Hongbaio Dong

List of Publications by Year
in descending order

187 papers	4,299 citations	126907 33 h-index	161849 54 g-index
188 all docs	188 docs citations	188 times ranked	3229 citing authors

#	Article	IF	Citations
1	Using deep neural network with small dataset to predict material defects. Materials and Design, 2019, 162, 300-310.	7.0	333
2	Simulation of the columnar-to-equiaxed transition in directionally solidified Alâ€"Cu alloys. Acta Materialia, 2005, 53, 659-668.	7.9	258
3	Revealing internal flow behaviour in arc welding and additive manufacturing of metals. Nature Communications, 2018, 9, 5414.	12.8	158
4	Locomotion with flexible propulsors: I. Experimental analysis of pectoral fin swimming in sunfish. Bioinspiration and Biomimetics, 2006, 1, S25-S34.	2.9	121
5	Atomistics of pre-nucleation layering of liquid metals at the interface with poor nucleants. Communications Chemistry, 2019, 2, .	4.5	115
6	Microscale simulation of stray grain formation in investment cast turbine blades. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 386, 129-139.	5.6	93
7	What is the Process Window for Semi-solid Processing?. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 1-5.	2.2	83
8	The initiation and propagation mechanism of the overlapping zone cracking during laser solid forming of IN-738LC superalloy. Journal of Alloys and Compounds, 2018, 749, 859-870.	5.5	79
9	Solidification path in third-generation Ni-based superalloys, with an emphasis on last stage solidification. Scripta Materialia, 2007, 56, 41-44.	5.2	72
10	Grain Selection in Spiral Selectors During Investment Casting of Single-Crystal Turbine Blades: Part I. Experimental Investigation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3430-3438.	2.2	60
11	Seeding of single-crystal superalloysâ€"Role of constitutional undercooling and primary dendrite orientation on stray-grain nucleation and growth. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2005, 36, 657-666.	2.1	59
12	Microstructure evolution and mechanical properties of twinned AZ31 alloy plates at lower elevated temperature. Journal of Alloys and Compounds, 2014, 615, 687-692.	5.5	58
13	A time-dependent power law viscosity model and its application in modelling semi-solid die casting of 319s alloy. Acta Materialia, 2017, 124, 410-420.	7.9	58
14	Improved mechanical properties of AZ31 magnesium alloy sheets by repeated cold rolling and annealing using a small pass reduction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 637, 243-250.	5.6	57
15	Active screen plasma nitriding of 316 stainless steel for the application of bipolar plates in proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2014, 39, 21470-21479.	7.1	56
16	HAZ Liquation Cracking Mechanism of IN-738LC Superalloy Prepared by Laser Solid Forming. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 5118-5136.	2.2	55
17	Grain Selection in Spiral Selectors During Investment Casting of Single-Crystal Components: Part II. Numerical Modeling. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3439-3446.	2.2	54
18	Deep drawability and drawing behaviour of AZ31 alloy sheets with different initial texture. Journal of Alloys and Compounds, 2014, 615, 302-310.	5.5	53

