

Shen-gen Zhang

List of Publications by Year in descending order

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118
papers

4,077
citations

126907

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138484

58
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120
docs citations

120
times ranked

3627
citing authors

#	ARTICLE	IF	CITATIONS
1	Recovery of precious metals from electronic waste and spent catalysts: A review. <i>Resources, Conservation and Recycling</i> , 2019, 141, 284-298.	10.8	275
2	Heat treatment effects on microstructure and magnetic properties of Mn-Zn ferrite powders. <i>Journal of Magnetism and Magnetic Materials</i> , 2010, 322, 173-177.	2.3	203
3	Supply and demand of some critical metals and present status of their recycling in WEEE. <i>Waste Management</i> , 2017, 65, 113-127.	7.4	198
4	The mechanisms of heavy metal immobilization by cementitious material treatments and thermal treatments: A review. <i>Journal of Environmental Management</i> , 2017, 193, 410-422.	7.8	189
5	Enhanced Performance of CdS/CdSe Quantum Dot Cosensitized Solar Cells via Homogeneous Distribution of Quantum Dots in TiO ₂ Film. <i>Journal of Physical Chemistry C</i> , 2012, 116, 18655-18662.	3.1	176
6	A review of Mn-containing oxide catalysts for low temperature selective catalytic reduction of NO _x with NH ₃ : reaction mechanism and catalyst deactivation. <i>RSC Advances</i> , 2017, 7, 26226-26242.	3.6	135
7	ZnO/TiO ₂ nanocable structured photoelectrodes for CdS/CdSe quantum dot co-sensitized solar cells. <i>Nanoscale</i> , 2013, 5, 936-943.	5.6	124
8	Architected ZnO photoelectrode for high efficiency quantum dot sensitized solar cells. <i>Energy and Environmental Science</i> , 2013, 6, 3542.	30.8	116
9	Degradation technologies and mechanisms of dioxins in municipal solid waste incineration fly ash: A review. <i>Journal of Cleaner Production</i> , 2020, 250, 119507.	9.3	111
10	Immobilization mechanism of Pb in fly ash-based geopolymer. <i>Construction and Building Materials</i> , 2017, 134, 123-130.	7.2	102
11	The Advancement of 7XXX Series Aluminum Alloys for Aircraft Structures: A Review. <i>Metals</i> , 2021, 11, 718.	2.3	96
12	Constructing ZnO nanorod array photoelectrodes for highly efficient quantum dot sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2013, 1, 6770.	10.3	74
13	Heat treatment effects on Fe ₃ O ₄ nanoparticles structure and magnetic properties prepared by carbothermal reduction. <i>Journal of Alloys and Compounds</i> , 2011, 509, 2316-2319.	5.5	72
14	A review of glass ceramic foams prepared from solid wastes: Processing, heavy-metal solidification and volatilization, applications. <i>Science of the Total Environment</i> , 2021, 781, 146727.	8.0	70
15	Harmless disposal and resource utilization for secondary aluminum dross: A review. <i>Science of the Total Environment</i> , 2021, 760, 143968.	8.0	66
16	Challenges in legislation, recycling system and technical system of waste electrical and electronic equipment in China. <i>Waste Management</i> , 2015, 45, 361-373.	7.4	64
17	Highly efficient recovery of platinum, palladium, and rhodium from spent automotive catalysts via iron melting collection. <i>Resources, Conservation and Recycling</i> , 2020, 155, 104644.	10.8	64
18	Rare earth elements recycling from waste phosphor by dual hydrochloric acid dissolution. <i>Journal of Hazardous Materials</i> , 2014, 272, 96-101.	12.4	63

