Baokuan Li

List of Publications by Year
in descending order

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117	2,459	172207	288905
papers	citations	29 h-index	40 g-index

118	118	118	757
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Modeling of Three-phase Flows and Behavior of Slag/Steel Interface in an Argon Gas Stirred Ladle. ISIJ International, 2008, 48, 1704-1711.	0.6	89
2	Transient Asymmetric Flow and Bubble Transport Inside a Slab Continuous-Casting Mold. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 675-697.	1.0	82
3	Modeling of molten metal flow in a continuous casting process considering the effects of argon gas injection and static magnetic-field application. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2000, 31, 1491-1503.	1.0	66
4	Water Model and CFD-PBM Coupled Model of Gas-Liquid-Slag Three-Phase Flow in Ladle Metallurgy. ISIJ International, 2015, 55, 1337-1346.	0.6	63
5	A General Coupled Mathematical Model of Electromagnetic Phenomena, Two-Phase Flow, and Heat Transfer in Electroslag Remelting Process Including Conducting in the Mold. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 2425-2441.	1.0	60
6	Vortexing Flow Patterns in a Water Model of Slab Continuous Casting Mold. ISIJ International, 2005, 45, 30-36.	0.6	57
7	Population Balance Modeling of Polydispersed Bubbly Flow in Continuous-Casting Using Multiple-Size-Group Approach. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 406-420.	1.0	55
8	Modeling of spout-fluidized beds and investigation of drag closures using OpenFOAM. Powder Technology, 2017, 305, 364-376.	2.1	55
9	Current, Magnetic Field and Joule Heating in Electroslag Remelting Processes. ISIJ International, 2012, 52, 1289-1295.	0.6	54
10	Large Eddy Simulation of Bubbly Flow and Slag Layer Behavior in Ladle with Discrete Phase Model (DPM)â€“Volume of Fluid (VOF) Coupled Model. Jom, 2015, 67, 1459-1467.	0.9	49
11	Scale-adaptive analysis of Euler-Euler large eddy simulation for laboratory scale dispersed bubbly flows. Chemical Engineering Journal, 2018, 338, 465-477.	6.6	49
12	Modeling of Gas-Steel-Slag Three-Phase Flow in Ladle Metallurgy: Part I. Physical Modeling. ISIJ International, 2017, 57, 1971-1979.	0.6	46
13	Material and energy flows in rotary kiln-electric furnace smelting of ferronickel alloy with energy saving. Applied Thermal Engineering, 2016, 109, 542-559.	3.0	45
14	Numerical investigation of desulfurization behavior in electroslag remelting process. International Journal of Heat and Mass Transfer, 2017, 104, 943-951.	2.5	44
15	Modeling of Gas-Steel-Slag Three-Phase Flow in Ladle Metallurgy: Part II. Multi-scale Mathematical Model. ISIJ International, 2017, 57, 1980-1989.	0.6	44
16	Modeling of Electromagnetic Field and Liquid Metal Pool Shape in an Electroslag Remelting Process with Two Series-Connected Electrodes. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 1122-1132.	1.0	41
17	Large Eddy Simulation of Transient Flow, Solidification, and Particle Transport Processes in Continuous-Casting Mold. Jom, 2014, 66, 1184-1196.	0.9	41
18	Numerical Estimation of the Effect of the Magnetic Field Application on the Motion of Inclusion in Continuous Casting of Steel. ISIJ International, 2003, 43, 923-931.	0.6	39

