

Zhiwei Peng

List of Publications by Year in descending order

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133
papers

3,109
citations

147566

31
h-index

197535

49
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160
all docs

160
docs citations

160
times ranked

1885
citing authors

#	ARTICLE	IF	CITATIONS
1	Mn-vacancy birnessite for photo-assisted elimination of formaldehyde at ambient condition. <i>Journal of Colloid and Interface Science</i> , 2022, 618, 229-240.	5.0	13
2	Efficient double-layer sintering of titanomagnetite concentrate. <i>Scientific Reports</i> , 2022, 12, 6355.	1.6	3
3	Enrichment of heavy metals from spent printed circuit boards by microwave pyrolysis. <i>Waste Management</i> , 2022, 145, 112-120.	3.7	4
4	Facile synthesis of zinc ferrite as adsorbent from high-zinc electric arc furnace dust. <i>Powder Technology</i> , 2022, 405, 117479.	2.1	7
5	Preparation of refractory materials from electric furnace ferronickel slag and blast furnace ferronickel slag: A comparison. <i>Journal of Environmental Chemical Engineering</i> , 2022, 10, 107929.	3.3	8
6	Catalytic role of sodium carbonate in reduction of ferromanganese spinel. <i>Powder Technology</i> , 2021, 377, 20-28.	2.1	8
7	Short-flow preparation of pure MoO ₃ from CaCO ₃ -added molybdenite concentrate pellet by sublimation with flue gas recirculation. <i>Journal of Cleaner Production</i> , 2021, 284, 124747.	4.6	3
8	Rapid microwave-assisted reduction of ferromanganese spinel with biochar: Correlation between phase transformation and heating mechanism. <i>Journal of Cleaner Production</i> , 2021, 286, 124919.	4.6	12
9	Efficient Preparation of Blast Furnace Burdens from Titanomagnetite Concentrate by Composite Agglomeration Process. <i>Jom</i> , 2021, 73, 326-333.	0.9	13
10	Control of slag formation in the electric furnace smelting of ferronickel for an energy-saving production. <i>Journal of Cleaner Production</i> , 2021, 287, 125082.	4.6	17
11	Partial substitution of anthracite for coke breeze in iron ore sintering. <i>Scientific Reports</i> , 2021, 11, 1540.	1.6	8
12	Recent Progress in Microwave-Assisted Pyrometallurgy at Central South University. <i>Minerals, Metals and Materials Series</i> , 2021, , 25-32.	0.3	0
13	Chromium-promoted preparation of forsterite refractory materials from ferronickel slag by microwave sintering. <i>Ceramics International</i> , 2021, 47, 10809-10818.	2.3	10
14	Co-utilization of ferronickel slag and fly ash cenosphere for production of superior thermal insulation materials. <i>Ceramics International</i> , 2021, 47, 10019-10026.	2.3	20
15	Microwave-intensified treatment of low-zinc EAF dust: A route toward high-grade metallized product with a focus on multiple elements. <i>Powder Technology</i> , 2021, 383, 509-521.	2.1	14
16	Preparation of enstatite-spinel based glass-ceramics by co-utilization of ferronickel slag and coal fly ash. <i>Ceramics International</i> , 2021, 47, 29400-29409.	2.3	18
17	Recovery of platinum-group metals from spent catalysts by microwave smelting. <i>Journal of Cleaner Production</i> , 2021, 318, 128266.	4.6	20
18	Production of glass-ceramics from metallurgical slags. <i>Journal of Cleaner Production</i> , 2021, 317, 128220.	4.6	49

