

# Qiang Zeng

## List of Publications by Year in descending order

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Version: 2024-02-01

98  
papers

3,726  
citations

136740

32  
h-index

143772

57  
g-index

100  
all docs

100  
docs citations

100  
times ranked

2035  
citing authors

#	ARTICLE	IF	CITATIONS
1	Pore structure characterization of cement pastes blended with high-volume fly-ash. <i>Cement and Concrete Research</i> , 2012, 42, 194-204.	4.6	420
2	Determination of cement hydration and pozzolanic reaction extents for fly-ash cement pastes. <i>Construction and Building Materials</i> , 2012, 27, 560-569.	3.2	209
3	Surface fractal dimension: An indicator to characterize the microstructure of cement-based porous materials. <i>Applied Surface Science</i> , 2013, 282, 302-307.	3.1	167
4	Surface fractal analysis of pore structure of high-volume fly-ash cement pastes. <i>Applied Surface Science</i> , 2010, 257, 762-768.	3.1	160
5	Pore-size resolved water vapor adsorption kinetics of white cement mortars as viewed from proton NMR relaxation. <i>Cement and Concrete Research</i> , 2018, 105, 31-43.	4.6	143
6	Fractal dimension of concrete incorporating silica fume and its correlations to pore structure, strength and permeability. <i>Construction and Building Materials</i> , 2019, 228, 116986.	3.2	138
7	Analysis of pore structure, contact angle and pore entrapment of blended cement pastes from mercury porosimetry data. <i>Cement and Concrete Composites</i> , 2012, 34, 1053-1060.	4.6	109
8	A study of freezing behavior of cementitious materials by poromechanical approach. <i>International Journal of Solids and Structures</i> , 2011, 48, 3267-3273.	1.3	100
9	Graphene nanoplatelets as an effective additive to tune the microstructures and piezoresistive properties of cement-based composites. <i>Construction and Building Materials</i> , 2019, 209, 665-678.	3.2	93
10	Thermally insulating lightweight cement-based composites incorporating glass beads and nano-silica aerogels for sustainably energy-saving buildings. <i>Energy and Buildings</i> , 2018, 174, 97-110.	3.1	91
11	Effect of porosity on thermal expansion coefficient of cement pastes and mortars. <i>Construction and Building Materials</i> , 2012, 28, 468-475.	3.2	80
12	Waste ceramic powder as a pozzolanic supplementary filler of cement for developing sustainable building materials. <i>Journal of Cleaner Production</i> , 2020, 259, 120853.	4.6	76
13	Effect of self-desiccation on the pore structure of paste and mortar incorporating 70% GGBS. <i>Construction and Building Materials</i> , 2014, 51, 329-337.	3.2	70
14	In-situ assessment of the water-penetration resistance of polymer modified cement mortars by $\hat{1}/4$ -XCT, SEM and EDS. <i>Cement and Concrete Composites</i> , 2020, 114, 103821.	4.6	65
15	Thermodynamics and Characteristics of Heterogeneous Nucleation on Fractal Surfaces. <i>Journal of Physical Chemistry C</i> , 2015, 119, 27426-27433.	1.5	64
16	Characterizing pore structure of cement blend pastes using water vapor sorption analysis. <i>Materials Characterization</i> , 2014, 95, 72-84.	1.9	60
17	Corrosion of rebar in concrete under cyclic freeze-thaw and Chloride salt action. <i>Construction and Building Materials</i> , 2014, 53, 40-47.	3.2	58
18	Characterizing blended cement pastes under cyclic freeze-thaw actions by electrical resistivity. <i>Construction and Building Materials</i> , 2013, 44, 477-486.	3.2	56

