Jishan Liu

List of Publications by Year in descending order

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121 papers	6,704 citations	44042 48 h-index	64755 79 g-index
121 all docs	121 docs citations	121 times ranked	2283 citing authors

#	Article	IF	Citations
1	How sorption-induced matrix deformation affects gas flow in coal seams: A new FE model. International Journal of Rock Mechanics and Minings Sciences, 2008, 45, 1226-1236.	2.6	413
2	Interactions of multiple processes during CBM extraction: A critical review. International Journal of Coal Geology, 2011, 87, 175-189.	1.9	359
3	Permeability evolution in fractured coal: The roles of fracture geometry and water-content. International Journal of Coal Geology, 2011, 87, 13-25.	1.9	284
4	Permeability evolution during progressive deformation of intact coal and implications for instability in underground coal seams. International Journal of Rock Mechanics and Minings Sciences, 2013, 58, 34-45.	2.6	201
5	Dual poroelastic response of a coal seam to CO2 injection. International Journal of Greenhouse Gas Control, 2010, 4, 668-678.	2.3	193
6	Evolution of coal permeability from stress-controlled to displacement-controlled swelling conditions. Fuel, 2011, 90, 2987-2997.	3.4	156
7	Effect of the effective stress coefficient and sorption-induced strain on the evolution of coal permeability: Experimental observations. International Journal of Greenhouse Gas Control, 2011, 5, 1284-1293.	2.3	143
8	Impact of transition from local swelling to macro swelling on the evolution of coal permeability. International Journal of Coal Geology, 2011, 88, 31-40.	1.9	143
9	Evaluation of stress-controlled coal swelling processes. International Journal of Coal Geology, 2010, 83, 446-455.	1.9	137
10	Linking gas-sorption induced changes in coal permeability to directional strains through a modulus reduction ratio. International Journal of Coal Geology, 2010, 83, 21-30.	1.9	136
11	Influence of the effective stress coefficient and sorption-induced strain on the evolution of coal permeability: Model development and analysis. International Journal of Greenhouse Gas Control, 2012, 8, 101-110.	2.3	136
12	Development of anisotropic permeability during coalbed methane production. Journal of Natural Gas Science and Engineering, 2010, 2, 197-210.	2.1	135
13	A fully coupled multiscale shale deformation-gas transport model for the evaluation of shale gas extraction. Fuel, 2016, 178, 103-117.	3.4	128
14	An improved relative permeability model for coal reservoirs. International Journal of Coal Geology, 2013, 109-110, 45-57.	1.9	125
15	A dual poroelastic model for CO2-enhanced coalbed methane recovery. International Journal of Coal Geology, 2011, 86, 177-189.	1.9	124
16	Effects of non-Darcy flow on the performance of coal seam gas wells. International Journal of Coal Geology, 2012, 93, 62-74.	1.9	114
17	A fully coupled coal deformation and compositional flow model for the control of the pre-mining coal seam gas extraction. International Journal of Rock Mechanics and Minings Sciences, 2014, 72, 138-148.	2.6	114
18	Permeability evolution of fluid-infiltrated coal containing discrete fractures. International Journal of Coal Geology, 2011, 85, 202-211.	1.9	113

