Xiao-Jian Gao

List of Publications by Year
in descending order

96 papers	4,343 citations	70961 41 h-index	114278 63 g-index
96 all docs	96 docs citations	96 times ranked	1958 citing authors

#	Article	IF	Citations
1	Influence of rice husk ash on strength and permeability of ultra-high performance concrete. Construction and Building Materials, 2017, 149, 621-628.	3.2	165
2	Effect of carbonation curing regime on strength and microstructure of Portland cement paste. Journal of CO2 Utilization, 2019, 34, 74-86.	3.3	161
3	Recycling of raw rice husk to manufacture magnesium oxysulfate cement based lightweight building materials. Journal of Cleaner Production, 2018, 191, 220-232.	4.6	146
4	Improvement effect of steel fiber orientation control on mechanical performance of UHPC. Construction and Building Materials, 2018, 188, 709-721.	3.2	142
5	Mechanical performances and microstructures of metakaolin contained UHPC matrix under steam curing conditions. Construction and Building Materials, 2021, 268, 121112.	3.2	135
6	Properties of coal gangue-Portland cement mixture with carbonation. Fuel, 2019, 245, 1-12.	3.4	130
7	Thermal and mechanical properties of ultra-high performance concrete incorporated with microencapsulated phase change material. Construction and Building Materials, 2021, 273, 121714.	3.2	117
8	Influence of mineral admixtures on carbonation curing of cement paste. Construction and Building Materials, 2019, 212, 653-662.	3.2	107
9	Incorporation of self-ignited coal gangue in steam cured precast concrete. Journal of Cleaner Production, 2021, 292, 126004.	4.6	96
10	Influence of rheological properties of cement mortar on steel fiber distribution in UHPC. Construction and Building Materials, 2017, 144, 65-73.	3.2	91
11	Influence of silica fume, metakaolin & SBR latex on strength and durability performance of pervious concrete. Construction and Building Materials, 2021, 275, 122124.	3.2	91
12	Effects of autoclave curing and fly ash on mechanical properties of ultra-high performance concrete. Construction and Building Materials, 2018, 158, 864-872.	3.2	86
13	Upcycling carbon dioxide to improve mechanical strength of Portland cement. Journal of Cleaner Production, 2018, 196, 726-738.	4.6	84
14	Effect of pulverized fuel ash, ground granulated blast-furnace slag and CO2 curing on performance of magnesium oxysulfate cement. Construction and Building Materials, 2020, 230, 116990.	3.2	83
15	Spatial distribution of steel fibers and air bubbles in UHPC cylinder determined by X-ray CT method. Construction and Building Materials, 2018, 160, 39-47.	3.2	80
16	Fiber alignment and its effect on mechanical properties of UHPC: An overview. Construction and Building Materials, 2021, 296, 123741.	3.2	79
17	Influence of sisal fibers on the mechanical performance of ultra-high performance concretes. Construction and Building Materials, 2021, 286, 122958.	3.2	78
18	Recycling of waste autoclaved aerated concrete powder in Portland cement by accelerated carbonation. Waste Management, 2019, 89, 254-264.	3.7	77

