

Shimin Liu

List of Publications by Year in descending order

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190
papers

8,959
citations

36203

51
h-index

53109

85
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193
all docs

193
docs citations

193
times ranked

4709
citing authors

#	ARTICLE	IF	CITATIONS
1	Hardness of Covalent Crystals. <i>Physical Review Letters</i> , 2003, 91, 015502.	2.9	835
2	Gas diffusion behavior of coal and its impact on production from coalbed methane reservoirs. <i>International Journal of Coal Geology</i> , 2011, 86, 342-348.	1.9	392
3	Pore characterization and its impact on methane adsorption capacity for organic-rich marine shales. <i>Fuel</i> , 2016, 181, 227-237.	3.4	219
4	Gas diffusion in coal particles: A review of mathematical models and their applications. <i>Fuel</i> , 2019, 252, 77-100.	3.4	214
5	Pore structure characterization of coal by NMR cryoporometry. <i>Fuel</i> , 2017, 190, 359-369.	3.4	187
6	Laboratory measurement and modeling of coal permeability with continued methane production: Part 1 "Laboratory results. <i>Fuel</i> , 2012, 94, 110-116.	3.4	186
7	Pore Structure in Coal: Pore Evolution after Cryogenic Freezing with Cyclic Liquid Nitrogen Injection and Its Implication on Coalbed Methane Extraction. <i>Energy & Fuels</i> , 2016, 30, 6009-6020.	2.5	173
8	Changes in the petrophysical properties of coal subjected to liquid nitrogen freeze-thaw " A nuclear magnetic resonance investigation. <i>Fuel</i> , 2017, 194, 102-114.	3.4	171
9	Pore Structure Characterization of Coal by Synchrotron Small-Angle X-ray Scattering and Transmission Electron Microscopy. <i>Energy & Fuels</i> , 2014, 28, 3704-3711.	2.5	160
10	Three-dimensional modeling and analysis of macro-pore structure of coal using combined X-ray CT imaging and fractal theory. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2019, 123, 104082.	2.6	148
11	Permeability prediction of coalbed methane reservoirs during primary depletion. <i>International Journal of Coal Geology</i> , 2013, 113, 1-10.	1.9	139
12	The temperature effect on the methane and CO ₂ adsorption capacities of Illinois coal. <i>Fuel</i> , 2018, 211, 241-250.	3.4	128
13	Laboratory measurement and modeling of coal permeability with continued methane production: Part 2 " Modeling results. <i>Fuel</i> , 2012, 94, 117-124.	3.4	125
14	Pore structure characterization of coal by synchrotron radiation nano-CT. <i>Fuel</i> , 2018, 215, 102-110.	3.4	124
15	A simplified permeability model for coalbed methane reservoirs based on matchstick strain and constant volume theory. <i>International Journal of Coal Geology</i> , 2011, 85, 43-48.	1.9	121
16	The impacts of coal dust on miners' health: A review. <i>Environmental Research</i> , 2020, 190, 109849.	3.7	114
17	Methane adsorption measurements and modeling for organic-rich marine shale samples. <i>Fuel</i> , 2016, 172, 301-309.	3.4	113
18	Estimation and modeling of pressure-dependent gas diffusion coefficient for coal: A fractal theory-based approach. <i>Fuel</i> , 2019, 253, 588-606.	3.4	103