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19	Effect of pre-existing <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si0003.gif" overflow="scroll"><mml:mrow><mml:mo stretchy="false">{</mml:mo><mml:mn>10</mml:mn><mml:mover accent="true"><mml:mn>1</mml:mn><mml:mo>Â¯</mml:mo></mml:mover><mml:mn>2</mml:mn><mml:mo stretchy="false">}</mml:mo></mml:mrow></mml:math> extension twins on mechanical properties, microstructure evolution and dynamic recrystallization of AZ31 Mg alloy during uniaxial compressio	5.6	51
20	Initiation and growth kinetics of solidification cracking during welding of steel. Scientific Reports, 2017, 7, 40255.	3.3	49
21	Microstructure and Solidification Sequence of the Interdendritic Region in a Third Generation Single-Crystal Nickel-Base Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2009, 40, 1660-1669.	2.2	48
22	Micro-mechanism of central damage formation during cross wedge rolling. Journal of Materials Processing Technology, 2018, 252, 322-332.	6.3	47
23	Microstructure, mechanical properties and static recrystallization behavior of the rolled ZK60 magnesium alloy sheets processed by electropulsing treatment. Journal of Alloys and Compounds, 2015, 646, 1-9.	5.5	45
24	Molecular dynamics calculation of solidâ€"liquid interfacial free energy and its anisotropy during iron solidification. Computational Materials Science, 2013, 74, 92-100.	3.0	44
25	Improved mechanical properties of AZ31 magnesium alloy plates by pre-rolling followed by warm compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 618, 540-545.	5.6	44
26	Microstructure and properties of the super-hydrophobic films fabricated on magnesium alloys. Journal of Alloys and Compounds, 2013, 554, 142-146.	5.5	43
27	Effect of electropulsing treatment on static recrystallization behavior of cold-rolled magnesium alloy ZK60 with different reductions. Journal of Materials Science and Technology, 2019, 35, 1113-1120.	10.7	41
28	A general and transferable deep learning framework for predicting phase formation in materials. Npj Computational Materials, 2021, 7, .	8.7	40
29	Intrinsic ductility of Mg-based binary alloys: A first-principles study. Scripta Materialia, 2014, 89, 13-16.	5.2	39
30	Solute enrichment induced dendritic fragmentation in directional solidification of nickel-based superalloys. Acta Materialia, 2021, 215, 117043.	7.9	38
31	Using transmission Kikuchi diffraction in a scanning electron microscope to quantify geometrically necessary dislocation density at the nanoscale. Ultramicroscopy, 2019, 197, 39-45.	1.9	37
32	Effect of CeO2 on the microstructure and wear behavior of thermal spray welded NiCrWRE coatings. Wear, 2007, 262, 562-567.	3.1	36
33	Effects of aluminum diffusion on the adhesive behavior of the Ni(111)/Cr2O3(0001) interface: First principle study. Computational Materials Science, 2013, 78, 116-122.	3.0	36
34	Thermal-solutal-fluid flow of channel segregation during directional solidification of single-crystal nickel-based superalloys. Acta Materialia, 2021, 206, 116620.	7.9	34
35	On Directional Dendritic Growth and Primary Spacingâ€"A Review. Crystals, 2020, 10, 627.	2.2	33
36	Microsegregation in Al-Cu alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 3103-3110.	2.2	32

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37	Microstructure evolution and deformation behaviors of AZ31 Mg alloy with different grain orientation during uniaxial compression. Journal of Alloys and Compounds, 2018, 741, 514-526.	5.5	32
38	The influence of Ce micro-alloying on the precipitation of intermetallic sigma phase during solidification of super-austenitic stainless steels. Journal of Alloys and Compounds, 2020, 815, 152418.	5.5	32
39	Grain refining and improving mechanical properties of a warm rolled AZ31 alloy plate. Materials Letters, 2014, 135, 31-34.	2.6	30
40	A study of microsegregation in Al-Cu using a novel single-pan scanning calorimeter. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 441-447.	2.2	29
41	Surface Segregation during Directional Solidification of Ni-Base Superalloys. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2008, 39, 87-93.	2.1	29
42	A two-scale model for predicting elastic properties of porous titanium formed with space-holders. Computational Materials Science, 2010, 50, 172-178.	3.0	28
43	Effect of Electromagnetic Stirring on Molten Steel Flow and Solidification in Bloom Mold. Journal of Iron and Steel Research International, 2014, 21, 1095-1103.	2.8	28
44	Detailed Analysis of the Solution Heat Treatment of a Third-Generation Single-Crystal Nickel-Based Superalloy CMSX-10KÂ®. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 889-906.	2.2	28
45	Study of precipitation-assisted stress relaxation and creep behavior during the ageing of a nickel-iron superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 742, 493-500.	5.6	28
46	An analysis of measurement of solute segregation in Ni-base superalloys using X-ray spectroscopy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 490, 258-265.	5.6	27
47	A Three-Stage Mechanistic Model for Solidification Cracking During Welding of Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1674-1682.	2.2	27
48	Enhancing compressive mechanical properties of rolled AZ31 Mg alloy plates by pre-compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 772, 138686.	5.6	27
49	Solidification path in the Ni-base superalloy, IN713LCâ€"quantitative correlation of last stage solidification. Scripta Materialia, 2005, 53, 729-733.	5.2	26
50	Geometric and electronic structures of new endohedral fullerenes: Eu@C72. Journal of Molecular Modeling, 2008, 14, 465-470.	1.8	25
51	Computational Modeling of Columnar to Equiaxed Transition in Alloy Solidification. Advanced Engineering Materials, 2013, 15, 216-229.	3.5	25
52	Precipitation of chromium nitride nano-rods on lamellar carbides along austenite-ferrite boundaries in super duplex stainless steel. Scripta Materialia, 2017, 127, 45-48.	5.2	25
53	A Numerical Model of a Two-pan Heat Flux DSC. Magyar AprÃ³vad KÃ¶zlemÃ©nyek, 2001, 64, 167-176.	1.4	24
54	Tribocorrosion behavior of S-phase surface engineered medical grade Coâ€"Cr alloy. Wear, 2013, 302, 1615-1623.	3.1	24