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19	Recovery of waste rare earth fluorescent powders by two steps acid leaching. <i>Rare Metals</i> , 2013, 32, 609-615.	7.1	62
20	Study on glass-ceramics made from MSWI fly ash, pickling sludge and waste glass by one-step process. <i>Journal of Cleaner Production</i> , 2020, 271, 122674.	9.3	62
21	Effect of oxygen vacancies on ceria catalyst for selective catalytic reduction of NO with NH ₃ . <i>Applied Surface Science</i> , 2020, 529, 147068.	6.1	60
22	Preparation and characterization of glass ceramic foams based on municipal solid waste incineration ashes using secondary aluminum ash as foaming agent. <i>Construction and Building Materials</i> , 2020, 262, 120781.	7.2	58
23	Research progress on gâ€C3N4â€based photocatalysts for organic pollutants degradation in wastewater: From exciton and carrier perspectives. <i>Ceramics International</i> , 2021, 47, 31005-31030.	4.8	54
24	Separation and purification of platinum group metals from aqueous solution: Recent developments and industrial applications. <i>Resources, Conservation and Recycling</i> , 2021, 167, 105417.	10.8	50
25	Mnâ€Zn soft magnetic ferrite nanoparticles synthesized from spent alkaline Znâ€Mn batteries. <i>Journal of Alloys and Compounds</i> , 2011, 509, 3991-3994.	5.5	40
26	Microstructure evolution of recycled 7075 aluminum alloy and its mechanical and corrosion properties. <i>Journal of Alloys and Compounds</i> , 2021, 879, 160407.	5.5	40
27	An Efficient Leaching of Palladium from Spent Catalysts through Oxidation with Fe(III). <i>Materials</i> , 2019, 12, 1205.	2.9	39
28	Suppression of N ₂ O formation by H ₂ O and SO ₂ in the selective catalytic reduction of NO with NH ₃ over a Mn/Tiâ€Si catalyst. <i>Catalysis Science and Technology</i> , 2019, 9, 4759-4770.	4.1	37
29	Carbothermal reduction method for Fe ₃ O ₄ powder synthesis. <i>Journal of Alloys and Compounds</i> , 2010, 502, 338-340.	5.5	36
30	Fuel additives and heat treatment effects on nanocrystalline zinc ferrite phase composition. <i>Journal of Magnetism and Magnetic Materials</i> , 2011, 323, 569-573.	2.3	36
31	Integrated process for recycling copper anode slime from electronic waste smelting. <i>Journal of Cleaner Production</i> , 2017, 165, 48-56.	9.3	36
32	Production of glassâ€ceramics using Municipal solid waste incineration fly ash. <i>Rare Metals</i> , 2019, 38, 245-251.	7.1	36
33	Resonant modes and magnetoelectric performance of PZT/Ni cylindrical layered composites. <i>Applied Physics A: Materials Science and Processing</i> , 2010, 98, 449-454.	2.3	34
34	Facile scalable synthesis and superior lithium storage performance of ball-milled MoS ₂ â€graphite nanocomposites. <i>Journal of Materials Chemistry A</i> , 2015, 3, 10466-10470.	10.3	34
35	Three-Dimensional Reticulated, Spongelike, Resilient Aerogels Assembled by SiC/Si ₃ N ₄ Nanowires. <i>Nano Letters</i> , 2021, 21, 4167-4175.	9.1	34
36	Recovery of Platinum from Spent Petroleum Catalysts: Optimization Using Response Surface Methodology. <i>Metals</i> , 2019, 9, 354.	2.3	33

