

Yixin Zhao

List of Publications by Year in descending order

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117
papers

4,232
citations

136950

32
h-index

118850

62
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117
all docs

117
docs citations

117
times ranked

4581
citing authors

#	ARTICLE	IF	CITATIONS
1	TiO ₂ Nanoparticles as Functional Building Blocks. <i>Chemical Reviews</i> , 2014, 114, 9283-9318.	47.7	410
2	Development of plasmonic semiconductor nanomaterials with copper chalcogenides for a future with sustainable energy materials. <i>Energy and Environmental Science</i> , 2012, 5, 5564-5576.	30.8	334
3	Resistance and polarization losses in aqueous buffer membrane electrolytes for water-splitting photoelectrochemical cells. <i>Energy and Environmental Science</i> , 2012, 5, 7582.	30.8	188
4	Pore structure characterization of coal by NMR cryoporometry. <i>Fuel</i> , 2017, 190, 359-369.	6.4	187
5	Metal ions optical sensing by semiconductor quantum dots. <i>Journal of Materials Chemistry C</i> , 2014, 2, 595-613.	5.5	163
6	Pore Structure Characterization of Coal by Synchrotron Small-Angle X-ray Scattering and Transmission Electron Microscopy. <i>Energy & Fuels</i> , 2014, 28, 3704-3711.	5.1	160
7	The temperature effect on the methane and CO ₂ adsorption capacities of Illinois coal. <i>Fuel</i> , 2018, 211, 241-250.	6.4	128
8	Acoustic emission and thermal infrared precursors associated with bump-prone coal failure. <i>International Journal of Coal Geology</i> , 2010, 83, 11-20.	5.0	127
9	Pore structure characterization of coal by synchrotron radiation nano-CT. <i>Fuel</i> , 2018, 215, 102-110.	6.4	124
10	Dynamic tensile behaviour and crack propagation of coal under coupled static-dynamic loading. <i>International Journal of Mining Science and Technology</i> , 2020, 30, 659-668.	10.3	117
11	Effects of bedding on the dynamic indirect tensile strength of coal: Laboratory experiments and numerical simulation. <i>International Journal of Coal Geology</i> , 2014, 132, 81-93.	5.0	113
12	Numerical Investigation of the Dynamic Mechanical State of a Coal Pillar During Longwall Mining Panel Extraction. <i>Rock Mechanics and Rock Engineering</i> , 2013, 46, 1211-1221.	5.4	107
13	Comparison of low-field NMR and microfocus X-ray computed tomography in fractal characterization of pores in artificial cores. <i>Fuel</i> , 2017, 210, 217-226.	6.4	106
14	Assessment and mitigation of coal bump risk during extraction of an island longwall panel. <i>International Journal of Coal Geology</i> , 2012, 95, 20-33.	5.0	91
15	Effects of loading rate and bedding on the dynamic fracture toughness of coal: Laboratory experiments. <i>Engineering Fracture Mechanics</i> , 2017, 178, 375-391.	4.3	86
16	A review of mechanism and prevention technologies of coal bumps in China. <i>Journal of Rock Mechanics and Geotechnical Engineering</i> , 2017, 9, 180-194.	8.1	77
17	Dynamic Tensile Strength of Coal under Dry and Saturated Conditions. <i>Rock Mechanics and Rock Engineering</i> , 2016, 49, 1709-1720.	5.4	74
18	Compaction characteristics of the caving zone in a longwall goaf: a review. <i>Environmental Earth Sciences</i> , 2019, 78, 1.	2.7	69