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55	Time-resolved X-ray diffraction studies of solidification microstructure evolution in welding. Acta Materialia, 2014, 68, 159-168.	7.9	24
56	Hydrogen embrittlement in super duplex stainless steels. Materialia, 2020, 9, 100524.	2.7	24
57	Simulation of equiaxed growth ahead of an advancing columnar front in directionally solidified Ni-based superalloys. Journal of Materials Science, 2004, 39, 7207-7212.	3.7	23
58	Effect of spiral shape on grain selection during casting of single crystal turbine blades. International Journal of Cast Metals Research, 2009, 22, 54-57.	1.0	23
59	Mechanism for Formation of Surface Scale during Directional Solidification of Ni-Base Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1288-1302.	2.2	23
60	GPU-accelerated three-dimensional large-scale simulation of dendrite growth for Ti6Al4V alloy based on multi-component phase-field model. Computational Materials Science, 2019, 160, 149-158.	3.0	23
61	Microscale simulation of stray grain formation in investment cast turbine blades. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 386, 129-139.	5.6	23
62	Determination of liquid fraction during solidification of aluminium alloys using a single-pan scanning calorimeter. Fluid Phase Equilibria, 2003, 212, 199-208.	2.5	22
63	Effect of hydrogen charging on dislocation multiplication in pre-strained super duplex stainless steel. Scripta Materialia, 2018, 143, 20-24.	5.2	22
64	A simulation and experiment study on phase transformations of Ti-6Al-4V in wire laser additive manufacturing. Materials and Design, 2021, 207, 109843.	7.0	22
65	Determination of liquidus temperature in Alâ€“Si and Alâ€“Siâ€“Mg alloys using a single-pan scanning calorimeter. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 413-414, 480-484.	5.6	21
66	Discontinuous Precipitation in Ni-Base Superalloys During Solution Heat Treatment. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4298-4315.	2.2	21
67	Evolution of Lattice Spacing of Gamma Double Prime Precipitates During Aging of Polycrystalline Ni-Base Superalloys: An In Situ Investigation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 574-585.	2.2	20
68	Title is missing!. Magyar AprÃ³vad KÃ¶zlemÃ©nyek, 2001, 64, 341-350.	1.4	19
69	Rapid production of pillar structures on the surface of single crystal CMSX-4 superalloy by femtosecond laser machining. Optics and Lasers in Engineering, 2020, 127, 105941.	3.8	19
70	Temperature-Dependent Misfit Stress in Gamma Double Prime Strengthened Ni-Base Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 1860-1873.	2.2	19
71	High Entropy Alloys as Filler Metals for Joining. Entropy, 2021, 23, 78.	2.2	19
72	A numerical model for a heat flux DSC: Determining heat transfer coefficients within a DSC. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 413-414, 470-473.	5.6	18

