Menghuai Wu

List of Publications by Year
in descending order

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178 papers	3,526 citations	126907 33 h-index	189892 50 g-index
194 all docs	194 docs citations	194 times ranked	838 citing authors

#	Article	IF	Citations
1	A three-phase model for mixed columnar-equiaxed solidification. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 1613-1631.	2.2	178
2	Modeling equiaxed solidification with melt convection and grain sedimentationâ€"I: Model description. Acta Materialia, 2009, 57, 5621-5631.	7.9	135
3	Simulation of macrosegregation in a 2.45-ton steel ingot using a three-phase mixed columnar-equiaxed model. International Journal of Heat and Mass Transfer, 2014, 72, 668-679.	4.8	126
4	Using a Three-Phase Deterministic Model for the Columnar-to-Equiaxed Transition. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 1465-1475.	2.2	108
5	Modeling of globular equiaxed solidification with a two-phase approach. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2002, 33, 3673-3683.	2.2	104
6	Modelling mixed columnar-equiaxed solidification with melt convection and grain sedimentation â€" Part I: Model description. Computational Materials Science, 2010, 50, 32-42.	3.0	99
7	Modeling equiaxed solidification with melt convection and grain sedimentationâ€"II. Model verification. Acta Materialia, 2009, 57, 5632-5644.	7.9	76
8	Influence of convection and grain movement on globular equiaxed solidification. International Journal of Heat and Mass Transfer, 2003, 46, 2819-2832.	4.8	72
9	Modelling mixed columnar-equiaxed solidification with melt convection and grain sedimentation â€" Part II: Illustrative modelling results and parameter studies. Computational Materials Science, 2010, 50, 43-58.	3.0	65
10	On Macrosegregation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 4854-4867.	2.2	65
11	Using a Two-Phase Columnar Solidification Model to Study the Principle of Mechanical Soft Reduction in Slab Casting. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 945-964.	2.2	62
12	Modeling the columnar-to-equiaxed transition with a three-phase Eulerian approach. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 413-414, 109-114.	5.6	61
13	Review on Modeling and Simulation of Electroslag Remelting. Steel Research International, 2018, 89, 1700100.	1.8	61
14	A four phase model for the macrosegregation and shrinkage cavity during solidification of steel ingot. Applied Mathematical Modelling, 2017, 41, 102-120.	4.2	58
15	Influence of argon gas bubbles and non-metallic inclusions on the flow behavior in steel continuous casting. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 413-414, 115-120.	5.6	55
16	Modeling of marangoni-induced droplet motion and melt convection during solidification of hypermonotectic alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 3009-3019.	2.2	51
17	Simulation of channel segregation using a two-phase columnar solidification model â€" Part I: Model description and verification. Computational Materials Science, 2012, 55, 407-418.	3.0	51
18	Shape and stability of the slag/melt interface in a small dc ESR process. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 413-414, 129-134.	5.6	50

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19	On the Formation of Centreline Segregation in Continuous Slab Casting of Steel due to Bulging and/or Feeding. Steel Research International, 2010, 81, 660-667.	1.8	50
20	Modeling of Multiscale and Multiphase Phenomena in Materials Processing. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 36-43.	2.1	50
21	Solidification and Particle Entrapment during Continuous Casting of Steel. Steel Research International, 2008, 79, 599-607.	1.8	49
22	Application of laser measuring, numerical simulation and rapid prototyping to titanium dental castings. Dental Materials, 2001, 17, 102-108.	3.5	48
23	On the Importance of Electric Currents Flowing directly into the Mould during an ESR Process. Steel Research International, 2008, 79, 632-636.	1.8	48
24	Modeling the Effects of Strand Surface Bulging and Mechanical Softreduction on the Macrosegregation Formation in Steel Continuous Casting. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 1415-1434.	2.2	47
25	Simulation of channel segregation using a two-phase columnar solidification model â€“ Part II: Mechanism and parameter study. Computational Materials Science, 2012, 55, 419-429.	3.0	46
26	Modeling diffusion-governed solidification of ternary alloys â€“ Part 1: Coupling solidification kinetics with thermodynamics. Computational Materials Science, 2013, 79, 830-840.	3.0	45
27	A Dynamic Mesh-Based Approach to Model Melting and Shape of an ESR Electrode. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 2049-2061.	2.1	45
28	Simulation of the Electric Signal During the Formation and Departure of Droplets in the Electroslag Remelting Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 1427-1434.	2.1	44
29	A transient model for nozzle clogging. Powder Technology, 2018, 329, 181-198.	4.2	44
30	Analysis of macrosegregation formation and columnar-to-equiaxed transition during solidification of Al-4wt.%Cu ingot using a 5-phase model. Journal of Crystal Growth, 2015, 417, 65-74.	1.5	42
31	On Melting of Electrodes during Electro-Slag Remelting. ISIJ International, 2014, 54, 1621-1628.	1.4	40
32	Numerical Investigation of Shell Formation in Thin Slab Casting of Funnel-Type Mold. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 1024-1037.	2.1	39
33	Modelling the solidification of hypermonotectic alloys. Modelling and Simulation in Materials Science and Engineering, 2003, 11, 755-769.	2.0	33
34	Volume-Averaged Modeling of Multiphase Flow Phenomena during Alloy Solidification. Metals, 2019, 9, 229.	2.3	33
35	On the Formation of Macrosegregations in Steel Ingot Castings. Steel Research International, 2008, 79, 637-644.	1.8	30
36	Modeling diffusion-governed solidification of ternary alloys â€“ Part 2: Macroscopic transport phenomena and macrosegregation. Computational Materials Science, 2014, 92, 267-285.	3.0	30

