

Deng-fu Chen

List of Publications by Year in descending order

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69
papers

912
citations

471509

17
h-index

580821

25
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73
all docs

73
docs citations

73
times ranked

600
citing authors

#	ARTICLE	IF	CITATIONS
1	Compensation Control Model of Superheat and Cooling Water Temperature for Secondary Cooling of Continuous Casting. <i>Steel Research International</i> , 2011, 82, 213-221.	1.8	50
2	Numerical Analysis of Coupled Turbulent Flow and Macroscopic Solidification in a Round Bloom Continuous Casting Mold with Electromagnetic Stirring. <i>Steel Research International</i> , 2015, 86, 1104-1115.	1.8	48
3	Hydraulics and Mathematics Simulation on the Weir and Gas Curtain in Tundish of Ultrathick Slab Continuous Casting. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2014, 45, 392-398.	2.1	45
4	Study on Mitigating Center Macro-segregation During Steel Continuous Casting Process. <i>Steel Research International</i> , 2011, 82, 847-856.	1.8	38
5	Thermal spin fluctuation effect on the elastic constants of paramagnetic Fe from first principles. <i>Physical Review B</i> , 2015, 92, .	3.2	29
6	Effects of Partition Coefficients, Diffusion Coefficients, and Solidification Paths on Microsegregation in Fe-Based Multinary Alloy. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2017, 48, 2504-2515.	2.1	28
7	Thermal spin fluctuations in CoCrFeMnNi high entropy alloy. <i>Scientific Reports</i> , 2018, 8, 12211.	3.3	27
8	Investigation of the Peritectic Phase Transition in a Commercial Peritectic Steel Under Different Cooling Rates Using In Situ Observation. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2020, 51, 338-352.	2.1	27
9	Structural and transport properties of FeO-TiO ₂ system through molecular dynamics simulations. <i>Journal of Non-Crystalline Solids</i> , 2018, 493, 57-64.	3.1	26
10	Longitudinal spin fluctuation contribution to thermal lattice expansion of paramagnetic Fe. <i>Physical Review B</i> , 2017, 95, .	3.2	25
11	Crystal structure and mechanical properties of nickel-cobalt alloys with different compositions: A first-principles study. <i>Journal of Physics and Chemistry of Solids</i> , 2020, 137, 109194.	4.0	25
12	Effect of coarse TiN inclusions and microstructure on impact toughness fluctuation in Ti micro-alloyed steel. <i>Journal of Iron and Steel Research International</i> , 2018, 25, 1043-1053.	2.8	24
13	Effects of Inclusion Precipitation, Partition Coefficient, and Phase Transition on Microsegregation for High-Sulfur Steel Solidification. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018, 49, 3280-3292.	2.1	23
14	Preparation and characterization of porous titanium using space-holder technique. <i>Rare Metals</i> , 2009, 28, 338-342.	7.1	22
15	Mathematical Modeling of Heat Transfer in Mold Copper Coupled with Cooling Water During the Slab Continuous Casting Process. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2014, 45, 2442-2452.	2.1	22
16	Effects of an even secondary cooling mode on the temperature and stress fields of round billet continuous casting steel. <i>Journal of Materials Processing Technology</i> , 2015, 222, 315-326.	6.3	22
17	Investigation on Water Model for Fluid Flow in Slab Continuous Casting Mold With Consideration of Solidified Process. <i>Steel Research International</i> , 2013, 84, 31-39.	1.8	19
18	Production of Synthetic Rutile from Molten Titanium Slag with the Addition of B ₂ O ₃ . <i>Jom</i> , 2017, 69, 1914-1919.	1.9	16