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19	Toward environmentally friendly direct reduced iron production: A novel route of comprehensive utilization of blast furnace dust and electric arc furnace dust. <i>Waste Management</i> , 2021, 135, 389-396.	3.7	16
20	Optimization of the Microwave-Assisted Carbothermal Reduction Process for Metals from Electric Arc Furnace Dust with Biochar. <i>Metals</i> , 2021, 11, 1765.	1.0	2
21	Effective electrodynamical parameters and microwave heating of radially heterogeneous pellets containing EAF dust and biochar. <i>Journal of Physics: Conference Series</i> , 2021, 2015, 012007.	0.3	0
22	Optimization of microwave heating of pellets with radial distribution of EAF dust and biochar. <i>AIP Conference Proceedings</i> , 2021, . .	0.3	0
23	Microwave-assisted self-reduction of EAF dust-biochar composite briquettes for production of direct reduced iron. <i>Powder Technology</i> , 2020, 362, 781-789.	2.1	22
24	Alkali-reinforced hydrothermal synthesis of lathy tobermorite fibers using mixture of coal fly ash and lime. <i>Construction and Building Materials</i> , 2020, 238, 117655.	3.2	41
25	Alumina-enhanced valorization of ferronickel slag into refractory materials under microwave irradiation. <i>Ceramics International</i> , 2020, 46, 6828-6837.	2.3	16
26	Strain engineering of 2D semiconductors and graphene: from strain fields to band-structure tuning and photonic applications. <i>Light: Science and Applications</i> , 2020, 9, 190.	7.7	239
27	Co-Conversion Mechanisms of Boron and Iron Components of Ludwigite Ore during Reductive Soda-Ash Roasting. <i>Metals</i> , 2020, 10, 1514.	1.0	4
28	Head-compliant microstrip split ring resonator for non-invasive healing monitoring after craniostyosis-based surgery. <i>Healthcare Technology Letters</i> , 2020, 7, 29-34.	1.9	3
29	Optimal microwave heating of biochar containing iron ore pellets. <i>Journal of Physics: Conference Series</i> , 2020, 1461, 012007.	0.3	1
30	Recovery of chromium from ferronickel slag: A comparison of microwave roasting and conventional roasting strategies. <i>Powder Technology</i> , 2020, 372, 578-584.	2.1	16
31	Fabrication of Boronized Ti6Al4V/HA Composites by Microwave Sintering in Mixed Gases. <i>ACS Omega</i> , 2020, 5, 11629-11636.	1.6	6
32	Effects and mechanisms of ternary solution of NaOH-Na ₂ CO ₃ -Na ₂ SO ₄ on the recovery of molybdenum from residues containing multiple molybdates. <i>Separation and Purification Technology</i> , 2020, 248, 117059.	3.9	7
33	Coprocessing of Stainless-Steel Pickling Sludge with Laterite Ore via Rotary Kiln-Electric Furnace Route: Enhanced Desulfurization and Metal Recovery. <i>Chemical Engineering Research and Design</i> , 2020, 142, 92-98.	2.7	19
34	Recycling Excessive Alkali from Reductive Soda Ash Roasted Ludwigite Ore: Toward a Zero-Waste Approach. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 5317-5327.	3.2	18
35	Thermodynamics guided ultrafast and continuous preparation of Mo ₂ C nanocrystals for hydrogen evolution electrocatalysis. <i>Materials and Design</i> , 2020, 193, 108803.	3.3	12
36	Promoting spinel formation and growth for preparation of refractory materials from ferronickel slag. <i>International Journal of Applied Ceramic Technology</i> , 2020, 17, 1701-1712.	1.1	11

