i>ISIJ International</i> , 2008, 48, 1096-1101.	0.6	66
313	Unexpected cyclic stress-strain response of dual-phase high-entropy alloys induced by partial reversibility of deformation. <i>Scripta Materialia</i> , 2018, 143, 63-67.	2.6	66
314	Crystal–Glass High-Entropy Nanocomposites with Near Theoretical Compressive Strength and Large Deformability. <i>Advanced Materials</i> , 2020, 32, e2002619.	11.1	66
315	An efficient and robust approach to determine material parameters of crystal plasticity constitutive laws from macro-scale stress–strain curves. <i>International Journal of Plasticity</i> , 2020, 134, 102779.	4.1	66
316	A dislocation density based constitutive law for BCC materials in crystal plasticity FEM. <i>Computational Materials Science</i> , 2007, 39, 91-95.	1.4	65
317	Preferred crystallographic texture of β -chitin as a microscopic and macroscopic design principle of the exoskeleton of the lobster <i>Homarus americanus</i> . <i>Acta Biomaterialia</i> , 2007, 3, 882-895.	4.1	65
318	Virtual material testing for stamping simulations based on polycrystal plasticity. <i>Computational Materials Science</i> , 2009, 46, 383-392.	1.4	65
319	A dislocation density-based crystal plasticity constitutive model for prismatic slip in β -titanium. <i>Acta Materialia</i> , 2011, 59, 7003-7009.	3.8	65
320	Atom probe tomography characterization of heavily cold drawn pearlitic steel wire. <i>Ultramicroscopy</i> , 2011, 111, 628-632.	0.8	65
321	Microstructure Control during Fabrication of Ultrafine Grained Dual-phase Steel: Characterization and Effect of Intercritical Annealing Parameters. <i>ISIJ International</i> , 2012, 52, 874-883.	0.6	65
322	Designing Heusler nanoprecipitates by elastic misfit stabilization in Fe–Mn maraging steels. <i>Acta Materialia</i> , 2014, 76, 94-105.	3.8	65
323	Strain-Induced Asymmetric Line Segregation at Faceted Si Grain Boundaries. <i>Physical Review Letters</i> , 2018, 121, 015702.	2.9	65
324	Elemental site occupancy in the L1 ₂ A3B ordered intermetallic phase in Co-based superalloys and its influence on the microstructure. <i>Acta Materialia</i> , 2019, 163, 140-153.	3.8	65

#	ARTICLE	IF	CITATIONS
325	Textures of strip cast and hot rolled ferritic and austenitic stainless steel. <i>Materials Science and Technology</i> , 1995, 11, 461-468.	0.8	64
326	Study on the orientational stability of cube-oriented FCC crystals under plane strain by use of a texture component crystal plasticity finite element method. <i>Scripta Materialia</i> , 2004, 50, 1085-1090.	2.6	64
327	Ultrastructural organization and micromechanical properties of shark tooth enameloid. <i>Acta Biomaterialia</i> , 2014, 10, 3959-3968.	4.1	64
328	Spatially and Kinetically Resolved Mapping of Hydrogen in a Twinning-Induced Plasticity Steel by Use of Scanning Kelvin Probe Force Microscopy. <i>Journal of the Electrochemical Society</i> , 2015, 162, C638-C647.	1.3	64
329	Interstitial doping enhances the strength-ductility synergy in a CoCrNi medium entropy alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 781, 139242.	2.6	64
330	Solute hydrogen and deuterium observed at the near atomic scale in high-strength steel. <i>Acta Materialia</i> , 2020, 188, 108-120.	3.8	64
331	Characterization of thin anodic oxides of Ti-Nb alloys by electrochemical impedance spectroscopy. <i>Electrochimica Acta</i> , 2012, 82, 324-332.	2.6	63
332	On the origin of creep dislocations in a Ni-base, single-crystal superalloy: an ECCI, EBSD, and dislocation dynamics-based study. <i>Acta Materialia</i> , 2016, 109, 151-161.	3.8	63
333	Manipulation of matter by electric and magnetic fields: Toward novel synthesis and processing routes of inorganic materials. <i>Materials Today</i> , 2018, 21, 527-536.	8.3	63
334	Atomic-scale characterization of the CdS/CuInSe ₂ interface in thin-film solar cells. <i>Applied Physics Letters</i> , 2011, 98, .	1.5	62
335	Lattice Boltzmann modeling of dendritic growth in forced and natural convection. <i>Computers and Mathematics With Applications</i> , 2011, 61, 3585-3592.	1.4	62
336	Atomic-scale investigation of μ and λ precipitates in bainite in 100Cr6 bearing steel by atom probe tomography and ab initio calculations. <i>Acta Materialia</i> , 2013, 61, 7582-7590.	3.8	62
337	Crystallization, phase evolution and corrosion of Fe-based metallic glasses: An atomic-scale structural and chemical characterization study. <i>Acta Materialia</i> , 2014, 71, 20-30.	3.8	62
338	Hydrogen effects on microstructural evolution and passive film characteristics of a duplex stainless steel. <i>Electrochemistry Communications</i> , 2017, 79, 28-32.	2.3	62
339	The small-angle and wide-angle X-ray scattering set-up at beamline BL9 of DELTA. <i>Journal of Synchrotron Radiation</i> , 2007, 14, 244-251.	1.0	61
340	Deformation-Induced Martensite: A New Paradigm for Exceptional Steels. <i>Advanced Materials</i> , 2016, 28, 7753-7757.	11.1	61
341	Influence of composition and precipitation evolution on damage at grain boundaries in a crept polycrystalline Ni-based superalloy. <i>Acta Materialia</i> , 2019, 166, 158-167.	3.8	61
342	Influence of microstructure and atomic-scale chemistry on the direct reduction of iron ore with hydrogen at 700°C. <i>Acta Materialia</i> , 2021, 212, 116933.	3.8	61

#	ARTICLE	IF	CITATIONS
343	On the Spheroidized Carbide Dissolution and Elemental Partitioning in High Carbon Bearing Steel 100Cr6. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 595-606.	1.1	60
344	A novel high manganese austenitic steel with higher work hardening capacity and much lower impact deformation than Hadfield manganese steel. Materials & Design, 2014, 55, 798-804.	5.1	60
345	Mechanisms of subgrain coarsening and its effect on the mechanical properties of carbon-supersaturated nanocrystalline hypereutectoid steel. Acta Materialia, 2015, 84, 110-123.	3.8	60
346	Core-shell nanoparticle arrays double the strength of steel. Scientific Reports, 2017, 7, 42547.	1.6	60
347	Competition between formation of carbides and reversed austenite during tempering of a medium-manganese steel studied by thermodynamic-kinetic simulations and atom probe tomography. Acta Materialia, 2018, 147, 165-175.	3.8	60
348	On the origin of the improvement of shape memory effect by precipitating VC in Fe-Mn-Si-based shape memory alloys. Acta Materialia, 2018, 155, 222-235.	3.8	60
349	Comparative atom probe study of Cu(In,Ga)Se ₂ thin-film solar cells deposited on soda-lime glass and mild steel substrates. Journal of Applied Physics, 2011, 110, .	1.1	59
350	Interdigitating biocalcite dendrites form a 3-D jigsaw structure in brachiopod shells. Acta Biomaterialia, 2011, 7, 2237-2243.	4.1	59
351	Atom probe study of Cu ₂ ZnSnSe ₄ thin-films prepared by co-evaporation and post-deposition annealing. Applied Physics Letters, 2013, 102, .	1.5	59
352	A novel approach to measure grain boundary segregation in bulk polycrystalline materials in dependence of the boundaries' five rotational degrees of freedom. Scripta Materialia, 2014, 81, 16-19.	2.6	59
353	Room temperature deformation of LPSO structures by non-basal slip. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 682, 354-358.	2.6	59
354	On the detection of multiple events in atom probe tomography. Ultramicroscopy, 2018, 189, 54-60.	0.8	59
355	Introduction of a Texture Component Crystal Plasticity Finite Element Method for Anisotropy Simulations. Advanced Engineering Materials, 2001, 3, 984.	1.6	58
356	From electronic structure to phase diagrams: A bottom-up approach to understand the stability of titanium-transition metal alloys. Acta Materialia, 2016, 113, 311-319.	3.8	58
357	Crystal plasticity study on stress and strain partitioning in a measured 3D dual phase steel microstructure. Physical Mesomechanics, 2017, 20, 311-323.	1.0	58
358	Thermophysical and Mechanical Properties of Advanced Single Crystalline Co-base Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 4099-4109.	1.1	58
359	Microstructural and mechanical characterization of an equiatomic YGdTbDyHo high entropy alloy with hexagonal close-packed structure. Acta Materialia, 2018, 156, 86-96.	3.8	58
360	Phase Equilibria in the Fe-Nb System. Journal of Phase Equilibria and Diffusion, 2011, 32, 97-104.	0.5	57

#	ARTICLE	IF	CITATIONS
361	Prediction of post-dynamic austenite-to-ferrite transformation and reverse transformation in a low-carbon steel by cellular automaton modeling. <i>Acta Materialia</i> , 2012, 60, 4768-4779.	3.8	57
362	Atom probe tomography observation of hydrogen in high-Mn steel and silver charged via an electrolytic route. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 12221-12229.	3.8	57
363	Efficient additive manufacturing production of oxide- and nitride-dispersion-strengthened materials through atmospheric reactions in liquid metal deposition. <i>Materials and Design</i> , 2016, 111, 60-69.	3.3	57
364	The Laplace Project: An integrated suite for preparing and transferring atom probe samples under cryogenic and UHV conditions. <i>PLoS ONE</i> , 2018, 13, e0209211.	1.1	57
365	Interfacial nanophases stabilize nanotwins in high-entropy alloys. <i>Acta Materialia</i> , 2020, 185, 218-232.	3.8	57
366	Modelling of the yield strength of a heavily wire drawn Cu-20%Nb composite by use of a modified linear rule of mixtures. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 4075-4082.	1.9	56
367	Experimental study on the thermal stability of Cr filaments in a Cu-Cr-Ag in situ composite. <i>Scripta Materialia</i> , 2004, 51, 915-920.	2.6	56
368	Annealing behavior of ferritic-martensitic 9%Cr-ODS Eurofer steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 3602-3608.	2.6	56
369	Nanostructure of wet-chemically prepared, polymer-stabilized silver-gold nanoalloys (6 nm) over the entire composition range. <i>Journal of Materials Chemistry B</i> , 2015, 3, 4654-4662.	2.9	56
370	Effect of silicon on the microstructure and growth kinetics of intermetallic phases formed during hot-dip aluminizing of ferritic steel. <i>Surface and Coatings Technology</i> , 2017, 319, 104-109.	2.2	56
371	Thermodynamics of grain boundary segregation, interfacial spinodal and their relevance for nucleation during solid-solid phase transitions. <i>Acta Materialia</i> , 2019, 168, 109-120.	3.8	56
372	Snoek-type damping performance in strong and ductile high-entropy alloys. <i>Science Advances</i> , 2020, 6, eaba7802.	4.7	56
373	On the correlation of microstructure and electromagnetic properties of heavily cold worked Cu-20 wt% Nb wires. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 1467-1476.	1.9	55
374	Parameter free quantitative analysis of atom probe data by correlation functions: Application to the precipitation in Al-Zn-Mg-Cu. <i>Scripta Materialia</i> , 2018, 154, 106-110.	2.6	55
375	Teaching solid mechanics to artificial intelligence—a fast solver for heterogeneous materials. <i>Npj Computational Materials</i> , 2021, 7, .	3.5	55
376	Influence of additives on the global mechanical behavior and the microscopic strain localization in wood reinforced polypropylene composites during tensile deformation investigated using digital image correlation. <i>Composites Science and Technology</i> , 2009, 69, 139-146.	3.8	54
377	(Nb _x , Zr _{1-x}) ₄ AlC ₃ MAX Phase Solid Solutions: Processing, Mechanical Properties, and Density Functional Theory Calculations. <i>Inorganic Chemistry</i> , 2016, 55, 5445-5452.	1.9	54
378	Formation mechanism of Si_1C_2 -carbides and deformation behavior in Si-alloyed FeMnAlC lightweight steels. <i>Acta Materialia</i> , 2020, 198, 258-270.	3.8	54

#	ARTICLE	IF	CITATIONS
379	Improving the mechanical properties of Fe-TiB ₂ high modulus steels through controlled solidification processes. <i>Acta Materialia</i> , 2016, 118, 187-195.	3.8	53
380	Effect of Through-Thickness Macro and Micro-Texture Gradients on Ridging of 17%Cr Ferritic Stainless Steel Sheet. <i>Steel Research International</i> , 2005, 76, 797-806.	1.0	52
381	Self-consistent modeling of large plastic deformation, texture and morphology evolution in semi-crystalline polymers. <i>Journal of the Mechanics and Physics of Solids</i> , 2006, 54, 1350-1375.	2.3	52
382	Formation of eta carbide in ferrous martensite by room temperature aging. <i>Acta Materialia</i> , 2018, 158, 297-312.	3.8	52
383	Influence of phase decomposition on mechanical behavior of an equiatomic CoCuFeMnNi high entropy alloy. <i>Acta Materialia</i> , 2019, 181, 25-35.	3.8	52
384	Microstructure-based multiscale modeling of large strain plastic deformation by coupling a full-field crystal plasticity-spectral solver with an implicit finite element solver. <i>International Journal of Plasticity</i> , 2020, 125, 97-117.	4.1	52
385	Experimental investigation and modeling of the influence of microstructure on the resistive conductivity of a Cu-Ag-Nb in situ composite. <i>Acta Materialia</i> , 1999, 47, 1627-1634.	3.8	51
386	Exploring the p-n junction region in Cu(In,Ga)Se ₂ thin-film solar cells at the nanometer-scale. <i>Applied Physics Letters</i> , 2012, 101, .	1.5	51
387	Error analysis of the crystal orientations and disorientations obtained by the classical electron backscatter diffraction technique. <i>Journal of Applied Crystallography</i> , 2015, 48, 797-813.	1.9	51
388	Computational modeling of dual-phase steels based on representative three-dimensional microstructures obtained from EBSD data. <i>Archive of Applied Mechanics</i> , 2016, 86, 575-598.	1.2	51
389	Superplasticity in a lean Fe-Mn-Al steel. <i>Nature Communications</i> , 2017, 8, 751.	5.8	51
390	Sodium enhances indium-gallium interdiffusion in copper indium gallium diselenide photovoltaic absorbers. <i>Nature Communications</i> , 2018, 9, 826.	5.8	51
391	On the segregation of Re at dislocations in the γ' phase of Ni-based single crystal superalloys. <i>Materialia</i> , 2018, 4, 109-114.	1.3	51
392	Atomistic phase field chemomechanical modeling of dislocation-solute-precipitate interaction in Ni-Al-Co. <i>Acta Materialia</i> , 2019, 175, 250-261.	3.8	51
393	Beyond Solid Solution High-Entropy Alloys: Tailoring Magnetic Properties via Spinodal Decomposition. <i>Advanced Functional Materials</i> , 2021, 31, 2007668.	7.8	51
394	Substantially enhanced plasticity of bulk metallic glasses by densifying local atomic packing. <i>Nature Communications</i> , 2021, 12, 6582.	5.8	51
395	Small droplets on superhydrophobic substrates. <i>Physical Review E</i> , 2010, 81, 051606.	0.8	50
396	Composition and orientation effects on the final recrystallization texture of coarse-grained Nb-containing AISI 430 ferritic stainless steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 3513-3519.	2.6	50