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19	The Influence of Fracturing Fluids on Fracturing Processes: A Comparison Between Water, Oil and SC-CO2. Rock Mechanics and Rock Engineering, 2018, 51, 299-313.	2.6	110
20	Simulation of coal self-heating processes in underground methane-rich coal seams. International Journal of Coal Geology, 2015, 141-142, 1-12.	1.9	108
21	Spontaneous switching of permeability changes in a limestone fracture with net dissolution. Water Resources Research, 2004, 40, .	1.7	106
22	Why coal permeability changes under free swellings: New insights. International Journal of Coal Geology, 2014, 133, 35-46.	1.9	94
23	Experimental study of permeability and its anisotropy for shale fracture supported with proppant. Journal of Natural Gas Science and Engineering, 2017, 44, 250-264.	2.1	94
24	Impact of CO2 injection and differential deformation on CO2 injectivity under in-situ stress conditions. International Journal of Coal Geology, 2010, 81, 97-108.	1.9	93
25	Evaluation of the pre-drained coal seam gas quality. Fuel, 2014, 130, 296-305.	3.4	91
26	Mechanical Behavior of Methane Infiltrated Coal: the Roles of Gas Desorption, Stress Level and Loading Rate. Rock Mechanics and Rock Engineering, 2013, 46, 945-958.	2.6	84
27	Why shale permeability changes under variable effective stresses: New insights. Fuel, 2018, 213, 55-71.	3.4	83
28	Complex evolution of coal permeability during CO2 injection under variable temperatures. International Journal of Greenhouse Gas Control, 2012, 9, 281-293.	2.3	82
29	Laboratory study of proppant on shale fracture permeability and compressibility. Fuel, 2018, 222, 83-97.	3.4	81
30	A multiscale-multiphase simulation model for the evaluation of shale gas recovery coupled the effect of water flowback. Fuel, 2017, 199, 191-205.	3.4	77
31	Combined effects of directional compaction, non-Darcy flow and anisotropic swelling on coal seam gas extraction. International Journal of Coal Geology, 2013, 109-110, 1-14.	1.9	75
32	Evolution of coal permeability: Contribution of heterogeneous swelling processes. International Journal of Coal Geology, 2011, 88, 152-162.	1.9	73
33	Modeling and Simulation of Moisture Effect on Gas Storage and Transport in Coal Seams. Energy & Fuels, 2012, 26, 1695-1706.	2.5	73
34	A fully coupled multidomain and multiphysics model for evaluation of shale gas extraction. Fuel, 2020, 278, 118214.	3.4	73
35	Characteristic of anisotropic coal permeability and its impact on optimal design of multi-lateral well for coalbed methane production. Journal of Petroleum Science and Engineering, 2012, 88-89, 13-28.	2.1	70
36	Coal permeability maps under the influence of multiple coupled processes. International Journal of Coal Geology, 2018, 187, 71-82.	1.9	70

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37	Optimizing enhanced coalbed methane recovery for unhindered production and CO2 injectivity. International Journal of Greenhouse Gas Control, 2012, 11, 86-97.	2.3	67
38	Impact of coal matrix strains on the evolution of permeability. Fuel, 2017, 189, 270-283.	3.4	66
39	Experimental study of impact of anisotropy and heterogeneity on gas flow in coal. Part II: Permeability. Fuel, 2018, 230, 397-409.	3.4	63
40	Impact of gas adsorption-induced coal damage on the evolution of coal permeability. International Journal of Rock Mechanics and Minings Sciences, 2018, 101, 89-97.	2.6	60
41	Effect of CO2 injection on heterogeneously permeable coalbed reservoirs. Fuel, 2014, 135, 509-521.	3.4	58
42	A fractal approach to fully-couple coal deformation and gas flow. Fuel, 2019, 240, 219-236.	3.4	58
43	A mechanistic model for permeability evolution in fractured sorbing media. Journal of Geophysical Research, 2012, 117, .	3.3	55
44	Roles of coal heterogeneity on evolution of coal permeability under unconstrained boundary conditions. Journal of Natural Gas Science and Engineering, 2013, 15, 38-52.	2.1	52
45	Mechanistic analysis of coal permeability evolution data under stress-controlled conditions. International Journal of Rock Mechanics and Minings Sciences, 2018, 110, 36-47.	2.6	52
46	A sequential model of shale gas transport under the influence of fully coupled multiple processes. Journal of Natural Gas Science and Engineering, 2015, 27, 808-821.	2.1	51
47	Permeability evolution of propped artificial fractures in coal on injection of CO2. Journal of Petroleum Science and Engineering, 2015, 133, 695-704.	2.1	51
48	Evolution of permeability during the process of shale gas extraction. Journal of Natural Gas Science and Engineering, 2018, 49, 94-109.	2.1	51
49	Influence of gas adsorption induced non-uniform deformation on the evolution of coal permeability. International Journal of Rock Mechanics and Minings Sciences, 2019, 114, 71-78.	2.6	51
50	Effects of gas diffusion from fractures to coal matrix on the evolution of coal strains: Experimental observations. International Journal of Coal Geology, 2016, 162, 74-84.	1.9	50
51	Combined impact of flow regimes and effective stress on the evolution of shale apparent permeability. Journal of Unconventional Oil and Gas Resources, 2016, 14, 32-43.	3.5	50
52	General Gas Permeability Model for Porous Media: Bridging the Gaps Between Conventional and Unconventional Natural Gas Reservoirs. Energy & Fuels, 2016, 30, 5492-5505.	2.5	49
53	Impact of matrix swelling area propagation on the evolution of coal permeability under coupled multiple processes. Journal of Natural Gas Science and Engineering, 2014, 18, 451-466.	2.1	48
54	Rapid decompression and desorption induced energetic failure in coal. Journal of Rock Mechanics and Geotechnical Engineering, 2015, 7, 345-350.	3.7	42