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19	Fractal dimensions of low rank coal subjected to liquid nitrogen freeze-thaw based on nuclear magnetic resonance applied for coalbed methane recovery. <i>Powder Technology</i> , 2018, 325, 11-20.	2.1	101
20	Eu/Dy ions co-doped white light luminescence zinc-aluminoborosilicate glasses for white LED. <i>Optical Materials</i> , 2008, 31, 47-50.	1.7	100
21	Estimation of Pressure-Dependent Diffusive Permeability of Coal Using Methane Diffusion Coefficient: Laboratory Measurements and Modeling. <i>Energy & Fuels</i> , 2016, 30, 8968-8976.	2.5	100
22	A new theoretical approach to model sorption-induced coal shrinkage or swelling. <i>AAPG Bulletin</i> , 2013, 97, 1033-1049.	0.7	98
23	CO ₂ gas fracturing: A novel reservoir stimulation technology in low permeability gassy coal seams. <i>Fuel</i> , 2017, 203, 197-207.	3.4	95
24	Mechanical behavior and fracture spatial propagation of coal injected with liquid nitrogen under triaxial stress applied for coalbed methane recovery. <i>Engineering Geology</i> , 2018, 233, 1-10.	2.9	93
25	Evolution of the pore structure in coal subjected to freeze-thaw using liquid nitrogen to enhance coalbed methane extraction. <i>Journal of Petroleum Science and Engineering</i> , 2019, 175, 129-139.	2.1	92
26	Experimental and theoretical characterization of methane and CO ₂ sorption hysteresis in coals based on Langmuir desorption. <i>International Journal of Coal Geology</i> , 2017, 171, 49-60.	1.9	83
27	Characterizations of pore, mineral and petrographic properties of marine shale using multiple techniques and their implications on gas storage capability for Sichuan Longmaxi gas shale field in China. <i>Fuel</i> , 2019, 241, 360-371.	3.4	83
28	Molecular structure controls on micropore evolution in coal vitrinite during coalification. <i>International Journal of Coal Geology</i> , 2018, 199, 19-30.	1.9	79
29	White luminescence of Tm-Dy ions co-doped aluminoborosilicate glasses under UV light excitation. <i>Journal of Solid State Chemistry</i> , 2008, 181, 2725-2730.	1.4	78
30	Non-linear gas desorption and transport behavior in coal matrix: Experiments and numerical modeling. <i>Fuel</i> , 2018, 214, 1-13.	3.4	75
31	Nanopore characterization of mine roof shales by SANS, nitrogen adsorption, and mercury intrusion: Impact on water adsorption/retention behavior. <i>International Journal of Coal Geology</i> , 2018, 200, 173-185.	1.9	75
32	Dynamic Tensile Strength of Coal under Dry and Saturated Conditions. <i>Rock Mechanics and Rock Engineering</i> , 2016, 49, 1709-1720.	2.6	74
33	Failure Mechanism of Coal after Cryogenic Freezing with Cyclic Liquid Nitrogen and Its Influences on Coalbed Methane Exploitation. <i>Energy & Fuels</i> , 2016, 30, 8567-8578.	2.5	73
34	Evaluation of in situ stress changes with gas depletion of coalbed methane reservoirs. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 6263-6276.	1.4	71
35	Water Vapor Sorption Properties of Illinois Shales Under Dynamic Water Vapor Conditions: Experimentation and Modeling. <i>Water Resources Research</i> , 2019, 55, 7212-7228.	1.7	71
36	Coalbed methane reservoir stimulation using guar-based fracturing fluid: A review. <i>Journal of Natural Gas Science and Engineering</i> , 2019, 66, 107-125.	2.1	71