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19	The effect of water saturation degree on the electrical properties of cement-based porous material. <i>Cement and Concrete Composites</i> , 2016, 70, 35-47.	4.6	56
20	Reassessment of mercury intrusion porosimetry for characterizing the pore structure of cement-based porous materials by monitoring the mercury entrapments with X-ray computed tomography. <i>Cement and Concrete Composites</i> , 2020, 113, 103726.	4.6	56
21	Freezing behavior of cement pastes saturated with NaCl solution. <i>Construction and Building Materials</i> , 2014, 59, 99-110.	3.2	54
22	Correlating the elastic properties of metakaolin-based geopolymer with its composition. <i>Materials and Design</i> , 2016, 95, 306-318.	3.3	54
23	Pore structure of geopolymer materials and its correlations to engineering properties: A review. <i>Construction and Building Materials</i> , 2022, 328, 127064.	3.2	45
24	Thinner fillers, coarser pores? A comparative study of the pore structure alterations of cement composites by graphene oxides and graphene nanoplatelets. <i>Composites Part A: Applied Science and Manufacturing</i> , 2020, 130, 105750.	3.8	43
25	Relative humidity and deterioration of concrete under freeze-thaw load. <i>Construction and Building Materials</i> , 2014, 62, 18-27.	3.2	42
26	Effect of pore shape on the thermal conductivity of partially saturated cement-based porous composites. <i>Cement and Concrete Composites</i> , 2017, 81, 87-96.	4.6	41
27	A comparative study on the influences of CNT and GNP on the piezoresistivity of cement composites. <i>Materials Letters</i> , 2020, 259, 126858.	1.3	40
28	Pore structure of cement pastes through NAD and MIP analysis. <i>Advances in Cement Research</i> , 2016, 28, 23-32.	0.7	39
29	Tracing mercury entrapment in porous cement paste after mercury intrusion test by X-ray computed tomography and implications for pore structure characterization. <i>Materials Characterization</i> , 2019, 151, 203-215.	1.9	38
30	Heterogeneous Nucleation on Concave Rough Surfaces: Thermodynamic Analysis and Implications for Nucleation Design. <i>Journal of Physical Chemistry C</i> , 2016, 120, 10368-10380.	1.5	36
31	Freeze-thaw behavior of air entrained cement paste saturated with 10wt.% NaCl solution. <i>Cold Regions Science and Technology</i> , 2014, 102, 21-31.	1.6	34
32	BSE-A reveals retardation mechanisms of polymer powders on cement hydration. <i>Journal of the American Ceramic Society</i> , 2020, 103, 3373-3389.	1.9	34
33	Relationships between microstructure and transport properties in mortar containing recycled ceramic powder. <i>Journal of Cleaner Production</i> , 2020, 263, 121384.	4.6	34
34	Quantifying the anomalous water absorption behavior of cement mortar in view of its physical sensitivity to water. <i>Cement and Concrete Research</i> , 2021, 143, 106395.	4.6	33
35	Determining the micro-fracture properties of Antrim gas shale by an improved micro-indentation method. <i>Journal of Natural Gas Science and Engineering</i> , 2019, 62, 224-235.	2.1	30
36	Towards better characterizing thermal conductivity of cement-based materials: The effects of interfacial thermal resistance and inclusion size. <i>Materials and Design</i> , 2018, 157, 105-118.	3.3	29

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37	Waterproof geopolymer composites modified by hydrophobic particles and polydimethylsiloxane. Composites Part B: Engineering, 2022, 237, 109865.	5.9	28
38	Characterizing frost damages of concrete with flatbed scanner. Construction and Building Materials, 2016, 102, 872-883.	3.2	27
39	The dependence of capillary sorptivity and gas permeability on initial water content for unsaturated cement mortars. Cement and Concrete Composites, 2019, 104, 103356.	4.6	27
40	Pore Structure Damages in Cement-Based Materials by Mercury Intrusion: A Non-Destructive Assessment by X-Ray Computed Tomography. Materials, 2019, 12, 2220.	1.3	26
41	Tailoring the thermal and mechanical properties of lightweight cement-based composites by macro and micro fillers. Cement and Concrete Composites, 2019, 102, 169-184.	4.6	26
42	Reaction and microstructure of cement-fly-ash system. Materials and Structures/Materiaux Et Constructions, 2015, 48, 1703-1716.	1.3	25
43	Elastic behavior of saturated porous materials under undrained freezing. Acta Mechanica Sinica/Lixue Xuebao, 2013, 29, 827-835.	1.5	24
44	A discussion of "Application of nano-indentation methods to estimate nanoscale mechanical properties of shale reservoir rocks" by K Liu, M Osatadhassan and B Bubach. Journal of Natural Gas Science and Engineering, 2017, 42, 187-189.	2.1	24
45	Matrix wettability and mechanical properties of geopolymer cement-polydimethylsiloxane (PDMS) hybrids. Cement and Concrete Composites, 2021, 124, 104268.	4.6	24
46	Effect of moisture content on freeze-thaw behavior of cement paste by electrical resistance measurements. Journal of Materials Science, 2014, 49, 4305-4314.	1.7	23
47	Kinetics and Equilibrium Isotherms of Water Vapor Adsorption/Desorption in Cement-Based Porous Materials. Transport in Porous Media, 2015, 109, 469-493.	1.2	23
48	Heterogeneous nucleation of ice from supercooled NaCl solution confined in porous cement paste. Journal of Crystal Growth, 2015, 409, 1-9.	0.7	23
49	CO <sub>2</sub> Pretreatment to Aerated Concrete with High-Volume Industry Wastes Enables a Sustainable Precast Concrete Industry. ACS Sustainable Chemistry and Engineering, 2021, 9, 3363-3375.	3.2	22
50	Pervious concrete with secondarily recycled low-quality brick-concrete demolition residue: Engineering performances, multi-scale/phase structure and sustainability. Journal of Cleaner Production, 2022, 341, 130929.	4.6	22
51	Water Removal by Freeze-Drying of Hardened Cement Paste. Drying Technology, 2013, 31, 67-71.	1.7	19
52	Micro indentation fracture of cement paste assessed by energy-based method: The method improvement and affecting factors. Construction and Building Materials, 2020, 231, 117136.	3.2	19
53	Sustainable cement mortar with recycled plastics enabled by the matrix-aggregate compatibility improvement. Construction and Building Materials, 2022, 318, 125994.	3.2	19
54	A fractional kinetic model for drying of cement-based porous materials. Drying Technology, 2016, 34, 1231-1242.	1.7	18

