

Feng Gao

List of Publications by Year in descending order

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103
papers

3,196
citations

159525

30
h-index

168321

53
g-index

103
all docs

103
docs citations

103
times ranked

2215
citing authors

#	ARTICLE	IF	CITATIONS
1	Energy Dissipation and Release During Coal Failure Under Conventional Triaxial Compression. <i>Rock Mechanics and Rock Engineering</i> , 2015, 48, 509-526.	2.6	251
2	Exact travelling wave solutions for the local fractional two-dimensional Burgers-type equations. <i>Computers and Mathematics With Applications</i> , 2017, 73, 203-210.	1.4	225
3	A new computational approach for solving nonlinear local fractional PDEs. <i>Journal of Computational and Applied Mathematics</i> , 2018, 339, 285-296.	1.1	184
4	A new fractional derivative involving the normalized sinc function without singular kernel. <i>European Physical Journal: Special Topics</i> , 2017, 226, 3567-3575.	1.2	100
5	Evaluation of coal damage and cracking characteristics due to liquid nitrogen cooling on the basis of the energy evolution laws. <i>Journal of Natural Gas Science and Engineering</i> , 2016, 29, 30-36.	2.1	95
6	A new technology for solving diffusion and heat equations. <i>Thermal Science</i> , 2017, 21, 133-140.	0.5	91
7	Fundamental solutions of the general fractional-order diffusion equations. <i>Mathematical Methods in the Applied Sciences</i> , 2018, 41, 9312-9320.	1.2	84
8	Theoretical and experimental validation of mining-enhanced permeability for simultaneous exploitation of coal and gas. <i>Environmental Earth Sciences</i> , 2015, 73, 5951-5962.	1.3	83
9	Experimental investigation on the energy evolution of dry and water-saturated red sandstones. <i>International Journal of Mining Science and Technology</i> , 2015, 25, 383-388.	4.6	82
10	Experimental investigation on the nonlinear characteristics of energy evolution and failure characteristics of coal under different gas pressures. <i>Bulletin of Engineering Geology and the Environment</i> , 2022, 81, 1.	1.6	82
11	Effect of damage evolution of coal on permeability variation and analysis of gas outburst hazard with coal mining. <i>Natural Hazards</i> , 2015, 79, 999-1013.	1.6	70
12	Laboratory In Situ CT Observation of the Evolution of 3D Fracture Networks in Coal Subjected to Confining Pressures and Axial Compressive Loads: A Novel Approach. <i>Rock Mechanics and Rock Engineering</i> , 2018, 51, 3361-3375.	2.6	70
13	Effect of liquid nitrogen cooling on mechanical characteristics and fracture morphology of layer coal under Brazilian splitting test. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2022, 151, 105026.	2.6	69
14	Theoretical and technological exploration of deep in situ fluidized coal mining. <i>Frontiers in Energy</i> , 2019, 13, 603-611.	1.2	65
15	3D Multi-scale Reconstruction of Fractured Shale and Influence of Fracture Morphology on Shale Gas Flow. <i>Natural Resources Research</i> , 2021, 30, 2463-2481.	2.2	65
16	Thermo-mechanical coupling damage constitutive model of rock based on the Hoek-Brown strength criterion. <i>International Journal of Damage Mechanics</i> , 2018, 27, 1213-1230.	2.4	61
17	Thermal damage constitutive model for rock considering damage threshold and residual strength. <i>Journal of Central South University</i> , 2018, 25, 2523-2536.	1.2	60
18	Research on the energy evolution characteristics and the failure intensity of rocks. <i>International Journal of Mining Science and Technology</i> , 2020, 30, 705-713.	4.6	57

