

Mingzhong Zhang

List of Publications by Year in descending order

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88
papers

3,800
citations

94415

37
h-index

133244

59
g-index

89
all docs

89
docs citations

89
times ranked

2006
citing authors

#	ARTICLE	IF	CITATIONS
1	Fiber-reinforced geopolymer composites: A review. <i>Cement and Concrete Composites</i> , 2020, 107, 103498.	10.7	337
2	Workability and mechanical properties of alkali-activated fly ash-slag concrete cured at ambient temperature. <i>Construction and Building Materials</i> , 2018, 172, 476-487.	7.2	305
3	Computational technology for analysis of 3D meso-structure effects on damage and failure of concrete. <i>International Journal of Solids and Structures</i> , 2016, 80, 310-333.	2.7	168
4	Computational investigation on mass diffusivity in Portland cement paste based on X-ray computed microtomography (µCT) image. <i>Construction and Building Materials</i> , 2012, 27, 472-481.	7.2	123
5	Multiscale micromechanical analysis of alkali-activated fly ash-slag paste. <i>Cement and Concrete Research</i> , 2020, 135, 106141.	11.0	109
6	Meso-scale modelling of compressive fracture in concrete with irregularly shaped aggregates. <i>Cement and Concrete Research</i> , 2021, 140, 106317.	11.0	98
7	Internal curing of alkali-activated fly ash-slag pastes using superabsorbent polymer. <i>Cement and Concrete Research</i> , 2019, 116, 179-190.	11.0	95
8	Mechanisms of autogenous shrinkage of alkali-activated fly ash-slag pastes cured at ambient temperature within 24h. <i>Construction and Building Materials</i> , 2018, 171, 377-387.	7.2	89
9	Transport properties in unsaturated cement-based materials – A review. <i>Construction and Building Materials</i> , 2014, 72, 367-379.	7.2	83
10	Experimental study on engineering properties of concrete reinforced with hybrid recycled tyre steel and polypropylene fibres. <i>Journal of Cleaner Production</i> , 2020, 259, 120914.	9.3	81
11	The evolution of interfacial transition zone in alkali-activated fly ash-slag concrete. <i>Cement and Concrete Research</i> , 2020, 129, 105963.	11.0	76
12	Modeling of ionic diffusivity in non-saturated cement-based materials using lattice Boltzmann method. <i>Cement and Concrete Research</i> , 2012, 42, 1524-1533.	11.0	71
13	Mechanical behaviour of grouted sleeve splice under uniaxial tensile loading. <i>Engineering Structures</i> , 2019, 186, 421-435.	5.3	69
14	Pore-scale modelling of relative permeability of cementitious materials using X-ray computed microtomography images. <i>Cement and Concrete Research</i> , 2017, 95, 18-29.	11.0	68
15	Micromechanical modelling of deformation and fracture of hydrating cement paste using X-ray computed tomography characterisation. <i>Composites Part B: Engineering</i> , 2016, 88, 64-72.	12.0	63
16	Engineering properties of crumb rubber alkali-activated mortar reinforced with recycled steel fibres. <i>Journal of Cleaner Production</i> , 2019, 238, 117950.	9.3	61
17	Effects of graphene sulfonate nanosheets on mechanical and thermal properties of sacrificial concrete during high temperature exposure. <i>Cement and Concrete Composites</i> , 2017, 82, 252-264.	10.7	60
18	Behaviour of inorganic polymer concrete columns reinforced with basalt FRP bars under eccentric compression: An experimental study. <i>Composites Part B: Engineering</i> , 2016, 104, 44-56.	12.0	59

