

Xiang Sun

List of Publications by Year in descending order

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Version: 2024-02-01

43
papers

1,607
citations

279487

23
h-index

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43
all docs

43
docs citations

43
times ranked

423
citing authors

#	ARTICLE	IF	CITATIONS
1	Numerical simulation of gas recovery from a low-permeability hydrate reservoir by depressurization. <i>Applied Energy</i> , 2019, 250, 7-18.	5.1	162
2	Mechanical Characteristics of Hydrate-Bearing Sediment: A Review. <i>Energy & Fuels</i> , 2021, 35, 1041-1057.	2.5	108
3	Cementation Failure Behavior of Consolidated Gas Hydrate-Bearing Sand. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2019JB018623.	1.4	94
4	Experimental study on the effect of methane hydrate decomposition on gas phase permeability of clayey sediments. <i>Applied Energy</i> , 2018, 230, 1304-1310.	5.1	86
5	Numerical modeling for the mechanical behavior of marine gas hydrate-bearing sediments during hydrate production by depressurization. <i>Journal of Petroleum Science and Engineering</i> , 2019, 177, 971-982.	2.1	85
6	Undrained triaxial tests on water-saturated methane hydrate-bearing clayey-silty sediments of the South China Sea. <i>Canadian Geotechnical Journal</i> , 2021, 58, 351-366.	1.4	78
7	Hydrate-bearing sediment of the South China Sea: Microstructure and mechanical characteristics. <i>Engineering Geology</i> , 2022, 307, 106782.	2.9	67
8	The effects of compressibility of natural gas hydrate-bearing sediments on gas production using depressurization. <i>Energy</i> , 2019, 185, 837-846.	4.5	64
9	A coupled thermal-hydraulic-mechanical-chemical (THMC) model for methane hydrate bearing sediments using COMSOL Multiphysics. <i>Journal of Zhejiang University: Science A</i> , 2018, 19, 600-623.	1.3	62
10	Experimental study on the gas phase permeability of montmorillonite sediments in the presence of hydrates. <i>Marine and Petroleum Geology</i> , 2018, 91, 373-380.	1.5	51
11	A microfocuss x-ray computed tomography based gas hydrate triaxial testing apparatus. <i>Review of Scientific Instruments</i> , 2019, 90, 055106.	0.6	49
12	Effect of sediment particle size on the mechanical properties of CH ₄ hydrate-bearing sediments. <i>Journal of Petroleum Science and Engineering</i> , 2018, 171, 302-314.	2.1	44
13	Mechanical behaviours of gas-hydrate-bearing clayey sediments of the South China Sea. <i>Environmental Geotechnics</i> , 2022, 9, 210-222.	1.3	44
14	Pore-Scale 3D Morphological Modeling and Physical Characterization of Hydrate-Bearing Sediment Based on Computed Tomography. <i>Journal of Geophysical Research: Solid Earth</i> , 2020, 125, e2020JB020570.	1.4	44
15	Strength behaviors of CH ₄ hydrate-bearing silty sediments during thermal decomposition. <i>Journal of Natural Gas Science and Engineering</i> , 2019, 72, 103031.	2.1	41
16	Deformation behaviors of hydrate-bearing silty sediment induced by depressurization and thermal recovery. <i>Applied Energy</i> , 2020, 276, 115468.	5.1	40
17	A thermodynamics-based critical state constitutive model for methane hydrate bearing sediment. <i>Journal of Natural Gas Science and Engineering</i> , 2015, 27, 1024-1034.	2.1	39
18	Numerical study of gas production from marine hydrate formations considering soil compression and hydrate dissociation due to depressurization. <i>Marine and Petroleum Geology</i> , 2019, 102, 759-774.	1.5	34