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19	An experimental investigation on the mechanism of fluid flow through single rough fracture of rock. Science China Technological Sciences, 2013, 56, 2070-2080.	2.0	56
20	A Multi-Parameter Optimization Model for the Evaluation of Shale Gas Recovery Enhancement. Energies, 2018, 11, 654.	1.6	55
21	Quantitative visualization and characteristics of gas flow in 3D pore-fracture system of tight rock based on Lattice Boltzmann simulation. Journal of Natural Gas Science and Engineering, 2021, 89, 103867.	2.1	55
22	Influence of Temperature on the Microstructure Deterioration of Sandstone. Energies, 2018, 11, 1753.	1.6	53
23	Strength, Deformability and X-ray Micro-CT Observations of Deeply Buried Marble Under Different Confining Pressures. Rock Mechanics and Rock Engineering, 2016, 49, 4227-4244.	2.6	50
24	Fractional Maxwell fluid with fractional derivative without singular kernel. Thermal Science, 2016, 20, 871-877.	0.5	50
25	Effect of the layer orientation on mechanics and energy evolution characteristics of shales under uniaxial loading. International Journal of Mining Science and Technology, 2016, 26, 857-862.	4.6	49
26	A FRACTAL PERSPECTIVE ON FRACTURE INITIATION AND PROPAGATION OF RESERVOIR ROCKS UNDER WATER AND NITROGEN FRACTURING. Fractals, 2021, 29, .	1.8	45
27	CT Identification and Fractal Characterization of 3D Propagation and Distribution of Hydrofracturing Cracks in Low-Permeability Heterogeneous Rocks. Journal of Geophysical Research: Solid Earth, 2018, 123, 2156-2173.	1.4	42
28	Flow Consistency Between Non-Darcy Flow in Fracture Network and Nonlinear Diffusion in Matrix to Gas Production Rate in Fractured Shale Gas Reservoirs. Transport in Porous Media, 2016, 111, 97-121.	1.2	41
29	Effect of liquid nitrogen freeze-thaw cycle on fracture toughness and energy release rate of saturated sandstone. Engineering Fracture Mechanics, 2021, 258, 108066.	2.0	37
30	Numerical analysis of the effect of natural microcracks on the supercritical CO ₂ fracturing crack network of shale rock based on bonded particle models. International Journal for Numerical and Analytical Methods in Geomechanics, 2017, 41, 1992-2013.	1.7	31
31	The effect of liquid nitrogen cooling on coal cracking and mechanical properties. Energy Exploration and Exploitation, 2018, 36, 1609-1628.	1.1	30
32	EXACT TRAVELING-WAVE SOLUTIONS FOR ONE-DIMENSIONAL MODIFIED KORTEWEG-DE VRIES EQUATION DEFINED ON CANTOR SETS. Fractals, 2019, 27, 1940010.	1.8	30
33	Study on the surface crack propagation mechanism of coal and sandstone subjected to cryogenic cooling with liquid nitrogen. Journal of Natural Gas Science and Engineering, 2020, 81, 103436.	2.1	30
34	Impact of Water Film Evaporation on Gas Transport Property in Fractured Wet Coal Seams. Transport in Porous Media, 2016, 113, 357-382.	1.2	29
35	A Fully Coupled Numerical Model for Microwave Heating Enhanced Shale Gas Recovery. Energies, 2018, 11, 1608.	1.6	29
36	Experimental study on coal permeability and cracking characteristics under LN2 freeze-thaw cycles. Journal of Natural Gas Science and Engineering, 2020, 83, 103526.	2.1	29