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19	Hydration and mechanical properties of UHPC matrix containing limestone and different levels of metakaolin. Construction and Building Materials, 2020, 256, 119454.	3.2	77
20	Experimental exploration of incorporating form-stable hydrate salt phase change materials into cement mortar for thermal energy storage. Applied Thermal Engineering, 2018, 140, 112-119.	3.0	73
21	Mathematical modeling of accelerated carbonation curing of Portland cement paste at early age. Cement and Concrete Research, 2019, 120, 187-197.	4.6	73
22	Thaumasite formation in a tunnel of Bapanxia Dam in Western China. Cement and Concrete Research, 2006, 36, 716-722.	4.6	71
23	Carbonation curing of cement mortars incorporating carbonated fly ash for performance improvement and CO2 sequestration. Journal of CO2 Utilization, 2021, 51, 101633.	3.3	69
24	Preparation and properties of fatty acids based thermal energy storage aggregate concrete. Construction and Building Materials, 2018, 165, 1-10.	3.2	68
25	The influence of rheological parameters of cement paste on the dispersion of carbon nanofibers and self-sensing performance. Construction and Building Materials, 2017, 134, 673-683.	3.2	67
26	Effect of carbonation curing on sulfate resistance of cement-coal gangue paste. Journal of Cleaner Production, 2021, 278, 123897.	4.6	66
27	Use of Carbonation Curing to Improve Mechanical Strength and Durability of Pervious Concrete. ACS Sustainable Chemistry and Engineering, 2020, 8, 3872-3884.	3.2	64
28	Multi-functional properties of carbon nanofiber reinforced reactive powder concrete. Construction and Building Materials, 2018, 187, 699-707.	3.2	63
29	Potential application of Portland cement-calcium sulfoaluminate cement blends to avoid early age frost damage. Construction and Building Materials, 2018, 190, 363-372.	3.2	57
30	Modification of Magnesium Oxysulfate Cement by Incorporating Weak Acids. Journal of Materials in Civil Engineering, 2018, 30, .	1.3	57
31	Utilization of beet molasses as a grinding aid in blended cements. Construction and Building Materials, 2011, 25, 3782-3789.	3.2	56
32	Relationship between Flowability, Entrapped Air Content and Strength of UHPC Mixtures Containing Different Dosage of Steel Fiber. Applied Sciences (Switzerland), 2016, 6, 216.	1.3	54
33	Effects of salt freeze-thaw cycles and cyclic loading on the piezoresistive properties of carbon nanofibers mortar. Construction and Building Materials, 2018, 177, 192-201.	3.2	53
34	Contribution of fiber orientation to enhancing dynamic properties of UHPC under impact loading. Cement and Concrete Composites, 2021, 121, 104108.	4.6	53
35	Effect of carbon nanotube and graphite nanoplatelet on composition, structure, and nano-mechanical properties of C-S-H in UHPC. Cement and Concrete Research, 2022, 154, 106713.	4.6	52
36	Incorporation of phase change material and carbon nanofibers into lightweight aggregate concrete for thermal energy regulation in buildings. Energy, 2020, 197, 117262.	4.5	51

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37	Improvement effect of fiber alignment on resistance to elevated temperature of ultra-high performance concrete. Composites Part B: Engineering, 2019, 177, 107454.	5.9	50
38	Electrical and piezoresistive properties of carbon nanofiber cement mortar under different temperatures and water contents. Construction and Building Materials, 2020, 265, 120740.	3.2	50
39	Influence of vibration-induced segregation on mechanical property and chloride ion permeability of concrete with variable rheological performance. Construction and Building Materials, 2019, 194, 32-41.	3.2	49
40	Optimization of mixture proportions by statistical experimental design using response surface method - A review. Journal of Building Engineering, 2021, 36, 102101.	1.6	48
41	Utilization of natural sisal fibers to manufacture eco-friendly ultra-high performance concrete with low autogenous shrinkage. Journal of Cleaner Production, 2022, 332, 130105.	4.6	48
42	Mechanical strength and water resistance of magnesium oxysulfate cement based lightweight materials. Cement and Concrete Composites, 2020, 109, 103554.	4.6	44
43	Contribution of fiber alignment on flexural properties of UHPC and prediction using the Composite Theory. Cement and Concrete Composites, 2021, 118, 103971.	4.6	44
44	Influence of formwork wall effect on fiber orientation of UHPC with two casting methods. Construction and Building Materials, 2019, 215, 310-320.	3.2	43
45	Relationship among particle characteristic, water film thickness and flowability of fresh paste containing different mineral admixtures. Construction and Building Materials, 2017, 153, 193-201.	3.2	42
46	How carbonation curing influences ca leaching of Portland cement paste: Mechanism and mathematical modeling. Journal of the American Ceramic Society, 2019, 102, 7755-7767.	1.9	35
47	Analysis of correlation between hydration heat release and compressive strength for blended cement pastes. Construction and Building Materials, 2020, 260, 120436.	3.2	35
48	The resistance to high temperature of magnesia phosphate cement paste containing wollastonite. Materials and Structures/Materiaux Et Constructions, 2016, 49, 3423-3434.	1.3	34
49	Improvement of viscosity-modifying agents on air-void system of vibrated concrete. Construction and Building Materials, 2020, 239, 117843.	3.2	34
50	Influence of fiber alignment and length on flexural properties of UHPC. Construction and Building Materials, 2021, 290, 122863.	3.2	34
51	Influences of coal fly ash containing ammonium salts on properties of cement paste. Journal of Environmental Management, 2019, 249, 109374.	3.8	33
52	Experimental study on multi-component corrosion inhibitor for steel bar in chloride environment. Construction and Building Materials, 2021, 313, 125533.	3.2	33
53	Correlation analysis and statistical assessment of early hydration characteristics and compressive strength for multi-composite cement paste. Construction and Building Materials, 2021, 310, 125260.	3.2	31
54	Utilization of hybrid sisal and steel fibers to improve elevated temperature resistance of ultra-high performance concrete. Cement and Concrete Composites, 2022, 130, 104555.	4.6	31