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19	Investigation of Bubble-Slag Layer Behaviors with Hybrid Eulerianâ€“Lagrangian Modeling and Large Eddy Simulation. Jom, 2016, 68, 2160-2169.	0.9	38
20	Transient motion of inclusion cluster in vertical-bending continuous casting caster considering heat transfer and solidification. Powder Technology, 2016, 287, 315-329.	2.1	36
21	Large-Eddy Simulation of Transient Horizontal Gasâ€“Liquid Flow in Continuous Casting Using Dynamic Subgrid-Scale Model. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 1833-1849.	1.0	36
22	Implementation and validation of a volume-of-fluid and discrete-element-method combined solver in OpenFOAM. Particuology, 2018, 39, 109-115.	2.0	34
23	Three-dimensional magnetohydrodynamic two-phase flow and heat transfer analysis in electroslag remelting process. Applied Thermal Engineering, 2015, 80, 178-186.	3.0	33
24	Large Eddy Simulation of Transient Flow and Inclusions Transport in Continuous Casting Mold under Different Electromagnetic Brakes. Jom, 2016, 68, 2180-2190.	0.9	33
25	Modeling of Quasi-Four-Phase Flow in Continuous Casting Mold Using Hybrid Eulerian and Lagrangian Approach. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 1248-1267.	1.0	33
26	Modeling of biased flow phenomena associated with the effects of static magnetic-field application and argon gas injection in slab continuous casting of steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2001, 32, 1053-1066.	1.0	32
27	Multiple Size Group Modeling of Polydispersed Bubbly Flow in the Mold: An Analysis of Turbulence and Interfacial Force Models. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 933-952.	1.0	32
28	Evolution of Desulfurization and Characterization of Inclusions in Dual Alloy Ingot Processed by Electroslag Remelting. Steel Research International, 2017, 88, 1700058.	1.0	32
29	Numerical investigation on the effect of fill ratio on macrosegregation in electroslag remelting ingot. Applied Thermal Engineering, 2015, 91, 116-125.	3.0	30
30	Physical and Numerical Modeling of Exposed Slag Eye in Continuous Casting Mold using Eulerâ€“Euler Approach. Steel Research International, 2019, 90, 1800117.	1.0	30
31	Analysis of Transient Transport and Entrapment of Particle in Continuous Casting Mold. ISIJ International, 2014, 54, 2324-2333.	0.6	29
32	Large Eddy Simulation of Multi-Phase Flow and Slag Entrapment in a Continuous Casting Mold. Metals, 2019, 9, 7.	1.0	29
33	Numerical modeling of multiphase flow in gas stirred ladles: From a multiscale point of view. Powder Technology, 2020, 373, 14-25.	2.1	29
34	Population balance modeling of polydispersed bubbly flow in continuous casting using average bubble number density approach. Powder Technology, 2017, 319, 139-147.	2.1	27
35	A Coupled Cellular Automatonâ€“Finite-Element Mathematical Model for the Multiscale Phenomena of Electroslag Remelting H13 Die Steel Ingot. Jom, 2014, 66, 1153-1165.	0.9	26
36	Numerical Study on the Effect of Electrode Polarity on Desulfurization in Direct Current Electroslag Remelting Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 2649-2663.	1.0	26

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37	Simulation of Magnetohydrodynamic Multiphase Flow Phenomena and Interface Fluctuation in Aluminum Electrolytic Cell with Innovative Cathode. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 272-294.	1.0	25
38	A three-phase comprehensive mathematical model of desulfurization in electroslag remelting process. Applied Thermal Engineering, 2017, 114, 874-886.	3.0	25
39	Numerical analysis of inclusion motion behavior in electroslag remelting process. International Journal of Heat and Mass Transfer, 2018, 125, 1333-1344.	2.5	25
40	Experimental investigation of trajectories, velocities and size distributions of bubbles in a continuous-casting mold. Powder Technology, 2021, 387, 325-335.	2.1	23
41	Predicting transfer behavior of oxygen and sulfur in electroslag remelting process. Applied Thermal Engineering, 2018, 129, 378-388.	3.0	22
42	Sensitivity analysis of particle contact parameters for DEM simulation in a rotating drum using response surface methodology. Powder Technology, 2020, 362, 604-614.	2.1	22
43	Instability and Periodicity of Asymmetrical Flow in a Funnel Thin Slab Continuous Casting Mold. ISIJ International, 2015, 55, 805-813.	0.6	21
44	Numerical study of the solid flow behavior in a rotating drum based on a multiphase CFD model accounting for solid frictional viscosity and wall friction. Powder Technology, 2020, 361, 87-98.	2.1	21
45	Cleanliness improvement and microstructure refinement of ingot processed by vacuum electroslag remelting. Journal of Materials Research and Technology, 2020, 9, 1619-1630.	2.6	21
46	Large eddy simulation of unsteady shedding behavior in cavitating flows with time-average validation. Ocean Engineering, 2016, 125, 1-11.	1.9	19
47	Effect of vertical length on asymmetric flow and inclusion transport in vertical-bending continuous caster. Powder Technology, 2018, 323, 403-415.	2.1	19
48	Impact of Electromagnetic Stirring on Grain Structure of Electroslag Remelting Ingot. Jom, 2015, 67, 1821-1829.	0.9	18
49	Flow and heat transfer of parallel multiple jets obliquely impinging on a flat surface. Applied Thermal Engineering, 2018, 133, 588-603.	3.0	18
50	Numerical investigation on species transport in electroslag remelting dual alloy ingot. Applied Thermal Engineering, 2016, 103, 419-427.	3.0	17
51	Energy and exergy analysis of an annular shaft kiln with opposite burners. Applied Thermal Engineering, 2017, 119, 629-638.	3.0	17
52	Three-Dimensional Mathematical Model of Oxygen Transport Behavior in Electroslag Remelting Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 709-722.	1.0	17
53	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.	1.0	17
54	Multiscale Mathematical Model with Discreteâ€“Continuum Transition for Gasâ€“Liquidâ€“Slag Three-Phase Flow in Gas-Stirred Ladles. Jom, 2018, 70, 2900-2908.	0.9	16