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37	Fast-heating for intercritical annealing of cold-rolled quenching and partitioning steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 669, 387-395.	5.6	32
38	Integrated utilization of municipal solid waste incineration fly ash and bottom ash for preparation of foam glass-ceramics. <i>Rare Metals</i> , 2019, 38, 914-921.	7.1	32
39	Reduction for heavy metals in pickling sludge with aluminum nitride in secondary aluminum dross by pyrometallurgy, followed by glass ceramics manufacture. <i>Journal of Hazardous Materials</i> , 2021, 418, 126331.	12.4	32
40	Dilatometric study on the recrystallization and austenization behavior of cold-rolled steel with different heating rates. <i>Journal of Alloys and Compounds</i> , 2016, 666, 309-316.	5.5	28
41	Crystallization mechanism of glass-ceramics prepared from stainless steel slag. <i>Rare Metals</i> , 2018, 37, 413-420.	7.1	28
42	High N_2 selectivity in selective catalytic reduction of NO with NH_3 over Mn/Ti-Zr catalysts. <i>RSC Advances</i> , 2018, 8, 12733-12741.	3.6	28
43	Microstructure evolution and properties of 7075 aluminum alloy recycled from scrap aircraft aluminum alloys. <i>Journal of Materials Research and Technology</i> , 2022, 19, 354-367.	5.8	28
44	Treatment method of hazardous pickling sludge by reusing as glass-ceramics nucleation agent. <i>Rare Metals</i> , 2016, 35, 269-274.	7.1	27
45	Slag design and iron capture mechanism for recovering low-grade Pt, Pd, and Rh from leaching residue of spent auto-exhaust catalysts. <i>Science of the Total Environment</i> , 2022, 802, 149830.	8.0	27
46	Highly porous ceramics production using slags from smelting of spent automotive catalysts. <i>Resources, Conservation and Recycling</i> , 2021, 166, 105373.	10.8	26
47	Migration, transformation and solidification/stabilization mechanisms of heavy metals in glass-ceramics made from MSWI fly ash and pickling sludge. <i>Ceramics International</i> , 2021, 47, 21599-21609.	4.8	25
48	Glass-ceramics one-step crystallization accomplished by building Ca^{2+} and Mg^{2+} fast diffusion layer around diopside crystal. <i>Journal of Alloys and Compounds</i> , 2016, 688, 709-714.	5.5	24
49	Boosting exciton dissociation and charge transfer in P-doped 2D porous g-C ₃ N ₄ for enhanced H ₂ production and molecular oxygen activation. <i>Ceramics International</i> , 2022, 48, 4031-4046.	4.8	24
50	Effect of Heating Rate on Microstructure Evolution and Magnetic Properties of Cold Rolled Non-Oriented Electrical Steel. <i>Journal of Iron and Steel Research International</i> , 2010, 17, 54-61.	2.8	22
51	Selective catalytic reduction of NO _x with NH ₃ over Mn-Zr-Ti mixed oxide catalysts. <i>Journal of Materials Science</i> , 2019, 54, 6943-6960.	3.7	21
52	Co-reduction synthesis of uniform ferromagnetic SmCo nanoparticles. <i>Materials Letters</i> , 2012, 68, 212-214.	2.6	20
53	Effect of strip entry temperature on the formation of interfacial layer during hot-dip galvanizing of press-hardened steel. <i>Surface and Coatings Technology</i> , 2014, 240, 269-274.	4.8	20
54	Emerging pollutants—Part II: Treatment. <i>Water Environment Research</i> , 2019, 91, 1390-1401.	2.7	20