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19	Effect of recycled tyre polymer fibre on engineering properties of sustainable strain hardening geopolymer composites. <i>Cement and Concrete Composites</i> , 2021, 122, 104167.	10.7	58
20	Microstructure-based modeling of permeability of cementitious materials using multiple-relaxation-time lattice Boltzmann method. <i>Computational Materials Science</i> , 2013, 68, 142-151.	3.0	56
21	Experimental study on dynamic compressive behaviour of recycled tyre polymer fibre reinforced concrete. <i>Cement and Concrete Composites</i> , 2019, 98, 95-112.	10.7	56
22	Experimental study on a precast beam-column joint with double grouted splice sleeves. <i>Engineering Structures</i> , 2019, 199, 109589.	5.3	52
23	Flexural fatigue behaviour of recycled tyre polymer fibre reinforced concrete. <i>Cement and Concrete Composites</i> , 2020, 105, 103441.	10.7	52
24	Meso-scale modelling of static and dynamic tensile fracture of concrete accounting for real-shape aggregates. <i>Cement and Concrete Composites</i> , 2021, 116, 103889.	10.7	51
25	Microstructure-informed modelling of damage evolution in cement paste. <i>Construction and Building Materials</i> , 2014, 66, 731-742.	7.2	48
26	Numerical simulation of the effect of cement particle shapes on capillary pore structures in hardened cement pastes. <i>Construction and Building Materials</i> , 2018, 173, 615-628.	7.2	48
27	3D printing geopolymers: A review. <i>Cement and Concrete Composites</i> , 2022, 128, 104455.	10.7	48
28	Experimental study on flexural behaviour of inorganic polymer concrete beams reinforced with basalt rebar. <i>Composites Part B: Engineering</i> , 2016, 93, 174-183.	12.0	47
29	Pore structure of geopolymer materials and its correlations to engineering properties: A review. <i>Construction and Building Materials</i> , 2022, 328, 127064.	7.2	45
30	Engineering properties and sustainability assessment of recycled fibre reinforced rubberised cementitious composite. <i>Journal of Cleaner Production</i> , 2021, 278, 123996.	9.3	44
31	Numerical modeling of drying shrinkage deformation of cement-based composites by coupling multiscale structure model with 3D lattice analyses. <i>Computers and Structures</i> , 2017, 178, 88-104.	4.4	43
32	Influence of moisture condition on chloride diffusion in partially saturated ordinary Portland cement mortar. <i>Materials and Structures/Materiaux Et Constructions</i> , 2018, 51, 1.	3.1	43
33	Dynamic compressive behaviour of recycled tyre steel fibre reinforced concrete. <i>Construction and Building Materials</i> , 2022, 316, 125896.	7.2	41
34	Microstructure-based modeling of water diffusivity in cement paste. <i>Construction and Building Materials</i> , 2011, 25, 2046-2052.	7.2	40
35	Engineering properties of strain hardening geopolymer composites with hybrid polyvinyl alcohol and recycled steel fibres. <i>Construction and Building Materials</i> , 2020, 261, 120585.	7.2	40
36	Multiscale lattice Boltzmann-finite element modelling of chloride diffusivity in cementitious materials. Part I: Algorithms and implementation. <i>Mechanics Research Communications</i> , 2014, 58, 53-63.	1.8	38