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55	Use of calcium silicate-coated paraffin/expanded perlite materials to improve the thermal performance of cement mortar. Construction and Building Materials, 2018, 189, 218-226.	3.2	30
56	Coupling effect of salt freeze-thaw cycles and cyclic loading on performance degradation of carbon nanofiber mortar. Cold Regions Science and Technology, 2018, 154, 95-102.	1.6	30
57	Development of calcium silicate-coated expanded clay based form-stable phase change materials for enhancing thermal and mechanical properties of cement-based composite. Solar Energy, 2018, 174, 24-34.	2.9	29
58	New sights in early carbonation of calcium silicates: Performance, mechanism and nanostructure. Construction and Building Materials, 2022, 314, 125622.	3.2	29
59	Influence of clays on the shrinkage and cracking tendency of SCC. Cement and Concrete Composites, 2012, 34, 478-485.	4.6	28
60	Influence of splitting load on transport properties of ultra-high performance concrete. Construction and Building Materials, 2018, 171, 708-718.	3.2	28
61	Multi-objective optimization of gap-graded cement paste blended with supplementary cementitious materials using response surface methodology. Construction and Building Materials, 2020, 248, 118552.	3.2	28
62	Numerical simulation and visualization of motion and orientation of steel fibers in UHPC under controlling flow condition. Construction and Building Materials, 2019, 199, 624-636.	3.2	27
63	Sulfate Attack of Cement-Based Material with Limestone Filler Exposed to Different Environments. Journal of Materials Engineering and Performance, 2008, 17, 543-549.	1.2	19
64	Effects of Rheological Performance, Antifoaming Admixture, and Mixing Procedure on Air Bubbles and Strength of UHPC. Journal of Materials in Civil Engineering, 2019, 31, .	1.3	19
65	Preparation of durable magnesium oxysulfate cement with the incorporation of mineral admixtures and sequestration of carbon dioxide. Science of the Total Environment, 2022, 809, 152127.	3.9	19
66	Effects of water/binder ratio on the properties of engineered cementitious composites. Journal Wuhan University of Technology, Materials Science Edition, 2010, 25, 298-302.	0.4	18
67	Impacts of Global Warming and Sea Level Rise on Service Life of Chloride-Exposed Concrete Structures. Sustainability, 2017, 9, 460.	1.6	17
68	Effect of carbonation curing on durability of cement mortar incorporating carbonated fly ash subjected to Freeze-Thaw and sulfate attack. Construction and Building Materials, 2022, 341, 127920.	3.2	17
69	Effects of combined accelerating admixtures on mechanical strength and microstructure of cement mortar. Construction and Building Materials, 2021, 304, 124642.	3.2	16
70	Simplified analytical model to assess key factors influenced by fiber alignment and their effect on tensile performance of UHPC. Cement and Concrete Composites, 2022, 127, 104395.	4.6	16
71	Influence of Poker Vibration on Aggregate Settlement in Fresh Concrete with Variable Rheological Properties. Journal of Materials in Civil Engineering, 2019, 31, .	1.3	15
72	Shrinkage reducing measures for engineering cementitious composites. Journal Wuhan University of Technology, Materials Science Edition, 2008, 23, 907-911.	0.4	13