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55	Mechanism of CeMgAl ₁₁ O ₁₉ : Tb ³⁺ alkaline fusion with sodium hydroxide. <i>Rare Metals</i> , 2015, 34, 189-194.	7.1	19
56	Synergistic effect of cobalt and niobium in Co ₃ -Nb-Ox on performance of selective catalytic reduction of NO with NH ₃ . <i>Rare Metals</i> , 2022, 41, 166-178.	7.1	19
57	Rapid annealing effects on microstructure, texture, and magnetic properties of non-oriented electrical steel. <i>Metals and Materials International</i> , 2012, 18, 531-537.	3.4	18
58	Enhanced magnetoelectric effect in magnetostrictive/piezoelectric laminates through adopting magnetic warm compaction Terfenol-D. <i>Journal of Alloys and Compounds</i> , 2014, 587, 287-289.	5.5	18
59	Complete recovery of Eu from BaMgAl ₁₀ O ₁₇ :Eu ²⁺ by alkaline fusion and its mechanism. <i>RSC Advances</i> , 2015, 5, 1113-1119.	3.6	18
60	Porous ceramics with near-zero shrinkage and low thermal conductivity from hazardous secondary aluminum dross. <i>Journal of the American Ceramic Society</i> , 2022, 105, 3197-3210.	3.8	18
61	Recycle of valuable products from oily cold rolling mill sludge. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2013, 20, 941-946.	4.9	17
62	Enhanced magnetoelectric efficiency of the Tb _{1-x} Dy _x Fe ₂ /Pb(Zr,Ti)O ₃ cylinder multi-electrode composites. <i>Materials and Design</i> , 2016, 90, 753-756.	7.0	17
63	Synthesis and Characterization of Micaceous Iron Oxide Pigment from Oily Cold Rolling Mill Sludge. <i>Procedia Environmental Sciences</i> , 2016, 31, 653-661.	1.4	17
64	One-step crystallization kinetic parameters of the glass-ceramics prepared from stainless steel slag and pickling sludge. <i>Journal of Iron and Steel Research International</i> , 2016, 23, 220-224.	2.8	17
65	Preparation of glass-ceramics from high-chlorine MSWI fly ash by one-step process. <i>Rare Metals</i> , 2021, 40, 3316-3328.	7.1	17
66	A novel approach for preparing glass ceramic foams from MSWI fly ash: foaming characteristics and hierarchical pore formation mechanism. <i>Journal of Materials Research and Technology</i> , 2022, 18, 731-744.	5.8	17
67	Effects of pre-strain and baking parameters on the microstructure and bake-hardening behavior of dual-phase steel. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2014, 21, 766-771.	4.9	16
68	Effect of TiO ₂ on Crystallization, Microstructure and Mechanical Properties of Glass-ceramics. <i>Journal of Iron and Steel Research International</i> , 2015, 22, 1113-1117.	2.8	16
69	Phase evolution and properties of glass ceramic foams prepared by bottom ash, fly ash and pickling sludge. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2022, 29, 563-573.	4.9	16
70	Architecturing high magnetic properties of NdFeB/SmFeN hybrid magnets. <i>Materials Letters</i> , 2013, 105, 87-89.	2.6	15
71	SnSb/TiO ₂ /C nanocomposite fabricated by high energy ball milling for high-performance lithium-ion batteries. <i>RSC Advances</i> , 2016, 6, 32462-32466.	3.6	15
72	Strontium ferrite powders prepared from oily cold rolling mill sludge by solid-state reaction method. <i>Rare Metals</i> , 2013, 32, 518-523.	7.1	13