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37	Fracture permeability damage and recovery behaviors with fracturing fluid treatment of coal: An experimental study. <i>Fuel</i> , 2020, 282, 118809.	3.4	71
38	Pore variation of three different metamorphic coals by multiple freezing-thawing cycles of liquid CO ₂ injection for coalbed methane recovery. <i>Fuel</i> , 2017, 208, 41-51.	3.4	70
39	Estimation and modeling of coal pore accessibility using small angle neutron scattering. <i>Fuel</i> , 2015, 161, 323-332.	3.4	67
40	Reservoir reconstruction technologies for coalbed methane recovery in deep and multiple seams. <i>International Journal of Mining Science and Technology</i> , 2017, 27, 277-284.	4.6	67
41	Intrinsic relationship between Langmuir sorption volume and pressure for coal: Experimental and thermodynamic modeling study. <i>Fuel</i> , 2019, 241, 105-117.	3.4	67
42	Anisotropy characteristics of coal shrinkage/swelling and its impact on coal permeability evolution with CO ₂ injection. , 2016, 6, 615-632.		64
43	Laboratory investigations of gas flow behaviors in tight anthracite and evaluation of different pulse-decay methods on permeability estimation. <i>International Journal of Coal Geology</i> , 2015, 149, 118-128.	1.9	61
44	A conceptual model to characterize and model compaction behavior and permeability evolution of broken rock mass in coal mine gobs. <i>International Journal of Coal Geology</i> , 2017, 172, 60-70.	1.9	59
45	Fracturing mechanism of coal-like rock specimens under the effect of non-explosive expansion. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2018, 103, 145-154.	2.6	59
46	Reduction of Eu ³⁺ to Eu ²⁺ in Aluminoborosilicate Glasses Prepared in Air. <i>Journal of the American Ceramic Society</i> , 2008, 91, 2740-2742.	1.9	58
47	A new method for accurate and rapid measurement of underground coal seam gas content. <i>Journal of Natural Gas Science and Engineering</i> , 2015, 26, 1388-1398.	2.1	58
48	Determination of the Effective Stress Law for Deformation in Coalbed Methane Reservoirs. <i>Rock Mechanics and Rock Engineering</i> , 2014, 47, 1809-1820.	2.6	57
49	Failure mechanisms in coal: Dependence on strain rate and microstructure. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 6924-6935.	1.4	56
50	Water sorption on coal: effects of oxygen-containing function groups and pore structure. <i>International Journal of Coal Science and Technology</i> , 2021, 8, 983-1002.	2.7	56
51	Feasibility investigation of cryogenic effect from liquid carbon dioxide multi cycle fracturing technology in coalbed methane recovery. <i>Fuel</i> , 2017, 206, 371-380.	3.4	55
52	Constructing a novel strategy for carbon-doped TiO ₂ multiple-phase nanocomposites toward superior electrochemical performance for lithium ion batteries and the hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7055-7063.	5.2	54
53	Temperature effect on gas adsorption capacity in different sized pores of coal: Experiment and numerical modeling. <i>Journal of Petroleum Science and Engineering</i> , 2018, 165, 821-830.	2.1	54
54	Evaluating the changes of sorption and diffusion behaviors of Illinois coal with various water-based fracturing fluid treatments. <i>Fuel</i> , 2021, 283, 118884.	3.4	54

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55	Pore structure characterization of shales using synchrotron SAXS and NMR cryoporometry. <i>Marine and Petroleum Geology</i> , 2019, 102, 116-125.	1.5	53
56	Characterization of nano-to-micron sized respirable coal dust: Particle surface alteration and the health impact. <i>Journal of Hazardous Materials</i> , 2021, 413, 125447.	6.5	52
57	Gas sorption and diffusion damages by guar-based fracturing fluid for CBM reservoirs. <i>Fuel</i> , 2019, 251, 30-44.	3.4	51
58	Factors controlling the mechanical properties degradation and permeability of coal subjected to liquid nitrogen freeze-thaw. <i>Scientific Reports</i> , 2017, 7, 3675.	1.6	50
59	Numerical prediction of in situ horizontal stress evolution in coalbed methane reservoirs by considering both poroelastic and sorption induced strain effects. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2018, 104, 156-164.	2.6	50
60	Modeling of permeability for ultra-tight coal and shale matrix: A multi-mechanistic flow approach. <i>Fuel</i> , 2018, 232, 60-70.	3.4	49
61	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.	2.6	47
62	Gas diffusion coefficient estimation of coal: A dimensionless numerical method and its experimental validation. <i>International Journal of Heat and Mass Transfer</i> , 2020, 162, 120336.	2.5	47
63	Stress response during in-situ gas depletion and its impact on permeability and stability of CBM reservoir. <i>Fuel</i> , 2020, 266, 117083.	3.4	47
64	Experimental study on coal pore structure deterioration under freeze-thaw cycles. <i>Environmental Earth Sciences</i> , 2017, 76, 1.	1.3	46
65	Transition metal ion doping perovskite nanocrystals for high luminescence quantum yield. <i>Chemical Engineering Journal</i> , 2020, 382, 122868.	6.6	43
66	Asynchronous difference in dynamic characteristics of adsorption swelling and mechanical compression of coal: Modeling and experiments. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2020, 135, 104498.	2.6	43
67	Respirable nano-particulate generations and their pathogenesis in mining workplaces: a review. <i>International Journal of Coal Science and Technology</i> , 2021, 8, 179-198.	2.7	43
68	Coal wettability in coalbed methane production: A critical review. <i>Fuel</i> , 2021, 303, 121277.	3.4	42
69	Evaluation of pore properties in coal through compressibility correction based on mercury intrusion porosimetry: A practical approach. <i>Fuel</i> , 2021, 291, 120130.	3.4	41
70	Fractal evolution under in situ pressure and sorption conditions for coal and shale. <i>Scientific Reports</i> , 2017, 7, 8971.	1.6	40
71	Evaluation of permeability damage for stressed coal with cyclic loading: An experimental study. <i>International Journal of Coal Geology</i> , 2019, 216, 103338.	1.9	40
72	Evaluation of gas contents for a multi-seam deep coalbed methane reservoir and their geological controls: In situ direct method versus indirect method. <i>Fuel</i> , 2020, 265, 116917.	3.4	40