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55	A two-parameter stretched exponential function for dynamic water vapor sorption of cement-based porous materials. <i>Materials and Structures/Materiaux Et Constructions</i> , 2017, 50, 1.	1.3	18
56	Size matching effect on Wenzel wetting on fractal surfaces. <i>Results in Physics</i> , 2018, 10, 588-593.	2.0	18
57	Capillary imbibition of ethanol in cement paste traced by X-ray computed tomography with CsCl-enhancing technique. <i>Chemical Physics Letters</i> , 2019, 726, 117-123.	1.2	17
58	Effect of Size of Coarse Aggregate on Mechanical Properties of Metakaolin-Based Geopolymer Concrete and Ordinary Concrete. <i>Materials</i> , 2021, 14, 3316.	1.3	17
59	Total recycling of low-quality urban-fringe construction and demolition waste towards the development of sustainable cement-free pervious concrete: The proof of concept. <i>Journal of Cleaner Production</i> , 2022, 352, 131464.	4.6	17
60	Anomalous matrix and interlayer pore structure of 3D-printed fiber-reinforced cementitious composites. <i>Cement and Concrete Research</i> , 2022, 157, 106829.	4.6	17
61	Transmission micro-focus X-ray radiographic measurements towards in-situ tracing capillary imbibition fronts and paths in ultra-thin concrete slices. <i>Measurement: Journal of the International Measurement Confederation</i> , 2021, 175, 109141.	2.5	16
62	Compositional Dependence of Pore Structure, Strength and Freezing-Thawing Resistance of Metakaolin-Based Geopolymers. <i>Materials</i> , 2020, 13, 2973.	1.3	15
63	Electrical Resistivity of Cement Pastes Undergoing Cyclic Freeze-Thaw Action. <i>Journal of Materials in Civil Engineering</i> , 2015, 27, 04014109.	1.3	14
64	Effect of supercooling on the instantaneous freezing dilation of cement-based porous materials. <i>Journal of Building Physics</i> , 2016, 40, 101-124.	1.2	14
65	Oven drying kinetics and status of cement-based porous materials for in-lab microstructure investigation. <i>Advances in Cement Research</i> , 2018, 30, 204-215.	0.7	14
66	A self-balanced electrochemical model for corrosion of reinforcing steel bar in considering the micro-environments in concrete. <i>Construction and Building Materials</i> , 2020, 254, 119116.	3.2	14
67	Visualization of mercury percolation in porous hardened cement paste by means of X-ray computed tomography. <i>Cement and Concrete Composites</i> , 2021, 122, 104111.	4.6	14
68	Quasi-Liquid Layer on Ice and Its Effect on the Confined Freezing of Porous Materials. <i>Crystals</i> , 2019, 9, 250.	1.0	13
69	The effect of chemical aging on water permeability of white cement mortars in the context of sol-gel science. <i>Cement and Concrete Composites</i> , 2020, 114, 103812.	4.6	13
70	Morphological characteristics of calcium carbonate crystallization in CO <sub>2</sub> pre-cured aerated concrete. <i>RSC Advances</i> , 2022, 12, 14610-14620.	1.7	13
71	Waterproof ultra-high toughness cementitious composites containing nano reservoir silts. <i>Construction and Building Materials</i> , 2017, 155, 770-779.	3.2	12
72	FRactal ANALYSIS OF STRESS-DEPENDENT DIFFUSIVITY OF POROUS CEMENTITIOUS MATERIALS. <i>Fractals</i> , 2020, 28, 2050117.	1.8	12