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19	Apparent-Depth Effects of the Dynamic Failure of Thick Hard Rock Strata on the Underlying Coal Mass During Underground Mining. <i>Rock Mechanics and Rock Engineering</i> , 2019, 52, 1565-1576.	5.4	67
20	Scale effects and strength anisotropy in coal. <i>International Journal of Coal Geology</i> , 2018, 195, 37-46.	5.0	63
21	Experimental and numerical modelling investigation on fracturing in coal under impact loads. <i>International Journal of Fracture</i> , 2013, 183, 63-80.	2.2	59
22	Characteristic strength and acoustic emission properties of weakly cemented sandstone at different depths under uniaxial compression. <i>International Journal of Coal Science and Technology</i> , 2021, 8, 1288-1301.	6.0	58
23	Failure mechanisms in coal: Dependence on strain rate and microstructure. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 6924-6935.	3.4	56
24	Pore structure characterization of shales using synchrotron SAXS and NMR cryoporometry. <i>Marine and Petroleum Geology</i> , 2019, 102, 116-125.	3.3	53
25	Coal pillar failure analysis and instability evaluation methods: A short review and prospect. <i>Engineering Failure Analysis</i> , 2022, 138, 106344.	4.0	53
26	Modeling of permeability for ultra-tight coal and shale matrix: A multi-mechanistic flow approach. <i>Fuel</i> , 2018, 232, 60-70.	6.4	49
27	Evaluation of gas sorption-induced internal swelling in coal. <i>Fuel</i> , 2015, 143, 165-172.	6.4	47
28	Mechanical anisotropy of coal with considerations of realistic microstructures and external loading directions. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2019, 116, 111-121.	5.8	47
29	A fully coupled thermo-hydro-mechanical model for heat and gas transfer in thermal stimulation enhanced coal seam gas recovery. <i>International Journal of Heat and Mass Transfer</i> , 2018, 125, 866-875.	4.8	44
30	Quantifying nano-pore heterogeneity and anisotropy in gas shale by synchrotron radiation nano-CT. <i>Microporous and Mesoporous Materials</i> , 2018, 258, 8-16.	4.4	42
31	Effects of microstructure on water imbibition in sandstones using X-ray computed tomography and neutron radiography. <i>Journal of Geophysical Research: Solid Earth</i> , 2017, 122, 4963-4981.	3.4	39
32	Pore-Scale Reconstruction and Simulation of Non-Darcy Flow in Synthetic Porous Rocks. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 2770-2786.	3.4	35
33	FRactal Characteristics of Crack Propagation in Coal Under Impact Loading. <i>Fractals</i> , 2018, 26, 1840014.	3.7	31
34	3D DEM method for compaction and breakage characteristics simulation of broken rock mass in goaf. <i>Acta Geotechnica</i> , 2022, 17, 2765-2781.	5.7	31
35	Influence of Bedding Planes on Mode I and Mixed-Mode (I-II) Dynamic Fracture Toughness of Coal: Analysis of Experiments. <i>Rock Mechanics and Rock Engineering</i> , 2021, 54, 173-189.	5.4	30
36	Shale Pore Characterization Using NMR Cryoporometry with Octamethylcyclotetrasiloxane as the Probe Liquid. <i>Energy & Fuels</i> , 2017, 31, 6951-6959.	5.1	27

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37	Investigations into Mining-Induced Stressâ€“Fractureâ€“Seepage Field Coupling Effect Considering the Response of Key Stratum and Composite Aquifer. <i>Rock Mechanics and Rock Engineering</i> , 2019, 52, 4017-4031.	5.4	27
38	Space-sky-surface integrated monitoring system for overburden migration regularity in shallow-buried high-intensity mining. <i>Bulletin of Engineering Geology and the Environment</i> , 2021, 80, 1403-1417.	3.5	27
39	Experimental study of stressâ€“permeability behavior of single persistent fractured coal samples in the fractured zone. <i>Journal of Geophysics and Engineering</i> , 2018, 15, 2159-2170.	1.4	26
40	Deformation Field and Acoustic Emission Characteristics of Weakly Cemented Rock under Brazilian Splitting Test. <i>Natural Resources Research</i> , 2021, 30, 1925-1939.	4.7	26
41	CO2-ECBM in coal nanostructure: Modelling and simulation. <i>Journal of Natural Gas Science and Engineering</i> , 2018, 54, 202-215.	4.4	23
42	A Model to Estimate the Height of the Water-conducting Fracture Zone for Longwall Panels in Western China. <i>Mine Water and the Environment</i> , 2020, 39, 823-838.	2.0	23
43	Identification of mining induced ground fissures using UAV and infrared thermal imager: Temperature variation and fissure evolution. <i>ISPRS Journal of Photogrammetry and Remote Sensing</i> , 2021, 180, 45-64.	11.1	22
44	Numerical Simulation of Broken Coal Strength Influence on Compaction Characteristics in Goaf. <i>Natural Resources Research</i> , 2020, 29, 2495-2511.	4.7	21
45	Influence of bedding and cleats on the mechanical properties of a hard coal. <i>Arabian Journal of Geosciences</i> , 2018, 11, 1.	1.3	20
46	Water sorptivity of unsaturated fractured sandstone: Fractal modeling and neutron radiography experiment. <i>Advances in Water Resources</i> , 2019, 130, 172-183.	3.8	20
47	Anisotropy of acoustic emission in coal under the uniaxial loading condition. <i>Chaos, Solitons and Fractals</i> , 2020, 130, 109465.	5.1	20
48	Characterization of unsaturated diffusivity of tight sandstones using neutron radiography. <i>International Journal of Heat and Mass Transfer</i> , 2018, 124, 693-705.	4.8	19
49	Impact of coal composition and pore structure on gas adsorption: a study based on a synchrotron radiation facility. , 2020, 10, 116-129.		19
50	Development and formation of ground fissures induced by an ultra large mining height longwall panel in Shendong mining area. <i>Bulletin of Engineering Geology and the Environment</i> , 2021, 80, 7879-7898.	3.5	19
51	A fluidâ€“solid coupling method for the simulation of gas transport in porous coal and rock media. <i>Energy Science and Engineering</i> , 2019, 7, 1913-1924.	4.0	18
52	The Influence of Roadway Backfill on Bursting Liability and Strength of Coal Pillar by Numerical Investigation. <i>Procedia Engineering</i> , 2011, 26, 1125-1143.	1.2	17
53	Experimental study on the mechanisms of fault reactivation and coal bumps induced by mining. <i>Science in China Series A: Mathematics</i> , 2013, 19, 507-513.	0.2	17
54	Quantification of pore modification in coals due to pulverization using synchrotron small angle X-ray scattering. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 84, 103669.	4.4	16