#	ARTICLE	IF	CITATIONS
19	Effect of Temperature on the Mechanical Properties of Hydrate-Bearing Sand under Different Confining Pressures. <i>Energy & Fuels</i> , 2021, 35, 4106-4117.	2.5	33
20	Analysis of the mechanical properties of methane hydrate-bearing sands with various pore pressures and confining pressures. <i>Journal of Natural Gas Science and Engineering</i> , 2021, 87, 103786.	2.1	33
21	Triaxial tests on the overconsolidated methane hydrate-bearing clayey-silty sediments. <i>Journal of Petroleum Science and Engineering</i> , 2021, 206, 109035.	2.1	32
22	Aggregation Behavior of Asphalt on the Natural Gas Hydrate Surface with Different Surfactant Coverages. <i>Journal of Physical Chemistry C</i> , 2021, 125, 16378-16390.	1.5	28
23	Comprehensive review of geomechanical constitutive models of gas hydrate-bearing sediments. <i>Journal of Natural Gas Science and Engineering</i> , 2021, 88, 103755.	2.1	27
24	Triaxial Tests on Water-Saturated Gas Hydrate-Bearing Fine-Grained Samples of the South China Sea under Different Drainage Conditions. <i>Energy & Fuels</i> , 2021, 35, 4118-4126.	2.5	24
25	Mechanical behaviors of hydrate-bearing sediment with different cementation spatial distributions at microscales. <i>IScience</i> , 2021, 24, 102448.	1.9	23
26	Creep Behaviors of Methane Hydrate-Bearing Frozen Sediments. <i>Energies</i> , 2019, 12, 251.	1.6	20
27	Experimental study on the permeability of methane hydrate-bearing sediments during triaxial loading. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 82, 103510.	2.1	19
28	Mechanical properties of methane hydrate-bearing sandy sediments under various temperatures and pore pressures. <i>Journal of Petroleum Science and Engineering</i> , 2022, 208, 109474.	2.1	19
29	Experimental Study on the Gas Permeability of Marine Sediments with Various Hydrate Saturations and Effective Stresses. <i>Energy & Fuels</i> , 2021, 35, 17479-17489.	2.5	18
30	Generalized stress framework for unsaturated soil: demonstration and discussion. <i>Acta Geotechnica</i> , 2019, 14, 1459-1481.	2.9	16
31	Strength Behaviors of Remolded Hydrate-Bearing Marine Sediments in Different Drilling Depths of the South China Sea. <i>Energies</i> , 2019, 12, 253.	1.6	14
32	Mechanical Characteristics of the Hydrate-Bearing Sediments in the South China Sea Using a Multistage Triaxial Loading Test. <i>Energy & Fuels</i> , 2021, 35, 4127-4137.	2.5	14
33	A Method for Directly Measuring the Hydraulic Conductivity of Unsaturated Soil. <i>Geotechnical Testing Journal</i> , 2017, 40, 907-916.	0.5	14
34	Influence of grain size distribution on the physical characteristics of cementing hydrate-bearing sediment. <i>Energy Reports</i> , 2021, 7, 8187-8197.	2.5	13
35	Consolidation deformation of hydrate-bearing sediments: A pore-scale computed tomography investigation. <i>Journal of Natural Gas Science and Engineering</i> , 2021, 95, 104184.	2.1	12
36	Effect of Hydrate Distribution on the Mechanical Response of Hydrate-Bearing Sand: Discrete Element Method Simulation. <i>Energy & Fuels</i> , 2022, 36, 3802-3815.	2.5	12

#	ARTICLE	IF	CITATIONS
37	Stress behavior of hydrate-bearing sands with changing temperature and hydrate saturation. <i>Journal of Natural Gas Science and Engineering</i> , 2022, 98, 104389.	2.1	11
38	Experimental Study on the Mechanical Properties of CH ₄ and CO ₂ Hydrate Remodeling Cores in Qilian Mountain. <i>Energies</i> , 2017, 10, 2078.	1.6	10
39	Experimental Study on Mechanical Properties of Hydrate-Bearing Sand: The Influence of Sand-Water Mixing Methods. <i>Energies</i> , 2021, 14, 2554.	1.6	7
40	Study of the Physical Characteristics of a Pore-Filling Hydrate Reservoir: Particle Shape Effect. <i>Energy & Fuels</i> , 2021, 35, 15502-15512.	2.5	7
41	Deformation behaviors of hydrate-bearing silty sediments during CH ₄ →CO ₂ replacement. <i>Journal of Petroleum Science and Engineering</i> , 2022, 211, 110225.	2.1	5
42	Drucker-Prager elasto-plastic constitutive model for methane hydrate-bearing sediment. <i>Transactions of Tianjin University</i> , 2016, 22, 441-450.	3.3	3
43	Effects of far-field boundary conditions on the simulation of hydrate production. <i>Environmental Geotechnics</i> , 2020, , 1-10.	1.3	1