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37	Behaviour of recycled tyre polymer fibre reinforced concrete under dynamic splitting tension. <i>Cement and Concrete Composites</i> , 2020, 114, 103764.	10.7	38
38	Modelling of irregular-shaped cement particles and microstructural development of Portland cement. <i>Construction and Building Materials</i> , 2018, 168, 362-378.	7.2	37
39	Micromechanical analysis of interfacial transition zone in alkali-activated fly ash-slag concrete. <i>Cement and Concrete Composites</i> , 2021, 119, 103990.	10.7	36
40	Relationships between microstructure and transport properties in mortar containing recycled ceramic powder. <i>Journal of Cleaner Production</i> , 2020, 263, 121384.	9.3	34
41	Experimental and numerical investigation on in-plane impact behaviour of chiral auxetic structure. <i>Composite Structures</i> , 2021, 267, 113922.	5.8	34
42	Multiscale lattice Boltzmann-finite element modelling of chloride diffusivity in cementitious materials. Part II: Simulation results and validation. <i>Mechanics Research Communications</i> , 2014, 58, 64-72.	1.8	33
43	Mechanical and physicochemical properties of ferro-siliceous concrete subjected to elevated temperatures. <i>Construction and Building Materials</i> , 2016, 122, 743-752.	7.2	33
44	Mechanical and thermal properties of graphene sulfonate nanosheet reinforced sacrificial concrete at elevated temperatures. <i>Construction and Building Materials</i> , 2017, 153, 682-694.	7.2	33
45	Recycling utilization of phosphogypsum in eco excess-sulphate cement: Synergistic effects of metakaolin and slag additives on hydration, strength and microstructure. <i>Journal of Cleaner Production</i> , 2022, 358, 131901.	9.3	33
46	Un método numérico-estadístico para determinar el volumen elemental representativo (VER) de la pasta de cemento en la medición de la difusividad. <i>Materiales De Construccion</i> , 2010, 60, 7-20.	0.7	32
47	Modelling of 3D microstructure and effective diffusivity of fly ash blended cement paste. <i>Cement and Concrete Composites</i> , 2020, 110, 103586.	10.7	31
48	Experimental study on static and dynamic properties of fly ash-slag based strain hardening geopolymer composites. <i>Cement and Concrete Composites</i> , 2022, 129, 104481.	10.7	31
49	Behaviour of recycled tyre polymer fibre reinforced concrete at elevated temperatures. <i>Cement and Concrete Composites</i> , 2021, 124, 104257.	10.7	28
50	A novel framework for modelling the 3D mesostructure of steel fibre reinforced concrete. <i>Computers and Structures</i> , 2020, 234, 106251.	4.4	27
51	Pore-scale modelling of 3D moisture distribution and critical saturation in cementitious materials. <i>Construction and Building Materials</i> , 2014, 64, 222-230.	7.2	26
52	Thermal behavior of siliceous and ferro-siliceous sacrificial concrete subjected to elevated temperatures. <i>Materials and Design</i> , 2016, 95, 470-480.	7.0	25
53	An integrated framework for modelling virtual 3D irregular particulate mesostructure. <i>Powder Technology</i> , 2019, 355, 808-819.	4.2	24
54	In-situ X-ray tomographic imaging of microstructure evolution of fly ash and slag particles in alkali-activated fly ash-slag paste. <i>Composites Part B: Engineering</i> , 2021, 224, 109221.	12.0	23

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55	Shear behaviour of inorganic polymer concrete beams reinforced with basalt FRP bars and stirrups. <i>Composite Structures</i> , 2021, 255, 112901.	5.8	22
56	Effect of curing temperature on hydration, microstructure and ionic diffusivity of fly ash blended cement paste: A modelling study. <i>Construction and Building Materials</i> , 2021, 297, 123834.	7.2	22
57	Pervious concrete with secondarily recycled low-quality brick-concrete demolition residue: Engineering performances, multi-scale/phase structure and sustainability. <i>Journal of Cleaner Production</i> , 2022, 341, 130929.	9.3	22
58	3D meso-scale modelling of tensile and compressive fracture behaviour of steel fibre reinforced concrete. <i>Composite Structures</i> , 2022, 291, 115690.	5.8	22
59	Experimental and analytical study of bond between basalt FRP bars and geopolymer concrete. <i>Construction and Building Materials</i> , 2022, 315, 125461.	7.2	21
60	Mitigating the damage of ultra-high performance concrete at elevated temperatures using synergistic flame-retardant polymer fibres. <i>Cement and Concrete Research</i> , 2022, 158, 106835.	11.0	19
61	Relationship between microstructure and strain-hardening behaviour of 3D printed engineered cementitious composites. <i>Cement and Concrete Composites</i> , 2022, 133, 104677.	10.7	19
62	Rheological behaviour of low-heat Portland cement paste with MgO-based expansive agent and shrinkage reducing admixture. <i>Construction and Building Materials</i> , 2021, 304, 124583.	7.2	18
63	Effect of recycled polymer fibre on dynamic compressive behaviour of engineered geopolymer composites. <i>Ceramics International</i> , 2022, 48, 23713-23730.	4.8	18
64	Effect of sand content on engineering properties of fly ash-slag based strain hardening geopolymer composites. <i>Journal of Building Engineering</i> , 2021, 34, 101951.	3.4	17
65	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.	9.3	17
66	Behaviour of strain hardening geopolymer composites at elevated temperatures. <i>Cement and Concrete Composites</i> , 2022, 132, 104634.	10.7	17
67	Fractal analysis of 2D and 3D mesocracks in recycled aggregate concrete using X-ray computed tomography images. <i>Journal of Cleaner Production</i> , 2021, 304, 127083.	9.3	16
68	Multiscale modelling of ionic diffusivity in unsaturated concrete accounting for its hierarchical microstructure. <i>Cement and Concrete Research</i> , 2022, 156, 106766.	11.0	16
69	Efficiency of electrochemical extraction of chlorides in fly ash concrete using carbon fibre mesh anode. <i>Construction and Building Materials</i> , 2020, 249, 118717.	7.2	13
70	Water absorption behaviour of concrete: Novel experimental findings and model characterization. <i>Journal of Building Engineering</i> , 2022, 53, 104602.	3.4	13
71	Experimental study on flexural behaviour of prefabricated concrete beams with double-grouted sleeves. <i>Engineering Structures</i> , 2021, 248, 113237.	5.3	10
72	Flexural fatigue behavior of layered hybrid fiber reinforced concrete. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2007, 22, 560-563.	1.0	8