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37	Use of a mixed columnar-equiaxed solidification model to analyse the formation of as-cast structure and macrosegregation in a Sn-10â€ wt% Pb benchmark experiment. International Journal of Heat and Mass Transfer, 2018, 122, 939-953.	4.8	30
38	Physical and Numerical Modeling of Exposed Slag Eye in Continuous Casting Mold using Eulerâ€“Euler Approach. Steel Research International, 2019, 90, 1800117.	1.8	30
39	Effect of an Electrically-Conducting Wall on Transient Magnetohydrodynamic Flow in a Continuous-Casting Mold with an Electromagnetic Brake. Metals, 2018, 8, 609.	2.3	27
40	Electric Current Distribution During Electromagnetic Braking in Continuous Casting. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 2811-2828.	2.1	26
41	Influence of Phase-Transport Phenomena on Macrosegregation and Structure Formation During Solidification. Advanced Engineering Materials, 2003, 5, 62-66.	3.5	25
42	Review of Ammonium Chlorideâ€“Water Solution Properties. Journal of Chemical & Engineering Data, 2018, 63, 3170-3183.	1.9	25
43	Prediction of the As-Cast Structure of Al-4.0ÂWtÂPctÂCu Ingots. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 2895-2903.	2.2	23
44	On Validity of Axisymmetric Assumption for Modeling an Industrial Scale Electroslag Remelting Process. Advanced Engineering Materials, 2016, 18, 224-230.	3.5	23
45	A Comprehensive Analysis of Macrosegregation Formation During Twin-Roll Casting. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 1334-1350.	2.1	23
46	Computer aided prediction and control of shrinkage porosity in titanium dental castings. Dental Materials, 1998, 14, 321-328.	3.5	22
47	A Parametric Study of the Vacuum Arc Remelting (VAR) Process: Effects of Arc Radius, Side-Arcing, and Gas Cooling. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 222-235.	2.1	22
48	Physical and numerical simulation of mixed columnar-equiaxed solidification during cold strip feeding in continuous casting. International Journal of Heat and Mass Transfer, 2021, 173, 121237.	4.8	22
49	Experimental and numerical analysis of free surface deformation in an electrically driven flow. Experimental Thermal and Fluid Science, 2015, 62, 192-201.	2.7	21
50	Generation of Reverse Meniscus Flow by Applying An Electromagnetic Brake. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 3193-3207.	2.1	21
51	Incorporation of fragmentation into a volume average solidification model. Modelling and Simulation in Materials Science and Engineering, 2018, 26, 015004.	2.0	20
52	A way of coupling ternary phase diagram information with multiphase solidification simulations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 413-414, 485-489.	5.6	19
53	Modelling the thermosolutal convection, shrinkage flow and grain movement of globular equiaxed solidification using a three phase model. International Journal of Cast Metals Research, 2005, 18, 221-228.	1.0	19
54	3D Lattice Boltzmann flow simulations through dendritic mushy zones. Engineering Analysis With Boundary Elements, 2014, 45, 29-35.	3.7	19