#	ARTICLE	IF	CITATIONS
397	Tensile deformation characteristics of bulk ultrafine-grained austenitic stainless steel produced by thermal cycling. <i>Scripta Materialia</i> , 2012, 66, 634-637.	2.6	50
398	Particle Stimulated Nucleation in Coarse-Grained Ferritic Stainless Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013, 44, 469-478.	1.1	50
399	Understanding the detection of carbon in austenitic high-Mn steel using atom probe tomography. <i>Ultramicroscopy</i> , 2013, 132, 239-247.	0.8	50
400	Interfacial dislocation motion and interactions in single-crystal superalloys. <i>Acta Materialia</i> , 2014, 79, 216-233.	3.8	50
401	Multiple slip dislocation patterning in a dislocation-based crystal plasticity finite element method. <i>International Journal of Plasticity</i> , 2018, 100, 104-121.	4.1	50
402	Experimental and numerical study of mechanical properties of multi-phase medium-Mn TWIP-TRIP steel: Influences of strain rate and phase constituents. <i>Acta Materialia</i> , 2019, 177, 250-265.	3.8	50
403	Mesoscale simulation of the kinetics and topology of spherulite growth during crystallization of isotactic polypropylene (iPP) by using a cellular automaton. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2005, 13, 733-751.	0.8	49
404	Effects of Ru on elemental partitioning and precipitation of topologically close-packed phases in Ni-based superalloys. <i>Scripta Materialia</i> , 2015, 101, 44-47.	2.6	49
405	Ultra-strong and damage tolerant metallic bulk materials: A lesson from nanostructured pearlitic steel wires. <i>Scientific Reports</i> , 2016, 6, 33228.	1.6	49
406	Atomic scale characterization of white etching area and its adjacent matrix in a martensitic 100Cr6 bearing steel. <i>Materials Characterization</i> , 2017, 123, 349-353.	1.9	49
407	Combinatorial Alloy Design by Laser Additive Manufacturing. <i>Steel Research International</i> , 2017, 88, 1600416.	1.0	49
408	Microstructural degradation of polycrystalline superalloys from oxidized carbides and implications on crack initiation. <i>Scripta Materialia</i> , 2018, 147, 59-63.	2.6	49
409	Correlative Microscopy – Novel Methods and Their Applications to Explore 3D Chemistry and Structure of Nanoscale Lattice Defects: A Case Study in Superalloys. <i>Jom</i> , 2018, 70, 1736-1743.	0.9	49
410	Rolling textures of a Cu/1b20%Nb composite. <i>Scripta Metallurgica Et Materialia</i> , 1992, 27, 211-216.	1.0	48
411	Investigation of contribution of {123} slip planes to development of rolling textures in bcc metals by use of Taylor models. <i>Materials Science and Technology</i> , 1995, 11, 455-460.	0.8	48
412	Lamination microstructure in shear deformed copper single crystals. <i>Acta Materialia</i> , 2009, 57, 3439-3449.	3.8	48
413	Experimental – numerical study on strain and stress partitioning in bainitic steels with martensite – austenite constituents. <i>International Journal of Plasticity</i> , 2018, 104, 39-53.	4.1	48
414	Elemental segregation to antiphase boundaries in a crept CoNi-based single crystal superalloy. <i>Scripta Materialia</i> , 2018, 157, 62-66.	2.6	48

#	ARTICLE	IF	CITATIONS
415	High-resolution transmission electron microscopy and electron backscatter diffraction in nanoscaled ferritic and ferriticâ€“martensitic oxide dispersion strengthenedâ€“steels. <i>Journal of Nuclear Materials</i> , 2009, 385, 231-235.	1.3	47
416	Multiple reentrant glass transitions in confined hard-sphere glasses. <i>Nature Communications</i> , 2014, 5, 4435.	5.8	47
417	Martensitic transformation in Eurofer-97 and ODS-Eurofer steels: A comparative study. <i>Journal of Nuclear Materials</i> , 2015, 462, 360-367.	1.3	47
418	Computationally efficient and quantitatively accurate multiscale simulation of solid-solution strengthening by ab initio calculation. <i>Acta Materialia</i> , 2015, 85, 53-66.	3.8	47
419	Laser beam welding of dual-phase DP1000 steel. <i>Journal of Materials Processing Technology</i> , 2018, 252, 498-510.	3.1	47
420	Deformation mechanisms, activated slip systems and critical resolved shear stresses in an Mg-LPSO alloy studied by micro-pillar compression. <i>Materials and Design</i> , 2018, 154, 203-216.	3.3	47
421	Joint investigation of strain partitioning and chemical partitioning in ferrite-containing TRIP-assisted steels. <i>Acta Materialia</i> , 2020, 186, 374-388.	3.8	47
422	Atomic-scale distribution of impurities in CuInSe2-based thin-film solar cells. <i>Ultramicroscopy</i> , 2011, 111, 552-556.	0.8	46
423	Bulk combinatorial design of ductile martensitic stainless steels through confined martensite-to-austenite reversion. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 582, 235-244.	2.6	46
424	The Maximum Separation Cluster Analysis Algorithm for Atom-Probe Tomography: Parameter Determination and Accuracy. <i>Microscopy and Microanalysis</i> , 2014, 20, 1662-1671.	0.2	46
425	Coupled Crystal Plasticityâ€“Phase Field Fracture Simulation Study on Damage Evolution Around a Void: Pore Shape Versus Crystallographic Orientation. <i>Jom</i> , 2017, 69, 872-878.	0.9	46
426	A new class of lightweight, stainless steels with ultra-high strength and large ductility. <i>Scientific Reports</i> , 2020, 10, 12140.	1.6	46
427	Sustainable steel through hydrogen plasma reduction of iron ore: Process, kinetics, microstructure, chemistry. <i>Acta Materialia</i> , 2021, 213, 116971.	3.8	46
428	Modeling of rolling texture development in a ferritic chromium steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1997, 28, 2343-2351.	1.1	45
429	Investigation of Orientation Gradients in Pearlite in Hypoeutectoid Steel by use of Orientation Imaging Microscopy. <i>Steel Research International</i> , 2007, 78, 38-44.	1.0	45
430	Study of internal stresses in a TWIP steel analyzing transient and permanent softening during reverse shear tests. <i>Journal of Materials Science</i> , 2010, 45, 6604-6610.	1.7	45
431	Microstructure-based description of the deformation of metals: Theory and application. <i>Jom</i> , 2011, 63, 26-33.	0.9	45
432	Complex Nanotwin Substructure of an Asymmetric $\langle 111 \rangle$ Tilt Grain Boundary in a Silicon Polycrystal. <i>Physical Review Letters</i> , 2015, 115, 235502.	2.9	45

#	ARTICLE	IF	CITATIONS
433	On the atomic solute diffusional mechanisms during compressive creep deformation of a Co-Al-W-Ta single crystal superalloy. <i>Acta Materialia</i> , 2020, 184, 86-99.	3.8	45
434	Identification of ϵ' martensite in a Fe-based shape memory alloy by means of EBSD. <i>Micron</i> , 2009, 40, 151-156.	1.1	44
435	Ab initio study of thermodynamic, structural, and elastic properties of Mg-substituted crystalline calcite. <i>Acta Biomaterialia</i> , 2010, 6, 4506-4512.	4.1	44
436	Multiscale characterization of White Etching Cracks (WEC) in a 100Cr6 bearing from a thrust bearing test rig. <i>Wear</i> , 2017, 370-371, 73-82.	1.5	44
437	Elemental partitioning and site-occupancy in β' forming Co-Ti-Mo and Co-Ti-Cr alloys. <i>Scripta Materialia</i> , 2018, 154, 159-162.	2.6	44
438	High-Resolution EBSD Investigation of Deformed and Partially Recrystallized IF Steel. <i>Advanced Engineering Materials</i> , 2003, 5, 566-570.	1.6	43
439	Correlation of structure, composition and local mechanical properties in the dorsal carapace of the edible crab <i>Cancer pagurus</i> . <i>Zeitschrift Fur Kristallographie - Crystalline Materials</i> , 2012, 227, 766-776.	0.4	43
440	Elastic properties of face-centred cubic Fe-Mn-C studied by nanoindentation and ab initio calculations. <i>Acta Materialia</i> , 2012, 60, 6025-6032.	3.8	43
441	Thermodynamics of carbon solubility in ferrite and vacancy formation in cementite in strained pearlite. <i>Acta Materialia</i> , 2013, 61, 1773-1784.	3.8	43
442	Strain Rate Sensitivity of a TRIP-Assisted Dual-Phase High-Entropy Alloy. <i>Frontiers in Materials</i> , 2018, 5, .	1.2	43
443	Hierarchical nature of hydrogen-based direct reduction of iron oxides. <i>Scripta Materialia</i> , 2022, 213, 114571.	2.6	43
444	A Finite Element approach with patch projection for strain gradient plasticity formulations. <i>International Journal of Plasticity</i> , 2007, 23, 690-710.	4.1	42
445	Simulation of earing of a 17% Cr stainless steel considering texture gradients. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 488, 482-490.	2.6	42
446	Prediction of cold rolling texture of steels using an Artificial Neural Network. <i>Computational Materials Science</i> , 2009, 46, 800-804.	1.4	42
447	Effect of strain rate on twinning in a Zr alloy. <i>Scripta Materialia</i> , 2014, 74, 72-75.	2.6	42
448	Growth of bainitic ferrite and carbon partitioning during the early stages of bainite transformation in a 2% mass% silicon steel studied by <i>in situ</i> neutron diffraction, TEM and APT. <i>Journal of Applied Crystallography</i> , 2016, 49, 399-414.	1.9	42
449	Synthesis and stabilization of a new phase regime in a Mo-Si-B based alloy by laser-based additive manufacturing. <i>Acta Materialia</i> , 2018, 151, 31-40.	3.8	42
450	Strain partitioning and strain localization in medium manganese steels measured by <i>in situ</i> microscopic digital image correlation. <i>Materialia</i> , 2019, 5, 100252.	1.3	42

#	ARTICLE	IF	CITATIONS
451	Hydrogen resistance of a 1â€GPa strong equiatomic CoCrNi medium entropy alloy. <i>Corrosion Science</i> , 2020, 167, 108510.	3.0	42
452	Microstructure and crystallographic texture of strip-cast and hot-rolled austenitic stainless steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1995, 26, 991-998.	1.1	41
453	On the Influence of Cross-Rolling on Shear Band Formation and Texture Evolution in Low Carbon Steel Sheets. <i>Textures and Microstructures</i> , 1995, 24, 225-237.	0.2	41
454	Texture simulation for hot rolling of aluminium by use of a Taylor model considering grain interactions. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 1023-1028.	1.9	41
455	Grain boundary segregation in a bronze-route Nb ₃ Sn superconducting wire studied by atom probe tomography. <i>Superconductor Science and Technology</i> , 2013, 26, 055008.	1.8	41
456	Dislocation interaction and twinning-induced plasticity in face-centered cubic Fe-Mn-C micro-pillars. <i>Acta Materialia</i> , 2017, 132, 162-173.	3.8	41
457	Design of Mg alloys: The effects of Li concentration on the structure and elastic properties in the Mg-Li binary system by first principles calculations. <i>Journal of Alloys and Compounds</i> , 2017, 691, 15-25.	2.8	41
458	Shape-preserving machining produces gradient nanolaminate medium entropy alloys with high strain hardening capability. <i>Acta Materialia</i> , 2019, 170, 176-186.	3.8	41
459	Parallel Dislocation Networks and Cottrell Atmospheres Reduce Thermal Conductivity of PbTe Thermoelectrics. <i>Advanced Functional Materials</i> , 2021, 31, 2101214.	7.8	41
460	Optimizing continuous annealing of interstitial-free steels for improving deep drawability. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2001, 32, 1989-1995.	1.1	40
461	Characterization of crocodile teeth: Correlation of composition, microstructure, and hardness. <i>Journal of Structural Biology</i> , 2013, 184, 155-163.	1.3	40
462	Atomic scale investigation of non-equilibrium segregation of boron in a quenched Mo-free martensitic steel. <i>Ultramicroscopy</i> , 2015, 159, 240-247.	0.8	40
463	Constitutive modeling of strain induced grain boundary migration via coupling crystal plasticity and phase-field methods. <i>International Journal of Plasticity</i> , 2017, 99, 19-42.	4.1	40
464	Stiff, light, strong and ductile: nano-structured High Modulus Steel. <i>Scientific Reports</i> , 2017, 7, 2757.	1.6	40
465	Atomic scale analysis of grain boundary deuteride growth front in Zircaloy-4. <i>Scripta Materialia</i> , 2018, 156, 42-46.	2.6	40
466	Investigation of the precipitation kinetics in an Al6061/TiB2 metal matrix composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1997, 237, 12-23.	2.6	39
467	Simulation of earing during deep drawing of an Alâ€3% Mg alloy (AA 5754) using a texture component crystal plasticity FEM. <i>Journal of Materials Processing Technology</i> , 2007, 183, 169-175.	3.1	39
468	Microstructural aspects of crack nucleation during cyclic loading of AA7075-T651. <i>Engineering Fracture Mechanics</i> , 2009, 76, 709-714.	2.0	39

#	ARTICLE	IF	CITATIONS
469	Adiabatic temperature increase associated with deformation twinning and dislocation plasticity. <i>Acta Materialia</i> , 2012, 60, 3994-4004.	3.8	39
470	On dislocation involvement in Ti-Nb gum metal plasticity. <i>Scripta Materialia</i> , 2013, 68, 805-808.	2.6	39
471	Multiphase microstructures via confined precipitation and dissolution of vessel phases: Example of austenite in martensitic steel. <i>Acta Materialia</i> , 2015, 86, 1-14.	3.8	39
472	Deformation compatibility between nanotwinned and recrystallized grains enhances resistance to interface cracking in cyclic loaded stainless steel. <i>Acta Materialia</i> , 2019, 165, 87-98.	3.8	39
473	The role of Ca, Al and Zn on room temperature ductility and grain boundary cohesion of magnesium. <i>Journal of Magnesium and Alloys</i> , 2021, 9, 1521-1536.	5.5	39
474	Roughness-induced flow instability: a lattice Boltzmann study. <i>Journal of Fluid Mechanics</i> , 2007, 573, 191-209.	1.4	38
475	Shear-induced anisotropic decay of correlations in hard-sphere colloidal glasses. <i>Europhysics Letters</i> , 2012, 100, 56001.	0.7	38
476	Partial recrystallization of gum metal to achieve enhanced strength and ductility. <i>Acta Materialia</i> , 2017, 135, 400-410.	3.8	38
477	Finite-deformation phase-field chemomechanics for multiphase, multicomponent solids. <i>Journal of the Mechanics and Physics of Solids</i> , 2018, 112, 619-636.	2.3	38
478	Moving cracks form white etching areas during rolling contact fatigue in bearings. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 771, 138659.	2.6	38
479	High stress twinning in a compositionally complex steel of very high stacking fault energy. <i>Nature Communications</i> , 2022, 13, .	5.8	38
480	A study on the geometry of dislocation patterns in the surrounding of nanoindentations in a TWIP steel using electron channeling contrast imaging and discrete dislocation dynamics simulations. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 636, 231-242.	2.6	37
481	Particle-induced damage in Fe-TiB ₂ high stiffness metal matrix composite steels. <i>Materials and Design</i> , 2018, 160, 557-571.	3.3	37
482	The impact of grain-scale strain localization on strain hardening of a high-Mn steel: Real-time tracking of the transition from the ϵ transformation to twinning. <i>Acta Materialia</i> , 2020, 197, 123-136.	3.8	37
483	Reversion and re-aging of a peak aged Al-Zn-Mg-Cu alloy. <i>Scripta Materialia</i> , 2020, 188, 269-273.	2.6	37
484	Refinement of grain boundary carbides in a Si-Cr spring steel by thermomechanical treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 426, 194-201.	2.6	36
485	Five-Parameter Grain Boundary Analysis by 3D EBSD of an Ultra Fine Grained CuZr Alloy Processed by Equal Channel Angular Pressing. <i>Advanced Engineering Materials</i> , 2011, 13, 237-244.	1.6	36
486	Measurement of the indium concentration in high indium content InGaN layers by scanning transmission electron microscopy and atom probe tomography. <i>Applied Physics Letters</i> , 2013, 102, 132112.	1.5	36