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55	Numerical Investigation and Experimental Validation of Motion and Distribution of Nonmetallic Inclusions in Argon Protection Electroslag Remelting Process. Metals, 2018, 8, 392.	1.0	16
56	Combined Effects of EMBr and SEMS on Melt Flow and Solidification in a Thin Slab Continuous Caster. Metals, 2021, 11, 948.	1.0	16
57	Effect of Rotating Electrode on Magnetohydrodynamic Flow and Heat Transfer in Electroslag Remelting Process. ISIJ International, 2014, 54, 2821-2830.	0.6	15
58	A Three-Dimensional Comprehensive Model for Prediction of Macrosegregation in Electroslag Remelting Ingot. ISIJ International, 2015, 55, 1010-1016.	0.6	15
59	Large eddy simulation of transient turbulent flow and mixing process in an SCR denitration system. Chemical Engineering Research and Design, 2019, 141, 279-289.	2.7	15
60	Comparison of Thermo-electromagneto-hydrodynamic Multi-physical Fields in ESR Furnace with Vibrating and Traditional Electrodes. ISIJ International, 2017, 57, 91-99.	0.6	14
61	Numerical study on the removal and distribution of non-metallic inclusions in electroslag remelting process. International Journal of Heat and Mass Transfer, 2019, 135, 1300-1311.	2.5	14
62	Large Eddy Simulation of Electromagnetic Threeâ€Phase Flow in a Round Bloom Considering Solidified Shell. Steel Research International, 2019, 90, 1800133.	1.0	14
63	Numerical analysis of size-induced particle segregation in rotating drums based on Eulerian continuum approach. Powder Technology, 2020, 376, 80-92.	2.1	14
64	An assessment on the performance of sub-grid scale models of large eddy simulation in modeling bubbly flows. Powder Technology, 2020, 374, 470-481.	2.1	14
65	Motion behavior of micro-bubbles in a delta shape tundish using impact pad. Powder Technology, 2020, 367, 296-304.	2.1	14
66	Effect of Anode Change on Heat Transfer and Magneto-hydrodynamic Flow in Aluminum Reduction Cell. Jom, 2016, 68, 610-622.	0.9	13
67	A coupled mathematical model of oxygen transfer in electroslag remelting process. International Journal of Heat and Mass Transfer, 2018, 120, 458-470.	2.5	13
68	A Multi-scale Mathematical Model of Growth and Coalescence of Bubbles Beneath the Anode in an Aluminum Reduction Cell. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 2821-2834.	1.0	13
69	Detection and Numerical Simulation of Nonâ€Metallic Inclusions in Continuous Casting Slab. Steel Research International, 2019, 90, 1800423.	1.0	13
70	Large Eddy Simulation on Flow Structure in Centrifugal Flow Tundish. ISIJ International, 2007, 47, 568-573.	0.6	12
71	Melting of Moving Strip during Steel Strip Feeding in Continuous Casting Process. Steel Research International, 2018, 89, 1700407.	1.0	12
72	Oxygen transport behavior and characteristics of nonmetallic inclusions during vacuum electroslag remelting. Vacuum, 2019, 164, 114-120.	1.6	12