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55	Interactions of Microbial-Enhanced Oil Recovery Processes. Transport in Porous Media, 2011, 87, 77-104.	1.2	41
56	Experimental study of coal matrix-cleat interaction under constant volume boundary condition. International Journal of Coal Geology, 2017, 181, 124-132.	1.9	40
57	Direct observation of coalâ€“gas interactions under thermal and mechanical loadings. International Journal of Coal Geology, 2014, 131, 274-287.	1.9	38
58	Micro-scale investigation on coupling of gas diffusion and mechanical deformation of shale. Journal of Petroleum Science and Engineering, 2019, 175, 961-970.	2.1	36
59	Controlling effects of differential swelling index on evolution of coal permeability. Journal of Rock Mechanics and Geotechnical Engineering, 2020, 12, 461-472.	3.7	36
60	Impact of Various Parameters on the Production of Coalbed Methane. SPE Journal, 2013, 18, 910-923.	1.7	34
61	STUDY ON EVOLUTION OF FRACTAL DIMENSION FOR FRACTURED COAL SEAM UNDER MULTI-FIELD COUPLING. Fractals, 2020, 28, 2050072.	1.8	34
62	Evolution of shale apparent permeability under variable boundary conditions. Fuel, 2018, 215, 46-56.	3.4	32
63	Triple-Porosity Modelling for the Simulation of Multiscale Flow Mechanisms in Shale Reservoirs. Geofluids, 2018, 2018, 1-11.	0.3	31
64	Preliminary study on the feasibility of co-exploitation of coal and uranium. International Journal of Rock Mechanics and Minings Sciences, 2019, 123, 104098.	2.6	29
65	Evolution of Shale Permeability under the Influence of Gas Diffusion from the Fracture Wall into the Matrix. Energy & Fuels, 2020, 34, 4393-4406.	2.5	29
66	Benchmark assessment of coal permeability models on the accuracy of permeability prediction. Fuel, 2014, 132, 194-203.	3.4	27
67	Evolution of shale apparent permeability from stress-controlled to displacement-controlled conditions. Journal of Natural Gas Science and Engineering, 2016, 34, 1453-1460.	2.1	27
68	Shale gas reservoir modeling and production evaluation considering complex gas transport mechanisms and dispersed distribution of kerogen. Petroleum Science, 2021, 18, 195-218.	2.4	27
69	Characterization of gas transport in shale: A multi-mechanism permeability modeling approach. Chemical Engineering Journal, 2022, 438, 135604.	6.6	27
70	Spontaneous Switching between Permeability Enhancement and Degradation in Fractures in Carbonate: Lumped Parameter Representation of Mechanically- and Chemically-Mediated Dissolution. Transport in Porous Media, 2006, 65, 385-409.	1.2	26
71	Experimental observations of heterogeneous strains inside a dual porosity sample under the influence of gas-sorption: A case study of fractured coal. International Journal of Coal Geology, 2020, 223, 103450.	1.9	26
72	Impact of shale matrix mechanical interactions on gas transport during production. Journal of Petroleum Science and Engineering, 2020, 184, 106524.	2.1	25

