Xiao-Yong Wang

List of Publications by Year
in descending order

105 papers	1,824 citations	318942 23 h-index	371746 37 g-index
111 all docs	111 docs citations	111 times ranked	1315 citing authors

#	Article	IF	Citations
1	Embodied CO₂-based optimal design of concrete with fly ash considering stress and carbonation. Journal of Sustainable Cement-Based Materials, 2023, 12, 71-82.	1.7	2
2	Potential application of MoS2 nanoflowers as photocatalysts in cement: Strength, hydration, and dye degradation properties. Journal of Cleaner Production, 2022, 330, 129947.	4.6	12
3	Performance of sustainable concrete made from waste oyster shell powder and blast furnace slag. Journal of Building Engineering, 2022, 47, 103918.	1.6	16
4	Compressive Strength Estimation and CO2 Reduction Design of Fly Ash Composite Concrete. Buildings, 2022, 12, 139.	1.4	11
5	Energy Optimization Design of Limestone Hybrid Concrete in Consideration of Stress Levels and Carbonation Resistance. Buildings, 2022, 12, 342.	1.4	4
6	OPTIMAL DESIGN OF LOW-CARBON CONCRETE CONTAINING FLY ASH AND LIMESTONE POWDER. Ceramics - Silikaty, 2022, , 0-0.	0.2	1
7	Multi-technique investigation regarding the impact of cellulose nanofibers on ultra-high-performance concrete at the macroscopic and microscopic levels. Construction and Building Materials, 2022, 327, 126936.	3.2	9
8	Optimal design of sustainable slag concrete considering sustained stress and carbonation resistance. Case Studies in Construction Materials, 2022, 16, e00958.	0.8	0
9	Effect of silicate-modified calcium oxide-based expansive agent on engineering properties and self-healing of ultra-high-strength concrete. Journal of Building Engineering, 2022, 50, 104230.	1.6	9
10	Hydrationâ€“Strengthâ€“Workabilityâ€“Durability of Binary, Ternary, and Quaternary Composite Pastes. Materials, 2022, 15, 204.	1.3	9
11	Strengthening the performance of limestone-calcined clay cement (LC3) using nano silica. Construction and Building Materials, 2022, 340, 127723.	3.2	20
12	Effects of Na2CO3 on engineering properties of cementâ€“limestone powderâ€“slag ternary blends. Journal of Building Engineering, 2022, 57, 104937.	1.6	7
13	Influence of K+ and CO32âˆ’ in activator on high-temperature performance of alkali-activated slag-ceramic powder binary blends. Case Studies in Construction Materials, 2022, 17, e01306.	0.8	2
14	Experimental studies on hydrationâ€“strengthâ€“durability of limestone-cement-calcined Hwangtoh clay ternary composite. Construction and Building Materials, 2021, 269, 121290.	3.2	46
15	Macroâ€“mesoâ€“micro experimental studies of calcined clay limestone cement (LC3) paste subjected to elevated temperature. Cement and Concrete Composites, 2021, 116, 103871.	4.6	55
16	Analysis of hydration kinetics and strength progress in cementâ€“slag binary composites. Journal of Building Engineering, 2021, 35, 101810.	1.6	7
17	The Effect of Different Types of Internal Curing Liquid on the Properties of Alkali-Activated Slag (AAS) Mortar. Sustainability, 2021, 13, 2407.	1.6	3
18	The Hydration, Mechanical, Autogenous Shrinkage, Durability, and Sustainability Properties of Cementâ€“Limestoneâ€“Slag Ternary Composites. Sustainability, 2021, 13, 1881.	1.6	16