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73	Accuracy of composition measurement using X-ray spectroscopy in precipitate-strengthened alloys: Application to Ni-base superalloys. Acta Materialia, 2011, 59, 1003-1013.	7.9	17
74	Microstructure evolution and mechanical properties of an AZ61 alloy processed with TS-ECAP and EPT. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 780, 139195.	5.6	17
75	In situ observation of the orientation relationship at the interface plane between substrate and nucleus using X-ray scattering techniques. Scripta Materialia, 2014, 77, 60-63.	5.2	16
76	Electroless Plating of Ni-P-W Coatings Containing Scattered Nb2O5 on Sintered NdFeB Substrate. Materials Research, 2015, 18, 1089-1096.	1.3	16
77	On the nature of hexagonality within the solidification structure of single crystal alloys: Mechanisms and applications. Acta Materialia, 2020, 200, 417-431.	7.9	16
78	Automatic Recognition of Dendritic Solidification Structures: DenMap. Journal of Imaging, 2020, 6, 19.	3.0	16
79	The role of Ti carbonitride precipitates on fusion zone strength-toughness in submerged arc welded linepipe joints. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 622, 194-203.	5.6	15
80	The Effect of Aluminum on the Divorced Eutectic Transformation of MnS Inclusions. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 1118-1131.	2.1	15
81	Quantitative characterisation of last stage solidification in nickel base superalloy using enthalpy based method. Materials Science and Technology, 2007, 23, 1085-1092.	1.6	14
82	Simulation of the Columnar-to-Equiaxed Transition in Alloy Solidification - The Effect of Nucleation Undercooling, Density of Nuclei in Bulk Liquid and Alloy Solidification Range on the Transition. Solid State Phenomena, 0, 139, 129-134.	0.3	14
83	The tensile properties and fracture of the Ni/Cr2O3 interface: First principles simulation. Computational Materials Science, 2014, 82, 367-371.	3.0	14
84	Investigation of the as-solidified microstructure of an Alâ€"Mgâ€"Siâ€"Cu alloy. Journal of Alloys and Compounds, 2014, 602, 312-321.	5.5	14
85	Deformation Mechanism and Hot Workability of Extruded Magnesium Alloy AZ31. Acta Metallurgica Sinica (English Letters), 2018, 31, 71-81.	2.9	14
86	Substrate-Induced Liquid Layering: A New Insight into the Heterogeneous Nucleation of Liquid Metals. Metals, 2018, 8, 521.	2.3	14
87	A New Efficient Quantitative Multi-component Phase Field: Lattice Boltzmann Model for Simulating Ti6Al4V Solidified Dendrite Under Forced Flow. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 2487-2497.	2.1	14
88	On the origin of mosaicity in directionally solidified Ni-base superalloys. Acta Materialia, 2021, 217, 117180.	7.9	14
89	Evaluating data-driven algorithms for predicting mechanical properties with small datasets: A case study on gear steel hardenability. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 836-847.	4.9	14
90	Role of Elemental Sublimation during Solution Heat Treatment of Ni-Based Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 4764-4773.	2.2	13

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91	Multiscale, Multiphysics Numerical Modeling of Fusion Welding with Experimental Characterization and Validation. Jom, 2013, 65, 99-106.	1.9	13
92	Growth of Secondary Dendrite Arms of Feâ€"C Alloy during Transient Directional Solidification by Phase-field Method. ISIJ International, 2014, 54, 430-436.	1.4	13
93	Enhanced Heterogeneous Nucleation by Pulsed Magnetoâ€Oscillation Treatment of Liquid Aluminum Containing Al3Ti1B Additions. Advanced Engineering Materials, 2015, 17, 1465-1469.	3.5	13
94	Key aspects of carbide precipitation during solidification in the Ni-base superalloy, MAR M002. Journal of Alloys and Compounds, 2017, 702, 6-12.	5.5	13
95	The study of hot deformation on laser cladding remanufactured 316L stainless steel. Materials and Design, 2021, 212, 110255.	7.0	13
96	Insight into the sensitivities of freckles in the directional solidification of single-crystal turbine blades. Journal of Manufacturing Processes, 2022, 77, 219-228.	5.9	13
97	Differential Scanning Calorimetry (DSC) and Thermodynamic Prediction of Liquid Fraction vs Temperature for Two High-Performance Alloys for Semi-Solid Processing (Al-Si-Cu-Mg (319s) and) Tj ETQq1 1 0.784314 rgBT /Overlock Science, 2017, 48, 4701-4712.	2.2	12
98	Roadmap of China steel industry in the past 70 years. Ironmaking and Steelmaking, 2019, 46, 922-927.	2.1	12
99	Vaporization of Ni, Al and Cr in Ni-Base Alloys and Its Influence on Surface Defect Formation During Manufacturing of Single-Crystal Components. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 309-322.	2.2	12
100	The orientation dependence of liquid ordering at Î±-Al2O3/Al solidâ€"liquid interfaces: A molecular dynamics study. Computational Materials Science, 2020, 174, 109489.	3.0	12
101	Experimental and numerical investigation of the melting process and heat transfer characteristics of multiple phase change materials. International Journal of Energy Research, 2020, 44, 11219-11232.	4.5	12
102	Solute-adsorption enhanced heterogeneous nucleation: the effect of Cu adsorption on Î±-Al nucleation at the sapphire substrate. Physical Chemistry Chemical Physics, 2021, 23, 5270-5282.	2.8	12
103	A comparison of a novel single-pan calorimeter with a conventional heat-flux differential scanning calorimeter. High Temperatures - High Pressures, 2000, 32, 311-319.	0.3	12
104	Unveiling the influence of interfacial bonding and dynamics on solid/liquid interfacial structures: An <i>ab initio</i> molecular dynamics study of (0001) sapphire-liquid Al interfaces. Physical Review Materials, 2020, 4, .	2.4	12
105	Grain Selection during Solidification in Spiral Grain Selector. , 2008, , .		12
106	Porous alumina infiltrated with melt and its dynamic analysis during pressureless infiltration. Ceramics International, 2014, 40, 6293-6299.	4.8	11
107	Improved mechanical properties of Mg matrix composites reinforced with Al and carbon nanotubes fabricated by spark plasma sintering followed by hot extrusion. Journal of Materials Research, 2016, 31, 3745-3756.	2.6	11
108	Structural and mechanical properties of homogeneous solid-liquid interface of Al modelled with COMB3 potential. Computational Materials Science, 2018, 155, 136-143.	3.0	11