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73	Investigation on the structure, fluoride vaporization and crystallization behavior of CaF2â€“CaOâ€“Al2O3â€“(SiO2) slag for electroslag remelting. Journal of Thermal Analysis and Calorimetry, 2020, 139, 923-931.	2.0	12
74	Evaluation of Slag Entrapment in Continuous Casting Mold Based on the LES-VOF-DPM Coupled Model. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 3246-3264.	1.0	12
75	LARGE EDDY SIMULATION FOR UNSTEADY TURBULENT FLOW IN THIN SLAB CONTINUOUS CASTING MOLD. Jinshu Xuebao/Acta Metallurgica Sinica, 2012, 48, 23.	0.3	12
76	Numerical Investigation of Segregation Evolution during the Vacuum Arc Remelting Process of Ni-Based Superalloy Ingots. Metals, 2021, 11, 2046.	1.0	12
77	Effect of current on solute transport in electroslag remelting dual alloy ingot. Applied Thermal Engineering, 2016, 101, 564-567.	3.0	11
78	Investigation of Heat Transfer and Magnetohydrodynamic Flow in Electroslag Remelting Furnace Using Vibrating Electrode. Jom, 2016, 68, 410-420.	0.9	11
79	Numerical Modeling of Fluid Flow, Heat Transfer and Arcâ€“Melt Interaction in Tungsten Inert Gas Welding. High Temperature Materials and Processes, 2017, 36, 427-439.	0.6	11
80	Effect of Current on Structure and Macrosegregation in Dual Alloy Ingot Processed by Electroslag Remelting. Metals, 2017, 7, 185.	1.0	11
81	Evaluation and synergy of material and energy in the smelting process of ferrochrome pellets in steel belt sintering-submerged arc furnace. Energy, 2019, 179, 792-804.	4.5	11
82	Effect of Current on Segregation and Inclusions Characteristics of Dual Alloy Ingot Processed by Electroslag Remelting. High Temperature Materials and Processes, 2019, 38, 207-218.	0.6	11
83	Modeling Inclusion Removal when Using Micro-bubble Swarm in a Full-Scale Tundish with an Impact Pad. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2022, 53, 526-536.	1.0	11
84	Effect of Slotted Anode on Gas Bubble Behaviors in Aluminum Reduction Cell. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 3161-3173.	1.0	10
85	Multiscale Simulation of Bubble Behavior in Aluminum Reduction Cell Using a Combined Discrete-Bubble-Modelâ€“Volume-of-Fluidâ€“Magnetohydrodynamical Method. Industrial & Engineering Chemistry Research, 2019, 58, 3407-3419.	1.8	10
86	Modeling of fluid flow, heat transfer and inclusion removal in electroslag remelting process with a rotating electrode. International Journal of Heat and Mass Transfer, 2020, 163, 120473.	2.5	10
87	Energy and exergy analyses of pellet smelting systems of cleaner ferrochrome alloy with multi-energy supply. Journal of Cleaner Production, 2021, 285, 124893.	4.6	10
88	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.	1.1	9
89	Numerical Investigation of Influence of Electrode Immersion Depth on Heat Transfer and Fluid Flow in Electroslag Remelting Process. Jom, 2016, 68, 3143-3149.	0.9	8
90	Effect of Static Magnetic Field Application on the Mass Transfer in Sequence Slab Continuous Casting Process. ISIJ International, 2001, 41, 844-849.	0.6	8

