Zhu-Shan Shao

List of Publications by Year
in descending order

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59 papers	1,198 citations	394421 19 h-index	395702 33 g-index
59 all docs	59 docs citations	59 times ranked	531 citing authors

#	Article	IF	Citations
1	Fundamentals and applications of microwave energy in rock and concrete processing â€“ A review. Applied Thermal Engineering, 2019, 157, 113751.	6.0	111
2	An analytical design method for ductile support structures in squeezing tunnels. Archives of Civil and Mechanical Engineering, 2020, 20, 1.	3.8	67
3	A critical review on the performance of yielding supports in squeezing tunnels. Tunnelling and Underground Space Technology, 2021, 115, 103815.	6.2	65
4	Visco-Elastic Analysis on the Effect of Flexible Layer on Mechanical Behavior of Tunnels. International Journal of Applied Mechanics, 2019, 11, 1950027.	2.2	61
5	Damage evolution and safety assessment of tunnel lining subjected to long-duration fire. Tunnelling and Underground Space Technology, 2019, 83, 354-363.	6.2	61
6	Analytical computation of support characteristic curve for circumferential yielding lining in tunnel design. Journal of Rock Mechanics and Geotechnical Engineering, 2022, 14, 144-152.	8.1	59
7	Study on the Effect of Flexible Layer on Support Structures of Tunnel Excavated in Viscoelastic Rocks. Journal of Engineering Mechanics - ASCE, 2019, 145, 04019077.	2.9	52
8	Investigation of Macroscopic Brittle Creep Failure Caused by Microcrack Growth Under Step Loading and Unloading in Rocks. Rock Mechanics and Rock Engineering, 2016, 49, 2581-2593.	5.4	48
9	Analytical Approach to Estimating the Influence of Shotcrete Hardening Property on Tunnel Response. Journal of Engineering Mechanics - ASCE, 2022, 148, .	2.9	47
10	Recent development of microwave applications for concrete treatment. Construction and Building Materials, 2021, 269, 121224.	7.2	45
11	Determination of Deformation Mechanism and Countermeasures in Silty Clay Tunnel. Journal of Performance of Constructed Facilities, 2020, 34, .	2.0	44
12	A solution for squeezing deformation control in tunnels using foamed concrete: A review. Construction and Building Materials, 2020, 257, 119539.	7.2	44
13	An Improved Nonlinear Creep Model for Rock Applied to Tunnel Displacement Prediction. International Journal of Applied Mechanics, 2021, 13, .	2.2	39
14	Analytical-Based Assessment of Effect of Highly Deformable Elements on Tunnel Lining Within Viscoelastic Rocks. International Journal of Applied Mechanics, 2020, 12, 2050030.	2.2	35
15	Theoretical Investigation into the Thermo-Mechanical Behaviours of Tunnel Lining During RABT Fire Development. Arabian Journal for Science and Engineering, 2019, 44, 4807-4818.	3.0	29
16	A unified analytical method calculating brittle rocks deformation induced by crack growth. International Journal of Rock Mechanics and Minings Sciences, 2019, 113, 134-141.	5.8	29
17	Effects of Pipe Roof Support and Grouting Pre-Reinforcement on the Track Settlement. Advances in Civil Engineering, 2018, 2018, 1-9.	0.7	24
18	A microcrack growth-based constitutive model for evaluating transient shear properties during brittle creep of rocks. Engineering Fracture Mechanics, 2018, 194, 9-23.	4.3	23

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19	Time-Dependent Solutions for Lined Circular Tunnels Considering Rockbolts Reinforcement and Face Advancement Effects. International Journal of Geomechanics, 2021, 21, .	2.7	22
20	Evaluation of strength and failure of brittle rock containing initial cracks under lithospheric conditions. Acta Geophysica, 2018, 66, 141-152.	2.0	20
21	A prediction model of permanent strain of unbound gravel materials based on performance of single-size gravels under repeated loads. Construction and Building Materials, 2020, 246, 118492.	7.2	18
22	Workability and mechanical properties of microwave heating for recovering high quality aggregate from concrete. Construction and Building Materials, 2021, 276, 122237.	7.2	15
23	Effect of Adjacent Hole on the Blast-Induced Stress Concentration in Rock Blasting. Advances in Civil Engineering, 2018, 2018, 1-13.	0.7	14
24	Fracture behavior of concrete coarse aggregates under microwave irradiation influenced by mineral components. Construction and Building Materials, 2021, 286, 122944.	7.2	14
25	Theoretical Investigation to the Effect of Bolt Reinforcement on Tunnel Viscoelastic Behavior. Arabian Journal for Science and Engineering, 2020, 45, 3707-3718.	3.0	13
26	The influence of compaction energy on frost-heave characteristics of coarse-grained soil. Natural Hazards, 2020, 100, 897-908.	3.4	11
27	Crack velocity- and strain rate- dependent dynamic compressive responses in brittle solids. Theoretical and Applied Fracture Mechanics, 2020, 105, 102420.	4.7	11
28	Properties of concrete incorporating microwave treated coarse aggregate: An experimental study. Structures, 2021, 33, 693-702.	3.6	11
29	Thermal response and crack propagation of mineral components in olivine basalt under microwave irradiation. Arabian Journal of Geosciences, 2020, 13, 1.	1.3	10
30	Quantifying damage evolution within olivine basalt based on crack propagation behavior under microwave irradiation. International Journal of Damage Mechanics, 2021, 30, 1617-1641.	4.2	10
31	Experimental study on thermal and mechanical behavior of mortar-aggregate under microwave irradiation. Journal of Building Engineering, 2021, 34, 101947.	3.4	9
32	Experimental Study of the Heating Potential of Mortar-Aggregate under Microwave Irradiation. Journal of Materials in Civil Engineering, 2021, 33, .	2.9	9
33	Analytical Approach to the Coupled Effects of Slope Angle and Seepage on Shallow Lined Tunnel Response. International Journal of Applied Mechanics, 2022, 14, .	2.2	9
34	The investigation of concrete damage and recycled aggregate properties under microwave and conventional heating. Construction and Building Materials, 2022, 341, 127859.	7.2	9
35	Static shear fracture influenced by historic stresses path and crack geometries in brittle solids. Theoretical and Applied Fracture Mechanics, 2018, 96, 64-71.	4.7	8
36	An analytical model of multi-stress drops triggered by localized microcrack damage in brittle rocks during progressive failure. International Journal of Damage Mechanics, 2020, 29, 1345-1360.	4.2	8