#	ARTICLE	IF	CITATIONS
487	Correlative transmission <sc>Kikuchi</sc> diffraction and atom probe tomography study of <sc>Cu(In,Ga)Se₂</sc> grain boundaries. Progress in Photovoltaics: Research and Applications, 2018, 26, 196-204.	4.4	36
488	Metastability alloy design. MRS Bulletin, 2019, 44, 266-272.	1.7	36
489	Could face-centered cubic titanium in cold-rolled commercially-pure titanium only be a Ti-hydride?. Scripta Materialia, 2020, 178, 39-43.	2.6	36
490	Green steel at its crossroads: Hybrid hydrogen-based reduction of iron ores. Journal of Cleaner Production, 2022, 340, 130805.	4.6	36
491	Crystallographic texture, amorphization, and recrystallization in rolled and heat treated polyethylene terephthalate (PET). Polymer, 2004, 45, 8265-8277.	1.8	35
492	Influence of Mn Content on the Microstructure and Mechanical Properties of Ultrafine Grained C-Mn Steels. ISIJ International, 2005, 45, 1721-1726.	0.6	35
493	Wetting gradient induced separation of emulsions: A combined experimental and lattice Boltzmann computer simulation study. Physics of Fluids, 2008, 20, .	1.6	35
494	Second-order convergence of the deviatoric stress tensor in the standard Bhatnagar-Gross-Krook lattice Boltzmann method. Physical Review E, 2010, 82, 025701.	0.8	35
495	Rapid theory-guided prototyping of ductile Mg alloys: from binary to multi-component materials. New Journal of Physics, 2015, 17, 093009.	1.2	35
496	Effects of strain amplitude, cycle number and orientation on low cycle fatigue microstructures in austenitic stainless steel studied by electron channelling contrast imaging. Acta Materialia, 2015, 87, 86-99.	3.8	35
497	Multiscale description of carbon-supersaturated ferrite in severely drawn pearlitic wires. Acta Materialia, 2016, 111, 321-334.	3.8	35
498	Functional adaptation of crustacean exoskeletal elements through structural and compositional diversity: a combined experimental and theoretical study. Bioinspiration and Biomimetics, 2016, 11, 055006.	1.5	35
499	Interfaces and defect composition at the near-atomic scale through atom probe tomography investigations. Journal of Materials Research, 2018, 33, 4018-4030.	1.2	35
500	Inhomogeneity of the crystallographic texture in a hot-rolled austenitic stainless steel. Journal of Materials Science, 1995, 30, 47-52.	1.7	34
501	Yield surface simulation for partially recrystallized aluminum polycrystals on the basis of spatially discrete data. Computational Materials Science, 2000, 19, 13-26.	1.4	34
502	Three-dimensional EBSD study on the relationship between triple junctions and columnar grains in electrodeposited Co-Ni films. Journal of Microscopy, 2008, 230, 487-498.	0.8	34
503	Chitin in the Exoskeletons of Arthropoda: From Ancient Design to Novel Materials Science. Topics in Geobiology, 2011, , 35-60.	0.6	34
504	Enhanced superplasticity in an Al-alloyed multicomponent Mn-Si-Cr-C steel. Acta Materialia, 2014, 63, 232-244.	3.8	34

#	ARTICLE	IF	CITATIONS
505	Competitive bcc and fcc crystal nucleation from non-equilibrium liquids studied by phase-field crystal simulation. <i>Acta Materialia</i> , 2017, 139, 196-204.	3.8	34
506	Invar effects in FeNiCo medium entropy alloys: From an Invar treasure map to alloy design. <i>Intermetallics</i> , 2019, 111, 106520.	1.8	34
507	Chemical instability at chalcogenide surfaces impacts chalcopyrite devices well beyond the surface. <i>Nature Communications</i> , 2020, 11, 3634.	5.8	34
508	Symbiotic crystal-glass alloys via dynamic chemical partitioning. <i>Materials Today</i> , 2021, 51, 6-14.	8.3	34
509	Inheritance of Dislocations and Crystallographic Texture during Martensitic Reversion into Austenite. <i>ISIJ International</i> , 2013, 53, 1286-1288.	0.6	33
510	Quantification Challenges for Atom Probe Tomography of Hydrogen and Deuterium in Zircaloy-4. <i>Microscopy and Microanalysis</i> , 2019, 25, 481-488.	0.2	33
511	Deformation behavior of Waspaloy at hot-working temperatures. <i>Scripta Materialia</i> , 2004, 50, 625-629.	2.6	32
512	Equal channel angular extrusion of niobium single crystals. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007, 467, 44-52.	2.6	32
513	Texture measurement of grain-oriented electrical steels after secondary recrystallization. <i>Journal of Magnetism and Magnetic Materials</i> , 2008, 320, e657-e660.	1.0	32
514	New Insights into the Atomic-Scale Structures and Behavior of Steels. <i>Microscopy Today</i> , 2012, 20, 44-48.	0.2	32
515	Ab initio study of single-crystalline and polycrystalline elastic properties of Mg-substituted calcite crystals. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013, 20, 296-304.	1.5	32
516	Viscous coalescence of droplets: A lattice Boltzmann study. <i>Physics of Fluids</i> , 2013, 25, .	1.6	32
517	Experimental Investigation and Numerical Simulation of the Correlation of Recovery and Texture in Bcc Metals and Alloys. <i>Textures and Microstructures</i> , 1996, 26, 611-635.	0.2	31
518	Transition from Diffusive to Displacive Austenite Reversion in Low-Alloy Steel. <i>ISIJ International</i> , 2013, 53, 2275-2277.	0.6	31
519	Correlations of plasticity in sheared glasses. <i>Physical Review E</i> , 2014, 89, 040301.	0.8	31
520	Revealing the relationships between chemistry, topology and stiffness of ultrastrong Co-based metallic glass thin films: A combinatorial approach. <i>Acta Materialia</i> , 2016, 107, 213-219.	3.8	31
521	Irreversible Structural Changes of Copper Hexacyanoferrate Used as a Cathode in Zn ²⁺ Batteries. <i>Chemistry - A European Journal</i> , 2020, 26, 4917-4922.	1.7	31
522	Orientation-dependent plastic deformation mechanisms and competition with stress-induced phase transformation in microscale NiTi. <i>Acta Materialia</i> , 2021, 208, 116731.	3.8	31

#	ARTICLE	IF	CITATIONS
523	Twins – A weak link in the magnetic hardening of ThMn12-type permanent magnets. <i>Acta Materialia</i> , 2021, 214, 116968.	3.8	31
524	On the orientation dependence of static recovery in low-carbon steels. <i>Scripta Metallurgica Et Materialia</i> , 1995, 33, 735-740.	1.0	30
525	Comparison of Single Crystal Simple Shear Deformation Experiments with Crystal Plasticity Finite Element Simulations. <i>Advanced Engineering Materials</i> , 2004, 6, 653-656.	1.6	30
526	Characterization of the Microstructure, Crystallographic Texture and Segregation of an As-cast Duplex Stainless Steel Slab. <i>Steel Research International</i> , 2008, 79, 482-488.	1.0	30
527	Lattice Boltzmann study of pattern formation in reaction-diffusion systems. <i>Physical Review E</i> , 2011, 83, 016702.	0.8	30
528	Texture and microstructure evolution during non-crystallographic shear banding in a plane strain compressed Cu–Ag metal matrix composite. <i>Acta Materialia</i> , 2014, 76, 238-251.	3.8	30
529	Long-term microstructural stability of oxide-dispersion strengthened Eurofer steel annealed at 800°C. <i>Journal of Nuclear Materials</i> , 2014, 448, 33-42.	1.3	30
530	Dynamic strain-induced transformation: An atomic scale investigation. <i>Scripta Materialia</i> , 2015, 109, 23-27.	2.6	30
531	On the nature of twin boundary-associated strengthening in Fe-Mn-C steel. <i>Scripta Materialia</i> , 2018, 156, 27-31.	2.6	30
532	The Role of Oxidized Carbides on Thermal-Mechanical Performance of Polycrystalline Superalloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 4236-4245.	1.1	30
533	Quantitative affinity parameters of synthetic hydroxyapatite and enamel surfaces in vitro. <i>Bioinspired, Biomimetic and Nanobiomaterials</i> , 2019, 8, 141-153.	0.7	30
534	On the influence of the heat treatment on microstructure formation and mechanical properties of near- \pm Ti-Fe alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 748, 301-312.	2.6	30
535	In-situ synthesis via laser metal deposition of a lean Cu–3.4Cr–0.6Nb (at%) conductive alloy hardened by Cr nano-scale precipitates and by Laves phase micro-particles. <i>Acta Materialia</i> , 2020, 197, 330-340.	3.8	30
536	Revisiting β phase embrittlement in metastable β^2 titanium alloys: Role of elemental partitioning. <i>Scripta Materialia</i> , 2021, 193, 38-42.	2.6	30
537	CALPHAD-informed phase-field modeling of grain boundary microchemistry and precipitation in Al-Zn-Mg-Cu alloys. <i>Acta Materialia</i> , 2021, 214, 116966.	3.8	30
538	Misorientation-dependent solute enrichment at interfaces and its contribution to defect formation mechanisms during laser additive manufacturing of superalloys. <i>Physical Review Materials</i> , 2019, 3, .	0.9	30
539	Selective particle drag during primary recrystallization of Fe-Cr alloys. <i>Scripta Metallurgica Et Materialia</i> , 1992, 26, 19-24.	1.0	29
540	On the influence of the chromium content on the evolution of rolling textures in ferritic stainless steels. <i>Journal of Materials Science</i> , 1996, 31, 3839-3845.	1.7	29

#	ARTICLE	IF	CITATIONS
541	Mesoscale Simulation of Recrystallization Textures and Microstructures. <i>Advanced Engineering Materials</i> , 2001, 3, 745.	1.6	29
542	Challenges in Computational Materials Science. <i>Advanced Materials</i> , 2002, 14, 639-650.	11.1	29
543	Evolution of crystallinity and of crystallographic orientation in isotactic polypropylene during rolling and heat treatment. <i>European Polymer Journal</i> , 2006, 42, 1755-1766.	2.6	29
544	Simulation of the deformation texture of a 17%Cr ferritic stainless steel using the texture component crystal plasticity finite element method considering texture gradients. <i>Scripta Materialia</i> , 2006, 54, 1537-1542.	2.6	29
545	Thermal stability of TiAlN/CrN multilayer coatings studied by atom probe tomography. <i>Ultramicroscopy</i> , 2011, 111, 518-523.	0.8	29
546	Plastic anisotropy of electro-deposited pure $\hat{\epsilon}$ -iron with sharp crystallographic $\hat{\epsilon}$ texture in normal direction: Analysis by an explicitly dislocation-based crystal plasticity model. <i>International Journal of Plasticity</i> , 2014, 52, 18-32.	4.1	29
547	Effects of Mn additions on microstructure and properties of Fe-TiB ₂ based high modulus steels. <i>Materials and Design</i> , 2016, 111, 185-191.	3.3	29
548	Effect of intercritical deformation on microstructure and mechanical properties of a low-silicon aluminum-added hot-rolled directly quenched and partitioned steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 656, 200-215.	2.6	29
549	<i>Ab initio</i> explanation of disorder and off-stoichiometry in Fe-Mn-Al-C carbides. <i>Physical Review B</i> , 2017, 95, .	1.1	29
550	Segregation-assisted spinodal and transient spinodal phase separation at grain boundaries. <i>Npj Computational Materials</i> , 2020, 6, .	3.5	29
551	Spinodal Decomposition in Nanocrystalline Alloys. <i>Acta Materialia</i> , 2021, 215, 117054.	3.8	29
552	Massive interstitial solid solution alloys achieve near-theoretical strength. <i>Nature Communications</i> , 2022, 13, 1102.	5.8	29
553	Correlation of microstructure and type II superconductivity of a heavily cold rolled Cu-20mass% Nb in situ composite. <i>Acta Materialia</i> , 1996, 44, 953-961.	3.8	28
554	Surface roughening and color changes of coated aluminum sheets during plastic straining. <i>Journal of Materials Processing Technology</i> , 2004, 148, 68-76.	3.1	28
555	The Monte Carlo Method. , 2005, , 77-114.		28
556	Bending of single crystal microcantilever beams of cube orientation: Finite element model and experiments. <i>Journal of the Mechanics and Physics of Solids</i> , 2010, 58, 1599-1612.	2.3	28
557	Annealing effects on microstructure and coercive field of ferritic-martensitic ODS Eurofer steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011, 528, 1442-1447.	2.6	28
558	Self-consistent Scale-bridging Approach to Compute the Elasticity of Multi-phase Polycrystalline Materials. <i>Materials Research Society Symposia Proceedings</i> , 2013, 1524, 301.	0.1	28

#	ARTICLE	IF	CITATIONS
559	Role of Nanostructuring and Microstructuring in Silver Antimony Telluride Compounds for Thermoelectric Applications. ACS Applied Materials & Interfaces, 2017, 9, 14779-14790.	4.0	28
560	Strengthening Fe-TiB ₂ based high modulus steels by precipitations. Materials and Design, 2017, 124, 183-193.	3.3	28
561	Cluster hardening in Al-3Mg triggered by small Cu additions. Acta Materialia, 2018, 161, 12-20.	3.8	28
562	Using spectral-based representative volume element crystal plasticity simulations to predict yield surface evolution during large scale forming simulations. Journal of Materials Processing Technology, 2020, 277, 116449.	3.1	28
563	(Al, Zn) ₃ Zr dispersoids assisted δ -Fe ₂ precipitation in an Al-Zn-Mg-Cu-Zr alloy. Materialia, 2020, 10, 100641.	1.3	28
564	On the consideration of climb in discrete dislocation dynamics. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1998, 77, 751-759.	0.8	27
565	Effect of hot and cold deformation on the recrystallization texture of continuous cast AA 5052 aluminum alloy. Scripta Materialia, 2005, 53, 1273-1277.	2.6	27
566	Determining the Elasticity of Materials Employing Quantum-mechanical Approaches: From the Electronic Ground State to the Limits of Materials Stability. Steel Research International, 2011, 82, 86-100.	1.0	27
567	On the Correlation Between Thermal Cycle and Formation of Intermetallic Phases at the Interface of Laser-Welded Aluminum-Steel Overlap Joints. Advanced Engineering Materials, 2012, 14, 464-472.	1.6	27
568	Atomic scale investigation of redistribution of alloying elements in pearlitic steel wires upon cold-drawing and annealing. Ultramicroscopy, 2013, 132, 233-238.	0.8	27
569	Extreme Optical Properties Tuned Through Phase Substitution in a Structurally Optimized Biological Photonic Polycrystal. Advanced Functional Materials, 2013, 23, 3615-3620.	7.8	27
570	Single-particle fluctuations and directional correlations in driven hard-sphere glasses. Physical Review E, 2013, 88, 022129.	0.8	27
571	3-Dimensional microstructural characterization of CdTe absorber layers from CdTe/CdS thin film solar cells. Solar Energy Materials and Solar Cells, 2016, 151, 66-80.	3.0	27
572	Martensite to austenite reversion in a high-Mn steel: Partitioning-dependent two-stage kinetics revealed by atom probe tomography, in-situ magnetic measurements and simulation. Acta Materialia, 2019, 166, 178-191.	3.8	27
573	Control of thermally stable core-shell nano-precipitates in additively manufactured Al-Sc-Zr alloys. Additive Manufacturing, 2020, 32, 100910.	1.7	27
574	Texture development of strip cast ferritic stainless steel. Steel Research = Archiv für Das Eisenhüttenwesen, 1993, 64, 359-363.	0.2	26
575	Experimental investigation of the transformation texture in hotrolled ferritic stainless steel using single orientation determination. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1996, 27, 49-57.	1.1	26
576	EBSD study of grain subdivision of a Goss grain in coarse-grained cold-rolled niobium. Scripta Materialia, 2005, 53, 207-212.	2.6	26