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109	Getting the Strain Under Control: Trans-Varestraint Tests for Hot Cracking Susceptibility. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 1748-1762.	2.2	11
110	Application of deep transfer learning to predicting crystal structures of inorganic substances. Computational Materials Science, 2021, 195, 110476.	3.0	11
111	Environmentâ€"Induced Cracking in Weld Joints in Subsea Oil and Gas Systems: Part I. , 2012, , .		10
112	In-situ neutron diffraction measurement of stress redistribution in a dissimilar joint during heat treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 627, 161-170.	5.6	10
113	Equations of heat generation during friction stir welding for tapered polygonal tools. Science and Technology of Welding and Joining, 2019, 24, 93-100.	3.1	10
114	Microstructure and Thermal Analysis of Metastable Intermetallic Phases in High-Entropy Alloy CoCrFeMo0.85Ni. Materials, 2021, 14, 1073.	2.9	10
115	The solidâ€"liquid interface free energy of Al: A comparison between molecular dynamics calculations and experimental measurements. Computational Materials Science, 2020, 184, 109910.	3.0	10
116	An Analysis of Solidification Path in the Ni-Base Superalloy, CMSX10K. , 2008, , .		10
117	Environment-Induced Cracking in Weld Joints in Subsea Oil and Gas Systems: Part II. , 2013, , .		9
118	Influence of Secondary Cooling Mode on Solidification Structure and Macro-segregation Behavior for High-carbon Continuous Casting Bloom. High Temperature Materials and Processes, 2017, 36, 741-753.	1.4	9
119	Using Variant Selection to Facilitate Accurate Fitting of Î³â€³ Peaks in Neutron Diffraction. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 5421-5432.	2.2	9
120	Influence of Al and Nb on castability of a Ni-base superalloy, IN713LC. International Journal of Cast Metals Research, 2009, 22, 62-65.	1.0	8
121	A Phenomenological Analysis of Freckling in Directional Solidification of Ni-Base Superalloy: The Role of Edge and Curvature in Casting Components. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 88-92.	2.2	8
122	2D single crystal Bragg-dip mapping by time-of-flight energy-resolved neutron imaging on IMAT@ISIS. Scientific Reports, 2020, 10, 20751.	3.3	8
123	A Fast-Acting Method for Simulating Precipitation During Heat Treatment of Superalloy 718. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 483-499.	2.2	8
124	Microstructure and mechanical properties of SiCp/AZ91 composite processed with extrusion and EPT. Materials Science and Technology, 2021, 37, 269-279.	1.6	8
125	On the Fully Implicit Solution of a Phase-Field Model for Binary Alloy Solidification in Three Dimensions. Advances in Applied Mathematics and Mechanics, 2012, 4, 665-684.	1.2	8
126	Effects of solute trapping on solidification path in Ta-rich Ta-Al-Fe ternary alloys under rapid freezing. Journal of Alloys and Compounds, 2017, 698, 375-383.	5.5	7

