

Sheng-ping He

List of Publications by Year in descending order

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73
papers

1,222
citations

331670

21
h-index

454955

30
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76
all docs

76
docs citations

76
times ranked

479
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular dynamics simulation of the structure and properties for the CaO-SiO ₂ and CaO-Al ₂ O ₃ systems. Journal of Non-Crystalline Solids, 2015, 411, 145-151.	3.1	74
2	Structural and viscosity properties of CaO-SiO ₂ -Al ₂ O ₃ -FeO slags based on molecular dynamic simulation. Journal of Non-Crystalline Solids, 2016, 450, 23-31.	3.1	67
3	Study on Properties of Alumina-Based Mould Fluxes for High-Al Steel Slab Casting. Steel Research International, 2012, 83, 1194-1202.	1.8	63
4	Mineral Change of Philippine and Indonesia Nickel Lateritic Ore during Sintering and Mineralogy of Their Sinter. ISIJ International, 2010, 50, 380-385.	1.4	44
5	Investigation of the Air-Argon-Steel-Slag Flow in an Industrial RH Reactor with VOF-DPM Coupled Model. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 2176-2186.	2.1	42
6	Properties of High Basicity Mold Fluxes for Peritectic Steel Slab Casting. Journal of Iron and Steel Research International, 2012, 19, 39-45.	2.8	40
7	Molecular dynamics simulations of the structural properties of Al ₂ O ₃ -based binary systems. Journal of Non-Crystalline Solids, 2016, 435, 17-26.	3.1	35
8	Effect of Fluorine on the Structure of High Al ₂ O ₃ -Bearing System by Molecular Dynamics Simulation. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 2005-2013.	2.1	34
9	Thermodynamics of Complex Sulfide Inclusion Formation in Ca-Treated Al-Killed Structural Steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 2549-2557.	2.1	33
10	Mixing behavior in the RH degasser with bottom gas injection. Vacuum, 2016, 130, 48-55.	3.5	33
11	Morphology Control for Al ₂ O ₃ Inclusion Without Ca Treatment in High-Aluminum Steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2015, 46, 585-594.	2.1	32
12	Investigation of Gas and Liquid Multiphase Flow in the Rheinsahl-Heraeus (RH) Reactor by Using the Euler-Euler Approach. Jom, 2016, 68, 2138-2148.	1.9	30
13	Structure investigation of CaO-SiO ₂ -Al ₂ O ₃ -Li ₂ O by molecular dynamics simulation and Raman spectroscopy. Journal of Non-Crystalline Solids, 2019, 526, 119695.	3.1	29
14	Effect of Substituting CaO with BaO and CaO/Al ₂ O ₃ Ratio on the Viscosity of Ca-Ba-Al ₂ O ₃ -CaF ₂ -Li ₂ O Mold Flux System. Metals, 2019, 9, 142.	2.3	29
15	Study on Reaction Performances and Applications of Mold Flux for High-Aluminum Steel. Materials Transactions, 2016, 57, 58-63.	1.2	27
16	Molecular Dynamics Simulation of the Structure and Properties of CaO-SiO ₂ -CaF ₂ Slag Systems. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 1503-1513.	2.1	25
17	Review of Mold Fluxes for Continuous Casting of High-Alloy (Al, Mn, Ti) Steels. Steel Research International, 2019, 90, 1800424.	1.8	25
18	Desulphurisation Process in RH Degasser for Soft-killed Ultra-low-carbon Electrical Steels. ISIJ International, 2012, 52, 977-983.	1.4	24