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37	Identification of Coal and Gas Outburst-Hazardous Zones by Electric Potential Inversion During Mining Process in Deep Coal Seam. <i>Rock Mechanics and Rock Engineering</i> , 2022, 55, 3439-3450.	2.6	29
38	Numerical Analysis of Hydrofracturing Behaviors and Mechanisms of Heterogeneous Reservoir Glutenite, Using the Continuum-Based Discrete Element Method While Considering Hydromechanical Coupling and Leak-Off Effects. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 3621-3644.	1.4	28
39	General fractional calculus in non-singular power-law kernel applied to model anomalous diffusion phenomena in heat transfer problems. <i>Thermal Science</i> , 2017, 21, 11-18.	0.5	28
40	Visualization method for stress-field evolution during rapid crack propagation using 3D printing and photoelastic testing techniques. <i>Scientific Reports</i> , 2018, 8, 4353.	1.6	27
41	Deformation, Permeability and Acoustic Emission Characteristics of Coal Masses under Mining-Induced Stress Paths. <i>Energies</i> , 2018, 11, 2233.	1.6	26
42	Effect of Gas Pressure on Rock Burst Proneness Indexes and Energy Dissipation of Coal Samples. <i>Geotechnical and Geological Engineering</i> , 2016, 34, 1737-1748.	0.8	25
43	New mathematical models in anomalous viscoelasticity from the derivative with respect to another function view point. <i>Thermal Science</i> , 2019, 23, 1555-1561.	0.5	23
44	CO ₂ permeability of fractured coal subject to confining pressures and elevated temperature: Experiments and modeling. <i>Science China Technological Sciences</i> , 2016, 59, 1931-1942.	2.0	21
45	Shale gas transport mechanisms in inorganic and organic pores based on lattice Boltzmann simulation. <i>Energy Reports</i> , 2020, 6, 2641-2650.	2.5	20
46	ANALYSIS OF PERMEABILITY EVOLUTION CHARACTERISTICS BASED ON DUAL FRACTAL COUPLING MODEL FOR COAL SEAM. <i>Fractals</i> , 2020, 28, 2050133.	1.8	19
47	Experimental Study on the Damage and Cracking Characteristics of Bedded Coal Subjected to Liquid Nitrogen Cooling. <i>Rock Mechanics and Rock Engineering</i> , 2021, 54, 5731-5744.	2.6	19
48	Exact traveling-wave solutions for linear and nonlinear heat-transfer equations. <i>Thermal Science</i> , 2017, 21, 2307-2311.	0.5	19
49	Exact Travelling Wave Solutions for Local Fractional Partial Differential Equations in Mathematical Physics. <i>Advances in Dynamics, Patterns, Cognition</i> , 2019, , 175-191.	0.2	18
50	The Interface Behavior of Multiple Piezoelectric Films Attaching to a Finite-Thickness Gradient Substrate. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2020, 87, .	1.1	17
51	Effect of pore pressure distribution on fracture behavior of sandstone in nitrogen fracturing. <i>Energy Exploration and Exploitation</i> , 2017, 35, 609-626.	1.1	16
52	Numerical Study of Fracture Network Evolution during Nitrogen Fracturing Processes in Shale Reservoirs. <i>Energies</i> , 2018, 11, 2503.	1.6	16
53	Influence of Liquid Nitrogen Cooling State on Mechanical Properties and Fracture Characteristics of Coal. <i>Rock Mechanics and Rock Engineering</i> , 2022, 55, 3817-3836.	2.6	16
54	Lattice-Boltzmann simulation of microscale CH ₄ flow in porous rock subject to force-induced deformation. <i>Science Bulletin</i> , 2014, 59, 3292-3303.	1.7	15

