Zheng-wu Jiang

List of Publications by Year
in descending order

82	2,766	147801 31	189892 50
papers	citations	h-index	g-index

82	82	82	1594
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Recent Advances in Intrinsic Selfâ€Healing Cementitious Materials. Advanced Materials, 2018, 30, e1705679.	21.0	197
2	Influence of mineral additives and environmental conditions on the self-healing capabilities of cementitious materials. Cement and Concrete Composites, 2015, 57, 116-127.	10.7	170
3	Autogenous relative humidity change and autogenous shrinkage of high-performance cement pastes. Cement and Concrete Research, 2005, 35, 1539-1545.	11.0	128
4	Utilization of low-quality desulfurized ash from semi-dry flue gas desulfurization by mixing with hemihydrate gypsum. Fuel, 2019, 255, 115783.	6.4	117
5	Utilization of the black tea powder as multifunctional admixture for the hemihydrate gypsum. Journal of Cleaner Production, 2019, 210, 231-237.	9.3	111
6	Chemical and mineralogical alterations of concrete subjected to chemical attacks in complex underground tunnel environments during 20â€“36 years. Cement and Concrete Composites, 2018, 86, 139-159.	10.7	86
7	State-of-the-art review on properties evolution and deterioration mechanism of concrete at cryogenic temperature. Construction and Building Materials, 2020, 257, 119456.	7.2	81
8	Self-Healing Efficiency of Cementitious Materials Containing Microcapsules Filled with Healing Adhesive: Mechanical Restoration and Healing Process Monitored by Water Absorption. PLoS ONE, 2013, 8, e81616.	2.5	78
9	Acoustic characterization of damage and healing of microencapsulation-based self-healing cement matrices. Cement and Concrete Composites, 2017, 84, 48-61.	10.7	76
10	Preparation and Properties of Melamine Urea-Formaldehyde Microcapsules for Self-Healing of Cementitious Materials. Materials, 2016, 9, 152.	2.9	74
11	Non-Ureolytic Bacterial Carbonate Precipitation as a Surface Treatment Strategy on Cementitious Materials. Journal of Materials in Civil Engineering, 2014, 26, 983-991.	2.9	73
12	Experimental study on the stability of C-S-H nanostructures with varying bulk CaO/SiO2 ratios under cryogenic attack. Cement and Concrete Research, 2020, 135, 106114.	11.0	69
13	A multiphase micromechanical model for hybrid fiber reinforced concrete considering the aggregate and ITZ effects. Construction and Building Materials, 2016, 114, 839-850.	7.2	68
14	Internal relative humidity distribution in high-performance cement paste due to moisture diffusion and self-desiccation. Cement and Concrete Research, 2006, 36, 320-325.	11.0	62
15	Migration and transformation of sulfur in the municipal sewage sludge during disposal in cement kiln. Waste Management, 2018, 77, 537-544.	7.4	62
16	Pozzolanic reaction of fly ash modified by fluidized bed reactor-vapor deposition. Cement and Concrete Research, 2017, 92, 98-109.	11.0	61
17	A multi-phase micromechanical model for unsaturated concrete repaired using the electrochemical deposition method. International Journal of Solids and Structures, 2013, 50, 3875-3885.	2.7	48
18	Sustainable resource opportunity for cane molasses: use of cane molasses as a grinding aid in the production of Portland cement. Journal of Cleaner Production, 2015, 93, 56-64.	9.3	47

