

# Xilin Shi

## List of Publications by Year in descending order

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48  
papers

1,520  
citations

218677

26  
h-index

315739

38  
g-index

48  
all docs

48  
docs citations

48  
times ranked

430  
citing authors

#	ARTICLE	IF	CITATIONS
1	Subsidence above rock salt caverns predicted with elastic plate theory. <i>Environmental Earth Sciences</i> , 2022, 81, 1.	2.7	4
2	Rock Salt Under Cyclic Loading with High-Stress Intervals. <i>Rock Mechanics and Rock Engineering</i> , 2022, 55, 4031-4049.	5.4	10
3	Compaction and restraining effects of insoluble sediments in underground energy storage salt caverns. <i>Energy</i> , 2022, 249, 123752.	8.8	12
4	Machine-learning-based capacity prediction and construction parameter optimization for energy storage salt caverns. <i>Energy</i> , 2022, 254, 124238.	8.8	6
5	Subsidence above gas storage in salt caverns predicted with viscoelastic theory. <i>Journal of Natural Gas Science and Engineering</i> , 2022, 103, 104620.	4.4	7
6	Mechanical and Microstructural Properties of Alkali Wastes as Filling Materials for Abandoned Salt Caverns. <i>Waste and Biomass Valorization</i> , 2021, 12, 1581-1590.	3.4	4
7	Geomechanical investigation for abandoned salt caverns used for solid waste disposal. <i>Bulletin of Engineering Geology and the Environment</i> , 2021, 80, 1205-1218.	3.5	19
8	Creep deformation analysis of gas storage in salt caverns. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2021, 139, 104635.	5.8	15
9	Prediction method for calculating the porosity of insoluble sediments for salt cavern gas storage applications. <i>Energy</i> , 2021, 221, 119815.	8.8	31
10	Stability analysis of U-shaped horizontal salt cavern for underground natural gas storage. <i>Journal of Energy Storage</i> , 2021, 38, 102541.	8.1	35
11	Dynamics and enhanced stability properties of slender leaching tubings in salt cavern storage with a Y-type manifold fitted at free downstream end. <i>Journal of Energy Storage</i> , 2021, 43, 103170.	8.1	8
12	Maximum gas production rate for salt cavern gas storages. <i>Energy</i> , 2021, 234, 121211.	8.8	18
13	Stability evaluation of underground gas storage salt caverns with micro-leakage interlayer in bedded rock salt of Jintan, China. <i>Acta Geotechnica</i> , 2020, 15, 549-563.	5.7	40
14	A 3D grain-based creep model (3D-GBCM) for simulating long-term mechanical characteristic of rock salt. <i>Journal of Petroleum Science and Engineering</i> , 2020, 185, 106672.	4.2	19
15	Physical simulation of flow field and construction process of horizontal salt cavern for natural gas storage. <i>Journal of Natural Gas Science and Engineering</i> , 2020, 82, 103527.	4.4	28
16	The formation mechanism of irregular salt caverns during solution mining for natural gas storage. <i>Energy Sources, Part A: Recovery, Utilization and Environmental Effects</i> , 2020, , 1-17.	2.3	5
17	Construction modeling and parameter optimization of multi-step horizontal energy storage salt caverns. <i>Energy</i> , 2020, 203, 117840.	8.8	26
18	A 3D Grain-Based Model for Simulating the Micromechanical Behavior of Salt Rock. <i>Rock Mechanics and Rock Engineering</i> , 2020, 53, 2819-2837.	5.4	41