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37	Effects of crack inclination on shear failure of brittle geomaterials under compression. Arabian Journal of Geosciences, 2017, 10, 1.	1.3	7
38	Research on the Fracture Grouting Mechanism and PFC Numerical Simulation in Loess. Advances in Materials Science and Engineering, 2018, 2018, 1-7.	1.8	7
39	Experimental assessment of microwave heating assisted aggregate recycling from dried and saturated concrete. Materials and Structures/Materiaux Et Constructions, 2021, 54, 1.	3.1	7
40	Experimental research on sintering construction spoil bricks based on microwave heating technology. Environmental Science and Pollution Research, 2021, 28, 69367-69380.	5.3	7
41	Thermally Assisted Liberation of Concrete and Aggregate Recycling: Comparison between Microwave and Conventional Heating. Journal of Materials in Civil Engineering, 2021, 33, .	2.9	7
42	A Fully Coupled Electromagnetic Irradiation, Heat and Mass Transfer Model of Microwave Heating on Concrete. IEEE Access, 2021, 9, 1575-1589.	4.2	7
43	The Effect of Blast-Hole Arrangement, Delay Time, and Decoupling Charge on Rock Damage and Vibration Attenuation in Multihole Blasting. Shock and Vibration, 2022, 2022, 1-18.	0.6	7
44	Freeze-Thaw Effects on Stability of Open Pit Slope in High-Altitude and Cold Regions. Geofluids, 2021, 2021, 1-10.	0.7	6
45	Prediction of mechanical response of â€œa flexible support systemâ€•supported tunnel in viscoelastic geomaterials. Archives of Civil and Mechanical Engineering, 2022, 22, .	3.8	6
46	An analytical micro-macro model of stress drops during brittle creep in rocks. Engineering Fracture Mechanics, 2020, 223, 106794.	4.3	5
47	Multifield coupling study on random aggregate concrete under microwave irradiation. Construction and Building Materials, 2022, 318, 126025.	7.2	5
48	A Study on the Creeping Failure related to Crack Inclination of Brittle Rocks. KSCE Journal of Civil Engineering, 2019, 23, 444-451.	1.9	4
49	Tunnel Squeezing Deformation Control and the Use of Yielding Elements in Shotcrete Linings: A Review. Materials, 2022, 15, 391.	2.9	4
50	Dynamic localized shear failure influenced by changing rates in brittle solids containing initial microcracks. International Journal of Impact Engineering, 2020, 135, 103408.	5.0	3
51	An analysis model for the temperature and residual stress of tunnel liner exposed to fire. Archives of Civil and Mechanical Engineering, 2021, 21, 1.	3.8	3
52	Crack damage evolution in concrete coarse aggregates under microwave-induced thermal stress. Archives of Civil and Mechanical Engineering, 2022, 22, 1.	3.8	3
53	The advantages of microwave in using engineering spoil to sinter bricks. Journal of Building Engineering, 2022, 57, 104940.	3.4	3
54	Temperature Field and Optimal Design of Duct-Ventilated Tower Foundation in Permafrost Regions. Advances in Materials Science and Engineering, 2019, 2019, 1-13.	1.8	1

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55	Heating process and damage evolution of microwave absorption and transparency materials under microwave irradiation. Geomechanics and Geophysics for Geo-Energy and Geo-Resources, 2021, 7, 1.	2.9	1
56	Stability and Countermeasures for a Deposit Slope with Artificial Scarp: Numerical Analysis and Field Monitoring. Advances in Civil Engineering, 2020, 2020, 1-13.	0.7	1
57	An Analytical Microcrack-Based Rock Model with Implications for Earthquake Mechanisms Induced by Stress Changes. Mathematical Geosciences, 2021, 53, 689-710.	2.4	0
58	Performance Evaluation of Tunnel-Slag-Improved High Liquid Limit Soil in Subgrade: A Case Study. Materials, 2022, 15, 1976.	2.9	0
59	Impact of Brittle Creep Failure on Time-Delayed Characteristics of Rockburst. Materials, 2022, 15, 3035.	2.9	0