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91	Numerical simulation of multi-size bubbly flow in a continuous casting mold using population balance model. Powder Technology, 2022, 396, 224-240.	2.1	8
92	The Structural Evolution and Segregation in a Dual Alloy Ingot Processed by Electroslag Remelting. Metals, 2016, 6, 325.	1.0	7
93	Role of Electrode Rotation on Improvement of Metal Pool Profile in Electroslag Remelting Process. Metals, 2021, 11, 1675.	1.0	7
94	Numerical investigation on electromagnetism and heat transfer in electroslag remelting process with triple-electrode. International Journal of Precision Engineering and Manufacturing, 2015, 16, 2467-2474.	1.1	6
95	Effect of Power Control Function on Heat Transfer and Magnetohydrodynamic Two-Phase Flow in Electroslag Remelting Furnace. Jom, 2015, 67, 2705-2713.	0.9	6
96	Effect of Slag Thickness on Macrosegregation and Transition Zone Width of Electroslag Remelting Dual Alloy Ingot. Jom, 2016, 68, 397-400.	0.9	6
97	A coupled mathematical model and experimental validation of oxygen transport behavior in the electro-slag refining process. Journal of Applied Electrochemistry, 2017, 47, 445-456.	1.5	6
98	<i>In-situ</i> Analysis and Numerical Study of Inclusion Distribution in a Vertical-bending Caster. ISIJ International, 2018, 58, 2052-2061.	0.6	6
99	Effects of Contact Angle on Single and Multiscale Bubble Motions in the Aluminum Reduction Cell. Industrial & Engineering Chemistry Research, 2019, 58, 17568-17582.	1.8	6
100	Impact of Fill Ratio on Temperature Profile and Metal Bath Configuration in Electroslag Remelting Process With Vibrating Electrode. Steel Research International, 2019, 90, 1800092.	1.0	6
101	Experimental and numerical investigations on transient multiscale bubble behaviors in CuSO4 aqueous solution electrolysis cell. Chemical Engineering Journal, 2022, 428, 131182.	6.6	5
102	Numerical Simulation Study of Gas-Solid Heat Transfer and Decomposition Processes of Limestone Calcined with Blast Furnace Gas in a Parallel Flow Regenerative Lime Kiln. Materials, 2022, 15, 4024.	1.3	5
103	Numerical Investigation on the Impact of Anode Change on Heat Transfer and Fluid Flow in Aluminum Smelting Cells. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 1228-1236.	1.0	4
104	Modeling on Reduction Reaction of Metal Oxides for Submerged Arc Furnace in Ferrochrome Pellets Smelting Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 0, , 1.	1.0	4
105	Numerical Simulation on Motion Behavior of Inclusions in the Lab-Scale Electroslag Remelting Process with a Vibrating Electrode. Metals, 2021, 11, 1784.	1.0	4
106	Prediction of surface oxidation weight gain on 7.8 wt% Cr-containing stainless steel electrode during electroslag remelting. Materials at High Temperatures, 2019, 36, 212-219.	0.5	3
107	A Sequenceâ€Coupled Mathematical Model of Magnetoâ€Hydrodynamic Twoâ€Phase Flow and Heat Transfer in a Triplexâ€Electrode Electroslag Remelting Furnace. Steel Research International, 2019, 90, 1800481.	1.0	3
108	Numerical study on the effect of vacuum on oxygen transfer in electroslag remelting process. Vacuum, 2020, 172, 109069.	1.6	3

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109	Sequentially Coupled Simulation of Multiphysical Fields During Twin-Electrode Electroslag Remelting Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 2285-2297.	1.0	3
110	Single and Multiscale Bubble Motions Beneath an Inclined Downward-Facing Surface in the Aluminum Reduction Cell. Industrial & Engineering Chemistry Research, 2020, 59, 8403-8415.	1.8	3
111	Numerical simulation of multi-size bubbly flow in a continuous casting mold using an inhomogeneous multiple size group model. Powder Technology, 2022, 402, 117368.	2.1	3
112	Effect of Steel Multi-collector Bars on Current Density and Magnetohydrodynamic Stability in an Aluminum Reduction Cell. Minerals, Metals and Materials Series, 2018, , 565-572.	0.3	2
113	The Development and Application of a TFM for Dense Particle Flow and Mixing in Rotating Drums. Processes, 2022, 10, 234.	1.3	2
114	Effect of solidified slag on magnetohydrodynamic flow and heat transfer in electroslag remelting process. International Journal of Precision Engineering and Manufacturing, 2015, 16, 2193-2198.	1.1	1
115	Simulation of different gasâ€“solid flow regimes using a drag law derived from lattice Boltzmann simulations. Journal of Computational Multiphase Flows, 2018, 10, 202-214.	0.8	1
116	Bubble Formation by Short Plunging Jet in a Continuous Casting Tundish. Metals, 2020, 10, 1590.	1.0	1
117	Numerical analysis of wall shear stress in a rotating drum based on two fluid model. Powder Technology, 2022, 408, 117716.	2.1	1