

Zhi Wang

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8827599/publications.pdf>

Version: 2024-02-01

70
papers

1,473
citations

331538

21
h-index

360920

35
g-index

72
all docs

72
docs citations

72
times ranked

988
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of gas–solid interface on pore wall microstructure evolution during thermal melting of foamed ceramics. <i>Journal of Thermal Analysis and Calorimetry</i> , 2022, 147, 2035-2046.	2.0	1
2	Constructing an artificial boundary to regulate solid electrolyte interface formation and synergistically enhance stability of nano-Si anodes. <i>Journal of Colloid and Interface Science</i> , 2022, 619, 158-167.	5.0	12
3	Short-Process Multiscale Core–Shell Structure Buffer Control of a Ni/N Codoped Si@C Composite Using Waste Silicon Powder for Lithium-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2022, 5, 178-185.	2.5	5
4	Design of Refining Slag Based on Structural Modifications Associated with the Boron Removal for SoG-Si. <i>Materials</i> , 2022, 15, 3107.	1.3	2
5	A new sustainable concept for silicon recovery from diamond wire saw silicon powder waste: Source control and comprehensive conservation. <i>Journal of Cleaner Production</i> , 2022, 358, 131961.	4.6	7
6	Innovative separation model for boron removal from silicon during slag refining based on ion and molecule coexistence theory. <i>Metallurgical Research and Technology</i> , 2022, 119, 304.	0.4	0
7	Numerical Simulation of Flow Field Optimizing the Rotating Segregation Purification of Silicon for SoG-Si. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2022, 53, 2657-2674.	1.0	1
8	Study on hydrocyclone separation enhancement of micro Si/SiC from silicon-sawing waste by selective comminution. <i>Separation Science and Technology</i> , 2021, 56, 991-999.	1.3	2
9	Glass-ceramics microstructure formation mechanism for simultaneous solidification of chromium and nickel from disassembled waste battery and chromium slag. <i>Journal of Hazardous Materials</i> , 2021, 403, 123598.	6.5	26
10	Development of calcium coke for CaC ₂ production using calcium carbide slag and coking coal. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2021, 28, 76-87.	2.4	16
11	Silicon recovery from diamond wire saw silicon powder waste with hydrochloric acid pretreatment: An investigation of Al dissolution behavior. <i>Waste Management</i> , 2021, 120, 820-827.	3.7	62
12	A flexible and conductive connection introduced by cross-linked CNTs between submicron Si@C particles for better performance LIB anode. <i>Nanoscale Advances</i> , 2021, 3, 2287-2294.	2.2	10
13	Novel Application of Electroslag Remelting Refining in the Removal of Boron and Phosphorus from Silicon Alloy for Silicon Recovery. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 2962-2974.	3.2	18
14	Waste to wealth: Defect-rich Ni-incorporated spent LiFePO ₄ for efficient oxygen evolution reaction. <i>Science China Materials</i> , 2021, 64, 2710-2718.	3.5	41
15	Enhanced In Situ Separation of Boron at the Silicon Alloy Solidification Interface through Innovating the Impurity Chemical Reconstruction Approach for SoG-Si. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 11179-11193.	3.2	4
16	Millisecond Conversion of Photovoltaic Silicon Waste to Binder-Free High Silicon Content Nanowires Electrodes. <i>Advanced Energy Materials</i> , 2021, 11, 2102103.	10.2	48
17	Fe ₃ C doped modified nano-Si/C composites as high-coulombic-efficiency anodes for lithium-ion batteries. <i>Sustainable Energy and Fuels</i> , 2021, 5, 6170-6180.	2.5	5
18	Millisecond Conversion of Photovoltaic Silicon Waste to Binder-Free High Silicon Content Nanowires Electrodes (Adv. Energy Mater. 40/2021). <i>Advanced Energy Materials</i> , 2021, 11, .	10.2	0