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55	Modeling of the as-cast structure and macrosegregation in the continuous casting of a steel billet: Effect of M-EMS. Journal of Materials Processing Technology, 2022, 301, 117434.	6.3	18
56	Simulation of Asâ€€Cast Steel Ingots. Steel Research International, 2018, 89, 1700037.	1.8	17
57	Calculation Accuracy and Efficiency of a Transient Model for Submerged Entry Nozzle Clogging. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 1428-1443.	2.1	17
58	Scale-Adaptive Simulation of Transient Two-Phase Flow in Continuous-Casting Mold. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 543-554.	2.1	17
59	A Numerical Study on the Influence of the Frequency of the Applied AC Current on the Electroslag Remelting Process. , 2013, , 13-19.		17
60	Mathematical Modeling of the Early Stage of Clogging of the SEN During Continuous Casting of Ti-ULC Steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 4167-4178.	2.1	17
61	Reformulation of time averaged Joule heating in presence of temperature fluctuations. International Journal of Cast Metals Research, 2009, 22, 155-159.	1.0	16
62	Simulation of Horizontal Centrifugal Casting: Mold Filling and Solidification. ISIJ International, 2014, 54, 266-274.	1.4	16
63	Heat Transfer Coefficient at Cast-Mold Interface During Centrifugal Casting: Calculation of Air Gap. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 1421-1433.	2.1	16
64	A multiphysics model of the electroslag rapid remelting (ESRR) process. Applied Thermal Engineering, 2018, 130, 1062-1069.	6.0	16
65	Contribution of an Electro-Vortex Flow to Primary, Secondary, and Tertiary Electric Current Distribution in an Electrolyte. Journal of the Electrochemical Society, 2018, 165, E604-E615.	2.9	16
66	Toward Modeling of Electrochemical Reactions during Electroslag Remelting (ESR) Process. Steel Research International, 2017, 88, 1700011.	1.8	15
67	Importance of Melt Flow in Solidifying Mushy Zone~!2009-09-25~!2010-02-26~!2010-04-16~!. Open Transport Phenomena Journal, 2010, 2, 16-23.	0.5	15
68	Numerical analysis of macrosegregation in vertically solidified Pb-Sn test castings â€“ Part II: Equiaxed solidification. Computational Materials Science, 2016, 124, 456-470.	3.0	14
69	Impact of hydrodynamics on growth and morphology of faceted crystals. Journal of Crystal Growth, 2020, 541, 125667.	1.5	14
70	A Numerical Study on the Influence of an Axial Magnetic Field (AMF) on Vacuum Arc Remelting (VAR) Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 3354-3362.	2.1	14
71	Influence of forced convection on solidification and remelting in the developing mushy zone. IOP Conference Series: Materials Science and Engineering, 2016, 117, 012045.	0.6	13
72	Numerical analysis of macrosegregation in vertically solidified Pb-Sn test castings â€“ Part I: Columnar solidification. Computational Materials Science, 2016, 124, 444-455.	3.0	13

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73	Confrontation of the Ohmic approach with the ionic transport approach for modeling the electrical behavior of an electrolyte. Ionics, 2018, 24, 2157-2165.	2.4	13
74	Two-phase viscoplastic model for the simulation of twin roll casting. Journal of Materials Processing Technology, 2020, 286, 116814.	6.3	13
75	Numerical study of porosity in titanium dental castings. Journal of Materials Science: Materials in Medicine, 1999, 10, 519-525.	3.6	12
76	Multiphase/multicomponent modeling of solidification processes: coupling solidification kinetics with thermodynamics. International Journal of Materials Research, 2008, 99, 618-625.	0.3	12
77	Validation of a Multiphase Model for the Macrosegregation and Primary Structure of High-Grade Steel Ingots. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2009, 40, 305-311.	2.1	12
78	Observation of flow regimes and transitions during a columnar solidification experiment. Fluid Dynamics Research, 2014, 46, 041424.	1.3	12
79	Simulation in Metallurgical Processing: Recent Developments and Future Perspectives. Jom, 2016, 68, 2191-2197.	1.9	12
80	On Modelling Parasitic Solidification Due to Heat Loss at Submerged Entry Nozzle Region of Continuous Casting Mold. Metals, 2021, 11, 1375.	2.3	12
81	Modeling of the flow-solidification interaction in thin slab casting. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012014.	0.6	11
82	Simultaneous Observation of Melt Flow and Motion of Equiaxed Crystals During Solidification Using a Dual Phase Particle Image Velocimetry Technique. Part I: Stage Characterization of Melt Flow and Equiaxed Crystal Motion. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 650-660.	2.2	11
83	Role of Solidification in Submerged Entry Nozzle Clogging During Continuous Casting of Steel. Steel Research International, 2020, 91, 2000230.	1.8	11
84	Simulation of casting, homogenization, and hot rolling: consecutive process and microstructure modelling for aluminium sheet production. Modelling and Simulation in Materials Science and Engineering, 2004, 12, S19-S31.	2.0	10
85	Modelling macrosegregation in a 2.45 ton steel ingot. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012091.	0.6	10
86	Simultaneous Observation of Melt Flow and Motion of Equiaxed Crystals During Solidification Using a Dual Phase Particle Image Velocimetry Technique. Part II: Relative Velocities. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 661-668.	2.2	10
87	Simulation of Crystal Sedimentation and Viscoplastic Behavior of Sedimented Equiaxed Mushy Zones. Transactions of the Indian Institute of Metals, 2015, 68, 1087-1094.	1.5	10
88	Massive Formation of Equiaxed Crystals by Avalanches of Mushy Zone Segments. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 2927-2931.	2.2	10
89	A Water Experiment Benchmark to Evaluate Numerical Models for the Motion of Particles in Continuous Casting Tundish. Steel Research International, 2017, 88, 1600276.	1.8	10
90	Modelling melting and grain destruction phenomena during globular equiaxed solidification. Applied Mathematical Modelling, 2021, 97, 821-838.	4.2	10