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19	Solidification and crystallization properties of CaO-SiO ₂ -Na ₂ O based mold fluxes. International Journal of Minerals, Metallurgy and Materials, 2009, 16, 261-264.	4.9	23
20	Electrical Conductivity, Viscosity and Structure of CaO-Al ₂ O ₃ -Based Mold Slags for Continuous Casting of High-Al Steels. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2021, 52, 2526-2535.	2.1	23
21	Dissolution behaviour of Al ₂ O ₃ in mould fluxes with low SiO ₂ content. Ceramics International, 2019, 45, 4035-4042.	4.8	22
22	Effect of Elements on Peritectic Reaction in Molten Steel Based on Thermodynamic Analysis. ISIJ International, 2012, 52, 1856-1861.	1.4	21
23	Effect of Exit Shape of Submerged Entry Nozzle on Flow Field and Slag Entrainment in Continuous Casting Mold. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 2862-2870.	2.1	21
24	Effects of the amphoteric behavior of Al ₂ O ₃ on the structure and properties of CaO-SiO ₂ -Al ₂ O ₃ melts by molecular dynamics. Journal of Non-Crystalline Solids, 2021, 552, 120435.	3.1	21
25	Study of the Mechanism of Liquid Slag Infiltration for Lubrication in Slab Continuous Casting. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2018, 49, 2038-2049.	2.1	20
26	Modeling Dynamics of Agglomeration, Transport, and Removal of Al ₂ O ₃ Clusters in the Rheinstahl-Heraeus Reactor Based on the Coupled Computational Fluid Dynamics-Population Balance Method Model. Industrial & Engineering Chemistry Research, 2016, 55, 7030-7042.	3.7	18
27	Effect of Transition Metal Oxides on Radiative Heat Transfer through Mold Flux Film in Continuous Casting of Steel. ISIJ International, 2007, 47, 1294-1299.	1.4	17
28	Dissolution behavior of Al ₂ O ₃ into tundish slag for high-al steel. Journal of Materials Research and Technology, 2020, 9, 11311-11318.	5.8	16
29	Solidification Properties of CaO-SO ₂ -TiO ₂ Based Mold Fluxes. Journal of Iron and Steel Research International, 2011, 18, 15-19.	2.8	15
30	Assessment of an Eulerian multi-fluid VOF model for simulation of multiphase flow in an industrial Ruhrstahl-Heraeus degasser. Metallurgical Research and Technology, 2019, 116, 617.	0.7	14
31	The relationship between crystallization and break temperature of mould flux. Ironmaking and Steelmaking, 2019, 46, 865-871.	2.1	14
32	Structure of Solidified Films of Mold Flux for Peritectic Steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 1652-1658.	2.1	13
33	Investigation of mixing and slag layer behaviours in the RH degasser with bottom gas injection by using the VOF-DPM coupled model. Ironmaking and Steelmaking, 2019, 46, 771-776.	2.1	13
34	Analysis of Crack Susceptibility of Regular Carbon Steel Slabs Using Volume-Based Shrinkage Index. ISIJ International, 2013, 53, 1812-1817.	1.4	12
35	Study of Non-Newtonian Behavior of CaO-SiO ₂ -Based Mold Slag and Its Effect on Lubrication in Continuous Casting of Steel. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 1052-1059.	2.1	12
36	Volatilisation problems in the measurement of mould fluxes crystallisation by hot thermocouple technique. Ironmaking and Steelmaking, 2019, 46, 141-147.	2.1	12

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37	Mechanism of Floater Formation in the Mold during Continuous Casting of Ti-Stabilized Austenitic Stainless Steels. <i>Metals</i> , 2019, 9, 635.	2.3	11
38	Application of Inhomogeneous Discrete Method to the Simulation of Transport, Agglomeration, and Removal of Oxide Inclusions in a Gas-Stirred Ladle. <i>Jom</i> , 2019, 71, 4206-4214.	1.9	11
39	Structure Evolution of Slag Films of Ultrahigh-Basicity Mold Flux During Solidification. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2017, 48, 1938-1942.	2.1	10
40	Wetting and Erosion of ZrO ₂ -Graphite Refractory by CaO-SiO ₂ and CaO-Al ₂ O ₃ -Based Mold Slags for Submerged Entry Nozzle. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019, 50, 1407-1416.	2.1	10
41	Contact angle and adhesion of CaO-SiO ₂ - and CaO-Al ₂ O ₃ -based mold slags on solid steel of various compositions. <i>Journal of Materials Research and Technology</i> , 2020, 9, 7828-7837.	5.8	10
42	Castability of aluminum- and sulfur-bearing free-cutting steel. <i>Journal of Iron and Steel Research International</i> , 2015, 22, 87-92.	2.8	9
43	Optimization of calcium addition to high-strength low-alloy steels. <i>Journal of Iron and Steel Research International</i> , 2015, 22, 590-597.	2.8	9
44	Circulation flow rate and decarburization in the RH degasser under low atmospheric pressure. <i>Vacuum</i> , 2018, 153, 132-138.	3.5	9
45	In situ observation of crystallization of mold slag using a digital optical microscope in an infrared furnace. <i>Journal of the American Ceramic Society</i> , 2019, 102, 104-108.	3.8	9
46	Mold Nonsinusoidal Oscillation Mode and Its Effect on Slag Infiltration for Lubrication and Initial Shell Growth during Steel Continuous Casting. <i>Metals</i> , 2019, 9, 418.	2.3	9
47	Numerical simulation of Argon-Molten steel two-phase flow in an industrial single snorkel refining furnace with bubble expansion, coalescence, and breakup. <i>Journal of Materials Research and Technology</i> , 2020, 9, 3318-3329.	5.8	9
48	Thermodynamic and experimental study on CO ₂ injection in RH decarburization process of ultra-low carbon steel. <i>Journal of CO₂ Utilization</i> , 2021, 50, 101586.	6.8	9
49	Effect of TiO ₂ substituting SiO ₂ on the rheological and crystallization behavior of mold slags for casting Ti-containing steel. <i>Ceramics International</i> , 2022, 48, 256-265.	4.8	9
50	Influence of Submerged Entry Nozzle Clogging on the Flow Field and Slag Entrainment in the Continuous Casting Mold by the Physical Model. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2022, 53, 1436-1445.	2.1	9
51	Effect of FeO content in Slag on formation of MgO·Al ₂ O ₃ inclusion for Al-killed steel. <i>Metallurgical Research and Technology</i> , 2016, 113, 204.	0.7	8
52	Effect of Interfacial Reaction between CaO-BaO-Al ₂ O ₃ -Based Mold Fluxes and High-Mn-High-Al Steels on Fundamental Properties and Lubrication of Mold Flux. <i>Steel Research International</i> , 2020, 91, 1900581.	1.8	7
53	Influence of Interfacial Thermal Resistance on Initial Solidification and Heat Transfer in Continuous Casting Mold of Steel. <i>Steel Research International</i> , 2021, 92, 2000636.	1.8	7
54	Properties and structure of a new non-reactive mold flux for high-Al steel. <i>Journal of Iron and Steel Research International</i> , 2022, 29, 61-70.	2.8	7