#	Article	IF	Citations
19	Investigation on the potential of waste cooking oil as a grinding aid in Portland cement. Journal of Environmental Management, 2016, 184, 545-551.	7.8	47
20	Effects of redispersible polymer powders on the structural build-up of 3D printing cement paste with and without hydroxypropyl methylcellulose. Construction and Building Materials, 2021, 267, 120551.	7.2	47
21	Stochastic micromechanical predictions for the effective properties of concrete considering the interfacial transition zone effects. International Journal of Damage Mechanics, 2018, 27, 1252-1271.	4.2	41
22	Effects of fibers on flexural strength of ultra-high-performance concrete subjected to cryogenic attack. Construction and Building Materials, 2020, 265, 120323.	7.2	41
23	Investigation on the physical stability of calcium-silicate-hydrate with varying CaO/SiO2 ratios under cryogenic attack. Construction and Building Materials, 2020, 252, 119103.	7.2	37
24	Fresh and hardened properties of self-compacting concrete using silicon carbide waste as a viscosity-modifying agent. Construction and Building Materials, 2019, 200, 324-332.	7.2	36
25	Healing effectiveness of cracks rehabilitation in reinforced concrete using electrodeposition method. Journal Wuhan University of Technology, Materials Science Edition, 2008, 23, 917-922.	1.0	35
26	Effect of early-hydration behavior on rheological properties of borax-admixed magnesium phosphate cement. Construction and Building Materials, 2021, 283, 122701.	7.2	35
27	Effective mechanical properties of self-healing cement matrices with microcapsules. Materials and Design, 2016, 95, 422-430.	7.0	34
28	Multiscale modelling for the ultra-high performance concrete: From hydration kinetics to macroscopic elastic moduli. Construction and Building Materials, 2020, 247, 118541.	7.2	34
29	Multi-level diffusion model for manufactured sand mortar considering particle shape and limestone powder effects. Construction and Building Materials, 2019, 207, 218-227.	7.2	33
30	Preparation and characterization of autolytic mineral microsphere for self-healing cementitious materials. Cement and Concrete Composites, 2019, 103, 112-120.	10.7	32
31	Functionalization of renewable bamboo charcoal to improve indoor environment quality in a sustainable way. Journal of Cleaner Production, 2020, 246, 119028.	9.3	32
32	Corrosion assessment of reinforced concrete structures exposed to chloride environments in underground tunnels: Theoretical insights and practical data interpretations. Cement and Concrete Composites, 2020, 112, 103652.	10.7	32
33	Understanding the sulfate attack of Portland cementâ€“based materials exposed to applied electric fields: Mineralogical alteration and migration behavior of ionic species. Cement and Concrete Composites, 2020, 111, 103630.	10.7	31
34	Effect of polycarboxylate ether on the expansion of ye'elimite hydration in the presence of anhydrite. Cement and Concrete Research, 2021, 140, 106321.	11.0	28
35	Temperature field distribution and microstructure of cement-based materials under cryogenic freeze-thaw cycles. Construction and Building Materials, 2020, 243, 118256.	7.2	28
36	Differential-scheme based micromechanical framework for saturated concrete repaired by the electrochemical deposition method. Materials and Structures/Materiaux Et Constructions, 2016, 49, 5183-5193.	3.1	27

#	Article	IF	Citations
37	Micromechanical framework for saturated concrete repaired by the electrochemical deposition method with interfacial transition zone effects. International Journal of Damage Mechanics, 2017, 26, 210-228.	4.2	27
38	Self-healing of cracks in concrete with various crystalline mineral additives in underground environment. Journal Wuhan University of Technology, Materials Science Edition, 2014, 29, 938-944.	1.0	24
39	A multiphase micromechanical model for unsaturated concrete repaired by electrochemical deposition method with the bonding effects. International Journal of Damage Mechanics, 2018, 27, 1307-1324.	4.2	24
40	Strength and toughness of ambient-cured geopolymer concrete containing virgin and recycled fibres in mono and hybrid combinations. Construction and Building Materials, 2021, 304, 124649.	7.2	23
41	A comprehensive nitrogen adsorption measurement on the pore structure of calcium-silicate-hydrate subjected to cryogenic attack. Measurement: Journal of the International Measurement Confederation, 2021, 184, 109941.	5.0	23
42	Upscaling degradation of cementitious calcium (aluminate) silicate hydrate upon ultra-low temperature attack: A multiscale insight and a bottom-up enhancement route. Composites Part B: Engineering, 2022, 243, 110122.	12.0	22
43	Differential-scheme based micromechanical framework for unsaturated concrete repaired by the electrochemical deposition method. Acta Mechanica, 2017, 228, 415-431.	2.1	20
44	Evaluation of the potential use of form-stable phase change materials to improve the freeze-thaw resistance of concrete. Construction and Building Materials, 2019, 203, 621-632.	7.2	20
45	Piezoresistive properties of ultra-high-performance fiber-reinforced concrete incorporating few-layer graphene. Construction and Building Materials, 2021, 305, 124362.	7.2	20
46	Stochastic micromechanical predictions for the probabilistic behavior of saturated concrete repaired by the electrochemical deposition method. International Journal of Damage Mechanics, 2020, 29, 435-453.	4.2	18
47	A stochastic micromechanical model for fiber-reinforced concrete using maximum entropy principle. Acta Mechanica, 2018, 229, 2719-2735.	2.1	17
48	Cement-based composite with humidity adsorption and formaldehyde removal functions as an indoor wall material. Construction and Building Materials, 2020, 247, 118610.	7.2	17
49	Experimental investigation of the factors affecting accuracy and resolution of the pore structure of cement-based materials by thermoporometry. Journal of Zhejiang University: Science A, 2013, 14, 720-730.	2.4	16
50	A stochastic micromechanical framework for hybrid fiber reinforced concrete. Cement and Concrete Composites, 2019, 102, 39-54.	10.7	16
51	Multiple damaging and self-healing properties of cement paste incorporating microcapsules. Construction and Building Materials, 2020, 255, 119302.	7.2	16
52	Revealing the effect of silica fume on the flexural behavior of ultra-high-performance fiber-reinforced concrete by acoustic emission technique. Cement and Concrete Composites, 2022, 131, 104563.	10.7	16
53	Incorporation of bamboo charcoal for cement-based humidity adsorption material. Construction and Building Materials, 2019, 215, 244-251.	7.2	15
54	Study on alkylsilane-incorporated cement composites: Hydration mechanism and mechanical properties effects. Cement and Concrete Composites, 2021, 122, 104161.	10.7	14