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91	Norton-Hoff model for deformation of growing solid shell of thin slab casting in funnel-shape mold. Journal of Iron and Steel Research International, 2022, 29, 88-102.	2.8	10
92	Numerical simulation of the casting process of titanium tooth crowns and bridges. Journal of Materials Science: Materials in Medicine, 2001, 12, 485-490.	3.6	9
93	Evaluation of a mixed columnar-equiaxed solidification model with laboratory castings. IOP Conference Series: Materials Science and Engineering, 2012, 27, 012018.	0.6	9
94	An Experimental Benchmark of Non-metallic Inclusion Distribution Inside a Heavy Continuous-Casting Slab. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 1370-1379.	2.2	9
95	Study of spatial phase separation during solidification and its impact on the formation of macrosegregations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 413-414, 192-199.	5.6	8
96	An idea to treat the dendritic morphology in mixed columnarâ€“equiaxed solidification. International Journal of Cast Metals Research, 2009, 22, 323-326.	1.0	8
97	On the Coupling Mechanism of Equiaxed Crystal Generation with the Liquid Flow Driven by Natural Convection During Solidification. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 1708-1724.	2.2	8
98	Modeling of the Twin-Roll Casting Process: Transition from Casting to Rolling. Transactions of the Indian Institute of Metals, 2018, 71, 2645-2649.	1.5	8
99	Modelling viscoplastic behavior of solidifying shell under applied electromagnetic breaking during continuous casting. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012015.	0.6	8
100	Directional Solidification of AlSi7Fe1 Alloy Under Forced Flow Conditions: Effect of Intermetallic Phase Precipitation and Dendrite Coarsening. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 3007-3022.	2.2	8
101	Bridging Capillary-Driven Fragmentation and Grain Transport with Mixed Columnar-Equiaxed Solidification. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 4609-4622.	2.2	8
102	Numerical modeling and experimental validation of the effect of arc distribution on the as-solidified Ti64 ingot in vacuum arc remelting (VAR) process. Journal of Materials Research and Technology, 2022, 19, 183-193.	5.8	8
103	Numerical simulation of the casting process of titanium removable partial denture frameworks. Journal of Materials Science: Materials in Medicine, 2002, 13, 301-306.	3.6	7
104	Application of Microprobe Analysis to the Reconstruction and Characterization of Dendritic Structures. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 607-616.	2.2	7
105	Using four-phase Eulerian volume averaging approach to model macrosegregation and shrinkage cavity. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012006.	0.6	7
106	On modelling viscoplastic behavior of the solidifying shell in the funnel-type continuous casting mold. IOP Conference Series: Materials Science and Engineering, 2019, 529, 012081.	0.6	7
107	A Numerical Investigation on the Electrochemical Behavior of CaO and Al2O3 in the ESR Slags. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 871-879.	2.1	7
108	A volume of fluid (VOF) method to model shape change during electrodeposition. Electrochemistry Communications, 2020, 112, 106675.	4.7	7