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73	Long-Term Evolution of Coal Permeability Under Effective Stresses Gap Between Matrix and Fracture During CO2 Injection. Transport in Porous Media, 2019, 130, 969-983.	1.2	24
74	Dissolution-induced preferential flow in a limestone fracture. Journal of Contaminant Hydrology, 2005, 78, 53-70.	1.6	21
75	Analytical solutions for multi-stage fractured shale gas reservoirs with damaged fractures and stimulated reservoir volumes. Journal of Petroleum Science and Engineering, 2020, 187, 106686.	2.1	20
76	Impact of equilibration time lag between matrix and fractures on the evolution of coal permeability. Fuel, 2021, 290, 120029.	3.4	18
77	Surface chemistry, rheology and microstructure of purified natural and synthetic hectorite suspensions. Physical Chemistry Chemical Physics, 2018, 20, 19221-19233.	1.3	17
78	Surface Chemisty, Microstructure, and Rheology of Thixotropic 1-D Sepiolite Gels. Clays and Clay Minerals, 2020, 68, 9-22.	0.6	17
79	Effect of adsorption-induced matrix swelling on coal permeability evolution of micro-fracture with the real geometry. Petroleum Science, 2021, 18, 1143-1152.	2.4	17
80	Evolution of Coal Permeability during Gas Injectionâ€"From Initial to Ultimate Equilibrium. Energies, 2018, 11, 2800.	1.6	16
81	A process-based coal swelling model: Bridging the gaps between localized swelling and bulk swelling. Fuel, 2021, 293, 120360.	3.4	16
82	A fully coupled hydromechanical XFEM model for the simulation of 3D non-planar fluid-driven fracture propagation. Computers and Geotechnics, 2021, 132, 103971.	2.3	15
83	A critical review of coal permeability models. Fuel, 2022, 326, 125124.	3.4	15
84	Application of Transient Electromagnetic Method for Investigating the Water-Enriched Mined-Out Area. Applied Sciences (Switzerland), 2018, 8, 1800.	1.3	14
85	A critical analysis of shale laboratory permeability evolution data. Energy, 2021, 236, 121405.	4.5	14
86	Shale gas production from reservoirs with hierarchical multiscale structural heterogeneities. Journal of Petroleum Science and Engineering, 2022, 208, 109380.	2.1	14
87	Modeling and Upscaling of Binary Gas Coal Interactions in CO2 Enhanced Coalbed Methane Recovery. Procedia Environmental Sciences, 2012, 12, 926-939.	1.3	12
88	Yield stress and microstructure of washed oxide suspensions at the isoelectric point: experimental and model fractal structure. Rheologica Acta, 2016, 55, 847-856.	1.1	12
89	Evolution and analysis of gas sorption-induced coal fracture strain data. Petroleum Science, 2020, 17, 376-392.	2.4	12
90	Evolution of Coal Permeability under Constant Effective Stresses: Direct Measurements and Numerical Modeling. Energy & Fuels, 2021, 35, 15489-15501.	2.5	12

