

# Zheng-wu Jiang

## List of Publications by Year in descending order

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Version: 2024-02-01

82  
papers

2,766  
citations

147801

31  
h-index

189892

50  
g-index

82  
all docs

82  
docs citations

82  
times ranked

1594  
citing authors

#	ARTICLE	IF	CITATIONS
1	Preparing Mg(OH) <sub>2</sub> -based materials by electro-deposition method from magnesium- and calcium-rich brine simulant. <i>Desalination</i> , 2022, 527, 115580.	8.2	8
2	Revealing the effect of silica fume on the flexural behavior of ultra-high-performance fiber-reinforced concrete by acoustic emission technique. <i>Cement and Concrete Composites</i> , 2022, 131, 104563.	10.7	16
3	Study on Autolytic Mechanism and Self-Healing Properties of Autolytic Clinker Microsphere in Alkaline Environment. <i>Materials</i> , 2022, 15, 3638.	2.9	2
4	Effect of CO <sub>2</sub> and Ca <sup>2+</sup> on self-healing of cementitious materials due to "build-in" carbonation. <i>Journal of Building Engineering</i> , 2022, 56, 104781.	3.4	4
5	Upscaling degradation of cementitious calcium (aluminate) silicate hydrate upon ultra-low temperature attack: A multiscale insight and a bottom-up enhancement route. <i>Composites Part B: Engineering</i> , 2022, 243, 110122.	12.0	22
6	Continuum damage-healing framework for the hydration induced self-healing of the cementitious composite. <i>International Journal of Damage Mechanics</i> , 2021, 30, 681-699.	4.2	7
7	Effects of redispersible polymer powders on the structural build-up of 3D printing cement paste with and without hydroxypropyl methylcellulose. <i>Construction and Building Materials</i> , 2021, 267, 120551.	7.2	47
8	The effect of Ca <sup>2+</sup> concentrations on the characteristics of Mg(OH) <sub>2</sub> -based building materials prepared in situ by electrodeposition. <i>Construction and Building Materials</i> , 2021, 271, 121523.	7.2	8
9	Effect of polycarboxylate ether on the expansion of ye'elimite hydration in the presence of anhydrite. <i>Cement and Concrete Research</i> , 2021, 140, 106321.	11.0	28
10	Effect of Chloride Ion Content and Replacement Ratio of Manufactured Sand on Performance of Sea Sand Masonry Mortar. <i>Iranian Journal of Science and Technology - Transactions of Civil Engineering</i> , 2021, 45, 147-158.	1.9	0
11	Properties and microstructure of CO <sub>2</sub> activated binder produced by recycling phosphorous slag. <i>Construction and Building Materials</i> , 2021, 282, 122698.	7.2	13
12	Effect of early-hydration behavior on rheological properties of borax-admixed magnesium phosphate cement. <i>Construction and Building Materials</i> , 2021, 283, 122701.	7.2	35
13	Reactions of self-healing agents and the chemical binding of aggressive ions in sea water: Thermodynamics and kinetics. <i>Cement and Concrete Research</i> , 2021, 145, 106450.	11.0	9
14	Study on alkylsilane-incorporated cement composites: Hydration mechanism and mechanical properties effects. <i>Cement and Concrete Composites</i> , 2021, 122, 104161.	10.7	14
15	Strength and toughness of ambient-cured geopolymer concrete containing virgin and recycled fibres in mono and hybrid combinations. <i>Construction and Building Materials</i> , 2021, 304, 124649.	7.2	23
16	Piezoresistive properties of ultra-high-performance fiber-reinforced concrete incorporating few-layer graphene. <i>Construction and Building Materials</i> , 2021, 305, 124362.	7.2	20
17	Microencapsulation and evaluation of styrene maleic anhydride/epoxy for mechanical triggering self-healing of cementitious materials. <i>Cement and Concrete Composites</i> , 2021, 124, 104247.	10.7	13
18	A comprehensive nitrogen adsorption measurement on the pore structure of calcium-silicate-hydrate subjected to cryogenic attack. <i>Measurement: Journal of the International Measurement Confederation</i> , 2021, 184, 109941.	5.0	23