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19	Numerical Simulation of Electromagnetic Field in Round Bloom Continuous Casting with Final Electromagnetic Stirring. <i>Metals</i> , 2018, 8, 903.	2.3	16
20	Elastic properties of paramagnetic austenitic steel at finite temperature: Longitudinal spin fluctuations in multicomponent alloys. <i>Physical Review B</i> , 2017, 96, .	3.2	15
21	Numerical Analysis of Molten Pool Behavior and Spatter Formation with Evaporation During Selective Laser Melting of 316L Stainless Steel. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019, 50, 2273-2283.	2.1	15
22	Transient flow and mold flux behavior during ultra-high speed continuous casting of billet. <i>Journal of Materials Research and Technology</i> , 2020, 9, 3984-3993.	5.8	15
23	A Three Dimensional Cellular Automata Model for Dendrite Growth in Non-Equilibrium Solidification of Binary Alloy. <i>Steel Research International</i> , 2015, 86, 1490-1497.	1.8	14
24	Interface analysis and hot deformation behaviour of a novel laminated composite with high-Cr cast iron and low carbon steel prepared by hot compression bonding. <i>Journal of Iron and Steel Research International</i> , 2015, 22, 438-445.	2.8	14
25	The Review of Microwave Applications in Metallurgical Process in China. <i>ISIJ International</i> , 2007, 47, 528-532.	1.4	13
26	A Three-Dimensional Cellular Automata Model for Dendrite Growth with Various Crystallographic Orientations During Solidification. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2014, 45, 719-725.	2.1	13
27	Dilatometric determination of four critical temperatures and phase transition fraction for austenite decomposition in hypo-eutectoid steels using peak separation method. <i>Journal of Materials Research</i> , 2018, 33, 967-977.	2.6	13
28	Quantifying the Effects of Combustion Gases's Radiation on Surface Temperature Measurements Using Two-Color Pyrometry. <i>Energy & Fuels</i> , 2019, 33, 3610-3619.	5.1	13
29	Evolution of Phase Transition and Mechanical Properties of Ultra-High Strength Hot-Stamped Steel During Quenching Process. <i>Metals</i> , 2020, 10, 138.	2.3	13
30	Optimization of submerged entry nozzle parameters for ultra-high casting speed continuous casting mold of billet. <i>Journal of Iron and Steel Research International</i> , 2022, 29, 44-52.	2.8	13
31	The Formation of Humps and Ripples During Selective Laser Melting of 316L Stainless Steel. <i>Jom</i> , 2020, 72, 1128-1137.	1.9	12
32	Comparison of Fluid Flow and Temperature Distribution in a Single-Strand Tundish with Different Flow Control Devices. <i>Metals</i> , 2021, 11, 796.	2.3	11
33	Fluid flow and heat transfer behavior of liquid steel in slab mold with different corner structures. Part 1: Mathematical model and verification. <i>Numerical Heat Transfer; Part A: Applications</i> , 2017, 72, 642-656.	2.1	10
34	Crystallization Behaviors of Anosovite and Silicate Crystals in High CaO and MgO Titanium Slag. <i>Metals</i> , 2018, 8, 754.	2.3	10
35	Defect detection in slab surface: A novel dual charge-coupled device imaging-based fuzzy connectedness strategy. <i>Review of Scientific Instruments</i> , 2014, 85, 115004.	1.3	9
36	Stress and Friction Distribution around Slab Corner in Continuous Casting Mold with Different Corner Structures. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2018, 49, 866-876.	2.1	9

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37	Effect of MnS precipitation on solute equilibrium partition coefficients in high sulfur steel during solidification. <i>Journal of Materials Research</i> , 2018, 33, 3490-3500.	2.6	9
38	Characteristics of Slag Infiltration in High-Mn Steel Castings. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019, 50, 1104-1113.	2.1	9
39	Melting and Flowing Behavior of Mold Flux in a Continuous Casting Billet Mold for Ultra-High Speed. <i>Metals</i> , 2020, 10, 1165.	2.3	9
40	CuOâ€ZnO anchored on APS modified activated carbon as an enhanced catalyst for methanol synthesisâ€”The role of ZnO. <i>Journal of Materials Research</i> , 2018, 33, 1625-1631.	2.6	8
41	Modeling on solute enrichment and inclusion precipitation during the solidification process of high sulfur steel slab. <i>Journal of Materials Research</i> , 2017, 32, 3854-3863.	2.6	7
42	Effect of the mold corner structure on the friction behavior in slab continuous casting molds. <i>Journal of Materials Processing Technology</i> , 2019, 270, 157-167.	6.3	7
43	Temperature Distribution in the As-Cast Steel Specimen During Gleeble Hot-Tensile Test and Its Effect on High-Temperature Mechanical Properties. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2021, 52, 1228-1242.	2.1	7
44	Universal Secondary Cooling Structure for Round Blooms Continuous Casting of Steels in Various Diameters. <i>Steel Research International</i> , 2015, 86, 154-162.	1.8	6
45	Analysis on the dynamic extension for transverse surface cracks in the as-cast steel slab at high temperatures. <i>Engineering Failure Analysis</i> , 2016, 66, 341-353.	4.0	6
46	Uniform Secondary Cooling Pattern for Minimizing Surface Reheating of the Strand During Round Bloom Continuous Casting. <i>Jom</i> , 2018, 70, 237-242.	1.9	6
47	Fluid Flow and Solidified Shell Remelting in F-EMS During Billet Continuous Casting. <i>Jom</i> , 2018, 70, 2059-2064.	1.9	6
48	Thermal Behavior During the Selective Laser Melting Process of Ti-6Al-4V Powder in the Point Exposure Scan Pattern. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019, 50, 2804-2814.	2.1	6
49	Ab Initio Calculations on Elastic Properties of IF Steel Matrix Phase at High Temperature Based on Lattice Expansion Theory. <i>Metals</i> , 2020, 10, 283.	2.3	6
50	Fluid flow and heat transfer behavior of liquid steel in slab mold with different corner structures. Part 2: Fluid flow, heat transfer, and solidification characteristics. <i>Numerical Heat Transfer; Part A: Applications</i> , 2017, 72, 657-668.	2.1	5
51	Numerical modeling of centerline segregation by a combined 3-D and 2-D hybrid model during slab continuous casting. <i>Journal of Materials Research</i> , 2018, 33, 989-1002.	2.6	5
52	Research on the Onâ€Line Simulation of a Threeâ€Dimensional Temperature Field Model of Slab Continuous Casting. <i>Steel Research International</i> , 2018, 89, 1800091.	1.8	5
53	Prediction model for austenite grains growth during reheating process in Ti micro-alloyed cast steel by coupling precipitates dissolution and coarsening behavior. <i>Journal of Iron and Steel Research International</i> , 2019, 26, 162-172.	2.8	5
54	Control of Coarse Precipitates of Titanium Nitride in High-Strength Low-Alloy Steel. <i>Metal Science and Heat Treatment</i> , 2020, 61, 534-542.	0.6	5