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19	Hydration Model and Evaluation of the Properties of Calcined Hwangtoh Binary Blends. International Journal of Concrete Structures and Materials, 2021, 15, .	1.4	23
20	Internal Curing Effect of Pre-Soaked Zeolite Sand on the Performance of Alkali-Activated Slag. Materials, 2021, 14, 718.	1.3	2
21	Total Repair Cost Simulation Considering Multiple Probabilistic Measures and Service Life. Sustainability, 2021, 13, 2350.	1.6	1
22	Effect of Cement Types and Superabsorbent Polymers on the Properties of Sustainable Ultra-High-Performance Paste. Materials, 2021, 14, 1497.	1.3	10
23	CO2 uptake of slag-blended concrete. Environmental Science and Pollution Research, 2021, 28, 48890-48904.	2.7	1
24	Penetration properties and injecting conditions of corrosion inhibitor for concrete. Construction and Building Materials, 2021, 284, 122761.	3.2	5
25	CO2 uptake model of limestone-powder-blended concrete due to carbonation. Journal of Building Engineering, 2021, 38, 102176.	1.6	10
26	Effect of Waste Ceramic Powder on Properties of Alkali-Activated Blast Furnace Slag Paste and Mortar. Polymers, 2021, 13, 2817.	2.0	14
27	Property Analysis of Slag Composite Concrete Using a Kineticâ€“Thermodynamic Hydration Model. Applied Sciences (Switzerland), 2021, 11, 7191.	1.3	5
28	Behavior of Biochar-Modified Cementitious Composites Exposed to High Temperatures. Materials, 2021, 14, 5414.	1.3	7
29	Effects of cement types and addition of quartz and limestone on the normal and carbonation curing of cement paste. Construction and Building Materials, 2021, 305, 124799.	3.2	41
30	Hydration-strength-durability-workability of biochar-cement binary blends. Journal of Building Engineering, 2021, 42, 103064.	1.6	12
31	Evaluation of the properties of cementâ€“calcined Hwangtoh clayâ€“limestone ternary blends using a kinetic hydration model. Construction and Building Materials, 2021, 303, 124596.	3.2	4
32	Performance and sustainability of quaternary composite paste comprising limestone, calcined Hwangtoh clay, and granulated blast furnace slag. Journal of Building Engineering, 2021, 43, 102655.	1.6	15
33	Experimental study on optimum proportioning of Portland cements, limestone, metakaolin, and fly ash for obtaining quaternary cementitious composites. Case Studies in Construction Materials, 2021, 15, e00691.	0.8	2
34	EVALUATION OF THE PHASE ASSEMBLAGE AND STRENGTH PROGRESS OF HYBRID BLENDS OF CEMENT AND FLY ASH USING KINETIC AND THERMODYNAMIC HYDRATION MODEL. Ceramics - Silikaty, 2021, , 58-68.	0.2	2
35	Strength and durability improvements of biochar-blended mortar or paste using accelerated carbonation curing. Journal of CO2 Utilization, 2021, 54, 101766.	3.3	26
36	Effect of Waste Ceramic Powder on the Properties of Alkaliâ€“Activated Slag and Fly Ash Pastes Exposed to High Temperature. Polymers, 2021, 13, 3797.	2.0	12

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37	Model-Based Methods to Produce Greener Metakaolin Composite Concrete. Applied Sciences (Switzerland), 2021, 11, 10704.	1.3	5
38	Optimal mix design of low-CO2 blended concrete with limestone powder. Construction and Building Materials, 2020, 263, 121006.	3.2	15
39	Autogenous Shrinkage, Strength, and Hydration Heat of Ultra-High-Strength Paste Incorporating Nano-Zirconium Dioxide. Sustainability, 2020, 12, 9372.	1.6	3
40	Effect of Nano-Silica on the Autogenous Shrinkage, Strength, and Hydration Heat of Ultra-High Strength Concrete. Applied Sciences (Switzerland), 2020, 10, 5202.	1.3	17
41	Prediction of flexural strength of natural pozzolana and limestone blended concrete using machine learning based models. IOP Conference Series: Materials Science and Engineering, 2020, 784, 012005.	0.3	4
42	Prediction of the Slump of Fly Ash Blended Concrete Based on Various Numerical Models. IOP Conference Series: Materials Science and Engineering, 2020, 774, 012071.	0.3	0
43	Increasing the early strength of high-volume Hwangtohâ€“cement systems using bassanite. Journal of Building Engineering, 2020, 30, 101317.	1.6	14
44	Design of low-cost and low-CO2 air-entrained fly ash-blended concrete considering carbonation and frost durability. Journal of Cleaner Production, 2020, 272, 122675.	4.6	16
45	Impacts of climate change on optimal mixture design of blended concrete considering carbonation and chloride ingress. Frontiers of Structural and Civil Engineering, 2020, 14, 473-486.	1.2	3
46	Effect of Pre-Wetted Zeolite Sands on the Autogenous Shrinkage and Strength of Ultra-High-Performance Concrete. Materials, 2020, 13, 2356.	1.3	22
47	Optimization of the Mixture Design of Low-CO₂ High-Strength Concrete Containing Silica Fume. Advances in Civil Engineering, 2019, 2019, 1-9.	0.4	8
48	Analysis of Hydration and Optimal Strength Combinations of Cement-Limestone-Metakaolin Ternary Composite. Advances in Materials Science and Engineering, 2019, 2019, 1-13.	1.0	6
49	Impact of Climate Change on the Optimization of Mixture Design of Low-CO2 Concrete Containing Fly Ash and Slag. Sustainability, 2019, 11, 3394.	1.6	6
50	Simulation for optimal mixture design of low-CO2 high-volume fly ash concrete considering climate change and CO2 uptake. Cement and Concrete Composites, 2019, 104, 103408.	4.6	25
51	Optimal Design of the Cement, Fly Ash, and Slag Mixture in Ternary Blended Concrete Based on Gene Expression Programming and the Genetic Algorithm. Materials, 2019, 12, 2448.	1.3	10
52	Effect of global warming on the proportional design of low CO2 slag-blended concrete. Construction and Building Materials, 2019, 225, 1140-1151.	3.2	19
53	Optimal Mixture Design of Low-CO2 High-Volume Slag Concrete Considering Climate Change and CO2 Uptake. International Journal of Concrete Structures and Materials, 2019, 13, .	1.4	22
54	Hydration and Microstructure of Cement Pastes with Calcined Hwangtoh Clay. Materials, 2019, 12, 458.	1.3	47