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109	Flow-solidification interaction: A numerical study on solidification of NH4Cl â€“ 70Âwt.%H2O solution in a water-cooled mould with a large sample thickness. International Journal of Heat and Mass Transfer, 2021, 164, 120566.	4.8	7
110	Modeling Asymmetric Flow in the Thinâ€Slab Casting Mold Under Electromagnetic Brake. Steel Research International, 2022, 93, .	1.8	7
111	Reverse flows and flattening of a submerged jet under the action of a transverse magnetic field. Physical Review Fluids, 2021, 6, .	2.5	7
112	Modeling electrochemical transport of ions in the molten CaF2â€“FeO slag operating under a DC voltage. Applied Mathematics and Computation, 2019, 357, 357-373.	2.2	6
113	Two-phase modelling of equiaxed crystal sedimentation and thermomechanic stress development in the sedimented packed bed. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012102.	0.6	6
114	Numerical simulation of porosity-free titanium dental castings. European Journal of Oral Sciences, 1999, 107, 307-315.	1.5	5
115	Exploration of the double-diffusive convection during dendritic solidification with a combined volume-averaging and cellular-automaton model. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012115.	0.6	5
116	Benchmark experiments and numerical modelling of the columnar-equiaxed dendritic growth in the transparent alloy Neopentylglycol-(d)Camphor. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012086.	0.6	5
117	Premature melt solidification during mold filling and its influence on the as-cast structure. Frontiers of Mechanical Engineering, 2018, 13, 53-65.	4.3	5
118	Macrosegregation Formation in an Alâ€“Si Casting Sample with Cross-sectional Change During Directional Solidification. Transactions of the Indian Institute of Metals, 2018, 71, 2639-2643.	1.5	5
119	A Dynamic Mesh Method to Model Shape Change during Electrodeposition. Journal of the Electrochemical Society, 2019, 166, D521-D529.	2.9	5
120	Numerical study of the role of mush permeability in the solidifying mushy zone under forced convection. Materials Today Communications, 2020, 22, 100842.	1.9	5
121	Contribution of the Mould Current to the Ingot Surface Quality in the Electroslag Remelting Process. , 2013, , 95-99.		5
122	Variation of the Resistance During the Electrode Movement in the Electroslag Remelting Process. , 2013, , 145-150.		5
123	Tornados and cyclones driven by Magneto-hydrodynamic forces. European Journal of Mechanics, B/Fluids, 2022, 94, 90-105.	2.5	5
124	Experimental Evaluation of MHD Modeling of EMS During Continuous Casting. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2022, 53, 2166-2181.	2.1	5
125	The Role of Mold Electromagnetic Stirring in the Dissipation of Superheat during the Continuous Casting of Billets. Steel Research International, 2022, 93, .	1.8	5
126	Numerical investigation of grid influence on formation of macrosegregation. International Journal of Cast Metals Research, 2009, 22, 175-178.	1.0	4

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127	Simulation of the as-cast structure of Al-4.0wt.%Cu ingots with a 5-phase mixed columnar-equiaxed solidification model. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012075.	0.6	4
128	A scale adaptive dendritic envelope model of solidification at mesoscopic scales. IOP Conference Series: Materials Science and Engineering, 2015, 84, 012032.	0.6	4
129	Assessment of Different Turbulence Models for the Motion of Non-metallic Inclusion in Induction Crucible Furnace. IOP Conference Series: Materials Science and Engineering, 2016, 143, 012026.	0.6	4
130	Simulation of Non-metallic Inclusion Deposition and Clogging of Nozzle. Minerals, Metals and Materials Series, 2018, , 149-158.	0.4	4
131	A 2D Multiphase Model of Drop Behavior during Electroslag Remelting. Metals, 2020, 10, 490.	2.3	4
132	Toward a Simplified Arc Impingement Model in a Direct-Current Electric Arc Furnace. Metals, 2021, 11, 1482.	2.3	4
133	Experimental and numerical investigations of NH4Cl solidification in a mould Part 2: numerical results. International Journal of Cast Metals Research, 2009, 22, 172-174.	1.0	3
134	3D simulation of interdendritic flow through a Al-18wt.%Cu structure captured with X-ray microtomography. IOP Conference Series: Materials Science and Engineering, 2012, 27, 012016.	0.6	3
135	Shallow water model for horizontal centrifugal casting. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012032.	0.6	3
136	A 3-phase model for mixed columnar-equiaxed solidification in DC casting of bronze. IOP Conference Series: Materials Science and Engineering, 2012, 27, 012015.	0.6	3
137	An approximate Riemann solver for shallow water equations and heat advection in horizontal centrifugal casting. Applied Mathematics and Computation, 2015, 267, 179-194.	2.2	3
138	Numerical Study about the Influence of Small Casting Speed Variations on the Metallurgical Length in Continuous Casting of Steel Slabs. Steel Research International, 2015, 86, 184-188.	1.8	3
139	Transient melting of an ESR electrode. IOP Conference Series: Materials Science and Engineering, 2016, 143, 012003.	0.6	3
140	Simulation of macrosegregation in a large vertical continuous casting of steel. IOP Conference Series: Materials Science and Engineering, 2016, 143, 012032.	0.6	3
141	Modelling Al-4wt.%Cu as-cast structure using equiaxed morphological parameters deduced from in-situ synchrotron X-ray radiography. IOP Conference Series: Materials Science and Engineering, 2016, 117, 012010.	0.6	3
142	A GPU solver for symmetric positive-definite matrices vs. traditional codes. Computers and Mathematics With Applications, 2019, 78, 2933-2943.	2.7	3
143	Geometrical effect on macrosegregation formation during unidirectional solidification of Alâ€“Si alloy. Journal of Materials Processing Technology, 2021, 288, 116913.	6.3	3
144	Validation of a capillary-driven fragmentation model during mixed columnar-equiaxed solidification with melt convection and grain transport. Materialia, 2022, 23, 101462.	2.7	3