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19	Stochastic micromechanical predictions for the probabilistic behavior of saturated concrete repaired by the electrochemical deposition method. <i>International Journal of Damage Mechanics</i> , 2020, 29, 435-453.	4.2	18
20	Functionalization of renewable bamboo charcoal to improve indoor environment quality in a sustainable way. <i>Journal of Cleaner Production</i> , 2020, 246, 119028.	9.3	32
21	Microscopic analysis of nano-modified fly ash by fluidized bed reactor-vapor deposition. <i>Construction and Building Materials</i> , 2020, 260, 120434.	7.2	4
22	Role of Limestone Powder in Early-Age Cement Paste Considering Fineness Effects. <i>Journal of Materials in Civil Engineering</i> , 2020, 32, .	2.9	12
23	Effects of fibers on flexural strength of ultra-high-performance concrete subjected to cryogenic attack. <i>Construction and Building Materials</i> , 2020, 265, 120323.	7.2	41
24	Multiple damaging and self-healing properties of cement paste incorporating microcapsules. <i>Construction and Building Materials</i> , 2020, 255, 119302.	7.2	16
25	Corrosion assessment of reinforced concrete structures exposed to chloride environments in underground tunnels: Theoretical insights and practical data interpretations. <i>Cement and Concrete Composites</i> , 2020, 112, 103652.	10.7	32
26	Experimental study on the stability of C-S-H nanostructures with varying bulk CaO/SiO <sub>2</sub> ratios under cryogenic attack. <i>Cement and Concrete Research</i> , 2020, 135, 106114.	11.0	69
27	Multiscale modelling for the ultra-high performance concrete: From hydration kinetics to macroscopic elastic moduli. <i>Construction and Building Materials</i> , 2020, 247, 118541.	7.2	34
28	Insight into the inherent randomness of concrete properties using the stochastic micromechanics. <i>Probabilistic Engineering Mechanics</i> , 2020, 61, 103064.	2.7	3
29	Preparation and Self-Healing Properties of Clinker/PVP Microsphere in Cement Paste. <i>Materials</i> , 2020, 13, 589.	2.9	7
30	Preparation and Characterization of Self-Healing Mortar Based on CO <sub>2</sub> -Carbonation. <i>Materials</i> , 2020, 13, 644.	2.9	6
31	Cement-based composite with humidity adsorption and formaldehyde removal functions as an indoor wall material. <i>Construction and Building Materials</i> , 2020, 247, 118610.	7.2	17
32	Investigation on the physical stability of calcium-silicate-hydrate with varying CaO/SiO <sub>2</sub> ratios under cryogenic attack. <i>Construction and Building Materials</i> , 2020, 252, 119103.	7.2	37
33	Understanding the sulfate attack of Portland cement-based materials exposed to applied electric fields: Mineralogical alteration and migration behavior of ionic species. <i>Cement and Concrete Composites</i> , 2020, 111, 103630.	10.7	31
34	Temperature field distribution and microstructure of cement-based materials under cryogenic freeze-thaw cycles. <i>Construction and Building Materials</i> , 2020, 243, 118256.	7.2	28
35	State-of-the-art review on properties evolution and deterioration mechanism of concrete at cryogenic temperature. <i>Construction and Building Materials</i> , 2020, 257, 119456.	7.2	81
36	Utilization of low-quality desulfurized ash from semi-dry flue gas desulfurization by mixing with hemihydrate gypsum. <i>Fuel</i> , 2019, 255, 115783.	6.4	117

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37	Differential scheme-based stochastic micromechanical framework for saturated concrete repaired by EDM. <i>Acta Mechanica</i> , 2019, 230, 4287-4301.	2.1	8
38	Acoustic emission analysis of characteristics of healing products in steam-cured cementitious materials with mineral additives. <i>Construction and Building Materials</i> , 2019, 201, 807-817.	7.2	9
39	Self-regulating Humidity Activated Carbon Material Prepared from Bamboo for the Room. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2019, 34, 267-274.	1.0	2
40	Incorporation of bamboo charcoal for cement-based humidity adsorption material. <i>Construction and Building Materials</i> , 2019, 215, 244-251.	7.2	15
41	Permeability modeling of self-healing due to calcium carbonate precipitation in cement-based materials with mineral additives. <i>Journal of Central South University</i> , 2019, 26, 567-576.	3.0	6
42	A stochastic micromechanical framework for hybrid fiber reinforced concrete. <i>Cement and Concrete Composites</i> , 2019, 102, 39-54.	10.7	16
43	Preparation and characterization of autolytic mineral microsphere for self-healing cementitious materials. <i>Cement and Concrete Composites</i> , 2019, 103, 112-120.	10.7	32
44	Evaluation of the potential use of form-stable phase change materials to improve the freeze-thaw resistance of concrete. <i>Construction and Building Materials</i> , 2019, 203, 621-632.	7.2	20
45	Multi-level diffusion model for manufactured sand mortar considering particle shape and limestone powder effects. <i>Construction and Building Materials</i> , 2019, 207, 218-227.	7.2	33
46	Fresh and hardened properties of self-compacting concrete using silicon carbide waste as a viscosity-modifying agent. <i>Construction and Building Materials</i> , 2019, 200, 324-332.	7.2	36
47	Utilization of the black tea powder as multifunctional admixture for the hemihydrate gypsum. <i>Journal of Cleaner Production</i> , 2019, 210, 231-237.	9.3	111
48	A stochastic micromechanical model for fiber-reinforced concrete using maximum entropy principle. <i>Acta Mechanica</i> , 2018, 229, 2719-2735.	2.1	17
49	Recent Advances in Intrinsic Self-Healing Cementitious Materials. <i>Advanced Materials</i> , 2018, 30, e1705679.	21.0	197
50	Chemical and mineralogical alterations of concrete subjected to chemical attacks in complex underground tunnel environments during 20-36 years. <i>Cement and Concrete Composites</i> , 2018, 86, 139-159.	10.7	86
51	Stochastic micromechanical predictions for the effective properties of concrete considering the interfacial transition zone effects. <i>International Journal of Damage Mechanics</i> , 2018, 27, 1252-1271.	4.2	41
52	Modification on the Performance of the Hemihydrate Gypsum with the Plant Source Polymer of Dry Matcha Powder. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2018, 33, 1452-1458.	1.0	0
53	Migration and transformation of sulfur in the municipal sewage sludge during disposal in cement kiln. <i>Waste Management</i> , 2018, 77, 537-544.	7.4	62
54	A multiphase micromechanical model for unsaturated concrete repaired by electrochemical deposition method with the bonding effects. <i>International Journal of Damage Mechanics</i> , 2018, 27, 1307-1324.	4.2	24