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37	Co-volatilizing-water leaching process for efficient utilization of rhenium-bearing molybdenite concentrate. <i>Hydrometallurgy</i> , 2020, 192, 105284.	1.8	9
38	Facile fabrication of boronized Ti6Al4V/HA composites for load-bearing applications. <i>Journal of Alloys and Compounds</i> , 2020, 825, 153102.	2.8	11
39	Cost-Effective and Sustainable Preparation of Porous Mullite-Based Ceramics Combining MoO ₃ Recovery from Industrial Calcine. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 7290-7299.	3.2	15
40	Solvent Extraction of Ni and Co from the Phosphoric Acid Leaching Solution of Laterite Ore by P204 and P507. <i>Metals</i> , 2020, 10, 545.	1.0	14
41	Recovery of Chromium from Ferronickel Slag via Alkaline Roasting Followed by Water Leaching: Effect of Roasting Atmosphere. <i>Minerals, Metals and Materials Series</i> , 2020, , 359-368.	0.3	2
42	Self-reduction of Core-Shell EAF Dust-Biochar Composite Pellets Under Microwave Irradiation. <i>Minerals, Metals and Materials Series</i> , 2020, , 405-415.	0.3	0
43	Solvent extraction behavior of metal ions and selective separation Sc ³⁺ in phosphoric acid medium using P204. <i>Separation and Purification Technology</i> , 2019, 209, 175-181.	3.9	67
44	From ferronickel slag to value-added refractory materials: A microwave sintering strategy. <i>Resources, Conservation and Recycling</i> , 2019, 149, 521-531.	5.3	31
45	Use of Biochar for Sustainable Ferrous Metallurgy. <i>Jom</i> , 2019, 71, 3931-3940.	0.9	28
46	Recovering Magnesium from Ferronickel Slag by Vacuum Reduction: Thermodynamic Analysis and Experimental Verification. <i>ACS Omega</i> , 2019, 4, 16062-16067.	1.6	12
47	Mechanical performance and in-vitro biological behaviors of boronized Ti6Al4V/HA composites synthesized by microwave sintering. <i>Ceramics International</i> , 2019, 45, 24684-24690.	2.3	16
48	A novel simultaneous oxidizing-volatilizing process for efficient separation of pure MoO ₃ from structure self-sustained molybdenite concentrate pellets. <i>Powder Technology</i> , 2019, 345, 338-345.	2.1	15
49	Microwave-Assisted Reduction of Electric Arc Furnace Dust with Biochar: An Examination of Transition of Heating Mechanism. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 9515-9524.	3.2	31
50	Selective recovery of chromium from ferronickel slag via alkaline roasting followed by water leaching. <i>Journal of Hazardous Materials</i> , 2019, 374, 83-91.	6.5	38
51	Microwave-Assisted Solid-State Synthesis of Fluorinated Hydroxyapatite. <i>Minerals, Metals and Materials Series</i> , 2019, , 225-235.	0.3	1
52	Valorization of Ferronickel Slag into Refractory Materials: Effect of Sintering Temperature. <i>Jom</i> , 2019, 71, 1024-1032.	0.9	10
53	Microwave-assisted self-reduction of composite briquettes of zinc ferrite and carbonaceous materials. <i>Powder Technology</i> , 2019, 342, 224-232.	2.1	25
54	Facile Route for Preparing Refractory Materials from Ferronickel Slag with Addition of Magnesia. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 4880-4889.	3.2	36