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145	Grain Sedimentation and Melt Convection Phenomena During Globular Equiaxed Solidification. , 2005, , 204-212.		2
146	Simultaneous observation of melt flow and motion of equiaxed crystals during solidification using a dual phase Particle Image Velocimetry technique. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012042.	0.6	2
147	Process Simulation for the Metallurgical Industry: New Insights into Invisible Phenomena. BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik, 2013, 158, 184-188.	1.0	2
148	Advanced Process Simulation of Solidification and Melting. BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik, 2014, 159, 30-40.	1.0	2
149	Modified Shallow Water Equations With Application for Horizontal Centrifugal Casting of Rolls. Journal of Fluids Engineering, Transactions of the ASME, 2015, 137, .	1.5	2
150	A numerical study on electrochemical transport of ions in calcium fluoride slag. IOP Conference Series: Materials Science and Engineering, 2016, 143, 012008.	0.6	2
151	Numerical investigation of solidification and CET of the transparent alloy NPG-37.5 wt.% DC in microgravity â€œTRACEâ€•experiment. IOP Conference Series: Materials Science and Engineering, 2016, 117, 012011.	0.6	2
152	Discussion on Modeling Capability for Macrosegregation. High Temperature Materials and Processes, 2017, 36, 531-539.	1.4	2
153	Impact of crystal sedimentation and viscoplastic semi-solid dynamics on macrosegregation. IOP Conference Series: Materials Science and Engineering, 2020, 861, 012042.	0.6	2
154	Hydrodynamically enhanced electrochemical mass transfer on the surface of an electrically conductive droplet. Heat and Mass Transfer, 2021, 57, 1697-1705.	2.1	2
155	Using a Three-Phase Mixed Columnar-Equiaxed Solidification Model to Study Macrosegregation in Ingot Castings: Perspectives and Limitations. , 2013, , 171-180.		2
156	Thermo-mechanical modeling of dendrite deformation in continuous casting of steel. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012058.	0.6	2
157	Investigation of effect of electrode polarity on electrochemistry and magnetohydrodynamics using tertiary current distribution in electroslag remelting process. Journal of Iron and Steel Research International, 2021, 28, 1551-1561.	2.8	2
158	Numerical study of the influence of mold filling conditions on the as-cast structure of Al-4 wt.% Cu ingots. , 2012, , .		1
159	Recent Developments and Future Perspectives in Simulation of Metallurgical Processes. BHM-Zeitschrift Fuer Rohstoffe Geotechnik Metallurgie Werkstoffe Maschinen-Und Anlagentechnik, 2015, 160, 507-512.	1.0	1
160	An attempt to model electrode change during the ESR process. IOP Conference Series: Materials Science and Engineering, 2016, 143, 012006.	0.6	1
161	Free-surface flow in horizontally rotating cylinder: experiment and simulation. IOP Conference Series: Materials Science and Engineering, 2016, 143, 012036.	0.6	1
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