#	Article	IF	Citations
55	Properties and microstructure of CO2 activated binder produced by recycling phosphorous slag. Construction and Building Materials, 2021, 282, 122698.	7.2	13
56	Microencapsulation and evaluation of styrene maleic anhydride/epoxy for mechanical triggering self-healing of cementitious materials. Cement and Concrete Composites, 2021, 124, 104247.	10.7	13
57	Role of Limestone Powder in Early-Age Cement Paste Considering Fineness Effects. Journal of Materials in Civil Engineering, 2020, 32, .	2.9	12
58	Production of recycled cellulose fibers from waste paper via ultrasonic wave processing. Journal of Applied Polymer Science, 2015, 132, .	2.6	11
59	Crack Extension and Possibility of Debonding in Encapsulation-Based Self-Healing Materials. Materials, 2017, 10, 589.	2.9	11
60	Silicon carbide waste as a source of mixture materials for cement mortar. Frontiers of Environmental Science and Engineering, 2017, 11, 1.	6.0	9
61	Acoustic emission analysis of characteristics of healing products in steam-cured cementitious materials with mineral additives. Construction and Building Materials, 2019, 201, 807-817.	7.2	9
62	Reactions of self-healing agents and the chemical binding of aggressive ions in sea water: Thermodynamics and kinetics. Cement and Concrete Research, 2021, 145, 106450.	11.0	9
63	Differential scheme-based stochastic micromechanical framework for saturated concrete repaired by EDM. Acta Mechanica, 2019, 230, 4287-4301.	2.1	8
64	The effect of Ca2+ concentrations on the characteristics of Mg(OH)2-based building materials prepared in situ by electrodeposition. Construction and Building Materials, 2021, 271, 121523.	7.2	8
65	Preparing Mg(OH)2-based materials by electro-deposition method from magnesium- and calcium-rich brine simulant. Desalination, 2022, 527, 115580.	8.2	8
66	Pozzolanicity of fly ash modified by fluidized bed reactorâ€“vapor deposition. Construction and Building Materials, 2017, 156, 719-727.	7.2	7
67	Preparation and Self-Healing Properties of Clinker/PVP Microsphere in Cement Paste. Materials, 2020, 13, 589.	2.9	7
68	Continuum damage-healing framework for the hydration induced self-healing of the cementitious composite. International Journal of Damage Mechanics, 2021, 30, 681-699.	4.2	7
69	Properties of bamboo charcoal and cement-based composite materials and their microstructure. Journal Wuhan University of Technology, Materials Science Edition, 2017, 32, 1374-1378.	1.0	6
70	Permeability modeling of self-healing due to calcium carbonate precipitation in cement-based materials with mineral additives. Journal of Central South University, 2019, 26, 567-576.	3.0	6
71	Preparation and Characterization of Self-Healing Mortar Based on â€œBuild-Inâ€•Carbonation. Materials, 2020, 13, 644.	2.9	6
72	Electrochemical deposition induced continuum damage-healing framework for the cementitious composite. International Journal of Damage Mechanics, 0, , 105678952199187.	4.2	6

#	Article	IF	Citations
73	Effect of Waste Paper Fiber on Properties of Cement-based Mortar and Relative Mechanism. Journal Wuhan University of Technology, Materials Science Edition, 2018, 33, 419-426.	1.0	5
74	Microscopic analysis of nano-modified fly ash by fluidized bed reactor-vapor deposition. Construction and Building Materials, 2020, 260, 120434.	7.2	4
75	Effect of CO32 and Ca2+ on self-healing of cementitious materials due to â€œbuild-inâ€•carbonation. Journal of Building Engineering, 2022, 56, 104781.	3.4	4
76	An Experimental Study on the Repair of Deteriorated Concrete by the Electrochemical Deposition Method. , 2015, , .		3
77	Insight into the inherent randomness of concrete properties using the stochastic micromechanics. Probabilistic Engineering Mechanics, 2020, 61, 103064.	2.7	3
78	Self-regulating Humidity Activated Carbon Material Prepared from Bamboo for the Room. Journal Wuhan University of Technology, Materials Science Edition, 2019, 34, 267-274.	1.0	2
79	Study on Autolytic Mechanism and Self-Healing Properties of Autolytic Clinker Microsphere in Alkaline Environment. Materials, 2022, 15, 3638.	2.9	2
80	An Improved Micromechanical Framework for Saturated Concrete Repaired by the Electrochemical Deposition Method considering the Imperfect Bonding. Journal of Engineering (United States), 2016, 2016, 1-11.	1.0	1
81	Modification on the Performance of the Hemihydrate Gypsum with the Plant Source Polymer of Dry Matcha Powder. Journal Wuhan University of Technology, Materials Science Edition, 2018, 33, 1452-1458.	1.0	0
82	Effect of Chloride Ion Content and Replacement Ratio of Manufactured Sand on Performance of Sea Sand Masonry Mortar. Iranian Journal of Science and Technology - Transactions of Civil Engineering, 2021, 45, 147-158.	1.9	0