#	ARTICLE	IF	CITATIONS
577	Multiscale simulation of polycrystal mechanics of textured $\hat{\alpha}$ -Ti alloys using ab initio and crystal-based finite element methods. <i>Physica Status Solidi (B): Basic Research</i> , 2008, 245, 2642-2648.	0.7	26
578	Guided mass spectrum labelling in atom probe tomography. <i>Ultramicroscopy</i> , 2015, 159, 338-345.	0.8	26
579	Quantitative chemical-structure evaluation using atom probe tomography: Short-range order analysis of Fe-Al. <i>Ultramicroscopy</i> , 2015, 157, 12-20.	0.8	26
580	From generalized stacking fault energies to dislocation properties: Five-energy-point approach and solid solution effects in magnesium. <i>Physical Review B</i> , 2015, 92, .	1.1	26
581	Electronic hybridisation implications for the damage-tolerance of thin film metallic glasses. <i>Scientific Reports</i> , 2016, 6, 36556.	1.6	26
582	Combinatorial design of transitory constitution steels: Coupling high strength with inherent formability and weldability through sequenced austenite stability. <i>Materials and Design</i> , 2016, 90, 1100-1109.	3.3	26
583	Quantification of solute deuterium in titanium deuteride by atom probe tomography with both laser pulsing and high-voltage pulsing: influence of the surface electric field. <i>New Journal of Physics</i> , 2019, 21, 053025.	1.2	26
584	Imaging individual solute atoms at crystalline imperfections in metals. <i>New Journal of Physics</i> , 2019, 21, 123020.	1.2	26
585	Nanocrystalline Sm-based 1:12 magnets. <i>Acta Materialia</i> , 2020, 200, 652-658.	3.8	26
586	Experimental investigation and simulation of the texture evolution during rolling deformation of an intermetallic Fe-28 at.% Al-2 at.% Cr polycrystal at elevated temperatures. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1995, 71, 805-813.	0.8	25
587	Recent advances in the manufacturing of copper-base composites. <i>Journal of Materials Processing Technology</i> , 1996, 59, 367-372.	3.1	25
588	Correlation between the flow stress and the nominal indentation hardness of soft metals. <i>Scripta Materialia</i> , 2008, 59, 518-521.	2.6	25
589	Fall and rise of small droplets on rough hydrophobic substrates. <i>Europhysics Letters</i> , 2009, 88, 26002.	0.7	25
590	Stability and dynamics of droplets on patterned substrates: insights from experiments and lattice Boltzmann simulations. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 184112.	0.7	25
591	Atom Probe Tomography of Compound Semiconductors for Photovoltaic and Light-Emitting Device Applications. <i>Microscopy Today</i> , 2012, 20, 18-24.	0.2	25
592	Atom probe tomography study of internal interfaces in Cu ₂ ZnSnSe ₄ thin-films. <i>Journal of Applied Physics</i> , 2015, 118, .	1.1	25
593	Ab initio-guided design of twinning-induced plasticity steels. <i>MRS Bulletin</i> , 2016, 41, 320-325.	1.7	25
594	Autonomous Filling of Grain-Boundary Cavities during Creep Loading in Fe-Mo Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016, 47, 4831-4844.	1.1	25

#	ARTICLE	IF	CITATIONS
595	Hydrogen-assisted damage in austenite/martensite dual-phase steel. Philosophical Magazine Letters, 2016, 96, 9-18.	0.5	25
596	On the compositional partitioning during phase transformation in a binary ferromagnetic MnAl alloy. Acta Materialia, 2019, 174, 227-236.	3.8	25
597	Interplay of Chemistry and Faceting at Grain Boundaries in a Model Al Alloy. Physical Review Letters, 2020, 124, 106102.	2.9	25
598	In situ correlation between metastable phase-transformation mechanism and kinetics in a metallic glass. Nature Communications, 2021, 12, 2839.	5.8	25
599	The dual role of martensitic transformation in fatigue crack growth. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	25
600	Influence of particles on recrystallization textures of ferritic stainless steels. Steel Research = Archiv Für Das Eisenhüttenwesen, 1992, 63, 457-464.	0.2	24
601	Textures of strip cast Fe16%Cr. Scripta Metallurgica Et Materialia, 1993, 29, 113-116.	1.0	24
602	Correlation of superconductivity and microstructure in an in-situ formed Cu-20%Nb composite. Physica Status Solidi A, 1994, 142, 473-481.	1.7	24
603	Comparison of texture evolution in fcc metals predicted by various grain cluster homogenization schemes. International Journal of Materials Research, 2009, 100, 500-509.	0.1	24
604	Influence of nitrogen doping on growth rate and texture evolution of chemical vapor deposition diamond films. Applied Physics Letters, 2009, 94, 021119.	1.5	24
605	Autonomous Repair Mechanism of Creep Damage in Fe-Au and Fe-Au-B-N Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 5656-5670.	1.1	24
606	Thermal dissolution mechanisms of AlN/CrN hard coating superlattices studied by atom probe tomography and transmission electron microscopy. Acta Materialia, 2015, 85, 32-41.	3.8	24
607	Correlating Atom Probe Tomography with Atomic-Resolved Scanning Transmission Electron Microscopy: Example of Segregation at Silicon Grain Boundaries. Microscopy and Microanalysis, 2017, 23, 291-299.	0.2	24
608	Evolution of dislocation patterns inside the plastic zone introduced by fatigue in an aged aluminium alloy AA2024-T3. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 718, 345-349.	2.6	24
609	Unraveling the Metastability of C_{2n}^{n+2} ($n = 2-4$) Clusters. Journal of Physical Chemistry Letters, 2019, 10, 581-588.	2.1	24
610	The hidden structure dependence of the chemical life of dislocations. Science Advances, 2021, 7, .	4.7	24
611	Dopant-segregation to grain boundaries controls electrical conductivity of n-type NbCo(Pt)Sn half-Heusler alloy mediating thermoelectric performance. Acta Materialia, 2021, 217, 117147.	3.8	24
612	Textures of ferritic stainless steels. Materials Science and Technology, 1993, 9, 302-312.	0.8	24

#	ARTICLE	IF	CITATIONS
613	Determination and analysis of the constitutive parameters of temperature-dependent dislocation-density-based crystal plasticity models. <i>Mechanics of Materials</i> , 2022, 164, 104117.	1.7	24
614	Observation of amorphous areas in a heavily cold rolled Cu-20 wt% Nb composite. <i>Materials Letters</i> , 1995, 22, 155-161.	1.3	23
615	Grain boundary characterization and grain size measurement in an ultrafine-grained steel. <i>International Journal of Materials Research</i> , 2004, 95, 513-517.	0.8	23
616	Optimisation of precipitation for controlling recrystallisation of wrought Fe3Al based alloys. <i>Intermetallics</i> , 2005, 13, 1296-1303.	1.8	23
617	Scaling effects in microscale fluid flows at rough solid surfaces. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2006, 14, 857-873.	0.8	23
618	A comparison of polycrystalline elastic properties computed by analytic homogenization schemes and FEM. <i>Physica Status Solidi (B): Basic Research</i> , 2008, 245, 2630-2635.	0.7	23
619	Analysis of the plastic anisotropy and pre-yielding of (β/β_2)-phase titanium aluminide microstructures by crystal plasticity simulation. <i>Intermetallics</i> , 2011, 19, 820-827.	1.8	23
620	Superplastic martensitic Mn-Si-Cr steel with 900% elongation. <i>Acta Materialia</i> , 2011, 59, 5787-5802.	3.8	23
621	Kikuchi bandlet method for the accurate deconvolution and localization of Kikuchi bands in Kikuchi diffraction patterns. <i>Journal of Applied Crystallography</i> , 2014, 47, 264-275.	1.9	23
622	Ab initio study of compositional trends in solid solution strengthening in metals with low Peierls stresses. <i>Acta Materialia</i> , 2015, 98, 367-376.	3.8	23
623	Structure and dynamics of shear bands in amorphous-crystalline nanolaminates. <i>Scripta Materialia</i> , 2016, 110, 28-32.	2.6	23
624	Influence of rhenium on β -strengthened cobalt-base superalloys. <i>Journal of Materials Research</i> , 2017, 32, 2551-2559.	1.2	23
625	Nano-laminated thin film metallic glass design for outstanding mechanical properties. <i>Scripta Materialia</i> , 2018, 155, 73-77.	2.6	23
626	Compatible deformation and extra strengthening by heterogeneous nanolayer composites. <i>Scripta Materialia</i> , 2020, 179, 30-35.	2.6	23
627	Comparative study of hydrogen embrittlement resistance between additively and conventionally manufactured 304L austenitic stainless steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 803, 140499.	2.6	23
628	Application of the method of superposition of harmonic currents for the simulation of inhomogeneous deformation during hot rolling of FeCr. <i>Scripta Metallurgica Et Materialia</i> , 1994, 30, 1-6.	1.0	22
629	Hot deformation behavior of a Fe3Al-binary alloy in the A2 and B2-order regimes. <i>Intermetallics</i> , 2005, 13, 1304-1312.	1.8	22
630	Microtexture and Grain Boundaries in Freestanding CVD Diamond Films: Growth and Twinning Mechanisms. <i>Advanced Functional Materials</i> , 2009, 19, 3880-3891.	7.8	22

#	ARTICLE	IF	CITATIONS
631	Methodological challenges in combining quantum-mechanical and continuum approaches for materials science applications. <i>European Physical Journal Plus</i> , 2011, 126, 1.	1.2	22
632	Pulsed-laser atom probe studies of a precipitation hardened maraging TRIP steel. <i>Ultramicroscopy</i> , 2011, 111, 623-627.	0.8	22
633	Modelling of dendritic growth during alloy solidification under natural convection. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2014, 22, 034006.	0.8	22
634	Dental lessons from past to present: ultrastructure and composition of teeth from plesiosaurs, dinosaurs, extinct and recent sharks. <i>RSC Advances</i> , 2015, 5, 61612-61622.	1.7	22
635	From hard to rubber-like: mechanical properties of resorcinol-formaldehyde aerogels. <i>Journal of Materials Science</i> , 2015, 50, 5482-5493.	1.7	22
636	Vessel microstructure design: A new approach for site-specific core-shell micromechanical tailoring of TRIP-assisted ultra-high strength steels. <i>Acta Materialia</i> , 2016, 113, 19-31.	3.8	22
637	Efficient liquid metallurgy synthesis of Fe-TiB ₂ high modulus steels via in-situ reduction of titanium oxides. <i>Materials and Design</i> , 2016, 97, 357-363.	3.3	22
638	Abnormal grain growth in Eurofer-97 steel in the ferrite phase field. <i>Journal of Nuclear Materials</i> , 2017, 485, 23-38.	1.3	22
639	In-process Precipitation During Laser Additive Manufacturing Investigated by Atom Probe Tomography. <i>Microscopy and Microanalysis</i> , 2017, 23, 694-695.	0.2	22
640	Diffusional-displacive transformation enables formation of long-period stacking order in magnesium. <i>Scientific Reports</i> , 2017, 7, 4046.	1.6	22
641	Misorientation distribution between martensite and austenite in Fe-31wt%Ni-0.01wt%C. <i>Acta Materialia</i> , 2018, 143, 227-236.	3.8	22
642	A sustainable ultra-high strength Fe18Mn3Ti maraging steel through controlled solute segregation and δ -Mn nanoprecipitation. <i>Nature Communications</i> , 2022, 13, 2330.	5.8	22
643	A finite element method on the basis of texture components for fast predictions of anisotropic forming operations. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 2001, 72, 421-426.	0.2	21
644	Yielding of polyethylene through propagation of chain twist defects: Temperature, stem length and strain-rate dependence. <i>Polymer</i> , 2006, 47, 1696-1703.	1.8	21
645	On Predicting Nucleation of Microcracks Due to Slip-Twin Interactions at Grain Boundaries in Duplex Near β -TiAl. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2008, 130, .	0.8	21
646	Ab Initio Guided Design of bcc Ternary Mg-Li-X (X=Ca, Al, Si, Zn, Cu) Alloys for Ultra-Lightweight Applications. <i>Advanced Engineering Materials</i> , 2010, 12, 572-576.	1.6	21
647	Modification of pineapple leaf fibers and graft copolymerization of acrylonitrile onto modified fibers. <i>Journal of Composite Materials</i> , 2012, 46, 79-90.	1.2	21
648	Heterogeneous Shear in Hard Sphere Glasses. <i>Physical Review Letters</i> , 2012, 108, 098301.	2.9	21

#	ARTICLE	IF	CITATIONS
649	Star-shaped Crystallographic Cracking of Localized Nanoporous Defects. <i>Advanced Materials</i> , 2015, 27, 4877-4882.	11.1	21
650	Atom probe tomography of metallic nanostructures. <i>MRS Bulletin</i> , 2016, 41, 23-29.	1.7	21
651	Long-term thermal stability of nanoclusters in ODS-Eurofer steel: An atom probe tomography study. <i>Journal of Nuclear Materials</i> , 2017, 492, 142-147.	1.3	21
652	Grain boundary character distribution in electroplated nanotwinned copper. <i>Journal of Materials Science</i> , 2017, 52, 4070-4085.	1.7	21
653	Modulation of plastic flow in metallic glasses via nanoscale networks of chemical heterogeneities. <i>Acta Materialia</i> , 2017, 140, 116-129.	3.8	21
654	Development of high modulus steels based on the Fe-Cr-B system. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 724, 142-147.	2.6	21
655	Elemental re-distribution inside shear bands revealed by correlative atom-probe tomography and electron microscopy in a deformed metallic glass. <i>Scripta Materialia</i> , 2019, 168, 14-18.	2.6	21
656	On the assessment of creep damage evolution in nickel-based superalloys through correlative HR-EBSD and cECCI studies. <i>Acta Materialia</i> , 2020, 185, 13-27.	3.8	21
657	Recrystallization in non-conventional microstructures of 316L stainless steel produced via laser powder-bed fusion: effect of particle coarsening kinetics. <i>Journal of Materials Science</i> , 2022, 57, 9576-9598.	1.7	21
658	Textures of Cold Rolled and Annealed Tantalum. <i>Materials Science Forum</i> , 1994, 157-162, 841-846.	0.3	20
659	Simulation and Experimental Examination of the Evolution of Orientation Gradients in Single Grains during Rolling of Body Centered Cubic Polycrystals. <i>Physica Status Solidi (B): Basic Research</i> , 1994, 181, 291-299.	0.7	20
660	Simulation of the Texture Evolution During Annealing of Cold Rolled Bcc and Fcc Metals Using a Cellular Automaton Approach. <i>Textures and Microstructures</i> , 1997, 28, 211-218.	0.2	20
661	Using Ab Initio Calculations in Designing bcc Mg-Li-X Alloys for Ultra-Lightweight Applications. <i>Advanced Engineering Materials</i> , 2010, 12, 1198-1205.	1.6	20
662	Effect of strain hardening on texture development in cold rolled Al-Mg alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 1249-1254.	2.6	20
663	Polycrystal model of the mechanical behavior of a Mo-TiC30 vol.% metal-ceramic composite using a three-dimensional microstructure map obtained by dual beam focused ion beam scanning electron microscopy. <i>Acta Materialia</i> , 2012, 60, 1623-1632.	3.8	20
664	Atomistic simulation of the $\sim 100\%$ binary junction formation and its unzipping in body-centered cubic iron. <i>Acta Materialia</i> , 2014, 64, 24-32.	3.8	20
665	Relationship Between Damping Capacity and Variations of Vacancies Concentration and Segregation of Carbon Atom in an Fe-Mn Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 4828-4833.	1.1	20
666	Interface engineering and characterization at the atomic-scale of pure and mixed ion layer gas reaction buffer layers in chalcopyrite thin-film solar cells. <i>Progress in Photovoltaics: Research and Applications</i> , 2015, 23, 705-716.	4.4	20