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55	The Reduction of Cu ²⁺ Promoted by Zn or Ni on rGO. <i>Jom</i> , 2020, 72, 4458-4465.	1.9	5
56	Ab Initio Study on Continuous Evolution of Mechanical Properties in Phase-Transition Region of Low-Carbon Steel. <i>Steel Research International</i> , 2020, 91, 2000070.	1.8	5
57	Migration and Enrichment Behaviors of Ca and Mg Elements during Cooling and Crystallization of Boron-Bearing Titanium Slag Melt. <i>Crystals</i> , 2021, 11, 888.	2.2	5
58	Effect of Microwave Treating the Blast Furnace Slag Bearing Titanium on Thermal Action. <i>ISIJ International</i> , 2007, 47, 1239-1244.	1.4	4
59	Computation of Phase Fractions in Austenite Transformation with the Dilation Curve for Various Cooling Regimens in Continuous Casting. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2016, 47, 1553-1564.	2.1	4
60	Effect of the strand corner structure on the corner stress during the bending and straightening processes in slab continuous casting. <i>Journal of Manufacturing Processes</i> , 2019, 48, 270-282.	5.9	4
61	Hydraulic Modeling on Flow Behavior in High-Speed Billet Continuous Casting Mold Considering Hydrostatic Pressure and Solidified Shell. <i>Metals</i> , 2020, 10, 1226.	2.3	4
62	The effect of the elements Cr, Os, Ir, and Y additions on the mechanical and electronic properties of L12 Ni ₃ Co alloys. <i>Journal of Applied Physics</i> , 2020, 128, .	2.5	4
63	Comprehensive Utilization of Boron-Concentrate by Hydrometallurgy. <i>Journal of Sustainable Metallurgy</i> , 2021, 7, 244-255.	2.3	4
64	Effect of Temperature Reversion on Hot Ductility and Flow Stress-Strain Curves of C-Mn Continuously Cast Steels. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2015, 46, 1885-1894.	2.1	3
65	Interface structure characterization and elements doping on interface bonding strength and tensile failure mechanism of NiCo coating/Cu matrix. <i>Results in Physics</i> , 2021, 30, 104883.	4.1	3
66	Numerical Simulation of Heat Transfer between Roll and Slab under Dry Secondary Cooling in Ultrathick Slab Continuous Casting. <i>Steel Research International</i> , 2020, 91, 1900516.	1.8	2
67	Experimental simulation on the high-temperature friction property of slag in slab continuous casting mold. <i>Journal of Materials Research and Technology</i> , 2020, 9, 6453-6463.	5.8	2
68	Study on Mathematical Model of Temperature and Stress for Thin Slab in Continuous Casting. , 2009, , .		1
69	Using differential scanning calorimetry to characterize the precipitation and dissolution of V(CN) and VC particles during continuous casting and reheating process. <i>Journal of Materials Research</i> , 2018, 33, 2784-2795.	2.6	1