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73	Mechanism and kinetics of the BaMgAl10O17:Eu ²⁺ alkaline fusion reaction. <i>Journal of Rare Earths</i> , 2015, 33, 664-670.	4.8	13
74	SiC/Si ₃ N ₄ composite with multi-laminate nanowires originated from oriented porous structure by freeze-casting. <i>Ceramics International</i> , 2020, 46, 26238-26243.	4.8	13
75	Emerging pollutants—Part II: Treatment. <i>Water Environment Research</i> , 2020, 92, 1603-1617.	2.7	12
76	Effect of hot-dip galvanizing processes on the microstructure and mechanical properties of 600-MPa hot-dip galvanized dual-phase steel. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2017, 24, 1379-1383.	4.9	11
77	Facile ball-milled synthesis of SnS ₂ -carbon nanocomposites with superior lithium storage. <i>Progress in Natural Science: Materials International</i> , 2018, 28, 676-682.	4.4	11
78	Directly growing nanowire-assembled nanofibrous ceramic foams with multi-lamellar structure via freeze-casting process. <i>Journal of the European Ceramic Society</i> , 2021, 41, 1041-1047.	5.7	11
79	Iron oxide and jadeite nucleation in high alumina glass-ceramics prepared from secondary aluminum dross. <i>Ceramics International</i> , 2021, 47, 21744-21750.	4.8	11
80	Homogeneous reduction for heavy metals from pickling sludge with aluminum nitride from secondary aluminum dross in aluminosilicate melt solution environment. <i>Journal of Cleaner Production</i> , 2022, 362, 132358.	9.3	11
81	Process and mechanism of electrolytic enrichment of PGMs from Fe-PGMs alloy. <i>Journal of Cleaner Production</i> , 2020, 271, 122829.	9.3	10
82	Phase transition during nucleation process in calcium aluminate glass-ceramics manufactured from secondary aluminum dross. <i>Journal of Alloys and Compounds</i> , 2022, 911, 165010.	5.5	10
83	Hierarchically porous glass-ceramics by alkaline activation and crystallization from municipal solid waste incineration ashes. <i>Journal of Cleaner Production</i> , 2022, 364, 132693.	9.3	10
84	Behavior of residual carbon in Sm(Co, Fe, Cu, Zr) _z permanent magnets. <i>Journal of Alloys and Compounds</i> , 2007, 440, 89-93.	5.5	9
85	Rapid heating effects on grain-size, texture and magnetic properties of 3% Si non-oriented electrical steel. <i>Bulletin of Materials Science</i> , 2011, 34, 1477-1482.	1.7	9
86	Phosphorus content effect on the magnetoelectric properties of the Ni ₂ P(Ni)/PZT/Ni ₂ P(Ni) cylindrical layered composites. <i>Materials Letters</i> , 2014, 133, 255-258.	2.6	9
87	Recovery of copper and tin from stripping tin solution by electrodeposition. <i>Rare Metals</i> , 2014, 33, 353-357.	7.1	9
88	Effect of Continuous Annealing on Microstructure and Bake Hardening Behavior of Low Carbon Steel. <i>Journal of Iron and Steel Research International</i> , 2015, 22, 163-170.	2.8	9
89	Synthesis and properties of SrFe ₁₂ O ₁₉ obtained by solid waste recycling of oily cold rolling mill sludge. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2019, 26, 642-648.	4.9	9
90	Controlling the Composition and Magnetic Properties of Nano-SrFe ₁₂ O ₁₉ Powder Synthesized from Oily Cold Mill Sludge by the Citrate Precursor Method. <i>Materials</i> , 2019, 12, 1250.	2.9	9