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55	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
56	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
57	Pozzolanic reaction of fly ash modified by fluidized bed reactor-vapor deposition. Cement and Concrete Research, 2017, 92, 98-109.	11.0	61
58	Pozzolanicity of fly ash modified by fluidized bed reactorâ€“vapor deposition. Construction and Building Materials, 2017, 156, 719-727.	7.2	7
59	Acoustic characterization of damage and healing of microencapsulation-based self-healing cement matrices. Cement and Concrete Composites, 2017, 84, 48-61.	10.7	76
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	Differential-scheme based micromechanical framework for unsaturated concrete repaired by the electrochemical deposition method. Acta Mechanica, 2017, 228, 415-431.	2.1	20
62	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
63	Crack Extension and Possibility of Debonding in Encapsulation-Based Self-Healing Materials. Materials, 2017, 10, 589.	2.9	11
64	Preparation and Properties of Melamine Urea-Formaldehyde Microcapsules for Self-Healing of Cementitious Materials. Materials, 2016, 9, 152.	2.9	74
65	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
66	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
67	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
68	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
69	Effective mechanical properties of self-healing cement matrices with microcapsules. Materials and Design, 2016, 95, 422-430.	7.0	34
70	An Experimental Study on the Repair of Deteriorated Concrete by the Electrochemical Deposition Method. , 2015, , .		3
71	Production of recycled cellulose fibers from waste paper via ultrasonic wave processing. Journal of Applied Polymer Science, 2015, 132, .	2.6	11
72	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

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73	Sustainable resource opportunity for cane molasses: use of cane molasses as a grinding aid in the production of Portland cement. <i>Journal of Cleaner Production</i> , 2015, 93, 56-64.	9.3	47
74	Non-Ureolytic Bacterial Carbonate Precipitation as a Surface Treatment Strategy on Cementitious Materials. <i>Journal of Materials in Civil Engineering</i> , 2014, 26, 983-991.	2.9	73
75	Self-healing of cracks in concrete with various crystalline mineral additives in underground environment. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2014, 29, 938-944.	1.0	24
76	A multi-phase micromechanical model for unsaturated concrete repaired using the electrochemical deposition method. <i>International Journal of Solids and Structures</i> , 2013, 50, 3875-3885.	2.7	48
77	Experimental investigation of the factors affecting accuracy and resolution of the pore structure of cement-based materials by thermoporometry. <i>Journal of Zhejiang University: Science A</i> , 2013, 14, 720-730.	2.4	16
78	Self-Healing Efficiency of Cementitious Materials Containing Microcapsules Filled with Healing Adhesive: Mechanical Restoration and Healing Process Monitored by Water Absorption. <i>PLoS ONE</i> , 2013, 8, e81616.	2.5	78
79	Healing effectiveness of cracks rehabilitation in reinforced concrete using electrodeposition method. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2008, 23, 917-922.	1.0	35
80	Internal relative humidity distribution in high-performance cement paste due to moisture diffusion and self-desiccation. <i>Cement and Concrete Research</i> , 2006, 36, 320-325.	11.0	62
81	Autogenous relative humidity change and autogenous shrinkage of high-performance cement pastes. <i>Cement and Concrete Research</i> , 2005, 35, 1539-1545.	11.0	128
82	Electrochemical deposition induced continuum damage-healing framework for the cementitious composite. <i>International Journal of Damage Mechanics</i> , 0, , 105678952199187.	4.2	6