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55	Characteristics of Pore and Fracture of Coal with Bursting Proneness Based on DIC and Fractal Theory. <i>Energies</i> , 2020, 13, 5404.	3.1	15
56	Impact of nanopore structure on coal strength: A study based on synchrotron radiation nano-CT. <i>Results in Physics</i> , 2020, 17, 103029.	4.1	15
57	Investigation on the size and fractal dimension of nano-pore in coals by synchrotron small angle X-ray scattering. <i>Chinese Science Bulletin</i> , 2017, 62, 2416-2427.	0.7	15
58	Role of bedding plane in the relationship between Mode-I fracture toughness and tensile strength of shale. <i>Bulletin of Engineering Geology and the Environment</i> , 2022, 81, 1.	3.5	15
59	Quantitative characterization and comparison of bentonite microstructure by small angle X-ray scattering and nitrogen adsorption. <i>Construction and Building Materials</i> , 2020, 262, 120863.	7.2	13
60	Small furnace for the small angle X-ray scattering (SAXS) and wide angle X-ray scattering (WAXS) characterization of the high temperature carbonization of coal. <i>Instrumentation Science and Technology</i> , 2021, 49, 445-456.	1.8	13
61	Using Improved Edge Detection Method to Detect Mining-Induced Ground Fissures Identified by Unmanned Aerial Vehicle Remote Sensing. <i>Remote Sensing</i> , 2021, 13, 3652.	4.0	13
62	Prediction of interactive effects of CBM production, faulting stress regime, and fault in coal reservoir: Numerical simulation. <i>Journal of Natural Gas Science and Engineering</i> , 2022, 99, 104419.	4.4	13
63	Plastic fracture simulation by using discretized virtual internal bond. <i>Engineering Fracture Mechanics</i> , 2017, 178, 169-183.	4.3	12
64	Synchrotron radiation facility-based quantitative evaluation of pore structure heterogeneity and anisotropy in coal. <i>Petroleum Exploration and Development</i> , 2019, 46, 1195-1205.	7.0	12
65	Effects of bedding planes on the fracture characteristics of coal under dynamic loading. <i>Engineering Fracture Mechanics</i> , 2021, 250, 107761.	4.3	12
66	Dynamic failure risk of coal pillar formed by irregular shape longwall face: A case study. <i>International Journal of Mining Science and Technology</i> , 2018, 28, 775-781.	10.3	11
67	Investigations into Mining-Induced Stress-“Fracture”-Seepage Field Coupling in a Complex Hydrogeology Environment: A Case Study in the Bulianta Colliery. <i>Mine Water and the Environment</i> , 2019, 38, 632-642.	2.0	11
68	Co-effects of bedding planes and loading condition on Mode-I fracture toughness of anisotropic rocks. <i>Theoretical and Applied Fracture Mechanics</i> , 2022, 117, 103158.	4.7	11
69	<i>In situ</i> SAXS study of fractal structure of non-caking coal during carbonisation. <i>Philosophical Magazine Letters</i> , 2021, 101, 60-67.	1.2	10
70	Influence of bedding planes on fracture characteristics of coal under mode II loading. <i>Theoretical and Applied Fracture Mechanics</i> , 2022, 117, 103131.	4.7	10
71	Probing Into Design Of Refuge Chamber System In Coal Mine. <i>Procedia Engineering</i> , 2011, 26, 2334-2341.	1.2	9
72	Influence of initial microcrack on the physic-mechanical properties of rock with slaty cleavage. <i>Geotechnical and Geological Engineering</i> , 2017, 35, 2351-2360.	1.7	9