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19	Construction modeling and shape prediction of horizontal salt caverns for gas/oil storage in bedded salt. <i>Journal of Petroleum Science and Engineering</i> , 2020, 190, 107058.	4.2	26
20	Tightness Analysis of Underground Natural Gas and Oil Storage Caverns With Limit Pillar Widths in Bedded Rock Salt. <i>IEEE Access</i> , 2020, 8, 12130-12145.	4.2	40
21	Microscopic Pore Structure of Surrounding Rock for Underground Strategic Petroleum Reserve (SPR) Caverns in Bedded Rock Salt. <i>Energies</i> , 2020, 13, 1565.	3.1	42
22	Simulating the transport of brine in the strata of bedded salt cavern storage with a fluid–solid coupling model. <i>Engineering Geology</i> , 2020, 271, 105595.	6.3	11
23	Study on Sealing Failure of Wellbore in Bedded Salt Cavern Gas Storage. <i>Rock Mechanics and Rock Engineering</i> , 2019, 52, 215-228.	5.4	34
24	Modeling the construction of energy storage salt caverns in bedded salt. <i>Applied Energy</i> , 2019, 255, 113866.	10.1	58
25	Position design of the casing shoe of an abandoned horizontal salt cavern to be used for gas storage. <i>Energy Sources, Part A: Recovery, Utilization and Environmental Effects</i> , 2019, , 1-15.	2.3	4
26	Analysis of the plugging process of the leaking interlayer in a thin interbedded salt cavern gas storage of Jintan (China) by high-pressure grouting and potential applications. <i>Journal of Natural Gas Science and Engineering</i> , 2019, 68, 102918.	4.4	18
27	Dynamics of a Partially Confined, Vertical Upward-Fluid-Conveying, Slender Cantilever Pipe with Reverse External Flow. <i>Applied Sciences (Switzerland)</i> , 2019, 9, 1425.	2.5	10
28	Experimental device for the study of Liquid–Solid coupled flutter instability of salt cavern leaching tubing. <i>Journal of Natural Gas Science and Engineering</i> , 2019, 66, 168-179.	4.4	30
29	Study on Damage and Repair Mechanical Characteristics of Rock Salt Under Uniaxial Compression. <i>Rock Mechanics and Rock Engineering</i> , 2019, 52, 659-671.	5.4	34
30	Mathematical model of salt cavern leaching for gas storage in high-insoluble salt formations. <i>Scientific Reports</i> , 2018, 8, 372.	3.3	30
31	Mathematic modelling of the debrining for a salt cavern gas storage. <i>Journal of Natural Gas Science and Engineering</i> , 2018, 50, 205-214.	4.4	38
32	Analysis of mechanical and permeability properties of mudstone interlayers around a strategic petroleum reserve cavern in bedded rock salt. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2018, 112, 1-10.	5.8	35
33	Softening model for failure analysis of insoluble interlayers during salt cavern leaching for natural gas storage. <i>Acta Geotechnica</i> , 2018, 13, 801-816.	5.7	13
34	Stability and availability evaluation of underground strategic petroleum reserve (SPR) caverns in bedded rock salt of Jintan, China. <i>Energy</i> , 2017, 134, 504-514.	8.8	85
35	Preliminary investigation on the feasibility of a clean CAES system coupled with wind and solar energy in China. <i>Energy</i> , 2017, 127, 462-478.	8.8	102
36	Repair of irregularly shaped salt cavern gas storage by re-leaching under gas blanket. <i>Journal of Natural Gas Science and Engineering</i> , 2017, 45, 848-859.	4.4	45

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37	Failure Analysis of Overhanging Blocks in the Walls of a Gas Storage Salt Cavern: A Case Study. <i>Rock Mechanics and Rock Engineering</i> , 2017, 50, 125-137.	5.4	31
38	Synthetic Rock Analogue for Permeability Studies of Rock Salt with Mudstone. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 946.	2.5	12
39	Geological Feasibility of Underground Oil Storage in Jintan Salt Mine of China. <i>Advances in Materials Science and Engineering</i> , 2017, 2017, 1-11.	1.8	12
40	Feasibility analysis of using closely spaced caverns in bedded rock salt for underground gas storage: a case study. <i>Environmental Earth Sciences</i> , 2016, 75, 1.	2.7	33
41	Tightness and suitability evaluation of abandoned salt caverns served as hydrocarbon energies storage under adverse geological conditions (AGC). <i>Applied Energy</i> , 2016, 178, 703-720.	10.1	109
42	Feasibility analysis of using horizontal caverns for underground gas storage: A case study of Yunying salt district. <i>Journal of Natural Gas Science and Engineering</i> , 2016, 36, 252-266.	4.4	57
43	A prediction model of the accumulation shape of insoluble sediments during the leaching of salt cavern for gas storage. <i>Journal of Natural Gas Science and Engineering</i> , 2016, 33, 792-802.	4.4	33
44	Safety evaluation of salt cavern gas storage close to an old cavern. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2016, 83, 95-106.	5.8	75
45	Stability evaluation of the underground gas storage in rock salts based on new partitions of the surrounding rock. <i>Environmental Earth Sciences</i> , 2015, 73, 6911-6925.	2.7	58
46	Gas seepage around bedded salt cavern gas storage. <i>Journal of Natural Gas Science and Engineering</i> , 2015, 26, 61-71.	4.4	35
47	Influences of filling abandoned salt caverns with alkali wastes on surface subsidence. <i>Environmental Earth Sciences</i> , 2015, 73, 6939-6950.	2.7	39
48	Failure analysis of thick interlayer from leaching of bedded salt caverns. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2015, 73, 175-183.	5.8	43