#	ARTICLE	IF	CITATIONS
667	Atom probe tomography of intermetallic phases and interfaces formed in dissimilar joining between Al alloys and steel. <i>Materials Characterization</i> , 2016, 120, 268-272.	1.9	20
668	Interfacial hydrogen localization in austenite/martensite dual-phase steel visualized through optimized silver decoration and scanning Kelvin probe force microscopy. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2017, 68, 306-310.	0.8	20
669	Impact of local electrostatic field rearrangement on field ionization. <i>Journal Physics D: Applied Physics</i> , 2018, 51, 105601.	1.3	20
670	A near atomic-scale view at the composition of amyloid-beta fibrils by atom probe tomography. <i>Scientific Reports</i> , 2018, 8, 17615.	1.6	20
671	Advances in the Optimization of Thin Strip Cast Austenitic 304 Stainless Steel. <i>Steel Research International</i> , 2008, 79, 440-444.	1.0	19
672	Grain boundary electrochemistry of Nb-Ti alloy using a scanning droplet cell. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2011, 208, 1246-1251.	0.8	19
673	<i>Ab initio</i> study of thermodynamic, electronic, magnetic, structural, and elastic properties of Ni_4N allotropes. <i>Physical Review B</i> , 2013, 88, ..	1.1	19
674	New insights into the austenitization process of low-alloyed hypereutectoid steels: Nucleation analysis of strain-induced austenite formation. <i>Acta Materialia</i> , 2014, 80, 296-308.	3.8	19
675	Deformation induced alloying in crystalline metallic glass nano-composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 628, 269-280.	2.6	19
676	Crystal plasticity modeling of size effects in rolled multilayered Cu-Nb composites. <i>Acta Materialia</i> , 2016, 111, 116-128.	3.8	19
677	Evaluation of Analysis Conditions for Laser-Pulsed Atom Probe Tomography: Example of Cemented Tungsten Carbide. <i>Microscopy and Microanalysis</i> , 2017, 23, 431-442.	0.2	19
678	Cd and Impurity Redistribution at the CdS/CIGS Interface After Annealing of CIGS-Based Solar Cells Resolved by Atom Probe Tomography. <i>IEEE Journal of Photovoltaics</i> , 2017, 7, 313-321.	1.5	19
679	Microstructural Stability of a Niobium Single Crystal Deformed by Equal Channel Angular Pressing. <i>Materials Research</i> , 2017, 20, 1238-1247.	0.6	19
680	Crystallographic examination of the interaction between texture evolution, mechanically induced martensitic transformation and twinning in nanostructured bainite. <i>Journal of Alloys and Compounds</i> , 2018, 752, 505-519.	2.8	19
681	Sputtering as a viable route for In_2S_3 buffer layer deposition in high efficiency $\text{Cu}(\text{In,Ga})\text{Se}_2$ solar cells. <i>Energy Science and Engineering</i> , 2019, 7, 478-487.	1.9	19
682	Probing catalytic surfaces by correlative scanning photoemission electron microscopy and atom probe tomography. <i>Journal of Materials Chemistry A</i> , 2020, 8, 388-400.	5.2	19
683	Recrystallization kinetics, mechanisms, and topology in alloys processed by laser powder-bed fusion: AISI 316L stainless steel as example. <i>Materialia</i> , 2021, 20, 101236.	1.3	19
684	Chemo-mechanical phase-field modeling of iron oxide reduction with hydrogen. <i>Acta Materialia</i> , 2022, 231, 117899.	3.8	19

#	ARTICLE	IF	CITATIONS
685	Influence of volume fraction and dispersion rate of grain-boundary cementite on the cold-rolling textures of low-carbon steel. <i>Steel Research = Archiv F&Auml;r Das Eisenh&Auml;ttenwesen</i> , 1992, 63, 263-269.	0.2	18
686	Simulation of the resistivity of heavily cold worked Cu-20 wt.%Nb wires. <i>Computational Materials Science</i> , 1995, 3, 402-412.	1.4	18
687	Simulation of the yield strength of wire drawn Cu-based in-situ composites. <i>Computational Materials Science</i> , 1996, 5, 195-202.	1.4	18
688	Experimental investigation and GinzburgÄLandau modeling of the microstructure dependence of superconductivity in CuÄAgÄNb wires. <i>Acta Materialia</i> , 1999, 47, 769-777.	3.8	18
689	Atom Probe Tomography Studies on the Cu(In,Ga)Se₂; Grain Boundaries. <i>Journal of Visualized Experiments</i> , 2013, , .	0.2	18
690	Atom probe tomography investigation of heterogeneous short-range ordering in the ÄkomplexÄ™ phase state (K-state) of FeÄ18Al (at.%). <i>Intermetallics</i> , 2015, 64, 23-31.	1.8	18
691	Atomic diffusion induced degradation in bimetallic layer coated cemented tungsten carbide. <i>Corrosion Science</i> , 2017, 120, 1-13.	3.0	18
692	Elemental segregation to twin boundaries in a MnAl ferromagnetic Heusler alloy. <i>Scripta Materialia</i> , 2018, 155, 144-148.	2.6	18
693	Role of elemental intermixing at the In2S3/CIGSe heterojunction deposited using reactive RF magnetron sputtering. <i>Solar Energy Materials and Solar Cells</i> , 2019, 195, 367-375.	3.0	18
694	Strain hardening mechanisms during cold rolling of a high-Mn steel: Interplay between submicron defects and microtexture. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 754, 636-649.	2.6	18
695	Atomic-scale investigation of hydrogen distribution in a Ti Mo alloy. <i>Scripta Materialia</i> , 2019, 162, 321-325.	2.6	18
696	Atomic Scale Origin of Metal Ion Release from Hip Implant Taper Junctions. <i>Advanced Science</i> , 2020, 7, 1903008.	5.6	18
697	Unveiling the mechanism of abnormal magnetic behavior of FeNiCoMnCu high-entropy alloys through a joint experimental-theoretical study. <i>Physical Review Materials</i> , 2020, 4, .	0.9	18
698	Role of magnetic ordering for the design of quinary TWIP-TRIP high entropy alloys. <i>Physical Review Materials</i> , 2020, 4, .	0.9	18
699	Quantitative analysis of grain boundary diffusion, segregation and precipitation at a sub-nanometer scale. <i>Acta Materialia</i> , 2022, 225, 117522.	3.8	18
700	Lossless multi-scale constitutive elastic relations with artificial intelligence. <i>Npj Computational Materials</i> , 2022, 8, .	3.5	18
701	Investigation of the ADC Method for Direct ODF Approximation by Means of Standard Functions. <i>Physica Status Solidi (B): Basic Research</i> , 1993, 180, 59-65.	0.7	17
702	Introduction of a hybrid model for the discrete 3D simulation of dislocation dynamics. <i>Computational Materials Science</i> , 1998, 11, 1-15.	1.4	17

#	ARTICLE	IF	CITATIONS
703	Deformation Behavior of Aluminum Bicrystals. <i>Advanced Engineering Materials</i> , 2003, 5, 563-566.	1.6	17
704	Multiscale recrystallization models for the prediction of crystallographic textures with respect to process simulation. <i>Journal of Strain Analysis for Engineering Design</i> , 2007, 42, 253-268.	1.0	17
705	A texture-component Avrami model for predicting recrystallization textures, kinetics and grain size. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2007, 15, 39-63.	0.8	17
706	Electron backscatter diffraction study of Nb ₃ Sn superconducting multifilamentary wire. <i>Scripta Materialia</i> , 2010, 62, 59-62.	2.6	17
707	The Relation between Shear Banding, Microstructure and Mechanical Properties in Mg and Mg-Y Alloys. <i>Materials Science Forum</i> , 0, 690, 202-205.	0.3	17
708	Structure of rapidly quenched (Cu _{0.5} Zr _{0.5}) ₁₀₀ ~Ag alloys (x= 0~40 at.%). <i>Journal of Alloys and Compounds</i> , 2014, 607, 285-290.	2.8	17
709	Atomic scale study of CU clustering and pseudo-homogeneous Fe~Si nanocrystallization in soft magnetic FeSiNbB(CU) alloys. <i>Ultramicroscopy</i> , 2015, 159, 285-291.	0.8	17
710	A correlative investigation of grain boundary crystallography and electronic properties in CdTe thin film solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2017, 166, 108-120.	3.0	17
711	Tailoring Thermoelectric Transport Properties of Ag-Alloyed PbTe: Effects of Microstructure Evolution. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 38994-39001.	4.0	17
712	Defect phases ~ thermodynamics and impact on material properties. <i>International Materials Reviews</i> , 2022, 67, 89-117.	9.4	17
713	A cracking oxygen story: A new view of stress corrosion cracking in titanium alloys. <i>Acta Materialia</i> , 2022, 227, 117687.	3.8	17
714	Numerical study of textures and Lankford values for FCC polycrystals by use of a modified Taylor model. <i>Computational Materials Science</i> , 2004, 29, 353-361.	1.4	16
715	Influence of flow on the global crystallization kinetics of iso-tactic polypropylene. <i>Polymer Testing</i> , 2006, 25, 460-469.	2.3	16
716	A review of crystallographic textures in chemical vapor-deposited diamond films. <i>Frontiers of Materials Science in China</i> , 2010, 4, 1-16.	0.5	16
717	Influence of supersaturated carbon on the diffusion of Ni in ferrite determined by atom probe tomography. <i>Scripta Materialia</i> , 2013, 69, 424-427.	2.6	16
718	Influence of the dislocation core on the glide of the $\frac{1}{2}\sim\{111\}$ edge dislocation in bcc-iron: An embedded atom method study. <i>Computational Materials Science</i> , 2014, 87, 274-282.	1.4	16
719	Eliminating deformation incompatibility in composites by gradient nanolayer architectures. <i>Scientific Reports</i> , 2018, 8, 16216.	1.6	16
720	An Automated Computational Approach for Complete In-Plane Compositional Interface Analysis by Atom Probe Tomography. <i>Microscopy and Microanalysis</i> , 2019, 25, 389-400.	0.2	16

#	ARTICLE	IF	CITATIONS
721	Effects of Mo on the mechanical behavior of $\hat{\beta}$ / $\hat{\beta}$ -strengthened Co-Ti-based alloys. <i>Acta Materialia</i> , 2020, 197, 69-80.	3.8	16
722	Large-deformation crystal plasticity simulation of microstructure and microtexture evolution through adaptive remeshing. <i>International Journal of Plasticity</i> , 2021, 146, 103078.	4.1	16
723	Influence of solution treatment on the microstructure and crystallographic texture of cold rolled and recrystallised low carbon steel. <i>Steel Research = Archiv Fur Das Eisenhattenwesen</i> , 1995, 66, 353-359.	0.2	15
724	Introduction of a modified linear rule of mixtures for the modelling of the yield strength of heavily wire drawn in situ composites. <i>Composites Science and Technology</i> , 1995, 55, 57-61.	3.8	15
725	Calculation of stress-strain curves by using 2 dimensional dislocation dynamics. <i>Computational Materials Science</i> , 1996, 7, 56-62.	1.4	15
726	Taylor simulation and experimental investigation of rolling textures of polycrystalline iron aluminides with special regard to slip on {112} planes. <i>Acta Materialia</i> , 1996, 44, 937-951.	3.8	15
727	Microstructure and crystallographic texture of rolled polycrystalline Fe3Al. <i>Journal of Materials Science</i> , 1996, 31, 339-344.	1.7	15
728	Error propagation in multiscale approaches to the elasticity of polycrystals. <i>Physica Status Solidi (B): Basic Research</i> , 2008, 245, 2636-2641.	0.7	15
729	Synergy of atom-probe structural data and quantum-mechanical calculations in a theory-guided design of extreme-stiffness superlattices containing metastable phases. <i>New Journal of Physics</i> , 2015, 17, 093004.	1.2	15
730	Combinatorial screening of the microstructure-property relationships for Fe-B-X stiff, light, strong and ductile steels. <i>Materials and Design</i> , 2016, 112, 131-139.	3.3	15
731	Crystal plasticity study of monocrystalline stochastic honeycombs under in-plane compression. <i>Acta Materialia</i> , 2016, 103, 796-808.	3.8	15
732	Numerical Benchmark of Phase-Field Simulations with Elastic Strains: Precipitation in the Presence of Chemo-Mechanical Coupling. <i>Computational Materials Science</i> , 2018, 155, 541-553.	1.4	15
733	Magnetic properties of a 17.6 Mn-TRIP steel: Study of strain-induced martensite formation, austenite reversion, and athermal $\hat{\beta}$ -formation. <i>Journal of Magnetism and Magnetic Materials</i> , 2019, 473, 109-118.	1.0	15
734	Nucleation and growth of $\hat{\beta}$ phase in a metastable $\hat{\beta}$ -Titanium Ti-5Al-5Mo-5V-3Cr alloy: Influence from the nano-scale, ordered-orthorhombic $O\hat{\beta}^3$ phase and $\hat{\beta}$ compositional evolution. <i>Scripta Materialia</i> , 2021, 194, 113672.	2.6	15
735	Crystal plasticity simulation of in-grain microstructural evolution during large deformation of IF-steel. <i>Acta Materialia</i> , 2022, 237, 118167.	3.8	15
736	Development of the microstructure and crystallographic texture during annealing of a rolled polycrystalline Fe3Al alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1995, 203, 208-216.	2.6	14
737	Effect of precipitation on rolling texture evolution in continuous cast AA 3105 aluminum alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 434, 105-113.	2.6	14
738	Size effects on the magnetic properties of Cu-Nb nanofilamentary wires processed by severe plastic deformation. <i>Superconductor Science and Technology</i> , 2006, 19, 1233-1239.	1.8	14

#	ARTICLE	IF	CITATIONS
739	Texture Evolution During Bending of a Single Crystal Copper Nanowire Studied by EBSD and Crystal Plasticity Finite Element Simulations. <i>Advanced Engineering Materials</i> , 2008, 10, 737-741.	1.6	14
740	Effect of aspect ratio on transverse diffusive broadening: A lattice Boltzmann study. <i>Physical Review E</i> , 2009, 80, 016304.	0.8	14
741	Improved single- and multi-contact life-time testing of dental restorative materials using key characteristics of the human masticatory system and a force/position-controlled robotic dental wear simulator. <i>Bioinspiration and Biomimetics</i> , 2012, 7, 016002.	1.5	14
742	Multi-Scale Correlative Microscopy Investigation of Both Structure and Chemistry of Deformation Twin Bundles in Fe-Mn-C Steel. <i>Microscopy and Microanalysis</i> , 2013, 19, 1581-1585.	0.2	14
743	Homogeneity and composition of AlInGaN: A multiprobe nanostructure study. <i>Ultramicroscopy</i> , 2015, 156, 29-36.	0.8	14
744	Localized plastic deformation in a model metallic glass: a survey of free volume and local force distributions. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2016, 2016, 084006.	0.9	14
745	Machine-learning-based atom probe crystallographic analysis. <i>Ultramicroscopy</i> , 2018, 194, 15-24.	0.8	14
746	Site-specific quasi in situ investigation of primary static recrystallization in a low carbon steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 755, 295-306.	2.6	14
747	Machine-learning-enhanced time-of-flight mass spectrometry analysis. <i>Patterns</i> , 2021, 2, 100192.	3.1	14
748	Tetragonal fcc-Fe induced by $\hat{\epsilon}$ -carbide precipitates: Atomic scale insights from correlative electron microscopy, atom probe tomography, and density functional theory. <i>Physical Review Materials</i> , 2018, 2, .	0.9	14
749	Texture and microstructure of rolled and annealed tantalum. <i>Materials Science and Technology</i> , 1994, 10, 299-305.	0.8	14
750	CALPHAD-informed phase-field model for two-sublattice phases based on chemical potentials: $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.svg"} \rangle \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -phase precipitation in Al-Zn-Mg-Cu alloys. <i>Acta Materialia</i> , 2022, 226, 117602.	3.8	14
751	Contribution of $\{123\} \tilde{\epsilon}^{111}$ slip systems to deformation of b.c.c. metals. <i>Physica Status Solidi A</i> , 1995, 149, 575-581.	1.7	13
752	Discrete Mesoscale Simulation of Recrystallization Microstructure and Texture Using a Stochastic Cellular Automaton Approach. <i>Materials Science Forum</i> , 1998, 273-275, 169-174.	0.3	13
753	Slip system determination by rolling texture measurements around the strength peak temperature in a Fe ₃ Al-based alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004, 387-389, 950-954.	2.6	13
754	Structure and Crystallographic Texture of Arthropod Bio-Composites. <i>Materials Science Forum</i> , 2005, 495-497, 1665-1674.	0.3	13
755	A 3D tomographic EBSD analysis of a CVD diamond thin film. <i>Science and Technology of Advanced Materials</i> , 2008, 9, 035013.	2.8	13
756	Synthesis of hollow metallic particles via ultrasonic treatment of a metal emulsion. <i>Scripta Materialia</i> , 2010, 62, 690-692.	2.6	13