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73	A Gaussian Decomposition Method and its applications to the prediction of shale gas production. Fuel, 2018, 224, 331-347.	6.4	9
74	Scale Effect on the Anisotropy of Acoustic Emission in Coal. Shock and Vibration, 2018, 2018, 1-11.	0.6	8
75	Nano- to micro-pore characterization by synchrotron radiation SAXS and nano-CT for bituminous coals. Frontiers of Earth Science, 2021, 15, 189-201.	2.1	8
76	Interactions between the fluid and an isolation tool in a pipe: laboratory experiments and numerical simulation. Petroleum Science, 2016, 13, 746-759.	4.9	7
77	Effects of Pore Structure on Stress-Dependent Fluid Flow in Synthetic Porous Rocks Using Microfocus X-ray Computed Tomography. Transport in Porous Media, 2019, 128, 653-675.	2.6	7
78	Experimental Investigation of Forchheimer Coefficients for Non-Darcy Flow in Conglomerate-Confined Aquifer. Geofluids, 2018, 2018, 1-21.	0.7	6
79	Experimental study on permeability response in fractured rock to the effect of hydro-mechanical coupling, fracture geometry, and component content. Natural Hazards, 2021, 105, 1439-1451.	3.4	6
80	Initial water imbibition of gas-saturated natural reservoir rock: A generalized multifactor geometry model with capillary bundles. Journal of Petroleum Science and Engineering, 2021, 205, 108849.	4.2	6
81	Characteristics Evolution of Multiscale Structures in Deep Coal under Liquid Nitrogen Freeze-Thaw Cycles. Geofluids, 2021, 2021, 1-9.	0.7	6
82	<i>In situ</i> wide-angle X-ray scattering study on the change of microcrystalline structure in Jincheng anthracite during high-temperature carbonization. Journal of Applied Crystallography, 2022, 55, 265-270.	4.5	6
83	The Feasibility Research on Ascending Mining under the Condition of Multi-Disturbances. Procedia Environmental Sciences, 2012, 12, 758-764.	1.4	5
84	Effect of the Heterogeneity on Sorptivity in Sandstones with High and Low Permeability in Water Imbibition Process. Processes, 2019, 7, 260.	2.8	5
85	Experimental Investigation on the Tensile Strength of Coal: Consideration of the Specimen Size and Water Content. Energies, 2020, 13, 6585.	3.1	5
86	Experimental Investigation of Microstructure-Related Scale Effect on Tensile Failure of Coal. Natural Resources Research, 2021, 30, 1495-1510.	4.7	5
87	Comparative study on modes I and II fracture characteristics of bituminous coal using asymmetric semi-circular bend specimen. Theoretical and Applied Fracture Mechanics, 2022, , 103377.	4.7	5
88	Dynamic tensile failure of layered sorptive rocks: Shale and coal. Engineering Failure Analysis, 2022, 138, 106346.	4.0	5
89	Visualization of Gas Diffusion-Sorption in Coal: A Study Based on Synchrotron Radiation Nano-CT. Geofluids, 2020, 2020, 1-11.	0.7	4
90	Coupled hydro-mechanical evolution of fracture permeability in sand injectite intrusions. Journal of Rock Mechanics and Geotechnical Engineering, 2020, 12, 742-751.	8.1	4