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91	Long-term effect of desorption-induced matrix shrinkage on the evolution of coal permeability during coalbed methane production. Journal of Petroleum Science and Engineering, 2022, 208, 109378.	2.1	11
92	On evaluating the stability of the Baiyian ancient landslide in the Three Gorges Reservoir area, Yangtze River: a geological history analysis. Environmental Geology, 2008, 55, 1699-1711.	1.2	10
93	Surface force arising from adsorbed graphene oxide in alumina suspensions with different shape and size. AICHE Journal, 2013, 59, 3633-3641.	1.8	10
94	Quantitative study on coal permeability evolution with consideration of shear dilation. Journal of Natural Gas Science and Engineering, 2016, 36, 1199-1207.	2.1	10
95	Experimental Observations of Gas-sorption-Induced Strain Gradients and their Implications on Permeability Evolution of Shale. Rock Mechanics and Rock Engineering, 2021, 54, 3927-3943.	2.6	10
96	Simulation of coal permeability under non-isothermal CO<SUB align="right">2 injection. International Journal of Oil, Gas and Coal Technology, 2017, 15, 190.	0.1	9
97	A Gaussian Decomposition Method and its applications to the prediction of shale gas production. Fuel, 2018, 224, 331-347.	3.4	9
98	Complete coal permeability models from initial to ultimate equilibrium. Fuel, 2020, 271, 117612.	3.4	9
99	A fully coupled multidomain and multiphysics model considering stimulation patterns and thermal effects for evaluation of coalbed methane (CBM) extraction. Journal of Petroleum Science and Engineering, 2022, 214, 110506.	2.1	9
100	Modification of Eclipse simulator for microbial enhanced oil recovery. Journal of Petroleum Exploration and Production, 2019, 9, 2247-2261.	1.2	8
101	Impact of Local Effects on the Evolution of Unconventional Rock Permeability. Energies, 2019, 12, 478.	1.6	8
102	Surface chemistry, rheology and microstructure of as-received SHCa-1 hectorite gels. Clay Minerals, 2019, 54, 269-275.	0.2	8
103	Rodâ€“plate interactions in sepioliteâ€“LAPONITEÂ® gels: microstructure, surface chemistry and rheology. Soft Matter, 2021, 17, 2614-2623.	1.2	8
104	Simulations of a coupled hydro-chemo-mechanical system in rocks. Geotechnical and Geological Engineering, 2004, 22, 121-133.	0.8	7
105	A Critical Review of the Application of Nanomaterials in Frac Fluids: The State of the Art and Challenges. , 2019, , .		7
106	A pore geometry-based permeability model for tight rocks and new sight of impact of stress on permeability. Journal of Natural Gas Science and Engineering, 2021, 91, 103958.	2.1	7
107	Water Liberating/Sealing effects on shale gas Extraction: A fully coupled multidomain and multiphysics model. Fuel, 2022, 325, 124953.	3.4	7
108	Impact of Rock Heterogeneity on Interactions of Microbial-Enhanced Oil Recovery Processes. Transport in Porous Media, 2012, 92, 373-396.	1.2	6

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109	A transient dual porosity/permeability model for coal multiphysics. Geomechanics and Geophysics for Geo-Energy and Geo-Resources, 2022, 8, 1.	1.3	5
110	Influence of Well Types on Optimizing the Co-production of Gas from Coal and Tight Formations. Energy & Fuels, 2022, 36, 6736-6754.	2.5	5
111	Impact of Rock Microstructures on the Supercritical CO2 Enhanced Gas Recovery. , 2010, , .		4
112	A Dual Fractal Poroelastic Model for Characterizing Fluid Flow in Fractured Coal Masses. Geofluids, 2020, 2020, 1-13.	0.3	4
113	Effects of Heterogeneous Local Swelling and Multiple Pore Types on Coal and Shale Permeability Evolution. , 2020, , .		4
114	Advances in in-situ modï¬ed mining by ï¬‚uidization and in unconventional geomechanics. Advances in Geo-Energy Research, 2021, 5, 1-4.	3.1	4
115	Characterizing Gas Transfer from the Inorganic Matrix and Kerogen to Fracture Networks: A Comprehensive Analytical Modeling Approach. , 2019, , .		3
116	Differential Strain Index-Based Multiphysics Model for Coal Seam Gas Production. Energy & Fuels, 2021, 35, 15642-15656.	2.5	2
117	Microstructure and Time-Dependent Behavior of STx-1b Calcium Montmorillonite Suspensions. Clays and Clay Minerals, 2021, 69, 787.	0.6	2
118	Multiphysics of Coal-Gas Interactions: The Scientific Foundation for CBM Production and CO2 Storage in Coal. , 2010, , .		1
119	Yield stress and microstructure of composite halloysite-LAPONITEÂ® gels: Effects of mixing ratio, surface chemistry, and ageing time. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 640, 128472.	2.3	1
120	Sensitivity simulation and analysis of CO<inf>2</inf> injection for enhanced coalbed methane recovery. , 2011, , .		0
121	Constraints of Pore-Bulk Strain Ratio and Interference Time on the Evolution of Coal Permeability during CO2 Injection. Geofluids, 2021, 2021, 1-16.	0.3	0