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73	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.	1.4	39
74	Investigation of the discharge law for drill cuttings used for coal outburst prediction based on different borehole diameters under various side stresses. <i>Powder Technology</i> , 2018, 325, 396-404.	2.1	39
75	Experimental and theoretical investigation on sorption kinetics and hysteresis of nitrogen, methane, and carbon dioxide in coals. <i>Fuel</i> , 2020, 268, 117349.	3.4	39
76	First principles study on the properties of p-type conducting In:SnO ₂ . <i>Thin Solid Films</i> , 2009, 517, 3345-3349.	0.8	38
77	Investigation of Accessible Pore Structure Evolution under Pressurization and Adsorption for Coal and Shale Using Small-Angle Neutron Scattering. <i>Energy & Fuels</i> , 2019, 33, 837-847.	2.5	37
78	Review of Shale Gas Sorption and Its Models. <i>Energy & Fuels</i> , 2020, 34, 15502-15524.	2.5	37
79	A new approach to model shale gas production behavior by considering coupled multiple flow mechanisms for multiple fractured horizontal well. <i>Fuel</i> , 2019, 237, 283-297.	3.4	36
80	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.	1.4	35
81	Experimental evaluation of ultrasound treatment induced pore structure and gas desorption behavior alterations of coal. <i>Fuel</i> , 2022, 307, 121855.	3.4	35
82	Characterization of mineral composition and its influence on microstructure and sorption capacity of coal. <i>Journal of Natural Gas Science and Engineering</i> , 2015, 25, 46-57.	2.1	34
83	The effects of magma intrusion on localized stress distribution and its implications for coal mine outburst hazards. <i>Engineering Geology</i> , 2017, 218, 12-21.	2.9	33
84	Quantitative Analysis of Nanopore Structural Characteristics of Lower Paleozoic Shale, Chongqing (Southwestern China): Combining FIB-SEM and NMR Cryoporometry. <i>Energy & Fuels</i> , 2017, 31, 13317-13328.	2.5	33
85	A new approach modeling permeability of mining-disturbed coal based on a conceptual model of equivalent fractured coal. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 79, 103366.	2.1	33
86	Evaluation and modeling of water vapor sorption and transport in nanoporous shale. <i>International Journal of Coal Geology</i> , 2020, 228, 103553.	1.9	32
87	Experimental study on the effect of inherent moisture on hard coal adsorption-desorption characteristics. <i>Adsorption</i> , 2017, 23, 723-742.	1.4	31
88	Discovering Inherent Characteristics of Polyethylenimine-Functionalized Porous Materials for CO ₂ Capture. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 36515-36524.	4.0	31
89	Compressibility of sorptive porous media: Part 1. Background and theory. <i>AAPG Bulletin</i> , 2014, 98, 1761-1772.	0.7	30
90	Compressibility of sorptive porous media: Part 2. Experimental study on coal. <i>AAPG Bulletin</i> , 2014, 98, 1773-1788.	0.7	30