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73	Modelling of time dependency of chloride diffusion coefficient in cement paste. Journal Wuhan University of Technology, Materials Science Edition, 2010, 25, 687-691.	1.0	8
74	Fracture Energy of Graphite from Microstructure-informed Lattice Model. , 2014, 3, 1848-1853.		7
75	Meso-scale site-bond model for elasticity: theory and calibration. Materials Research Innovations, 2014, 18, S2-982-S2-986.	2.3	7
76	Three-dimensional virtual microstructure generation of porous polycrystalline ceramics. Ceramics International, 2019, 45, 21647-21656.	4.8	7
77	A new understanding of the effect of filler minerals on the precipitation of synthetic Ca ²⁺ . Journal of Materials Science, 2020, 55, 16455-16469.	3.7	6
78	Three-Dimensional Modeling of Transport Properties in Hardened Cement Paste Using Metal Centrifugation-Based Pore Network. Journal of Materials in Civil Engineering, 2021, 33, .	2.9	6
79	Lattice Boltzmann modelling of ionic diffusivity in non-saturated limestone blended cement paste. Construction and Building Materials, 2022, 316, 126060.	7.2	6
80	Two-scale modelling of fracture of magnesium phosphate cement under bending using X-ray computed tomography characterisation. Cement and Concrete Composites, 2021, 121, 104099.	10.7	5
81	Discrete Lattice Model of Quasi-Brittle Fracture in Porous Graphite. Materials Performance and Characterization, 2014, 3, 414-428.	0.3	4
82	A Lattice-spring Model for Damage Evolution in Cement Paste. , 2014, 3, 1854-1859.		4
83	Site-bond Modelling of Structure-failure Relations in Quasi-brittle Media. , 2014, 3, 1872-1877.		2
84	Shrinkage Performance and Cracking Resistance Mechanism of Rubberized Lightweight Aggregate Concrete with Polymer. Key Engineering Materials, 2008, 385-387, 817-820.	0.4	1
85	Experimental Study on the Flexural Fatigue Damage Evolution of Layered Fiber Reinforced Concrete. Key Engineering Materials, 0, 385-387, 673-676.	0.4	1
86	Mechanical Properties and Damage Evolution of Siliceous Concrete Subjected to Elevated Temperatures. Key Engineering Materials, 2016, 711, 488-495.	0.4	1
87	Pore Properties of Eco-Material for Erosion Control of Slope and its Fractal Features. Key Engineering Materials, 2008, 385-387, 461-464.	0.4	0
88	Nonlinear Stability Analysis on the Concrete Casting Step of Long-Span Concrete-Filled Steel Tube Arch Bridge. Materials Science Forum, 0, 614, 275-282.	0.3	0