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55	Selective leaching of nickel and cobalt from limonitic laterite using phosphoric acid: An alternative for value-added processing of laterite. <i>Journal of Cleaner Production</i> , 2018, 189, 620-626.	4.6	45
56	Extraction of scandium from scandium-rich material derived from bauxite ore residues. <i>Hydrometallurgy</i> , 2018, 176, 62-68.	1.8	53
57	Microwave Synthesis of Co-Ni Ferrite/Graphene Nanocomposite for Microwave Absorption. <i>Minerals, Metals and Materials Series</i> , 2018, , 355-363.	0.3	0
58	Selective Extraction of Rare Earth Elements Over TiO ₂ From Bauxite Residues After Removal of Their Fe-, Si-, and Al-Bearing Constituents. <i>Jom</i> , 2018, 70, 2869-2876.	0.9	6
59	Combustion behavior of granulated coke breeze in iron ore sintering. <i>Powder Technology</i> , 2018, 340, 131-138.	2.1	19
60	Chromium: A Double-Edged Sword in Preparation of Refractory Materials from Ferronickel Slag. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 10536-10544.	3.2	26
61	Preparation of high purity MoO ₃ through volatilization of technical-grade Mo calcine in water vapor atmosphere. <i>International Journal of Refractory Metals and Hard Materials</i> , 2018, 77, 1-7.	1.7	16
62	Upgrading Diasporic Bauxite Ores for Iron and Alumina Enrichment Based on Reductive Roasting. <i>Jom</i> , 2018, 70, 1893-1901.	0.9	10
63	Preparation of core-shell iron ore-biochar composite pellets for microwave reduction. <i>Powder Technology</i> , 2018, 338, 365-375.	2.1	29
64	Achieving ultra-high electromagnetic wave absorption by anchoring Co _{0.33} Ni _{0.33} Mn _{0.33} Fe ₂ O ₄ nanoparticles on graphene sheets using microwave-assisted polyol method. <i>Ceramics International</i> , 2018, 44, 21015-21026.	2.3	32
65	Preparation of Refractory Materials from Ferronickel Slag. <i>Minerals, Metals and Materials Series</i> , 2018, , 633-642.	0.3	9
66	Dielectric characterization of Indonesian low-rank coal for microwave processing. <i>Fuel Processing Technology</i> , 2017, 156, 171-177.	3.7	58
67	Pyrometallurgical recycling of electric arc furnace dust. <i>Journal of Cleaner Production</i> , 2017, 149, 1079-1100.	4.6	148
68	Reduction of Sn-Bearing Iron Concentrate with Mixed H ₂ /CO Gas for Preparation of Sn-Enriched Direct Reduced Iron. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2017, 48, 1486-1493.	1.0	4
69	Characterization of Low-Zinc Electric Arc Furnace Dust. <i>Minerals, Metals and Materials Series</i> , 2017, , 103-109.	0.3	1
70	Enrichment of Sc ₂ O ₃ and TiO ₂ from bauxite ore residues. <i>Journal of Hazardous Materials</i> , 2017, 331, 71-80.	6.5	59
71	Formation mechanism of Mn _x Fe _{3-<i>x</i>} O ₄ by solid-state reaction of MnO ₂ and Fe ₂ O ₃ in air atmosphere: Morphologies and properties evolution. <i>Powder Technology</i> , 2017, 313, 201-209.	2.1	49
72	Synthesis, characterization, and catalytic properties of nano-SnO by chemical vapor transport (CVT) process under CO-CO ₂ atmosphere. <i>Materials and Design</i> , 2017, 121, 280-287.	3.3	21

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73	Roll-up effect of sulfur dioxide adsorption on zeolites FAU 13X and LTA 5A. <i>Adsorption</i> , 2017, 23, 699-710.	1.4	12
74	Microwave Power Absorption in Materials for Ferrous Metallurgy. <i>Jom</i> , 2017, 69, 178-183.	0.9	10
75	Use of Gases in Pyrometallurgy. <i>Jom</i> , 2017, 69, 968-969.	0.9	2
76	Beneficiation of Aluminum-, Iron-, and Titanium-Bearing Constituents from Diasporic Bauxite Ores. <i>Jom</i> , 2017, 69, 315-322.	0.9	10
77	Fe Alloys: Production and Metallurgical Aspects: Part II. <i>Jom</i> , 2017, 69, 323-324.	0.9	1
78	Water leaching of boron from soda-ash-activated ludwigite ore. <i>Hydrometallurgy</i> , 2017, 167, 101-106.	1.8	25
79	Thermodynamic Analysis and Reduction of MnO ₂ by Methane-Hydrogen Gas Mixture. <i>Jom</i> , 2017, 69, 1669-1675.	0.9	23
80	Pyrometallurgical Recovery of Platinum Group Metals from Spent Catalysts. <i>Jom</i> , 2017, 69, 1553-1562.	0.9	91
81	Field-Intensified Metallurgy. <i>Jom</i> , 2017, 69, 2658-2659.	0.9	1
82	Porous Materials from Thermally Activated Kaolinite: Preparation, Characterization and Application. <i>Materials</i> , 2017, 10, 647.	1.3	12
83	Utilization of the MgO-Rich Residue Originated from Ludwigite Ore: Hydrothermal Synthesis of MSH Whiskers. <i>Minerals (Basel, Switzerland)</i> , 2017, 7, 138.	0.8	3
84	Characterization of Spent Printed Circuit Boards from Computers. <i>Minerals, Metals and Materials Series</i> , 2017, , 507-514.	0.3	0
85	Penetration Depth of Microwave in Tire Rubber. <i>Minerals, Metals and Materials Series</i> , 2017, , 403-410.	0.3	0
86	Microwave-Intensified Reduction of Biochar-Containing Briquettes. <i>Minerals, Metals and Materials Series</i> , 2017, , 31-38.	0.3	0
87	Separation of Rhenium from Lead-Rich Molybdenite Concentrate via Hydrochloric Acid Leaching Followed by Oxidative Roasting. <i>Metals</i> , 2016, 6, 282.	1.0	14
88	Digestion of Alumina from Non-Magnetic Material Obtained from Magnetic Separation of Reduced Iron-Rich Diasporic Bauxite with Sodium Salts. <i>Metals</i> , 2016, 6, 294.	1.0	16
89	Waveguides for long-distance energy transport in microwave heating. <i>Journal of Microwave Power and Electromagnetic Energy</i> , 2016, 50, 153-167.	0.4	1
90	Microwave absorption characteristics of anthracite during pyrolysis. <i>Fuel Processing Technology</i> , 2016, 150, 58-63.	3.7	37