#	ARTICLE	IF	CITATIONS
19	Design of Refining Slag Based on Raman and NMR Spectroscopy Study for Removing Phosphorus for SoG-Si. <i>Silicon</i> , 2020, 12, 171-183.	1.8	8
20	Role of Oxygen Potential and Oxygen Ions on Phosphorus Removal from Silicon via Addition of FeO into Slag. <i>Silicon</i> , 2020, 12, 1145-1156.	1.8	2
21	Enhancing impurities removal from Si by controlling crystal growth in directional solidification refining with Al-Si alloy. <i>Journal of Alloys and Compounds</i> , 2020, 820, 153300.	2.8	16
22	Dissolution and mineralization behavior of metallic impurity content in diamond wire saw silicon powder during acid leaching. <i>Journal of Cleaner Production</i> , 2020, 248, 119256.	4.6	40
23	Occurrence State and Dissolution Mechanism of Metallic Impurities in Diamond Wire Saw Silicon Powder. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 12577-12587.	3.2	18
24	Recovery of Silicon via Using KOH-Ethanol Solution by Separating Different Layers of End-of-Life PV Modules. <i>Jom</i> , 2020, 72, 2624-2632.	0.9	17
25	Novel Reaction Media of $\text{Na}_2\text{CO}_3\text{-CaO}$ for Silicon Extraction and Aluminum Removal from Diamond Wire Saw Silicon Powder by Roasting-Smelting Process. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 4146-4157.	3.2	34
26	Hollow double-layer carbon nanocage confined Si nanoparticles for high performance lithium-ion batteries. <i>Nanoscale Advances</i> , 2020, 2, 3222-3230.	2.2	16
27	Joint caching and computing resource allocation for task offloading in vehicular networks. <i>IET Communications</i> , 2020, 14, 3820-3827.	1.5	2
28	Improve titanate reduction by electro-deoxidation of $\text{Ca}_3\text{Ti}_2\text{O}_7$ precursor in molten CaCl_2 . <i>International Journal of Minerals, Metallurgy and Materials</i> , 2020, 27, 1618-1625.	2.4	6
29	Thermodynamic analysis and experimental verification for silicon recovery from the diamond wire saw silicon powder by vacuum carbothermal reduction. <i>Separation and Purification Technology</i> , 2019, 228, 115754.	3.9	65
30	Effect of B_2O_3 Addition on Electrical Conductivity and Structural Roles of $\text{CaO-SiO}_2\text{-B}_2\text{O}_3$ Slag. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2019, 50, 304-311.	1.0	10
31	N-Doped gel-structures for construction of long cycling Si anodes at high current densities for high performance lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 11347-11354.	5.2	29
32	Preparation of CaO-containing carbon pellet from recycling of carbide slag: Effects of temperature and H_3PO_4 . <i>Waste Management</i> , 2019, 84, 64-73.	3.7	22
33	The mechanism of boron removal from silicon alloy by electric field using slag treatment. <i>Separation and Purification Technology</i> , 2018, 199, 134-139.	3.9	27
34	Formation of Amorphous Calcium Carbonate and Its Transformation Mechanism to Crystalline CaCO_3 in Laminar Microfluidics. <i>Crystal Growth and Design</i> , 2018, 18, 1710-1721.	1.4	30
35	CO_2 Absorption of Powdered $\text{Ba}_2\text{Fe}_2\text{O}_5$ with Different Particle Size. <i>High Temperature Materials and Processes</i> , 2018, 37, 1001-1006.	0.6	2
36	Self-Supporting Porous CoP -Based Films with Phase-Separation Structure for Ultrastable Overall Water Electrolysis at Large Current Density. <i>Advanced Energy Materials</i> , 2018, 8, 1802445.	10.2	114

#	ARTICLE	IF	CITATIONS
37	Insights into the Confined Crystallization in Microfluidics of Amorphous Calcium Carbonate. <i>Crystal Growth and Design</i> , 2018, 18, 6538-6546.	1.4	16
38	Direct Electrodeposition of Ga and the Simultaneous Production of NaOH and NaHCO ₃ from Carbonated Spent Liquor by Membrane Electrolysis. <i>Industrial & Engineering Chemistry Research</i> , 2018, 57, 12583-12589.	1.8	3
39	Hierarchically 3D porous films electrochemically constructed on gas-liquid-solid three-phase interface for energy application. <i>Journal of Materials Chemistry A</i> , 2017, 5, 9488-9513.	5.2	76
40	Competition of Oxygen Evolution and Desulfurization for Bauxite Electrolysis. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 6136-6144.	1.8	15
41	Electrochemical preparation of V ₂ O ₃ from NaVO ₃ and its reduction mechanism. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2017, 32, 1019-1024.	0.4	10
42	The Importance of Slag Structure to Boron Removal from Silicon during the Refining Process: Insights from Raman and Nuclear Magnetic Resonance Spectroscopy Study. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2017, 48, 3239-3250.	1.0	12
43	Mechanism Analysis of Carbon Contamination and the Inhibition by an Anode Structure during Soluble K ₂ CrO ₄ Electrolysis in CaCl ₂ -KCl Molten Salt. <i>Journal of the Electrochemical Society</i> , 2017, 164, E360-E366.	1.3	16
44	Experimental Study on Electrical Conductivity of MnO-CaO-SiO ₂ Slags at 1723 K to 1823 K (1450 °C to 1550 °C). <i>Metallurgical and Materials Processing Science</i> , 2017, 48, 3359-3363.	1.0	4
45	Time-Dependent Surface Structure Evolution of NiMo Films Electrodeposited Under Super Gravity Field as Electrocatalyst for Hydrogen Evolution Reaction. <i>Journal of Physical Chemistry C</i> , 2017, 121, 16792-16802.	1.5	20
46	Roles of Electrolyte Characterization on Bauxite Electrolysis Desulfurization with Regeneration and Recycling. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2017, 48, 726-732.	1.0	14
47	Removal of Phosphorus in Silicon by the Formation of CaAl ₂ Si ₂ Phase at the Solidification Interface. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2017, 48, 420-428.	1.0	15
48	Boehmite Preparation via Alditols-Interacting Transformation of Metastable Intermediates in Al ₂ O ₃ Reaction Crystallization. <i>Crystal Growth and Design</i> , 2017, 17, 183-190.	1.4	4
49	Influence of Particle Size Distribution on Agglomeration/defluidization of Iron Powders at Elevated Temperature. <i>ISIJ International</i> , 2017, 57, 649-655.	0.6	12
50	Relationship Between Iron Whisker Growth and Doping Amount of Oxide During Fe ₂ O ₃ Reduction. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2016, 47, 1137-1146.	1.0	8
51	Desulfurization from Bauxite Water Slurry (BWS) Electrolysis. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2016, 47, 649-656.	1.0	10
52	Decomposition Kinetics of Titania Slag in Eutectic NaOH-NaNO ₃ System. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2016, 47, 666-674.	1.0	4
53	Alumina Hydrate Polymorphism Control in Al ₂ O ₃ Water Reaction Crystallization by Seeding to Change the Metastable Zone Width. <i>Crystal Growth and Design</i> , 2016, 16, 1056-1062.	1.4	16
54	Oxidation behavior of metallurgical silicon slag under non-isothermal and isothermal conditions. <i>Journal of Thermal Analysis and Calorimetry</i> , 2016, 124, 593-599.	2.0	7

