

Sheng Dai

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

2,446
citations

218592

26
h-index

206029

48
g-index

61
all docs

61
docs citations

61
times ranked

1311
citing authors

#	ARTICLE	IF	CITATIONS
1	Bio-inspired geotechnical engineering: principles, current work, opportunities and challenges. <i>Geotechnique</i> , 2022, 72, 687-705.	2.2	74
2	Effects of depressurization on gas production and water performance from excess-gas and excess-water methane hydrate accumulations. <i>Chemical Engineering Journal</i> , 2022, 431, 133223.	6.6	23
3	Pore-scale observations of natural hydrate-bearing sediments via pressure core sub-coring and micro-CT scanning. <i>Scientific Reports</i> , 2022, 12, 3471.	1.6	10
4	Impacts of temperature on the mechanical properties of Longmaxi shale outcrops using instrumented nanoindentation. <i>Geomechanics for Energy and the Environment</i> , 2022, 30, 100348.	1.2	9
5	Facilitation of microbially induced calcite precipitation with kaolinite nucleation. <i>Geotechnique</i> , 2021, 71, 728-734.	2.2	15
6	Experimental and theoretical investigation of transparent sand composing of fused quartz and calcium bromide solution. <i>Heat and Mass Transfer</i> , 2021, 57, 1379-1393.	1.2	1
7	The coefficient of earth pressure at rest in hydrate-bearing sediments. <i>Acta Geotechnica</i> , 2021, 16, 2729-2739.	2.9	14
8	An Analytical Model for the Permeability in Hydrate-bearing Sediments Considering the Dynamic Evolution of Hydrate Saturation and Pore Morphology. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL093397.	1.5	15
9	Flow characterization of compressible biomass particles using multiscale experiments and a hypoplastic model. <i>Powder Technology</i> , 2021, 383, 396-409.	2.1	16
10	Methane Hydrate Crystallization on Sessile Water Droplets. <i>Journal of Visualized Experiments</i> , 2021, , .	0.2	0
11	Effect of Grain Crushing on the Hydraulic Conductivity of Tailings Sand. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2021, 147, .	1.5	4
12	Flow and Arching of Biomass Particles in Wedge-Shaped Hoppers. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 15303-15314.	3.2	10
13	Particle crushing in hydrate-bearing sands. <i>Geomechanics for Energy and the Environment</i> , 2020, 23, 100133.	1.2	21
14	Kinetic enhancement of capturing and storing greenhouse gas and volatile organic compound: Micro-mechanism and micro-structure of hydrate growth. <i>Chemical Engineering Journal</i> , 2020, 379, 122357.	6.6	98
15	Mainly on the Plane: Deep Subsurface Bacterial Proteins Bind and Alter Clathrate Structure. <i>Crystal Growth and Design</i> , 2020, 20, 6290-6295.	1.4	5
16	Triaxial compression of hydrate-bearing sediments undergoing hydrate dissociation by depressurization. <i>Geomechanics for Energy and the Environment</i> , 2020, 23, 100187.	1.2	25
17	An international code comparison study on coupled thermal, hydrologic and geomechanical processes of natural gas hydrate-bearing sediments. <i>Marine and Petroleum Geology</i> , 2020, 120, 104566.	1.5	80
18	The electroviscous flow of non-Newtonian fluids in microtubes and implications for nonlinear flow in porous media. <i>Journal of Hydrology</i> , 2020, 590, 125224.	2.3	15

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19	Pore-scale Controls on the Gas and Water Transport in Hydrate-bearing Sediments. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL086990.	1.5	17
20	An experimental study of the effect of motile bacteria on the fluid displacement in porous media. <i>E3S Web of Conferences</i> , 2020, 205, 08008.	0.2	2
21	Impacts of motile <i>Escherichia coli</i> on air-water surface tension. <i>E3S Web of Conferences</i> , 2020, 205, 08003.	0.2	2
22	Impacts of hydrate on the lateral stress in sediments. <i>E3S Web of Conferences</i> , 2020, 205, 11006.	0.2	0
23	Pressure core analysis of geomechanical and fluid flow properties of seals associated with gas hydrate-bearing reservoirs in the Krishna-Godavari Basin, offshore India. <i>Marine and Petroleum Geology</i> , 2019, 108, 537-550.	1.5	44
24	Smart Ground-Source Borehole Heat Exchanger Backfills: A Numerical Study. <i>Springer Series in Geomechanics and Geoengineering</i> , 2019, , 27-34.	0.0	3
25	Permeability anisotropy and relative permeability in sediments from the National Gas Hydrate Program Expedition 02, offshore India. <i>Marine and Petroleum Geology</i> , 2019, 108, 705-713.	1.5	82
26	Fractal characteristics of unsaturated sands and implications to relative permeability in hydrate-bearing sediments. <i>Journal of Natural Gas Science and Engineering</i> , 2019, 66, 11-17.	2.1	60
27	An Investigation of Hydrate Formation in Unsaturated Sediments Using X-ray Computed Tomography. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 3335-3349.	1.4	53
28	Tetrahydrofuran Hydrate in Clayey Sediments Laboratory Formation, Morphology, and Wave Characterization. <i>Journal of Geophysical Research: Solid Earth</i> , 2019, 124, 3307-3319.	1.4	56
29	Mineral Weathering and Bedrock Weakening: Modeling Microscale Bedrock Damage Under Biotite Weathering. <i>Journal of Geophysical Research F: Earth Surface</i> , 2019, 124, 2623-2646.	1.0	14
30	A pore-scale numerical investigation of the effect of pore characteristics on flow properties in soils. <i>Journal of Zhejiang University: Science A</i> , 2019, 20, 961-978.	1.3	5
31	Compressibility and particle crushing of Krishna-Godavari Basin sediments from offshore India: Implications for gas production from deep-water gas hydrate deposits. <i>Marine and Petroleum Geology</i> , 2019, 108, 697-704.	1.5	37
32	Characterization and Engineering Properties of Dry and Pondered Class-F Fly Ash. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2019, 145, .	1.5	25
33	Impact of hydrate saturation on water permeability in hydrate-bearing sediments. <i>Journal of Petroleum Science and Engineering</i> , 2019, 174, 696-703.	2.1	113
34	A fractal model of effective thermal conductivity for porous media with various liquid saturation. <i>International Journal of Heat and Mass Transfer</i> , 2019, 128, 1149-1156.	2.5	60
35	Influence of Pore Distribution Characteristics on Relative Hydraulic Conductivity in Soil Covers A Pore-Scale Numerical Investigation. <i>Environmental Science and Engineering</i> , 2019, , 343-350.	0.1	0
36	Multistage Triaxial Tests on Laboratory-Formed Methane Hydrate-bearing Sediments. <i>Journal of Geophysical Research: Solid Earth</i> , 2018, 123, 3347-3357.	1.4	77