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91	Fe Alloys: Production and Metallurgical Aspects: Part I. Jom, 2016, 68, 2998-2999.	0.9	0
92	Slag Metallurgy and Metallurgical Waste Recycling. Jom, 2016, 68, 2313-2315.	0.9	19
93	Phase Evolution and Ni-Fe Granular Growth of Saprolitic Laterite Oreâ€“CaO Mixtures during Reductive Roasting. Jom, 2016, 68, 3015-3021.	0.9	9
94	Metal Smelting and Furnace Tapping. Jom, 2016, 68, 1516-1517.	0.9	2
95	Reductive roasting of nickel laterite ore with sodium sulphate for Fe-Ni production. Part II: Phase transformation and grain growth. Separation Science and Technology, 2016, 51, 1727-1735.	1.3	45
96	Enrichment of Rare Earth and Niobium from a REE-Nb-Fe Associated Ore via Reductive Roasting Followed by Magnetic Separation. Jom, 2016, 68, 567-576.	0.9	16
97	Reductive roasting of nickel laterite ore with sodium sulfate for Fe-Ni production. Part I: Reduction/sulfidation characteristics. Separation Science and Technology, 2016, 51, 1408-1420.	1.3	46
98	Extractive Metallurgy: Efficiency and Eco-friendliness. Jom, 2016, 68, 530-531.	0.9	1
99	Microwave Heating of Waste Tires. , 2016, , 551-557.		0
100	Resonances of Microwave Power Absorption in Alumina and Silicon Carbide. , 2016, , 443-449.		0
101	Study on Reduction Disintegration of Sinter from Titanomagnetite Concentrate. , 2015, , 477-484.		0
102	Sustainability in Metallurgy. Jom, 2015, 67, 1931-1932.	0.9	2
103	Effect of Basicity on Titanomagnetite Concentrate Sintering. ISIJ International, 2015, 55, 907-909.	0.6	28
104	Distribution Characteristics of Phosphorus in the Metallic Iron during Solid-State Reductive Roasting of Oolitic Hematite Ore. ISIJ International, 2015, 55, 2304-2309.	0.6	19
105	Preparation of BF Burden from Titanomagnetite Concentrate by Composite Agglomeration Process (CAP). ISIJ International, 2015, 55, 1599-1607.	0.6	30
106	Effect of Quaternary Basicity on Melting Behavior and Ferronickel Particles Growth of Saprolitic Laterite Ores in Kruppâ€“Renn Process. ISIJ International, 2015, 55, 1828-1833.	0.6	21
107	Extraction of manganese from iron rich MnO ₂ ores via selective sulfation roasting with SO ₂ followed by water leaching. Hydrometallurgy, 2015, 156, 225-231.	1.8	53
108	Evaluation of Sintering Behaviors of Saprolitic Nickeliferous Laterite Based on Quaternary Basicity. Jom, 2015, 67, 1966-1974.	0.9	8