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73	SPH simulation and experimental investigation of fiber orientation in UHPC beams with different placements. Construction and Building Materials, 2020, 233, 117372.	3.2	13
74	Hydration process of rice husk ash cement paste and its corrosion resistance of embedded steel bar. Journal of Central South University, 2020, 27, 3464-3476.	1.2	13
75	Influence of time-dependent rheological properties on distinct-layer casting of self-compacting concrete. Construction and Building Materials, 2019, 199, 214-224.	3.2	12
76	Relationship between electrical resistance and rheological parameters of fresh cement slurry. Construction and Building Materials, 2020, 256, 119479.	3.2	12
77	Multi-scale particles optimization for some rheological properties of Eco-SCC: Modelling and experimental study. Construction and Building Materials, 2021, 308, 125151.	3.2	12
78	Influences of reinforcement on differential drying shrinkage of concrete. Journal Wuhan University of Technology, Materials Science Edition, 2012, 27, 576-580.	0.4	10
79	Early hydration properties and reaction kinetics of multi-composite cement pastes with supplementary cementitious materials (SCMs). Thermochimica Acta, 2022, 709, 179157.	1.2	10
80	Fabrication and Performance of All-Solid-State Chloride Sensors in Synthetic Concrete Pore Solutions. Sensors, 2010, 10, 10226-10239.	2.1	8
81	The Feasibility of Modified Magnesia-Phosphate Cement as a Heat Resistant Adhesive for Strengthening Concrete with Carbon Sheets. Applied Sciences (Switzerland), 2016, 6, 178.	1.3	8
82	Effects of isothermal microwave heating on the strength and microstructure of ultra-high performance concrete embedded with steel fibers. Journal of Materials Research and Technology, 2021, 14, 1893-1902.	2.6	8
83	Rehydration of ultra-high performance concrete matrix incorporating metakaolin under long-term water curing. Construction and Building Materials, 2021, 306, 124875.	3.2	7
84	Cracking tendency of restrained concrete at early ages. Journal Wuhan University of Technology, Materials Science Edition, 2008, 23, 263-267.	0.4	6
85	Corrosion resistance of wollastonite modified magnesium phosphate cement paste exposed to freeze-thaw cycles and acid-base corrosion. Case Studies in Construction Materials, 2020, 13, e00421.	0.8	6
86	Influence of salt freeze-thaw cycles on the damage and the following electrical and self-sensing performance of carbon nanofibers concrete. Materials Research Express, 2019, 6, 025705.	0.8	5
87	Theoretical and experimental study on the electrical resistivity method for evaluating fresh concrete segregation. Journal of Building Engineering, 2022, 48, 103943.	1.6	5
88	Influence of Rheological Behavior of Mortar Matrix on Fresh Concrete Segregation and Bleeding. Iranian Journal of Science and Technology - Transactions of Civil Engineering, 2021, 45, 1281-1295.	1.0	4
89	Use of saturated lightweight sand to improve the mechanical and microstructural properties of UHPC with fiber alignment. Cement and Concrete Composites, 2022, 129, 104513.	4.6	4
90	Performance degradation of CO2 cured cement-coal gangue pastes with low-temperature sulfate solution immersion. Case Studies in Construction Materials, 2022, 17, e01199.	0.8	4

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91	The durability of epoxy resin coating. Journal Wuhan University of Technology, Materials Science Edition, 2008, 23, 242-244.	0.4	3
92	For the improvement of mechanical and microstructural properties of UHPC with fiber alignment using carbon nanotube and graphite nanoplatelet. Cement and Concrete Composites, 2022, 129, 104462.	4.6	2
93	Influence of curing temperature on flexural performance of engineered cementitious composites. , 2010, , .		1
94	Hydration and Durability of Concrete Containing Supplementary Cementitious Materials. Advances in Materials Science and Engineering, 2017, 2017, 1-1.	1.0	1
95	Fabrication and performance of all-solid-state chloride sensors in synthetic concrete pore solutions. Sensors, 2010, 10, 10226-39.	2.1	1
96	Influence of maintenance methods on temperature and thermal stress of utility tunnel at early-age. Advances in Mechanical Engineering, 2022, 14, 168781322210834.	0.8	0