#	ARTICLE	IF	CITATIONS
757	Synthesis of defect-free single-phase bars of high-melting Laves phases through modified cold crucible levitation melting. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 7848-7853.	2.6	13
758	Investigation of the internal substructure of microbands in a deformed copper single crystal: experiments and dislocation dynamics simulation. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2010, 18, 085011.	0.8	13
759	Particle stress in suspensions of soft objects. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011, 369, 2414-2421.	1.6	13
760	Characterization of Nano-sized Precipitates in a Mn-based Lean Maraging Steel by Atom Probe Tomography. <i>Steel Research International</i> , 2011, 82, 137-145.	1.0	13
761	Study of Deformation Twinning and Planar Slip in a TWIP Steel by Electron Channeling Contrast Imaging in a SEM. <i>Materials Science Forum</i> , 0, 702-703, 523-529.	0.3	13
762	Microstructure-magnetic property relations in grain-oriented electrical steels: quantitative analysis of the sharpness of the Goss orientation. <i>Journal of Materials Science</i> , 2014, 49, 269-276.	1.7	13
763	Linking atomistic, kinetic Monte Carlo and crystal plasticity simulations of single-crystal tungsten strength. <i>GAMM Mitteilungen</i> , 2015, 38, 213-227.	2.7	13
764	Phase selection and nanocrystallization in Cu-free soft magnetic FeSiNbB amorphous alloy upon rapid annealing. <i>Journal of Applied Physics</i> , 2016, 119, .	1.1	13
765	Plastic accommodation at homophase interfaces between nanotwinned and recrystallized grains in an austenitic duplex-microstructured steel. <i>Science and Technology of Advanced Materials</i> , 2016, 17, 29-36.	2.8	13
766	Short Communication on Coarsening of Y-rich oxide particles in 9%Cr-ODS Eurofer steel annealed at 1350 Å, Å°C. <i>Journal of Nuclear Materials</i> , 2017, 484, 283-287.	1.3	13
767	Density, distribution and nature of planar faults in silver antimony telluride for thermoelectric applications. <i>Acta Materialia</i> , 2019, 178, 135-145.	3.8	13
768	Electronic structure based design of thin film metallic glasses with superior fracture toughness. <i>Materials and Design</i> , 2020, 186, 108327.	3.3	13
769	Magnetolectric Tuning of Pinning-type Permanent Magnets through Atomic-scale Engineering of Grain Boundaries. <i>Advanced Materials</i> , 2021, 33, 2006853.	11.1	13
770	Textures of Rolled and Wire Drawn Cu-20%Nb. <i>Materials Science Forum</i> , 1994, 157-162, 709-714.	0.3	12
771	Abnormal Grain Growth in Silicon Steel. <i>Materials Science Forum</i> , 2002, 408-412, 949-954.	0.3	12
772	Residual stress analysis in chemical-vapor-deposition diamond films. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	12
773	Designing quadplex (four-phase) microstructures in an ultrahigh carbon steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 612, 46-53.	2.6	12
774	Superplastic Mn-Si-C duplex and triplex steels: Interaction of microstructure and void formation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 610, 355-369.	2.6	12

#	ARTICLE	IF	CITATIONS
775	On the Multiple Event Detection in Atom Probe Tomography. <i>Microscopy and Microanalysis</i> , 2017, 23, 618-619.	0.2	12
776	Large strain synergetic material deformation enabled by hybrid nanolayer architectures. <i>Scientific Reports</i> , 2017, 7, 11371.	1.6	12
777	Deformation induced degradation of hot-dip aluminized steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 710, 385-391.	2.6	12
778	On the role of the collinear dislocation interaction in deformation patterning and laminate formation in single crystal plasticity. <i>Mechanics of Materials</i> , 2018, 125, 70-79.	1.7	12
779	Carbon partitioning and microstructure evolution during tempering of an Fe-Ni-C steel. <i>Scripta Materialia</i> , 2019, 172, 38-42.	2.6	12
780	Nanoglassâ€“Nanocrystal Compositeâ€“a Novel Material Class for Enhanced Strengthâ€“Plasticity Synergy. <i>Small</i> , 2020, 16, e2004400.	5.2	12
781	Multi-component chemo-mechanics based on transport relations for the chemical potential. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 365, 113029.	3.4	12
782	Texture Development of Strip Cast Ferritic Stainless Steel. <i>Materials Science Forum</i> , 1994, 157-162, 1039-1044.	0.3	11
783	Orientation dependence of local lattice rotations at precipitates: Example of $\hat{\gamma}$ -Fe ₃ AlC carbides in a Fe ₃ Al-based alloy. <i>Acta Materialia</i> , 2010, 58, 6672-6684.	3.8	11
784	Modelling of dendritic growth in ternary alloy solidification with melt convection. <i>International Journal of Cast Metals Research</i> , 2011, 24, 177-183.	0.5	11
785	Ab initio identified design principles of solid-solution strengthening in Al. <i>Science and Technology of Advanced Materials</i> , 2013, 14, 025001.	2.8	11
786	Formation of nanosized grain structure in martensitic 100Cr6 bearing steels upon rolling contact loading studied by atom probe tomography. <i>Materials Science and Technology</i> , 2016, 32, 1100-1105.	0.8	11
787	Ultra-stiff metallic glasses through bond energy density design. <i>Journal of Physics Condensed Matter</i> , 2017, 29, 265502.	0.7	11
788	Comparison of the quantitative analysis performance between pulsed voltage atom probe and pulsed laser atom probe. <i>Ultramicroscopy</i> , 2017, 175, 105-110.	0.8	11
789	Intercritical annealing to achieve a positive strain-rate sensitivity of mechanical properties and suppression of macroscopic plastic instabilities in multi-phase medium-Mn steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 803, 140469.	2.6	11
790	Experimental Investigation and Simulation of the Normal Conducting Properties of a Heavily Cold Rolled Cu-20 mass%Nb in Situ Composite. <i>Physica Status Solidi A</i> , 1995, 147, 515-527.	1.7	10
791	Examination of the Iterative Series-Expansion Method for Quantitative Texture Analysis. <i>Textures and Microstructures</i> , 1995, 23, 115-129.	0.2	10
792	Investigation of structurally less-ordered areas in the Nb filaments of a heavily cold-rolled Cu-20 wt.% Nb in situ composite. <i>Journal of Materials Research</i> , 1995, 10, 3050-3061.	1.2	10

#	ARTICLE	IF	CITATIONS
793	Modelling of active slip systems, Taylor factors and grain rotations during rolling and compression deformation of polycrystalline intermetallic L12 compounds. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 1531-1540.	1.9	10
794	Finite Element Simulation of Grain Interaction and Orientation Fragmentation during Plastic Deformation of BCC Metals. <i>Materials Science Forum</i> , 2002, 408-412, 371-376.	0.3	10
795	Multiscale Discrete Dislocation Dynamics Plasticity. , 2005, , 201-229.		10
796	Recrystallization of the ODS superalloy PM-1000. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 430, 172-178.	2.6	10
797	Profile blunting and flow blockage in a yield-stress fluid: A molecular dynamics study. <i>Physical Review E</i> , 2008, 77, 011504.	0.8	10
798	Modelling of dendritic growth and bubble formation. <i>IOP Conference Series: Materials Science and Engineering</i> , 2012, 33, 012103.	0.3	10
799	Damage resistance in gum metal through cold work-induced microstructural heterogeneity. <i>Journal of Materials Science</i> , 2015, 50, 5694-5708.	1.7	10
800	Advanced data mining in field ion microscopy. <i>Materials Characterization</i> , 2018, 146, 307-318.	1.9	10
801	Phase-Field Modeling of Chemoelastic Binodal/Spinodal Relations and Solute Segregation to Defects in Binary Alloys. <i>Materials</i> , 2021, 14, 1787.	1.3	10
802	Ultrastructural changes of bovine tooth surfaces under erosion in presence of biomimetic hydroxyapatite. <i>Bioinspired, Biomimetic and Nanobiomaterials</i> , 2021, 10, 132-145.	0.7	10
803	Modeling and simulation of microstructure in metallic systems based on multi-physics approaches. <i>Npj Computational Materials</i> , 2022, 8, .	3.5	10
804	Experimental investigation and simulation of crystallographic rolling textures of Fe ¹¹ Cr steel. <i>Materials Science and Technology</i> , 1995, 11, 985-993.	0.8	9
805	On the inhomogeneity of the crystallographic rolling texture of polycrystalline Fe ₃ Al. <i>Journal of Materials Research</i> , 1996, 11, 1694-1701.	1.2	9
806	INVESTIGATION OF CRYSTALLOGRAPHIC SLIP IN POLYCRYSTALLINE Fe ₃ Al USING SLIP TRACE MEASUREMENT AND MICROT texture DETERMINATION. <i>Acta Materialia</i> , 1997, 45, 2839-2849.	3.8	9
807	Phase equilibria among $\hat{1}\pm$ -Fe(Al, Cr, Ti), liquid and TiC and the formation of TiC in Fe ₃ Al-based alloys. <i>Acta Materialia</i> , 2005, 53, 3961-3970.	3.8	9
808	An EBSD Investigation on Deformation-Induced Shear Bands in Ti-Bearing IF-Steel under Controlled Shock-Loading Conditions. <i>Materials Science Forum</i> , 2005, 495-497, 393-398.	0.3	9
809	Chaotic flows in microchannels: a lattice Boltzmann study. <i>Molecular Simulation</i> , 2007, 33, 583-587.	0.9	9
810	Semi-automatic percutaneous reduction of intra-articular joint fractures - An initial analysis. , 2012, , .		9

#	ARTICLE	IF	CITATIONS
811	A novel roll-bonding methodology for the cross-scale analysis of phase properties and interactions in multiphase structural materials. <i>International Journal of Materials Research</i> , 2015, 106, 3-14.	0.1	9
812	Low cycle fatigue in aluminum single and bi-crystals: On the influence of crystal orientation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 668, 166-179.	2.6	9
813	Microscale plastic anisotropy of basal and pyramidal I slip in pure magnesium tested in shear. <i>Materialia</i> , 2020, 14, 100932.	1.3	9
814	Formation of a 2D Meta-stable Oxide by Differential Oxidation of AgCu Alloys. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 23595-23605.	4.0	9
815	Revealing in-plane grain boundary composition features through machine learning from atom probe tomography data. <i>Acta Materialia</i> , 2022, 226, 117633.	3.8	9
816	The martensitic transition pathway in steel. <i>Journal of Materials Science and Technology</i> , 2023, 134, 244-253.	5.6	9
817	Modelling of texture evolution during rolling and compression deformation of intermetallic Ni3Al and NiAl polycrystals. <i>Computational Materials Science</i> , 1994, 3, 231-240.	1.4	8
818	Recrystallization in Deformed and Heat Treated PET Polymer Sheets. <i>Materials Science Forum</i> , 2004, 467-470, 551-556.	0.3	8
819	Taylor-Type Homogenization Methods for Texture and Anisotropy. , 2005, , 459-472.		8
820	The Relative Importance of Nucleation vs. Growth for Recrystallisation in Particle-Containing Fe₃Al Alloys. <i>Materials Science Forum</i> , 2007, 550, 345-350.	0.3	8
821	NUMERICAL MODELING OF DENDRITIC GROWTH IN ALLOY SOLIDIFICATION WITH FORCED CONVECTION. <i>International Journal of Modern Physics B</i> , 2009, 23, 1609-1614.	1.0	8
822	Advanced Methods and Tools for Reconstruction and Analysis of Grain Boundaries from 3D-EBSD Data Sets. <i>Materials Science Forum</i> , 0, 702-703, 475-478.	0.3	8
823	Lattice Boltzmann Modeling of Advection-Diffusion-Reaction Equations: Pattern Formation Under Uniform Differential Advection. <i>Communications in Computational Physics</i> , 2013, 13, 741-756.	0.7	8
824	From insect scales to sensor design: modelling the mechanochromic properties of bicontinuous cubic structures. <i>Bioinspiration and Biomimetics</i> , 2016, 11, 045001.	1.5	8
825	Composites of fluoroapatite and methylmethacrylate-based polymers (PMMA) for biomimetic tooth replacement. <i>Bioinspiration and Biomimetics</i> , 2016, 11, 035001.	1.5	8
826	Magnetic microstructure in a stress-annealed Fe _{73.5} Si _{15.5} B ₇ Nb ₃ Cu ₁ soft magnetic alloy observed using off-axis electron holography and Lorentz microscopy. <i>AIP Advances</i> , 2016, 6, .	0.6	8
827	Oxidation behavior of AlN/CrN multilayered hard coatings. <i>Nano Convergence</i> , 2017, 4, 15.	6.3	8
828	Compositional evolution of long-period stacking ordered structures in magnesium studied by atom probe tomography. <i>Scripta Materialia</i> , 2018, 156, 55-59.	2.6	8

#	ARTICLE	IF	CITATIONS
829	On the Formation Mechanism of Column Damage Within Modular Taper Joints. Journal of Arthroplasty, 2021, 36, 2603-2611.e2.	1.5	8
830	Topological aspects responsible for recrystallization evolution in an IF-steel sheet – Investigation with cellular-automaton simulations. Computational Materials Science, 2021, 198, 110643.	1.4	8
831	Development of Microtextures in Cold Rolled Iron-Oligocrystals. Materials Science Forum, 1994, 157-162, 501-506.	0.3	7
832	Simulation of texture evolution during rolling deformation of an intermetallic Fe-28Al-5Cr polycrystal. Materials Letters, 1994, 19, 75-78.	1.3	7
833	On the contribution of screw dislocations to internal stress fields associated with dislocation cell structures. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1996, 73, 1363-1383.	0.8	7
834	A Texture Evolution Study Using the Texture Component Crystal Plasticity FEM. Materials Science Forum, 2005, 495-497, 937-944.	0.3	7
835	Title is missing!. Chinese Journal of Polymer Science (English Edition), 2006, 24, 403.	2.0	7
836	Compositional Dependence of the Compressive Yield Strength of Fe-Nb(-Al) and Co-Nb Laves Phases. Materials Research Society Symposia Proceedings, 2011, 1295, 311.	0.1	7
837	Recrystallization and Grain Growth in Ultrafine-Grained Materials Produced by High Pressure Torsion. Advanced Engineering Materials, 2011, 13, 245-250.	1.6	7
838	Microstructure Evolution during Recrystallization in Dual-Phase Steels. Materials Science Forum, 0, 715-716, 13-22.	0.3	7
839	Publisher’s Note: Shear-Induced Mixing Governs Codeformation of Crystalline-Amorphous Nanolaminates [Phys. Rev. Lett. 113, 035501 (2014)]. Physical Review Letters, 2014, 113, .	2.9	7
840	The relaxed-polar mechanism of locally optimal Cosserat rotations for an idealized nanoindentation and comparison with 3D-EBSD experiments. Zeitschrift Fur Angewandte Mathematik Und Physik, 2017, 68, 1.	0.7	7
841	Light, strong and cost effective: Martensitic steels based on the Fe – Al – C system. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 762, 138088.	2.6	7
842	Reconstructing the austenite parent microstructure of martensitic steels: A case study for reduced-activation Eurofer steels. Journal of Nuclear Materials, 2019, 516, 185-193.	1.3	7
843	Review on Quantum Mechanically Guided Design of Ultra-Strong Metallic Glasses. Frontiers in Materials, 2020, 7, .	1.2	7
844	Ti-bearing lightweight steel with large high temperature ductility via thermally stable multi-phase microstructure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 808, 140954.	2.6	7
845	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>3</mml:mn><mml:mi>d</mml:mi></mml:mrow></mml:math> transition-metal high-entropy Invar alloy developed by adjusting the valence-electron concentration. Physical Review Materials, 2021, 5, .	0.9	7
846	Revealing atomic-scale vacancy-solute interaction in nickel. Scripta Materialia, 2021, 203, 114036.	2.6	7