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91	Loading rates dependency of strength anisotropy in coal: Based on the three-dimensional reconstruction modeling technology. Energy Science and Engineering, 2021, 9, 855-864.	4.0	4
92	An automatic loading system for rock core testing with an industrial CT scanner. Petroleum Science, 2011, 8, 490-493.	4.9	3
93	Application and Development of an Environmentally Friendly Blast Hole Plug for Underground Coal Mines. Shock and Vibration, 2018, 2018, 1-12.	0.6	3
94	<i>In situ</i> change of fractal structure in coal with coking capability during high-temperature carbonisation. Philosophical Magazine Letters, 2022, 102, 81-92.	1.2	3
95	Principal Component Analysis on Electromagnetic Radiation Rules while Fully Mechanized Coal Face Passing Through Fault. Procedia Environmental Sciences, 2012, 12, 751-757.	1.4	2
96	Simulation of Sidewall Failure in Coal Mine Roadways Using an Extended Continuous Joint Model. Journal of Failure Analysis and Prevention, 2018, 18, 41-49.	0.9	2
97	Uniaxial compressive strength estimation based on the primary wave velocity in coal: considering scale effect and anisotropy. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2020, , 1-19.	2.3	2
98	A new method for measurement of moisture transport in porous media based on forward and backward scattering of epithermal neutrons. Applied Radiation and Isotopes, 2021, 173, 109730.	1.5	2
99	Differential Strain Index-Based Multiphysics Model for Coal Seam Gas Production. Energy & Fuels, 2021, 35, 15642-15656.	5.1	2
100	Effect of Uniaxial Compression on Coal Nanostructure as Measured by Small Angle X-ray Scattering. Journal of Testing and Evaluation, 2022, 50, 2592-2606.	0.7	2
101	Tensile Properties and Multiparameter Response Characteristics of Coal under Different Loading Rates. Natural Resources Research, 2022, 31, 2787-2803.	4.7	2
102	Constitutive equations for coal containing gas considering gas adsorption. Procedia Earth and Planetary Science, 2009, 1, 425-431.	0.6	1
103	Automatic loading testing system based on LabWindows/CVI for industrial CT. , 2011, , .		1
104	Study on Risk Analysis and Control Technology of Coal Bump. Procedia Environmental Sciences, 2012, 12, 831-836.	1.4	1
105	Study on Characteristic and Mechanism of Deformation and Failure of Roadway Surrounding Rock in Deep Mining. Advanced Materials Research, 0, 734-737, 819-823.	0.3	1
106	Consecutive Short-Scan CT for Geological Structure Analog Models with Large Size on In-Situ Stage. PLoS ONE, 2016, 11, e0161358.	2.5	1
107	Characteristics of Ground Surface Settlement of Double-Line Adjacent Metro Construction in Sandy Cobble Stratum: A Case Study of Beijing Airport Line. KSCE Journal of Civil Engineering, 2021, 25, 4443.	1.9	1
108	The Characteristics of Closed Pores in Coals With Different Ranks. Frontiers in Earth Science, 2021, 9, .	1.8	1

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109	Crack edge detection of coal CT images based on LS-SVM. , 2009, , .		0
110	Investigation of Shale Permeability Evolution considering Bivalued Effective Stress Coefficients for CO2 Injection. Geofluids, 2021, 2021, 1-11.	0.7	0
111	Investigation on Strain Localization of Coal Using Micro-finite Difference Modelling. Springer Series in Geomechanics and Geoengineering, 2013, , 507-517.	0.1	0
112	A Modified Fuzzy Feedback Scheduling Strategy in CAN Network. , 2015, , .		0
113	Neutron radiography study of water spontaneous imbibition in unsaturated sandstone. , 2019, , .		0
114	In-Situ Study on High-Temperature Carbonization of Coking Coal by Synchrotron Radiation SAXS-WAXS. SSRN Electronic Journal, 0, , .	0.4	0
115	Floor Failure Characteristics in Deep Island Longwall Panel: Theoretical Analysis and Field Verification. Geofluids, 2022, 2022, 1-14.	0.7	0
116	A semi-empirical modified geometry model for long-term co-current spontaneous imbibition of porous media based on convoluted, nonuniform and topological pore network. Journal of Hydrology, 2022, 609, 127669.	5.4	0
117	Impact of Fractal Features on Gas Adsorption and Desorption Capacities and Ad-/Desorption Hysteresis in Coals Based on Synchrotron Radiation SAXS. Frontiers in Earth Science, 2022, 10, .	1.8	0