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55	Simulation and visualization of the displacement between CO ₂ and formation fluids at pore-scale levels and its application to the recovery of shale gas. <i>International Journal of Coal Science and Technology</i> , 2016, 3, 351-369.	2.7	15
56	A fully coupling coal-gas model associated with inertia and slip effects for CBM migration. <i>Environmental Earth Sciences</i> , 2016, 75, 1.	1.3	15
57	Changes in mechanical properties and fracture behaviors of heated marble subjected to liquid nitrogen cooling. <i>Engineering Fracture Mechanics</i> , 2022, 261, 108256.	2.0	14
58	A Study on the Structure of Rock Engineering Coatings Based on Complex Network Theory. <i>Coatings</i> , 2020, 10, 1152.	1.2	13
59	Cohesive energy measurement of van der Waals heterostructures by the shaft loaded blister test. <i>Extreme Mechanics Letters</i> , 2020, 41, 100987.	2.0	13
60	A Two-Phase Flowback Model for Multiscale Diffusion and Flow in Fractured Shale Gas Reservoirs. <i>Geofluids</i> , 2018, 2018, 1-15.	0.3	12
61	Experimental Investigation of Perceptual Characteristics of Functional Cemented Backfilling Materials in Coal Mines. <i>Minerals (Basel, Switzerland)</i> , 2019, 9, 55.	0.8	12
62	An Energy Preservation Index for Evaluating the Rockburst Potential Based on Energy Evolution. <i>Energies</i> , 2020, 13, 3636.	1.6	11
63	Researches on Damage Evolution and Acoustic Emission Characteristics of Rocks. <i>Advances in Civil Engineering</i> , 2018, 2018, 1-7.	0.4	10
64	ESTIMATION OF THE FRACTAL DIMENSION OF WEIERSTRASS-MANDELBROT FUNCTION BASED ON CUCKOO SEARCH METHODS. <i>Fractals</i> , 2017, 25, 1750065.	1.8	9
65	Non-Darcy interfacial dynamics of air-water two-phase flow in rough fractures under drainage conditions. <i>Scientific Reports</i> , 2017, 7, 4570.	1.6	9
66	Differences in Petrophysical and Mechanical Properties Between Low- and Middle-Rank Coal Subjected to Liquid Nitrogen Cooling in Coalbed Methane Mining. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2022, 144, .	1.4	9
67	Three-dimensional numerical reconstruction method for irregular structures of granular geomaterials. <i>Geomechanics and Geophysics for Geo-Energy and Geo-Resources</i> , 2018, 4, 327-341.	1.3	8
68	Wrinkling and failure behavior of single-layer MoS ₂ sheets under in-plane shear. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 19115-19125.	1.3	8
69	Researches on the Constitutive Models of Artificial Frozen Silt in Underground Engineering. <i>Advances in Materials Science and Engineering</i> , 2014, 2014, 1-8.	1.0	7
70	Numerical Analysis of Heat and Gas Transfer Characteristics during Heat Injection Processes Based on a Thermo-Hydro-Mechanical Model. <i>Energies</i> , 2018, 11, 1722.	1.6	7
71	Finite Deformation Analysis on Sandstone Subjected to Thermo-Hydro-Mechanical (T-H-M) Coupling. <i>Rock Mechanics and Rock Engineering</i> , 2015, 48, 159-177.	2.6	6
72	Analytical Solution of Tunnel Surrounding Rock for Stress and Displacement Based on Lade-Duncan Criterion. <i>Advances in Civil Engineering</i> , 2018, 2018, 1-7.	0.4	6

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73	Experiment Study on Topological Characteristics of Sandstone Coating by Micro CT. <i>Coatings</i> , 2020, 10, 1143.	1.2	6
74	A FRACTAL PERSPECTIVE ON STRUCTURAL DAMAGE AND FRACTURE CHARACTERISTICS OF COAL SUBJECTED TO LIQUID NITROGEN COOLING AT LABORATORY-SCALE. <i>Fractals</i> , 2022, 30, .	1.8	6
75	Theoretical and Numerical Simulation of the Mining-Enhanced Permeability Model of Damaged Coal Seam. <i>Geotechnical and Geological Engineering</i> , 2016, 34, 1425-1433.	0.8	5
76	Numerical simulation on the flow field characteristics and impact capability of liquid nitrogen jet. <i>Energy Exploration and Exploitation</i> , 2018, 36, 989-1005.	1.1	5
77	Anomalous Advection-Dispersion Equations within General Fractional-Order Derivatives: Models and Series Solutions. <i>Entropy</i> , 2018, 20, 78.	1.1	5
78	Study on Coal Seam Damage Caused by Liquid Nitrogen Under Different Ground Temperature Conditions. <i>Journal of Energy Resources Technology, Transactions of the ASME</i> , 2022, 144, .	1.4	5
79	An Experimental Study on Triaxial Compression Tests and Cone Penetration Tests in Planetary Regolith Simulant under Low Gravity Fields. <i>Journal of Testing and Evaluation</i> , 2019, 47, 1677-1700.	0.4	5
80	Effect of liquid nitrogen thermal shock on structure damage and brittleness properties of high-temperature marble. <i>Geomechanics and Geophysics for Geo-Energy and Geo-Resources</i> , 2022, 8, 1.	1.3	5
81	Numerical Evaluation on Stress and Permeability Evolution of Overlying Coal Seams for Gas Drainage and Gas Disaster Elimination in Protective Layer Mining. <i>Mining, Metallurgy and Exploration</i> , 2022, 39, 1027-1043.	0.4	5
82	Analytical Solution for Shale Gas Productivity of a Multiple-Fractured Horizontal Well Based on a Diffusion Model. <i>Arabian Journal for Science and Engineering</i> , 2018, 43, 2563-2579.	1.7	4
83	A Dual Fractal Poroelastic Model for Characterizing Fluid Flow in Fractured Coal Masses. <i>Geofluids</i> , 2020, 2020, 1-13.	0.3	4
84	Influence of Various Control Factors on Fracture Toughness and Fracture Energy of Sandstone Subjected to Liquid Nitrogen Cooling. <i>Energy & Fuels</i> , 2022, 36, 397-406.	2.5	4
85	Effect of Different Cooling Treatments on the Tensile Properties and Fracture Modes of Granite Heated at Different Temperatures. <i>Natural Resources Research</i> , 2022, 31, 817-833.	2.2	4
86	Effect of Confining Pressure on Mechanical and Energy Conversion Properties of Gas-Containing Coal under Loads. <i>Geofluids</i> , 2022, 2022, 1-23.	0.3	4
87	A New Analysis Model for Potential Contamination of a Shallow Aquifer from a Hydraulically-Fractured Shale. <i>Energies</i> , 2018, 11, 3010.	1.6	3
88	On Linear and Nonlinear Electric Circuits: A Local Fractional Calculus Approach. , 2018, , 329-355.		3
89	The mechanical properties and fractal characteristics of the coal under temperature-gas-confining pressure. <i>Thermal Science</i> , 2019, 23, 789-798.	0.5	3
90	Variations in Stress Thresholds for Heated Granite Subjected to Rapid Cooling under Different Confining Pressures. <i>Natural Resources Research</i> , 2022, 31, 2653-2671.	2.2	3