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127	The In-Plane Structure and Dynamic Property of the Homogeneous Al-Al Solid-Liquid Interface. Metals, 2018, 8, 602.	2.3	7
128	Compressive Deformation Behavior of AZ31Mg Alloy Containing {10â€“12} Extension Twins at Different Temperature. Metals and Materials International, 2019, 25, 1170-1181.	3.4	7
129	In-Situ Determination of Precipitation Kinetics During Heat Treatment of Superalloy 718. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 500-511.	2.2	7
130	Metallurgical Data Science for Steel Industry: A Case Study on Basic Oxygen Furnace. Steel Research International, 2022, 93, .	1.8	7
131	Î³â€³ variant-sensitive deformation behaviour of Inconel 718 superalloy. Journal of Materials Science and Technology, 2022, 126, 169-181.	10.7	7
132	Determination of transition temperatures during freezing and melting of interdendritic phases in Ni based superalloys. Materials Science and Technology, 2011, 27, 325-331.	1.6	6
133	Characterisation of periodic variation in torque occurred in friction stir welding process. Science and Technology of Welding and Joining, 2014, 19, 350-354.	3.1	6
134	Effect of Al on the Wetting Behavior Between TiC x and Molten Ti-Al Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4783-4792.	2.2	6
135	The wettability and interfacial characterization between Î³-TiAl alloy and ceramic reinforcements. Composite Interfaces, 2018, 25, 713-723.	2.3	6
136	Simulation of solidified Î² grain for Tiâ€“6Alâ€“4V during wire laser additive manufacturing by three-dimensional cellular automaton method. Modelling and Simulation in Materials Science and Engineering, 2021, 29, 065006.	2.0	6
137	Grain-size dependent elastic-plastic deformation behaviour of inconel 625 alloy studied by in-situ neutron diffraction. Intermetallics, 2021, 138, 107340.	3.9	6
138	Combined first principle and experimental study of oxide/alloy interface evolution during hot rolling 430 stainless steels. Ironmaking and Steelmaking, 2011, 38, 530-533.	2.1	5
139	An integrated framework for multi-scale multi-physics numerical modelling of interface evolution in welding. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012029.	0.6	5
140	Using the interface Peclet number to select the maximum simulation interface width in phase-field solidification modelling. Computational Materials Science, 2013, 70, 71-76.	3.0	5
141	A Multi-Scale Approach to Simulate Solidification Structure Evolution and Solute Segregation in a Weld Pool. Journal of Algorithms and Computational Technology, 2013, 7, 489-507.	0.7	5
142	Modelling of Secondary Dendrite Arms Evolution during Solidification by a Phase-field Method. Materials Today: Proceedings, 2015, 2, S466-S473.	1.8	5
143	First-principle study of interfacial properties between Î³-TiAl and TiC, VN. Molecular Simulation, 2019, 45, 50-57.	2.0	5
144	An Ab Initio Molecular Dynamics Simulation of Liquid FeOâ€“SiO2 Silicate System with Sulfur Dissolving. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 3346-3353.	2.1	5

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145	Comparison of desulfurization mechanism in liquid CaO-SiO2 and MnO-SiO2: An ab initio molecular dynamics simulation. Journal of Alloys and Compounds, 2022, 896, 163008.	5.5	5
146	In Situ Environmental Scanning Electron Microscopy (ESEM) of Semi-Solid Samples. Solid State Phenomena, 2006, 116-117, 700-703.	0.3	4
147	Fusion Zone Microstructure Associated With Embrittlement of Subsea Dissimilar Joints. , 2014, , .		4
148	Phase Characterization of CRA Fastener INCONEL718 in Relation of Hydrogen Assisted Cracking. Materials Today: Proceedings, 2015, 2, S383-S392.	1.8	4
149	Modelling of Microstructure Evolution during Thermoplastic Deformation of Steel by a Finite Element Method. Materials Today: Proceedings, 2015, 2, S460-S465.	1.8	4
150	Formation and mechanism of nanocrystalline AZ91 powders during HDDR processing. Materials Characterization, 2017, 125, 134-141.	4.4	4
151	Solidification Reaction Sequence of Co-Rich Nb-Al-Co Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 3814-3822.	2.2	4
152	The adhesion, stability, and electronic structure of Î3-TiAl/VN interface: a first-principle study. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	4
153	Prediction of re-oxidation behaviour of ultra-low carbon steel by different slag series. Scientific Reports, 2020, 10, 9423.	3.3	4
154	Morphological changes of elongated MnS inclusions during heat treatment process. Ironmaking and Steelmaking, 2021, 48, 222-228.	2.1	4
155	Effect of Chemical Potential and Atomic-Scale Vibration of Nucleant Surface on Liquid Layering and Heterogeneous Nucleation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 2136-2143.	2.2	4
156	The Application of Differential Scanning Calorimetry to Investigate Precipitation Behavior in Nickel-Base Superalloys Under Continuous Cooling and Heating Conditions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 3706-3726.	2.2	4
157	The Effect of Heat Source Path on Thermal Evolution during Electro-Gas Welding of Thick Steel Plates. Materials, 2022, 15, 2215.	2.9	4
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