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91	An alkaline fusion mechanism for aluminate rare earth phosphor: cation-oxoanion synergies theory. <i>Rare Metals</i> , 2019, 38, 299-305.	7.1	9
92	Promotion effect of niobium on ceria catalyst for selective catalytic reduction of NO with NH ₃ . <i>Journal of Rare Earths</i> , 2022, 40, 1535-1545.	4.8	9
93	Electromagnetic and microwave absorbing properties of FeCoB powder composites. <i>Rare Metals</i> , 2013, 32, 402-407.	7.1	8
94	Theoretical and experimental on the thermodynamic, kinetic and phase evolution characteristics of secondary aluminum ash. <i>Journal of Materials Research and Technology</i> , 2022, 19, 3857-3866.	5.8	8
95	Using coal fly ash-based geopolymer to immobilize Cd from lead fuming furnace slag. <i>Rare Metals</i> , 2023, 42, 1056-1060.	7.1	7
96	2:17-type SmCo magnets prepared by powder injection molding using a water-based binder. <i>Journal of Magnetism and Magnetic Materials</i> , 2008, 320, 2168-2171.	2.3	6
97	Antimony recovery from SbCl ₅ acid solution by hydrolysis and aging. <i>Rare Metals</i> , 2015, 34, 436-439.	7.1	6
98	Free oxoanion theory for BaMgAl ₁₀ O ₁₇ :Eu ²⁺ structure decomposition during alkaline fusion process. <i>RSC Advances</i> , 2015, 5, 50105-50112.	3.6	6
99	Effect of temper rolling on the bake-hardening behavior of low carbon steel. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2015, 22, 32-36.	4.9	6
100	Bonded cylindrical Terfenol-D-epoxy/PZT magnetoelectric composites prepared by the one-step compression molding. <i>AIP Advances</i> , 2015, 5, .	1.3	6
101	The influence of Na ₂ O on the fast diffusion layer around diopside crystals. <i>RSC Advances</i> , 2017, 7, 9417-9422.	3.6	6
102	Preparation and formation mechanism of monodisperse micaceous iron oxide from iron chromium grinding waste. <i>Powder Technology</i> , 2018, 329, 401-408.	4.2	6
103	Recovery of Fe, Cr and Ni in pickling sludge with aluminum nitride in secondary aluminum dross. <i>Minerals Engineering</i> , 2022, 184, 107659.	4.3	6
104	Magnetic properties and microstructure of radially oriented Sm(Co,Fe,Cu,Zr) _z ring magnets. <i>Materials Letters</i> , 2007, 61, 5271-5274.	2.6	5
105	Radial cracks and fracture mechanism of radially oriented ring 2:17 type SmCo magnets. <i>Journal of Alloys and Compounds</i> , 2009, 476, 98-101.	5.5	5
106	Bonded Terfenol-D composites with low eddy current loss and high magnetostriction. <i>Rare Metals</i> , 2010, 29, 579-582.	7.1	5
107	Comparative study on transition element doped Mn-Zr-Ti-oxides catalysts for the low-temperature selective catalytic reduction of NO with NH ₃ . <i>Reaction Kinetics, Mechanisms and Catalysis</i> , 2019, 127, 637-652.	1.7	5
108	Effect of Directional Solidification Rate on Preferred Orientation, Microstructure and Magnetostriction of (Tb _{0.3} Dy _{0.7})Fe _{1.95} Alloys. <i>Japanese Journal of Applied Physics</i> , 2004, 43, 8032-8035.	1.5	4

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109	Influence of heat treatment on fracture and magnetic properties of radially oriented Sm ₂ Co ₁₇ permanent magnets. Transactions of Nonferrous Metals Society of China, 2007, 17, 491-495.	4.2	4
110	Inductance-capacitance resonance effect in the magnetoelectric composites characterization system. Applied Physics A: Materials Science and Processing, 2010, 100, 1069-1072.	2.3	4
111	Preparation of pure SnO ₂ powders from tin slag of printed circuit boards waste. Rare Metals, 2014, 33, 749-753.	7.1	4
112	Effects of overaging temperature on the microstructure and properties of 600 MPa cold-rolled dual-phase steel. International Journal of Minerals, Metallurgy and Materials, 2016, 23, 943-948.	4.9	4
113	New technology for recycling materials from oily cold rolling mill sludge. International Journal of Minerals, Metallurgy and Materials, 2013, 20, 1141-1147.	4.9	3
114	Polymer content and particle size effects on polymer-bonded Terfenol-D/PZT magnetoelectric composites. Materials Letters, 2016, 175, 93-95.	2.6	3
115	Tar induced deactivation and regeneration of a commercial V ₂ O ₅ -MoO ₃ /TiO ₂ catalyst during selective catalytic reduction of NO with NH ₃ . Fuel, 2022, 316, 123324.	6.4	3
116	Effect of annealing process of iron powder on magnetic properties and losses of motor cores. Bulletin of Materials Science, 2011, 34, 829-833.	1.7	2
117	Height-related magnetoelectric performance of PZT/Ni layered composites. Rare Metals, 2017, 36, 591-595.	7.1	2
118	Preparation of BaPbO ₃ functional ceramics from leaded waste. Rare Metals, 2014, 33, 598-603.	7.1	1