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91	Infrared thermal image and heat transfer characteristics of coal injected with liquid nitrogen under triaxial loading for coalbed methane recovery. <i>International Journal of Heat and Mass Transfer</i> , 2018, 118, 1231-1242.	2.5	30
92	Transient gas diffusivity evaluation and modeling for methane and helium in coal. <i>International Journal of Heat and Mass Transfer</i> , 2020, 159, 120091.	2.5	30
93	Numerical Modeling of Gas Flow in Coal Using a Modified Dual-Porosity Model: A Multi-Mechanistic Approach and Finite Difference Method. <i>Rock Mechanics and Rock Engineering</i> , 2018, 51, 2863-2880.	2.6	29
94	Laboratory study of cryogenic treatment induced pore-scale structural alterations of Illinois coal and their implications on gas sorption and diffusion behaviors. <i>Journal of Petroleum Science and Engineering</i> , 2020, 194, 107507.	2.1	29
95	The molecular model of Marcellus shale kerogen: Experimental characterization and structure reconstruction. <i>International Journal of Coal Geology</i> , 2021, 246, 103833.	1.9	29
96	Predicting fugitive gas emissions from gob-to-face in longwall coal mines: Coupled analytical and numerical modeling. <i>International Journal of Heat and Mass Transfer</i> , 2020, 150, 119392.	2.5	28
97	Effects of mixed alkaline earth oxides additive on crystallization and structural changes in borosilicate glasses. <i>Journal of Non-Crystalline Solids</i> , 2008, 354, 956-961.	1.5	27
98	Shale Pore Characterization Using NMR Cryoporometry with Octamethylcyclotetrasiloxane as the Probe Liquid. <i>Energy & Fuels</i> , 2017, 31, 6951-6959.	2.5	27
99	Experimental study on sorption induced strain and permeability evolutions and their implications in the anthracite coalbed methane production. <i>Journal of Petroleum Science and Engineering</i> , 2018, 164, 515-522.	2.1	27
100	Gas transport through coal particles: Matrix-flux controlled or fracture-flux controlled?. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 76, 103216.	2.1	27
101	The role of sorption-induced coal matrix shrinkage on permeability and stress evolutions under replicated in situ condition for CBM reservoirs. <i>Fuel</i> , 2021, 294, 120530.	3.4	27
102	The characteristics and its implications of hydraulic fracturing in hydrate-bearing clayey silt. <i>Journal of Natural Gas Science and Engineering</i> , 2021, 95, 104189.	2.1	27
103	Integrated modeling of multi-scale transport in coal and its application for coalbed methane recovery. <i>Fuel</i> , 2021, 300, 120971.	3.4	26
104	Characterization of Swelling Modulus and Effective Stress Coefficient Accommodating Sorption-Induced Swelling in Coal. <i>Energy & Fuels</i> , 2017, 31, 8843-8851.	2.5	25
105	Hydraulic fracturing for improved nutrient delivery in microbially-enhanced coalbed-methane (MECBM) production. <i>Journal of Natural Gas Science and Engineering</i> , 2018, 60, 294-311.	2.1	25
106	Anisotropic pore structure of shale and gas injection-induced nanopore alteration: A small-angle neutron scattering study. <i>International Journal of Coal Geology</i> , 2020, 219, 103384.	1.9	25
107	Evaluation of Nanoscale Accessible Pore Structures for Improved Prediction of Gas Production Potential in Chinese Marine Shales. <i>Energy & Fuels</i> , 2018, 32, 12447-12461.	2.5	24
108	Characterizing Anisotropic Pore Structure and Its Impact on Gas Storage and Transport in Coalbed Methane and Shale Gas Reservoirs. <i>Energy & Fuels</i> , 2020, 34, 3161-3172.	2.5	24