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37	Strength Estimation for Hydrate-Bearing Sediments From Direct Shear Tests of Hydrate-Bearing Sand and Silt. <i>Geophysical Research Letters</i> , 2018, 45, 715-723.	1.5	85
38	Stiffness Evolution in Frozen Sands Subjected to Stress Changes. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2017, 143, .	1.5	11
39	Water and Gas Flows in Hydrate-Bearing Sediments. , 2017, , .		2
40	Supercritical CO ₂ and brine displacement in geological carbon sequestration: Micromodel and pore network simulation studies. <i>International Journal of Greenhouse Gas Control</i> , 2016, 44, 104-114.	2.3	55
41	The water retention curve and relative permeability for gas production from hydrate-bearing sediments: pore-network model simulation. <i>Geochemistry, Geophysics, Geosystems</i> , 2016, 17, 3099-3110.	1.0	96
42	Formation and development of salt crusts on soil surfaces. <i>Acta Geotechnica</i> , 2016, 11, 1103-1109.	2.9	46
43	Thermal conductivity measurements in unsaturated hydrate-bearing sediments. <i>Geophysical Research Letters</i> , 2015, 42, 6295-6305.	1.5	34
44	The physical nature of thermal conduction in dry granular media. <i>Geotechnique Letters</i> , 2015, 5, 1-5.	0.6	13
45	Hydro-bio-geomechanical properties of hydrate-bearing sediments from Nankai Trough. <i>Marine and Petroleum Geology</i> , 2015, 66, 434-450.	1.5	190
46	Characterization of hollow fiber supported ionic liquid membranes using microfocus X-ray computed tomography. <i>Journal of Membrane Science</i> , 2015, 492, 497-504.	4.1	9
47	Laboratory formation of noncementing hydrates in sandy sediments. <i>Geochemistry, Geophysics, Geosystems</i> , 2014, 15, 1648-1656.	1.0	52
48	Multi-property characterization chamber for geophysical-hydrological investigations of hydrate bearing sediments. <i>Review of Scientific Instruments</i> , 2014, 85, 084501.	0.6	15
49	Sampling disturbance in hydrate-bearing sediment pressure cores: NGHP-01 expedition, Krishna-Godavari Basin example. <i>Marine and Petroleum Geology</i> , 2014, 58, 178-186.	1.5	38
50	Hydrate nucleation in quiescent and dynamic conditions. <i>Fluid Phase Equilibria</i> , 2014, 378, 107-112.	1.4	45
51	Water permeability in hydrate-bearing sediments: A pore-scale study. <i>Geophysical Research Letters</i> , 2014, 41, 4176-4184.	1.5	196
52	Coda Wave Analysis to Monitor Processes in Soils. <i>Journal of Geotechnical and Geoenvironmental Engineering - ASCE</i> , 2013, 139, 1504-1511.	1.5	23
53	Water retention curve for hydrate-bearing sediments. <i>Geophysical Research Letters</i> , 2013, 40, 5637-5641.	1.5	39
54	Hydrate morphology: Physical properties of sands with patchy hydrate saturation. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	231

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55	Formation history and physical properties of sediments from the Mount Elbert Gas Hydrate Stratigraphic Test Well, Alaska North Slope. <i>Marine and Petroleum Geology</i> , 2011, 28, 427-438.	1.5	57
56	Sustainable development and energy geotechnology – Potential roles for geotechnical engineering. <i>KSCE Journal of Civil Engineering</i> , 2011, 15, 611-621.	0.9	41
57	Pressure Core Characterization Tools for Hydrate-Bearing Sediments. <i>Scientific Drilling</i> , 0, 14, 44-48.	1.0	53
58	On the Fidelity of Computational Models for the Flow of Milled Loblolly Pine: A Benchmark Study on Continuum-Mechanics Models and Discrete-Particle Models. <i>Frontiers in Energy Research</i> , 0, 10, .	1.2	6