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91	A Comparative Study on Fracture Characteristics of the Red Sandstone under Water and Nitrogen Gas Fracturing. <i>Advances in Civil Engineering</i> , 2018, 2018, 1-15.	0.4	2
92	Numerical Simulations on the Front Motion of Water Permeation into Anisotropic Porous Media. <i>Geofluids</i> , 2019, 2019, 1-13.	0.3	2
93	A Complex Network Model for Analysis of Fractured Rock Permeability. <i>Advances in Civil Engineering</i> , 2020, 2020, 1-10.	0.4	2
94	Quantitatively Deciphering Paleostrain From Digital Outcrops Model and its Application in the Eastern Tian Shan, China. <i>Tectonics</i> , 2020, 39, e2019TC005999.	1.3	2
95	A MULTI-FIELD COUPLED SEEPAGE MODEL FOR COAL SEAM WITH FRACTURES OF POWER LAW LENGTH DISTRIBUTIONS. <i>Fractals</i> , 2021, 29, 2150140.	1.8	2
96	Migration of the Industrial Wastewater in Fractured Rock Masses Based on the Thermal-Hydraulic-Mechanical Coupled Model. <i>Geofluids</i> , 2021, 2021, 1-13.	0.3	2
97	Mass flow rate prediction of shale gas considering gas diffusion and water film evaporation. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 2019, 76, 285-310.	0.6	1
98	Analytical Solutions for Gas-Water Two-Phase Flow in Multiseam Coalbed Methane Production. <i>Geofluids</i> , 2021, 2021, 1-15.	0.3	1
99	Characteristics of Stress, Crack Evolution, and Energy Conversion of Gas-Containing Coal under Different Gas Pressures. <i>Geofluids</i> , 2021, 2021, 1-18.	0.3	1
100	Analytical and Numerical Study of the Ground Pressure of the Work Face Crossing the Fault. <i>Advances in Materials Science and Engineering</i> , 2021, 2021, 1-15.	1.0	1
101	Constraints of Pore-Bulk Strain Ratio and Interference Time on the Evolution of Coal Permeability during CO ₂ Injection. <i>Geofluids</i> , 2021, 2021, 1-16.	0.3	0
102	A Complex Network Approach for Quantitative Characterization and Robustness Analysis of Sandstone Pore Network Structure. <i>Geofluids</i> , 2021, 2021, 1-10.	0.3	0
103	Energy evolution of coal subjected to thermo-gas-mechanical coupling. <i>Thermal Science</i> , 2019, 23, 685-692.	0.5	0