#	ARTICLE	IF	CITATIONS
847	Spectral Solvers for Crystal Plasticity and Multi-physics Simulations. , 2019, , 1347-1372.		7
848	Rolling Textures of Niobium and Molybdenum. International Journal of Materials Research, 1994, 85, 302-307.	0.1	7
849	Laser-equipped gas reaction chamber for probing environmentally sensitive materials at near atomic scale. PLoS ONE, 2022, 17, e0262543.	1.1	7
850	Impact of interstitial elements on the stacking fault energy of an equiatomic CoCrNi medium entropy alloy: theory and experiments. Science and Technology of Advanced Materials, 2022, 23, 376-392.	2.8	7
851	Analysis of the ADC Method for Direct ODF Calculation by Use of Gauss Models and Standard Functions. Materials Science Forum, 1994, 157-162, 413-418.	0.3	6
852	3D simulation of the stress fields associated with disordered finite dislocation walls in face centred cubic crystals. Computational Materials Science, 1995, 4, 143-150.	1.4	6
853	On the Anisotropy of the Superconducting Properties of a Heavily Cold Rolled Cu-20 mass% Nb in situ Composite. Physica Status Solidi A, 1996, 154, 715-726.	1.7	6
854	Application of In Situ-Formed Metallic-Fiber-Reinforced Copper Matrix Composites to Cables Used for Robots. Japanese Journal of Applied Physics, 2000, 39, L119-L121.	0.8	6
855	A Texture Component Crystal Plasticity Finite Element Method for Physically-Based Metal Forming Simulations Including Texture Update. Materials Science Forum, 2002, 396-402, 31-38.	0.3	6
856	Don't Trust your Simulation -Computational Materials Science on its Way to Maturity?. Advanced Engineering Materials, 2002, 4, 255-267.	1.6	6
857	On the influence of heavy warm reduction on the microstructure and mechanical properties of a medium-carbon ferritic-pearlitic steel. International Journal of Materials Research, 2004, 95, 1108-1114.	0.8	6
858	Recrystallisation Texture of Cold Rolled and Annealed IF Steel Produced from Ferritic Rolled Hot Strip. Materials Science Forum, 2004, 467-470, 257-262.	0.3	6
859	Simulation of Earing during Deep Drawing of bcc Steel by Use of a Texture Component Crystal Plasticity Finite Element Method. Materials Science Forum, 2005, 495-497, 1529-1534.	0.3	6
860	Recrystallization of Niobium Single Crystals Deformed by ECAE. Materials Science Forum, 2007, 558-559, 125-130.	0.3	6
861	Detection of Cu ₂ Zn ₅ SnSe ₈ and Cu ₂ Zn ₆ SnSe ₉ phases in co-evaporated Cu ₂ ZnSnSe ₄ thin-films. Applied Physics Letters, 2015, 107, .	1.5	6
862	Crystallisation of amorphous Fe - Ti - B alloys as a design pathway for nano-structured high modulus steels. Journal of Alloys and Compounds, 2017, 704, 565-573.	2.8	6
863	Characterization of Partitioning in a Medium-Mn Third-Generation AHSS. Microscopy and Microanalysis, 2017, 23, 402-403.	0.2	6
864	Calibration of Atom Probe Tomography Reconstructions Through Correlation with Electron Micrographs. Microscopy and Microanalysis, 2019, 25, 301-308.	0.2	6

#	ARTICLE	IF	CITATIONS
865	Introduction of a scalable three-dimensional cellular automaton with a probabilistic switching rule for the discrete mesoscale simulation of recrystallization phenomena. , 0, .		6
866	Grain boundary segregation, phase formation, and their influence on the coercivity of rapidly solidified SmFe ₁₁ Ti hard magnetic alloys. Physical Review Materials, 2020, 4, .	0.9	6
867	Textures of strip cast and hot rolled ferritic and austenitic stainless steel. Materials Science and Technology, 1995, 11, 461-468.	0.8	6
868	The influence of temperature on the strain-hardening behavior of Fe-22/25/28Mn-3Al-3Si TRIP/TWIP steels. Materialia, 2022, 22, 101425.	1.3	6
869	Effects of volume fraction and dispersion rate of grain boundary cementite on the recrystallization textures of low carbon steel. Scripta Metallurgica Et Materialia, 1992, 26, 1137-1141.	1.0	5
870	Texture Development and Simulation of Inhomogeneous Deformation of FeCr during Hot Rolling. Materials Science Forum, 1994, 157-162, 1771-1776.	0.3	5
871	Macrotextures of Stainless Fe-Cr Steels. Materials Science Forum, 1994, 157-162, 1469-1474.	0.3	5
872	Modelling of the anisotropy of Young's modulus in polycrystals. Steel Research = Archiv F�r Das Eisenh�ttenwesen, 1994, 65, 291-297.	0.2	5
873	Cold rolling textures of Fe-Ni soft magnetic alloys. Scripta Materialia, 1996, 35, 1277-1283.	2.6	5
874	Influence of Grain Neighbourhood on FCC Texture Simulations. Materials Science Forum, 2002, 408-412, 281-286.	0.3	5
875	Surface Micromechanics of Polymer Coated Aluminium Sheets during Plastic Deformation. Advanced Engineering Materials, 2002, 4, 859-864.	1.6	5
876	Mechanical Properties of the Lobster Cuticle. Materials Research Society Symposia Proceedings, 2005, 874, 1.	0.1	5
877	On strain gradients and size-dependent hardening descriptions in crystal plasticity frameworks. Metals and Materials International, 2006, 12, 407-411.	1.8	5
878	Texture prediction from a novel grain cluster-based homogenization scheme. International Journal of Material Forming, 2009, 2, 523-526.	0.9	5
879	Modeling of dislocation patterns of small- and high-angle grain boundaries in aluminum. Computational Materials Science, 2009, 46, 293-296.	1.4	5
880	Anodic oxides on a beta type Nb�Ti alloy and their characterization by electrochemical impedance spectroscopy. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 812-816.	0.8	5
881	On the Reconstruction and Computation of Dual�Phase Steel Microstructures Based on 3D EBSD Data. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 503-504.	0.2	5
882	Grain Structure and Irreversibility Line of a Bronze Route CuNb Reinforced Nb ₃ Sn Multifilamentary Wire. Physics Procedia, 2012, 36, 1504-1509.	1.2	5

#	ARTICLE	IF	CITATIONS
883	Nano-scale Characterization of Thin-Film Solar Cells. <i>Microscopy and Microanalysis</i> , 2014, 20, 394-395.	0.2	5
884	Aging in amorphous solids: A study of the first-passage time and persistence time distributions. <i>Europhysics Letters</i> , 2015, 111, 48004.	0.7	5
885	Reply to the "Comments on "Dental lessons from past to present: ultrastructure and composition of teeth from plesiosaurs, dinosaurs, extinct and recent sharks" by H. Botella et al." by RSC Adv., 2016, 6, 74384-74388. <i>RSC Advances</i> , 2017, 7, 6215-6222.	1.7	5
886	High Fidelity Reconstruction of Experimental Field Ion Microscopy Data by Atomic Relaxation Simulations. <i>Microscopy and Microanalysis</i> , 2017, 23, 642-643.	0.2	5
887	Understanding Hot vs. Cold Rolled Medium Manganese Steel Deformation Behavior Using In Situ Microscopic Digital Image Correlation. <i>Materials Science Forum</i> , 2018, 941, 198-205.	0.3	5
888	Spectral Solvers for Crystal Plasticity and Multi-physics Simulations. , 2018, , 1-27.		5
889	Variable chemical decoration of extended defects in Cu-poor Cu_2S thin films. <i>Physical Review Materials</i> , 2019, 3, .	0.9	5
890	Investigation of contribution of {123} slip planes to development of rolling textures in bcc metals by use of Taylor models. <i>Materials Science and Technology</i> , 1995, 11, 455-460.	0.8	5
891	Influence of intercritical annealing on the texture formation in low-carbon steel strips. <i>Steel Research = Archiv für Das Eisenhüttenwesen</i> , 1993, 64, 262-266.	0.2	4
892	Integral modeling of metallic materials. <i>Current Opinion in Solid State and Materials Science</i> , 1998, 3, 264-268.	5.6	4
893	An EBSD Study on Orientation Effects during Recrystallization of Coarse-Grained Niobium. <i>Materials Science Forum</i> , 2004, 467-470, 519-524.	0.3	4
894	Property Control in Production of Aluminum Sheet by Use of Simulation. , 2005, , 705-725.		4
895	Strong and Ductile Martensitic Steels for Automotive Applications. <i>Steel Research International</i> , 2006, 77, 704-711.	1.0	4
896	Microstrain localisation measurement in epoxy FRCs during plastic deformation using a digital image correlation technique coupled with scanning electron microscopy. <i>Nondestructive Testing and Evaluation</i> , 2008, 23, 229-240.	1.1	4
897	Design of Lean Maraging TRIP Steels. , 2011, , 199-208.		4
898	Grain boundary characterization in multicrystalline silicon using joint EBSD, EBIC, and atom probe tomography. , 2014, , .		4
899	Microstructure in Plasticity, a Comparison between Theory and Experiment. <i>Lecture Notes in Applied and Computational Mechanics</i> , 2015, , 205-218.	2.0	4
900	Analytical bounds of in-plane Young's modulus and full-field simulations of two-dimensional monocrystalline stochastic honeycomb structures. <i>Computational Materials Science</i> , 2015, 109, 323-329.	1.4	4

#	ARTICLE	IF	CITATIONS
901	Improved Atom Probe Methodology for Studying Carbon Redistribution in Low-Carbon High-Ms Lath Martensitic Steels. <i>Microscopy and Microanalysis</i> , 2017, 23, 706-707.	0.2	4
902	Deformation of Borides in Nickel-based Superalloys: a Study of Segregation at Dislocations. <i>Microscopy and Microanalysis</i> , 2019, 25, 2538-2539.	0.2	4
903	Influence of crystalline defects on magnetic nanodomains in a rare-earth-free magnetocrystalline anisotropic alloy. <i>Physical Review Materials</i> , 2021, 5, .	0.9	4
904	Discovery and Implications of Hidden Atomic-Scale Structure in a Metallic Meteorite. <i>Nano Letters</i> , 2021, 21, 8135-8142.	4.5	4
905	Effect of Phosphorous on the Development of Textures in Ti-Stabilized Steel Sheets. <i>Materials Science Forum</i> , 1994, 157-162, 571-576.	0.3	3
906	Modelling of grain rotations during compression deformation of polycrystalline intermetallic L12 compounds. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1994, 186, L1-L3.	2.6	3
907	A Dislocation Density Based Constitutive Model for Crystal Plasticity FEM. <i>Materials Science Forum</i> , 2005, 495-497, 1007-1012.	0.3	3
908	Thermodynamic Re-Assessment of the Co-Nb System. <i>Materials Research Society Symposia Proceedings</i> , 2008, 1128, 53001.	0.1	3
909	Crystal orientation effects in scratch testing with a spherical indenter. <i>Journal of Materials Research</i> , 2010, 25, 921-926.	1.2	3
910	EBSD Study of Substructure and Texture Formation in Dual-Phase Steel Sheets for Semi-Finished Products. <i>Solid State Phenomena</i> , 2010, 160, 251-256.	0.3	3
911	Crystal plasticity modelling and experiments for deriving microstructure-property relationships in β -TiAl based alloys. <i>Journal of Physics: Conference Series</i> , 2010, 240, 012140.	0.3	3
912	Development of a novel robotic system for hand rehabilitation. , 2011, , .		3
913	Numerical Simulation of Dynamic Strain-Induced Austenite-Ferrite Transformation and Post-Dynamic Kinetics in a Low Carbon Steel. <i>Materials Science Forum</i> , 0, 706-709, 1592-1597.	0.3	3
914	Annealing Behavior of RAFM ODS-Eurofer Steel. <i>Fusion Science and Technology</i> , 2012, 61, 136-140.	0.6	3
915	New insights on quantitative microstructure characterization by electron channeling contrast imaging under controlled diffraction conditions in SEM. <i>Microscopy and Microanalysis</i> , 2012, 18, 686-687.	0.2	3
916	Precipitation Behavior of V and/or Cu Bearing Middle Carbon Steels. <i>Tetsu-To-Hagane/Journal of the Iron and Steel Institute of Japan</i> , 2012, 98, 434-441.	0.1	3
917	Maintaining the equipartition theorem in small heterogeneous molecular dynamics ensembles. <i>Physical Review E</i> , 2013, 87, .	0.8	3
918	Texture Evolution as Determined by In situ Neutron Diffraction During Annealing of Iron Deformed by Equal Channel Angular Pressing. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 4235-4246.	1.1	3

#	ARTICLE	IF	CITATIONS
919	Texture evolution in the Fe-30.5Mn-8.0Al-1.2C and Fe-30.5Mn-2.1Al-1.2C steels upon cold rolling. Revista Escola De Minas, 2016, 69, 59-65.	0.1	3
920	Formation of nanometer-sized Cu-Sn-Se particles in Cu ₂ ZnSnSe ₄ thin-films and their effect on solar cell efficiency. Acta Materialia, 2017, 132, 276-284.	3.8	3
921	1 billion tons of nanostructure “segregation engineering enables confined transformation effects at lattice defects in steels. IOP Conference Series: Materials Science and Engineering, 2017, 219, 012006.	0.3	3
922	Molecular statics simulation of CdTe grain boundary structures and energetics using a bond-order potential. Modelling and Simulation in Materials Science and Engineering, 2018, 26, 045009.	0.8	3
923	The through-process texture analysis of plate rolling by coupling finite element and fast Fourier transform crystal plasticity analysis. Modelling and Simulation in Materials Science and Engineering, 2019, 27, 085005.	0.8	3
924	Measurement of the Texture Sharpness in Grain-Oriented Electrical Steels. Ceramic Transactions, 0, , 143-150.	0.1	3
925	Structure and Crystallographic Texture of Arthropod Bio-Composites. Materials Science Forum, 0, , 1665-1674.	0.3	3
926	Grain boundary characterization and grain size measurement in an ultrafine-grained steel. International Journal of Materials Research, 2022, 95, 513-517.	0.1	3
927	Numerical three-dimensional simulations of the stress fields of dislocations in face-centred cubic crystals. Modelling and Simulation in Materials Science and Engineering, 1995, 3, 655-664.	0.8	2
928	Comment on “study of the Brittle-to-Ductile transition in NiAl by texture analysis”. Scripta Metallurgica Et Materialia, 1995, 33, 1261-1264.	1.0	2
929	Simulation of the statics of 2D and 3D dislocation networks. Computational Materials Science, 1996, 5, 203-209.	1.4	2
930	Numerical simulation of stress fields of dislocation networks with special regard to interface dislocations. Materials Science and Technology, 1996, 12, 281-289.	0.8	2
931	Theory of Orientation Gradients. Materials Science Forum, 2002, 408-412, 275-280.	0.3	2
932	A Texture Component Crystal Plasticity Finite Element Method for Scalable Large Strain Anisotropy Simulations. Materials Science Forum, 2002, 408-412, 257-262.	0.3	2
933	Simulation of Spherulite Growth during Polymer Crystallization by Use of a Cellular Automaton. Materials Science Forum, 2004, 467-470, 603-610.	0.3	2
934	Thermomechanical Treatment of a Fe ₃ Al alloy. Materials Research Society Symposia Proceedings, 2004, 842, 257.	0.1	2
935	Deformation Processing. , 2005, , 387-395.		2
936	Mesostructure of the Exoskeleton of the Lobster Homarus Americanus. Materials Research Society Symposia Proceedings, 2005, 874, 1.	0.1	2