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109	Comparisons of Methane Adsorption/Desorption, Diffusion Behaviors on Intact Coals and Deformed Coals: Based on Experimental Analysis and Isothermic Heat of Adsorption. <i>Energy & Fuels</i> , 2021, 35, 5975-5987.	2.5	24
110	Changes in pore structure of coal caused by coal-to-gas bioconversion. <i>Scientific Reports</i> , 2017, 7, 3840.	1.6	23
111	Fluid-dependent shear slip behaviors of coal fractures and their implications on fracture frictional strength reduction and permeability evolutions. <i>International Journal of Coal Geology</i> , 2019, 212, 103235.	1.9	23
112	Optical absorption and emission properties of Er ³⁺ doped mixed alkali borosilicate glasses. <i>Optical Materials</i> , 2008, 30, 1393-1398.	1.7	22
113	A hierarchical methane adsorption characterization through a multiscale approach by considering the macromolecular structure and pore size distribution. <i>Marine and Petroleum Geology</i> , 2018, 96, 304-314.	1.5	22
114	Modeling of Coal Matrix Apparent Strains for Sorbing Gases Using a Transversely Isotropic Approach. <i>Rock Mechanics and Rock Engineering</i> , 2020, 53, 4163-4181.	2.6	22
115	Coalbed methane reservoir fracture evaluation through the novel passive microseismic survey and its implications on permeable and gas production. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 76, 103181.	2.1	21
116	Dual-Wavelength Responsive Broad Range Multicolor Upconversion Luminescence for High-Capacity Photonic Barcodes. <i>Advanced Optical Materials</i> , 2021, 9, 2100197.	3.6	21
117	Experimental study on the adverse effect of gel fracturing fluid on gas sorption behavior for Illinois coal. <i>International Journal of Coal Science and Technology</i> , 2021, 8, 1250-1261.	2.7	21
118	SANS coupled with fluid invasion approaches for characterization of overall nanopore structure and mesopore connectivity of organic-rich marine shales in China. <i>International Journal of Coal Geology</i> , 2020, 217, 103343.	1.9	20
119	Study of the Float Glass Melting Process: Combining Fluid Dynamics Simulation and Glass Homogeneity Inspection. <i>Journal of the American Ceramic Society</i> , 2008, 91, 3229-3234.	1.9	19
120	Quantifying fatigue-damage and failure-precursors using ultrasonic coda wave interferometry. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2020, 131, 104366.	2.6	19
121	Recovery of Low Permeability Reservoirs Considering Well Shut-Ins and Surfactant Additives. <i>Energies</i> , 2017, 10, 1279.	1.6	18
122	Pulse hydraulic fracturing technology and its application in coalbed methane extraction. <i>International Journal of Oil, Gas and Coal Technology</i> , 2018, 19, 115.	0.1	18
123	Evolution of gas transport pattern with the variation of coal particle size: Kinetic model and experiments. <i>Powder Technology</i> , 2020, 367, 336-346.	2.1	18
124	N-doped TiO ₂ Nanotubes as an Effective Additive to Improve the Catalytic Capability of Methanol Oxidation for Pt/Graphene Nanocomposites. <i>Nanomaterials</i> , 2016, 6, 40.	1.9	17
125	Organic Geochemical and Petrographic Characteristics of the Coal Measure Source Rocks of Pinghu Formation in the Xihu Sag of the East China Sea Shelf Basin: Implications for Coal Measure Gas Potential. <i>Acta Geologica Sinica</i> , 2020, 94, 364-375.	0.8	17
126	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.	2.1	16