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109	Lead and Zinc Metallurgy. <i>Jom</i> , 2015, 67, 1986-1987.	0.9	13
110	Modeling, Simulation, and Developments of Metallurgical Processes. <i>Jom</i> , 2015, 67, 425-426.	0.9	1
111	Atmospheric leaching characteristics of nickel and iron in limonitic laterite with sulfuric acid in the presence of sodium sulfite. <i>Minerals Engineering</i> , 2015, 78, 38-44.	1.8	44
112	Metallurgy: Energy and Environmental Issues. <i>Jom</i> , 2015, 67, 1064-1065.	0.9	1
113	Rapid prototyping-assisted maxillofacial reconstruction. <i>Annals of Medicine</i> , 2015, 47, 186-208.	1.5	33
114	Electromagnetic characteristics of low-permittivity ceramics as substrates for mushroom-like high impedance surfaces. <i>Ceramics International</i> , 2015, 41, 3058-3063.	2.3	5
115	Recovery of Silver and Gold from Copper Anode Slimes. <i>Jom</i> , 2015, 67, 493-502.	0.9	35
116	Microwave-assisted metallurgy. <i>International Materials Reviews</i> , 2015, 60, 30-63.	9.4	164
117	Microwave Power Absorption Characteristics of Iron Oxides. , 2015, , 299-305.		1
118	Maximum Sample Volume for Permittivity Measurements by Cavity Perturbation Technique. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2014, 63, 450-455.	2.4	35
119	Absorption characteristics of single-layer ceramics under oblique incident microwave irradiation. <i>Ceramics International</i> , 2014, 40, 16563-16568.	2.3	14
120	New Developments in Pyrometallurgy. <i>Jom</i> , 2013, 65, 1550-1551.	0.9	2
121	Microwave Power Absorption Characteristics of Ferrites. <i>IEEE Transactions on Magnetics</i> , 2013, 49, 1163-1166.	1.2	41
122	Design of double-layer ceramic absorbers for microwave heating. <i>Ceramics International</i> , 2013, 39, 6721-6725.	2.3	40
123	Absorber Impedance Matching in Microwave Heating. <i>Applied Physics Express</i> , 2012, 5, 077301.	1.1	31
124	Magnetic Loss in Microwave Heating. <i>Applied Physics Express</i> , 2012, 5, 027304.	1.1	33
125	Microwave Absorption Capability of High Volatile Bituminous Coal during Pyrolysis. <i>Energy & Fuels</i> , 2012, 26, 5146-5151.	2.5	81
126	Microwave Permittivity, Permeability, and Absorption Capability of Ferric Oxide. <i>ISIJ International</i> , 2012, 52, 1535-1538.	0.6	39

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127	Numerical Analysis of Heat Transfer Characteristics in Microwave Heating of Magnetic Dielectrics. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1070-1078.	1.1	35
128	Numerical Simulation of Heat Transfer during Microwave Heating of Magnetite. ISIJ International, 2011, 51, 884-888.	0.6	29
129	Leaching of limonitic laterite ore by acidic thiosulfate solution. Minerals Engineering, 2011, 24, 859-863.	1.8	55
130	Microwave Absorption Characteristics of Conventionally Heated Nonstoichiometric Ferrous Oxide. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 2259-2263.	1.1	55
131	Microwave Penetration Depth in Materials with Non-zero Magnetic Susceptibility. ISIJ International, 2010, 50, 1590-1596.	0.6	135
132	Characterization of Nickel Oxide Nanoparticles for Hydrogen Adsorption with External Electric Field. , 0, , 285-291.		0
133	Efficient Utilization of Carbon-Bearing Dusts in Composite Agglomeration Process for Iron Ore Sintering. Journal of Sustainable Metallurgy, 0, , .	1.1	2