#	ARTICLE	IF	CITATIONS
55	Progress toward Electrochemistry Intensified by using Supergravity Fields. ChemElectroChem, 2015, 2, 1879-1887.	1.7	20
56	Sulfur removal from bauxite water slurry (BWS) electrolysis intensified by ultrasonic. Ultrasonics Sonochemistry, 2015, 26, 142-148.	3.8	19
57	The corrosion resistance of Ni anode and Ga electrowinning in alkaline sulfide solutions. Journal of Applied Electrochemistry, 2015, 45, 1255-1263.	1.5	6
58	Insight of Iron Whisker Sticking Mechanism from Iron Atom Diffusion and Calculation of Solid Bridge Radius. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2014, 45, 2050-2056.	1.0	25
59	Sulfur removal from ionic liquid-assisted coal water slurry electrolysis in KNO ₃ system. Journal of Fuel Chemistry and Technology, 2013, 41, 928-936.	0.9	26
60	Impurities Removal from Metallurgical-Grade Silicon by Combined Sn-Si and Al-Si Refining Processes. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2013, 44, 828-836.	1.0	53
61	Modulation of active Cr(III) complexes by bath preparation to adjust Cr(III) electrodeposition. International Journal of Minerals, Metallurgy and Materials, 2013, 20, 902-908.	2.4	7
62	Characterization of Precipitated Carbon by XPS and Its Prevention Mechanism of Sticking during Reduction of Fe ₂ O ₃ Particles in the Fluidized Bed. ISIJ International, 2013, 53, 411-418.	0.6	20
63	Si purification by solidification of Al-Si melt with super gravity. Transactions of Nonferrous Metals Society of China, 2012, 22, 958-963.	1.7	67
64	Low-temperature purification process of metallurgical silicon. Transactions of Nonferrous Metals Society of China, 2011, 21, 1185-1192.	1.7	58
65	Relation between Sticking and Metallic Iron Precipitation on the Surface of Fe ₂ O ₃ Particles Reduced by CO in the Fluidized Bed. ISIJ International, 2011, 51, 1403-1409.	0.6	42
66	Effects of gravity on the electrodeposition and characterization of nickel foils. International Journal of Minerals, Metallurgy and Materials, 2011, 18, 59-65.	2.4	9
67	Influences of Super-Gravity Field on Aluminum Grain Refining. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 670-675.	1.1	47
68	Removal of Low-Content Impurities from Al By Super-Gravity. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2010, 41, 505-508.	1.0	68
69	Application of Modified Coke to NO _x Reduction with Recycling Flue Gas during Iron Ore Sintering Process. ISIJ International, 2008, 48, 1517-1523.	0.6	26
70	Rationally designed high-conductivity <i>Hydrangea macrophylla</i> -like Si@NiO@Ni/C composites as a high-performance anode material for lithium-ion batteries. Electrochemical Science Advances, 0, , .	1.2	0