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73	Microfracture Characterization of Cement Paste at Early Age by Indentation Test. Journal of Materials in Civil Engineering, 2018, 30, .	1.3	11
74	Characterizing the foam-shell microstructure of industrial ultra-light foamed concrete cast under different temperatures. Materials Characterization, 2021, 173, 110938.	1.9	11
75	The state-of-art in characterizing the micro/nano-structure and mechanical properties of cement-based materials via scratch test. Construction and Building Materials, 2020, 254, 119255.	3.2	10
76	A simple method for estimating the size of nuclei on fractal surfaces. Journal of Crystal Growth, 2017, 475, 49-54.	0.7	9
77	Uniform Model for Moisture Transport in Porous Materials and Its Application to Concrete at Selected Chinese Regions. Journal of Materials in Civil Engineering, 2014, 26, 05014001.	1.3	8
78	Erosion of aerial lime and sticky rice mortars by cyclic wetting&ldquo;drying and dilute sulfate acid actions. Advances in Cement Research, 2020, 32, 343-357.	0.7	8
79	Is scratch test proper to characterize microstructure and mechanical properties of cement-based materials? The effects of loading level and routine. Cement and Concrete Research, 2020, 133, 106072.	4.6	8
80	Discussion: Relationship of moisture content with temperature and relative humidity in concrete. Magazine of Concrete Research, 2013, 65, 1494-1496.	0.9	7
81	Fractal Characterization of Non-Uniform Corrosion of Steel Bars in Concrete Beams after Accelerated depassivation and Seven-Year Natural Corrosion. Materials, 2019, 12, 3919.	1.3	7
82	Evaluation of Mechanical Properties of Concrete after Exposure to Elevated Temperatures Using Ultrasonic Pulse Velocity Measurement and a Split-Hopkinson Pressure Bar. Journal of Materials in Civil Engineering, 2021, 33, .	1.3	7
83	A multi-scale micromechanical investigation on thermal conductivity of cement-based composites. IOP Conference Series: Materials Science and Engineering, 2017, 167, 012069.	0.3	7
84	May the Piezoresistivity of GNP-Modified Cement Mortar Be Related to Its Fractal Structure?. Fractal and Fractional, 2021, 5, 148.	1.6	7
85	Influence of freezing rate on cryo-damage of cementitious material. Journal of Zhejiang University: Science A, 2009, 10, 17-21.	1.3	6
86	A study of the behaviors of cement-based materials subject to freezing. , 2010, , .		5
87	Poroelastic Insights into Stress Dependence of Chloride Penetration into Saturated Cement-Based Porous Materials. Journal of Advanced Concrete Technology, 2019, 17, 350-364.	0.8	5
88	Empirical modeling of pore size distribution for rock materials with its impact on pore water freezing. Cold Regions Science and Technology, 2022, 201, 103619.	1.6	5
89	Discussion of &ldquo;Empirical Estimation of Pore Size Distribution in Cement, Mortar, and Concrete&rdquo;-by Fuyuan Gong, Dawei Zhang, Evdon Sicat, and Tamon Ueda. Journal of Materials in Civil Engineering, 2015, 27, .	1.3	4
90	Kinetics of low radioactive wastewater imbibition and radionuclides sorption in partially saturated ternary-binder mortar. Journal of Hazardous Materials, 2022, 422, 126897.	6.5	4

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91	Discussion of "Numerical simulation of moisture transport in concrete based on a pore size distribution model". Cement and Concrete Research, 2015, 73, 63-66.	4.6	3
92	Discussion of "Freezing Strain Model for Estimating the Unfrozen Water Content of Saturated Rock under Low Temperature" by Shibing Huang, Quansheng Liu, Yanzhang Liu, Zuyang Ye, and Aiping Cheng. International Journal of Geomechanics, 2019, 19, .	1.3	3
93	Effects of nanoclay addition on the permeability and mechanical properties of ultra high toughness cementitious composites. Journal of Zhejiang University: Science A, 2020, 21, 992-1007.	1.3	3
94	Residual compressive strength of hardened OPC/CAC paste after fire exposure. Magazine of Concrete Research, 2019, 71, 548-556.	0.9	2
95	Chemical "physical" mechanical stability of MKG mortars under sulfate attacks. Advances in Cement Research, 2021, 33, 224-238.	0.7	1
96	Ductile Concrete Columns Enabled by Multilayer Basalt TRM Shells: Confinement Mechanism and Modeling. Journal of Composites for Construction, 2022, 26, .	1.7	1
97	Rate-Dependent Bonding of Steel Reinforcement in Geopolymer Concrete. ACI Materials Journal, 2019, 116, .	0.3	0
98	Microstructure and properties of concrete with ceramic wastes. , 2022, , 229-253.		0