#	ARTICLE	IF	CITATIONS
937	Recrystallization Simulation by Use of Cellular Automata. , 2005, , 2173-2203.		2
938	Austenite Grain Coarsening Behaviour in a Medium Carbon Si-Cr Spring Steel with and without Vanadium. Steel Research International, 2006, 77, 590-594.	1.0	2
939	3D Tomographic EBSD Measurements of Heavily Deformed Ultra Fine Grained Cu-0.17wt%Zr Obtained from ECAP. Materials Science Forum, 0, 584-586, 434-439.	0.3	2
940	Nanoindentation Study Of Elastic Anisotropy Of Cu Single Crystals And Grains In TSVs. , 2011, , .		2
941	A (S)TEM and atom probe tomography study of InGaN. Journal of Physics: Conference Series, 2011, 326, 012029.	0.3	2
942	CHAPTER 9. Multi-scale Modelling of a Biological Material: The Arthropod Exoskeleton. RSC Smart Materials, 2013, , 197-218.	0.1	2
943	Abnormal Grain Growth in Ferritic-Martensitic Eurofer-97 Steel. Materials Science Forum, 2013, 753, 333-336.	0.3	2
944	Quantum-Mechanical Study of Single-Crystalline and Polycrystalline Elastic Properties of Mg-Substituted Calcite Crystals. Key Engineering Materials, 0, 592-593, 335-341.	0.4	2
945	Co-deformation of crystalline-amorphous nanolaminates. Microscopy and Microanalysis, 2015, 21, 361-362.	0.2	2
946	Fe-25Mn-3Al-3Si TWIP-TRIP Steel Deformed at High Strain-Rates. Microscopy and Microanalysis, 2015, 21, 1745-1746.	0.2	2
947	Spectral Solvers for Crystal Plasticity and Multi-physics Simulations. , 2019, , 1-26.		2
948	Atomic Structure and Chemical Composition of Planar Fault Structures in Co-Base Superalloys. Minerals, Metals and Materials Series, 2020, , 920-928.	0.3	2
949	Microchemistry-dependent simulation of yield stress and flow stress in non-heat treatable Al sheet alloys. Modelling and Simulation in Materials Science and Engineering, 2020, 28, 035010.	0.8	2
950	First evidence of crucible steel production in Medieval Anatolia, Kubadabad: A trace for possible technology exchange between Anatolia and Southern Asia. Journal of Archaeological Science, 2022, 137, 105529.	1.2	2
951	Effects of Precipitations on the Annealing Textures of Ferritic Stainless Steels. Materials Science Forum, 1994, 157-162, 1033-1038.	0.3	1
952	Rolling and recrystallization textures in Fe-Ni alloys. Metals and Materials International, 1996, 2, 151-157.	0.2	1
953	Through-Thickness Texture Variations Determined Non-Destructively by High Energy Synchrotron Radiation. Materials Science Forum, 1998, 273-275, 271-276.	0.3	1
954	Phase-Field Extension of Crystal Plasticity with Application to Hardening Modeling. , 2005, , 501-511.		1

#	ARTICLE	IF	CITATIONS
955	Micro-Mechanical Finite Element Models for Crystal Plasticity. , 2005, , 529-542.		1
956	Integration of Physically Based Materials Concepts. , 2005, , 675-685.		1
957	Roughening of Coated Aluminium Sheets during Plastic Straining. Materials Science Forum, 2006, 519-521, 711-716.	0.3	1
958	A Texture Component Model for Predicting Recrystallization Textures. Materials Science Forum, 2007, 558-559, 1035-1042.	0.3	1
959	Changes of crystallinity and spherulite morphology in isotactic polypropylene after rolling and heat treatment. International Journal of Minerals, Metallurgy, and Materials, 2008, 15, 514-520.	0.2	1
960	New Developments in Stainless Steels - Impacts from Markets and Technology. Steel Research International, 2008, 79, 403-403.	1.0	1
961	Fast, Physicallyâ€Based Algorithms for Online Calculations of Texture and Anisotropy during Fabrication of Steel Sheets. Advanced Engineering Materials, 2010, 12, 1206-1211.	1.6	1
962	The Exoskeleton of the American Lobster â€“ From Texture to Anisotropic Properties. Solid State Phenomena, 0, 160, 287-294.	0.3	1
963	EBSD Characterization of Pure Iron Deformed by ECAE. Materials Science Forum, 2010, 638-642, 1995-2000.	0.3	1
964	Characterization of CIGS grain boundaries using Atom Probe Tomography. , 2011, , .		1
965	Annealing Effects on the Microstructure of Ferritic-Martensitic ODS-Eurofer Steel. Fusion Science and Technology, 2011, 60, 22-26.	0.6	1
966	Photonic Crystals: Extreme Optical Properties Tuned Through Phase Substitution in a Structurally Optimized Biological Photonic Polycrystal (Adv. Funct. Mater. 29/2013). Advanced Functional Materials, 2013, 23, 3598-3598.	7.8	1
967	Measuring composition in InGaN from HAADF-STEM images and studying the temperature dependence of Z-contrast. Journal of Physics: Conference Series, 2013, 471, 012009.	0.3	1
968	Revealing the Strain-Hardening Mechanisms of Advanced High-Mn Steels by Multi-Scale Microstructure Characterization. Materials Science Forum, 0, 783-786, 755-760.	0.3	1
969	Slip System Analysis in the Cold Rolling of a Ni₃Al Single Crystal. Materials Science Forum, 0, 783-786, 1111-1116.	0.3	1
970	Shear-flow-controlled mode selection in a nonlinear autocatalytic medium. Physical Review E, 2015, 91, 022913.	0.8	1
971	Microstructural Characterization of a Fe-25Mn-3Al-3Si TWIPâ€TRIP Steel. Microscopy and Microanalysis, 2016, 22, 1962-1963.	0.2	1
972	A Methodology for Investigation of Grain-Boundary Diffusion and Segregation. Microscopy and Microanalysis, 2017, 23, 656-657.	0.2	1

#	ARTICLE	IF	CITATIONS
973	Correlative Transmission EBSD-APT Analysis of Grain Boundaries in Cu(In,Ga)Se ₂ and Cu ₂ ZnSnSe ₄ Based Thin-film Solar Cells. Microscopy and Microanalysis, 2017, 23, 672-673.	0.2	1
974	Spectral Solvers for Crystal Plasticity and Multi-physics Simulations. , 2018, , 1-25.		1
975	An Integrated Workflow To Investigate Electrocatalytic Surfaces By Correlative X-ray Photoemission Spectroscopy, Scanning Photoemission Electron Microscopy and Atom Probe Tomography. Microscopy and Microanalysis, 2019, 25, 306-307.	0.2	1
976	Hough Transform Based Accurate Composition Extractions From Correlation Histograms in Atom Probe Tomography. Microscopy and Microanalysis, 2019, 25, 324-325.	0.2	1
977	Metallic Implants: Atomic Scale Origin of Metal Ion Release from Hip Implant Taper Junctions (Adv. Sci.) Tj ETQq1 1 0,784314,rgBT /Over 5,6 1	0.2	1
978	Concepts for Integrating Plastic Anisotropy into Metal Forming Simulations. , 2002, 4, 169.		1
979	Rolling textures of a Cu-20% Nb composite. European Physical Journal Special Topics, 1993, 03, C7-1727-C7-1730.	0.2	1
980	On the consideration of climb in discrete dislocation dynamics. , 0, .		1
981	Atomic-Scale Grain Boundary Engineering to Overcome Hot-Cracking in Additively-Manufactured Superalloys. SSRN Electronic Journal, 0, , .	0.4	1
982	Spatial Distributions of Alloying Elements Obtained from Atom Probe Tomography of the Amorphous Ribbon Fe ₇₅ C ₁₁ Si ₂ B ₈ Cr ₄ . Korean Journal of Materials Research, 2013, 23, 190-193.	0.1	1
983	Texture and microstructure of high purity tantalum. European Physical Journal Special Topics, 1993, 03, C7-523-C7-526.	0.2	1
984	Iron-rich High Entropy Alloys. , 2021, , 389-421.		1
985	Chemo-Mechanical Phase-Field Modeling of Iron Oxide Reduction with Hydrogen. SSRN Electronic Journal, 0, , .	0.4	1
986	Phase Transformations and Microstructure Evolution During Combustion of Iron Powder. SSRN Electronic Journal, 0, , .	0.4	1
987	On the stress fields of crystal dislocations with fractal geometry. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1995, 203, 203-207.	2.6	0
988	Investigation of the iterative series expansion method by means of standard functions. Materials Letters, 1995, 22, 313-318.	1.3	0
989	Orientation Dependence of Recrystallization in Aluminum. Materials Science Forum, 2002, 408-412, 773-778.	0.3	0
990	Experiments and Simulations on the micromechanics of single- and polycrystalline metals. AIP Conference Proceedings, 2004, , .	0.3	0

#	ARTICLE	IF	CITATIONS
991	Structure, Properties and Processing of Electrical Steels. Steel Research International, 2005, 76, 411-412.	1.0	0
992	Creep Simulation. , 2005, , 607-620.		0
993	Cellular, Lattice Gas, and Boltzmann Automata. , 2005, , 57-76.		0
994	Drowning in Data " A Viewpoint on Strategies for Doing Science with Simulations. , 2005, , 2687-2693.		0
995	Hot Rolling versus Strip Casting from the Viewpoint of Microstructure, Texture, and Properties. , 2006, , 83-88.		0
996	Orientation Microscopy on Nanostructured Electrodeposited NiCo-Films. Advanced Materials Research, 2006, 15-17, 953-958.	0.3	0
997	Through-Process Multiscale Models for the Prediction of Recrystallization Texture. , 0, , 181-196.		0
998	Recrystallization Behavior of the Nickel-Based ODS Superalloy PM 1000. Materials Science Forum, 2007, 558-559, 313-318.	0.3	0
999	Recent Progress in the 3D Experimentation and Simulation of Nanoindents. Materials Science Forum, 2007, 550, 199-204.	0.3	0
1000	Mechanism Oriented Steel Development. Steel Research International, 2007, 78, 195-198.	1.0	0
1001	Finite Elements for Microstructure Evolution. , 2007, , 317-333.		0
1002	Theory-guided design of Ti-based binaries for human implants (abstract only). Journal of Physics Condensed Matter, 2008, 20, 064221.	0.7	0
1003	Can Microscale Wall Roughness Trigger Unsteady Chaotic Flows?. AIP Conference Proceedings, 2008, , .	0.3	0
1004	Transverse diffusive mixing of solutes in pressure driven microchannels: a Lattice Boltzmann study of the scaling laws. Houille Blanche, 2009, 95, 93-100.	0.3	0
1005	Influence of Grain Boundary Mobility on Microstructure Evolution during Recrystallisation. Materials Science Forum, 0, 715-716, 191-196.	0.3	0
1006	Flow heterogeneity and correlations in a sheared hard sphere glass: Insight from computer simulations. , 2013, , .		0
1007	Study of Dislocation Substructures in High-Mn Steels by Electron Channeling Contrast Imaging. Materials Science Forum, 0, 783-786, 750-754.	0.3	0
1008	Self-Assembled Monolayers: Star-Shaped Crystallographic Cracking of Localized Nanoporous Defects (Adv. Mater. 33/2015). Advanced Materials, 2015, 27, 4947-4947.	11.1	0

#	ARTICLE	IF	CITATIONS
1009	International High Manganese Steel Conference. Steel Research International, 2015, 86, 1126-1126.	1.0	0
1010	Publisher's Note: From generalized stacking fault energies to dislocation properties: Five-energy-point approach and solid solution effects in magnesium [Phys. Rev. B92, 064107 (2015)]. Physical Review B, 2015, 92, .	1.1	0
1011	Atom probe tomography reveals options for microstructural design of steels and titanium alloys by segregation engineering. MATEC Web of Conferences, 2015, 33, 01001.	0.1	0
1012	Microstructure and Strain Hardening in Tensile-Tested Fe-Mn-Al-Si Steels. Microscopy and Microanalysis, 2015, 21, 1357-1358.	0.2	0
1013	B22-P-01 Understanding of off-stoichiometry of Nano-sized Carbides in Fe-Mn-Al-C Low-Density Steels using Transmission Electron Microscopy, Atom Probe Tomography, and Density Functional Theory. Microscopy (Oxford, England), 2015, 64, i103.1-i103.	0.7	0
1014	Response to "Comment on "Viscous coalescence of droplets: A lattice Boltzmann study" [Phys. Fluids 28, 079101 (2016)]. Physics of Fluids, 2016, 28, 079102.	1.6	0
1015	Microstructural analysis in the Fe-30.5Mn-8.0Al-1.2C and Fe-30.5Mn-2.1Al-1.2C steels upon cold rolling. Revista Escola De Minas, 2016, 69, 167-173.	0.1	0
1016	Topological Impurity Segregation at Faceted Silicon Grain Boundaries Studied by Correlative Atomic-Resolution STEM and APT. Microscopy and Microanalysis, 2016, 22, 46-47.	0.2	0
1017	100 years public-private partnership in metallurgical and materials science research. Materials Today, 2017, 20, 335-337.	8.3	0
1018	Thermo-mechanical stresses within switching contact systems after arcing events. , 2017, , .		0
1019	Reversion to Ultrafine-Grained Austenite in a Medium-Mn AHSS. Microscopy and Microanalysis, 2018, 24, 2228-2229.	0.2	0
1020	Quantification of Solute Deuterium in Titanium Deuteride by Atom Probe Tomography with Both Laser Pulsing and High-Voltage Pulsing: Influence of the Global and Local Surface Electric Field. Microscopy and Microanalysis, 2019, 25, 2512-2513.	0.2	0
1021	Application of Atom Probe Tomography to Complex Microstructures of Laser Additively Manufactured Samples. Microscopy and Microanalysis, 2019, 25, 2514-2515.	0.2	0
1022	Hydride Growth Mechanism in Zircaloy-4: Investigation of the Partitioning of Alloying Elements. Microscopy and Microanalysis, 2019, 25, 2506-2507.	0.2	0
1023	Spectral Solvers for Crystal Plasticity and Multi-physics Simulations. , 2019, , 1-25.		0
1024	Frontispiece: Irreversible Structural Changes of Copper Hexacyanoferrate Used as a Cathode in Zn-Ion Batteries. Chemistry - A European Journal, 2020, 26, .	1.7	0
1025	Texture Property Relationships in Aluminum Alloys. , 2003, , .		0
1026	Microscale Fluid Flow at Rough Metallic Surfaces: A Lattice Boltzmann Study. , 2006, , .		0

#	ARTICLE	IF	CITATIONS
1027	Crystallographic Characterization of a Phosphorus Added TRIP Steel. Ceramic Transactions, 0, , 333-340.	0.1	0
1028	Grain boundary segregation and precipitation in an Al-Zn-Mg-Cu alloy. MATEC Web of Conferences, 2020, 326, 01004.	0.1	0
1029	Atomic-Scale View into the Degradation of Ir-Ru Alloys during Anodic Oxygen Evolution. ECS Meeting Abstracts, 2020, MA2020-01, 1520-1520.	0.0	0
1030	Prospects of Making Nanoporous Ruthenium from Transition Metal-Ru Alloys. ECS Meeting Abstracts, 2020, MA2020-01, 2713-2713.	0.0	0
1031	New Frontiers in Electrocatalyst Characterization – Three Dimensional Atomic-Scale Insights By Atom Probe Tomography. ECS Meeting Abstracts, 2020, MA2020-01, 2561-2561.	0.0	0
1032	Hierarchical Nature of Hydrogen-Based Direct Reduction of Iron Oxides. SSRN Electronic Journal, 0, , .	0.4	0
1033	Characterizing Localized Microstructural Deformation of Multiphase Steel by Crystal Plasticity Simulation with Multi-Constitutive Law. Journal of the Japan Society for Technology of Plasticity, 2022, 63, 1-8.	0.0	0
1034	On the influence of heavy warm reduction on the microstructure and mechanical properties of a medium-carbon ferritic –pearlitic steel. International Journal of Materials Research, 2022, 95, 1108-1114.	0.1	0
1035	Recrystallization Simulation by Use of Cellular Automata. , 2005, , 2173-2203.		0
1036	Drowning in Data – A Viewpoint on Strategies for Doing Science with Simulations. , 2005, , 2687-2693.		0