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55	Modeling Fluid Flow and Carbon Removal in the Ruhrstahlâ€ˆHeraeus Reactor: Considering the Pumping Process. Industrial & Engineering Chemistry Research, 2019, 58, 18855-18865.	3.7	6
56	Thermodynamic Discussion of CO ₂ Injection in Molten Steel. Steel Research International, 2020, 91, 1900450.	1.8	6
57	Hydrodynamic Modeling of Two-Phase Flow in the Industrial Ruhrstahlâ€ˆHeraeus Degasser: Effect of Bubble Expansion Models. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2022, 53, 208-219.	2.1	6
58	Effects of Substituting SiO ₂ with Oxidisers on the Reaction Performance and Physical Properties of Mould Flux for High Ti-bearing Steel. ISIJ International, 2021, 61, 814-823.	1.4	5
59	3D Coupled Model on Dynamic Initial Solidification and Slag Infiltration at the Corner of Slab Continuous Casting Mold. Steel Research International, 2021, 92, 2100101.	1.8	5
60	Amphoteric behavior of component and microstructure feature on CaO-Al ₂ O ₃ -TiO ₂ ternary melt by molecular dynamics simulation. Computational Materials Science, 2022, 205, 111223.	3.0	5
61	Effect of the Charging Temperature on the Hot Ductility of Nb-Containing Steel in the Simulated Hot Charge Process. Steel Research International, 2012, 83, 671-677.	1.8	4
62	Reaction performances of mould slags with different SiO ₂ contents for 321 stainless steel. Canadian Metallurgical Quarterly, 2019, 58, 464-470.	1.2	4
63	Investigation of rheological behavior for commercial mold slags. Journal of Materials Research and Technology, 2020, 9, 9568-9575.	5.8	4
64	Effects of Transition Metal Oxides ZrO ₂ , Y ₂ O ₃ , and Sc ₂ O ₃ on Radiative Heat Transfer of Low-Reactive CaO-Al ₂ O ₃ -Based Mold Slag. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 677-689.	2.1	4
65	Development of Test Method for Measuring Sintering Temperature of Mould Fluxes. Journal of Iron and Steel Research International, 2011, 18, 1-6.	2.8	3
66	Structure of Solidified Films of CaO-SiO ₂ -Na ₂ O Based Low-Fluorine Mold Flux. Metals, 2019, 9, 93.	2.3	3
67	Study of Thermodynamic for Low-Reactive CaO-BaO-Al ₂ O ₃ -SiO ₂ -CaF ₂ -Li ₂ O Mold Flux Based on the Model of Ion and Molecular Coexistence Theory. Metals, 2022, 12, 1099.	2.3	3
68	Mathematical Modeling of Heat Transfer and Deformation of Bloom Tube Mold in Continuous Casting Process. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2020, 51, 213-221.	2.1	2
69	Thermodynamic Properties of the Fe-Mn-Cu _{0.5} Ternary System at 1473 K. ISIJ International, 2013, 53, 966-972.	1.4	2
70	Effect of Dispersant on the Dispersibility of CaO-Al ₂ O ₃ -Based Mold Powder Slurry. Transactions of the Indian Institute of Metals, 2022, 75, 473-479.	1.5	2
71	Effect of (BaO+CaO)/Al ₂ O ₃ ratio (1.7~4.0) on the structure and Al-Li association of BaO-CaO-Al ₂ O ₃ -CaF ₂ -Li ₂ O mold flux. Journal of Non-Crystalline Solids, 2022, 584, 121522.	3.1	2
72	Investigation and Minimization of Slag Spot Surface Defects in Continuous Casting of High Carbon Steel Billets through Statistical Evaluation. Metals, 2020, 10, 878.	2.3	1

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73	Effect of MgO on solidification and crystallization properties of ultrahigh-basicity mold flux. Materials Chemistry and Physics, 2021, , 125403.	4.0	0