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127	Continuous Compaction and Permeability Evolution in Longwall Gob Materials. <i>Rock Mechanics and Rock Engineering</i> , 2020, 53, 5489-5510.	2.6	16
128	Cryogenic enabled multicolor upconversion luminescence of $\text{KLa}(\text{MoO}_4)_2\text{:Yb}^{3+}/\text{Ho}^{3+}$ for dual-mode anti-counterfeiting. <i>Dalton Transactions</i> , 2021, 50, 12234-12241.	1.6	16
129	Application of Inorganic Solidified Foam to Control the Coexistence of Unusual Methane Emission and Spontaneous Combustion of Coal in the Luwa Coal Mine, China. <i>Combustion Science and Technology</i> , 2020, 192, 638-656.	1.2	15
130	Evolution of Aromatic Clusters in Vitrinite-Rich Coal during Thermal Maturation by Using High-Resolution Transmission Electron Microscopy and Fourier Transform Infrared Measurements. <i>Energy & Fuels</i> , 2020, 34, 10781-10792.	2.5	15
131	Pore-Scale Water Vapor Condensation Behaviors in Shales: An Experimental Study. <i>Transport in Porous Media</i> , 2020, 135, 713-734.	1.2	15
132	Role of VES-based fracturing fluid on gas sorption and diffusion of coal: An experimental study of Illinois basin coal. <i>Chemical Engineering Research and Design</i> , 2021, 148, 1243-1253.	2.7	15
133	Reach and geometry of dynamic gas-driven fractures. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2020, 129, 104287.	2.6	14
134	A novel experimental system for accurate gas sorption and its application to various shale rocks. <i>Chemical Engineering Research and Design</i> , 2021, 165, 180-191.	2.7	14
135	A novel strategy for preparing layered double hydroxide/exfoliated carbon nanostructures composites as superior electrochemical catalysts with respect to oxygen evolution and methanol oxidation. <i>Journal of Alloys and Compounds</i> , 2018, 744, 347-356.	2.8	13
136	MORPHOLOGY AND FRACTAL CHARACTERIZATION OF MULTISCALE PORE STRUCTURES FOR ORGANIC-RICH LACUSTRINE SHALE RESERVOIRS. <i>Fractals</i> , 2018, 26, 1840013.	1.8	13
137	Quantifying and Modeling of In Situ Stress Evolutions of Coal Reservoirs for Helium, Methane, Nitrogen and CO ₂ Depletions. <i>Rock Mechanics and Rock Engineering</i> , 2021, 54, 3701-3719.	2.6	13
138	Characterization of Ultramicropores and Analysis of Their Evolution in Tectonically Deformed Coals by Low-Pressure CO ₂ Adsorption, XRD, and HRTEM Techniques. <i>Energy & Fuels</i> , 2020, 34, 9436-9449.	2.5	12
139	Excitation-power responsive upconversion logic operations based on the multiphoton process of a praseodymium ion. <i>Journal of Materials Chemistry C</i> , 2020, 8, 2970-2974.	2.7	12
140	A fully-coupled water-vapor flow and rock deformation/damage model for shale and coal: Its application for mine stability evaluation. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2021, 146, 104880.	2.6	12
141	Structural, electronic and optical properties of $\text{Sn}_{1-x}\text{Sb}_x\text{O}_2$. <i>Computational Materials Science</i> , 2009, 46, 418-424.	1.4	11
142	Probing Nanomechanical Properties of a Shale with Nanoindentation: Heterogeneity and the Effect of Water-Shale Interactions. <i>Energy & Fuels</i> , 2021, 35, 11930-11946.	2.5	11
143	3D Simulation of Borosilicate Glass All-Electric Melting Furnaces. <i>Journal of the American Ceramic Society</i> , 2014, 97, 141-149.	1.9	10
144	Supercritical-CO ₂ Adsorption Quantification and Modeling for a Deep Coalbed Methane Reservoir in the Southern Qinshui Basin, China. <i>ACS Omega</i> , 2019, 4, 11685-11700.	1.6	10

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145	Experimental evidence of gas densification and enhanced storage in nanoporous shales. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 76, 103120.	2.1	10
146	Permeability Evolution of Fractured Sorptive Geomaterials: A Theoretical Study on Coalbed Methane Reservoir. <i>Rock Mechanics and Rock Engineering</i> , 2021, 54, 3507-3525.	2.6	10
147	Comparative study of nanoscale pore structure of Lower Paleozoic marine shales in the Middle Upper Yangtze area, China: Implications for gas production potential. <i>Geological Journal</i> , 2018, 53, 2413-2426.	0.6	9
148	Carbonate Caprock "Brine" Carbon Dioxide Interaction: Alteration of Hydromechanical Properties and Implications on Carbon Dioxide Leakage. <i>SPE Journal</i> , 2021, 26, 2780-2792.	1.7	9
149	Mechanical property alterations across coal matrix due to water-CO ₂ treatments: A micro-to-nano scale experimental study. <i>Energy</i> , 2022, 248, 123575.	4.5	9
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