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55	Effect of Carbon Pricing on Optimal Mix Design of Sustainable High-Strength Concrete. Sustainability, 2019, 11, 5827.	1.6	8
56	Impact of Climate Change on Proportional Design of Fly Ash-Blended Low-CO2Concrete. ACI Materials Journal, 2019, 116, .	0.3	4
57	Analysis of hydration and strength optimization of cement-fly ash-limestone ternary blended concrete. Construction and Building Materials, 2018, 166, 130-140.	3.2	51
58	Modeling of Hydration, Strength Development, and Optimum Combinations of Cement-Slag-Limestone Ternary Concrete. International Journal of Concrete Structures and Materials, 2018, 12, .	1.4	46
59	Effects of Quartz Powder on the Microstructure and Key Properties of Cement Paste. Sustainability, 2018, 10, 3369.	1.6	33
60	Effects of Crack and Climate Change on Service Life of Concrete Subjected to Carbonation. Applied Sciences (Switzerland), 2018, 8, 572.	1.3	3
61	Analysis of the compressive strength development of concrete considering the interactions between hydration and drying. Cement and Concrete Research, 2017, 102, 1-15.	4.6	28
62	Hydration and Durability of Concrete Containing Supplementary Cementitious Materials. Advances in Materials Science and Engineering, 2017, 2017, 1-1.	1.0	1
63	Impacts of Global Warming and Sea Level Rise on Service Life of Chloride-Exposed Concrete Structures. Sustainability, 2017, 9, 460.	1.6	17
64	Modeling of Hydration, Compressive Strength, and Carbonation of Portland-Limestone Cement (PLC) Concrete. Materials, 2017, 10, 115.	1.3	34
65	Analysis of Hydration-Mechanical-Durability Properties of Metakaolin Blended Concrete. Applied Sciences (Switzerland), 2017, 7, 1087.	1.3	17
66	Kinetic Hydration Heat Modeling for High-Performance Concrete Containing Limestone Powder. Advances in Materials Science and Engineering, 2017, 2017, 1-11.	1.0	3
67	Effect of Climate Change on Service Life of High Volume Fly Ash Concrete Subjected to Carbonationâ€"A Korean Case Study. Sustainability, 2017, 9, 157.	1.6	6
68	Prediction of Time-Dependent Chloride Diffusion Coefficients for Slag-Blended Concrete. Advances in Materials Science and Engineering, 2017, 2017, 1-10.	1.0	3
69	Theoretical and Numerical Analysis of 1â€‰:â€‰1 Main Parametric Resonance of Stayed Cable Considering Cable-Beam Coupling. Advances in Materials Science and Engineering, 2017, 2017, 1-10.	1.0	5
70	Experimental Research on 2â€‰:â€‰1 Parametric Vibration of Stay Cable Model under Support Excitation. Advances in Materials Science and Engineering, 2016, 2016, 1-9.	1.0	1
71	Simulation of Chloride Diffusion in Cracked Concrete with Different Crack Patterns. Advances in Materials Science and Engineering, 2016, 2016, 1-11.	1.0	9
72	A New Microstructure Development Model for the Evaluation of Concrete Setting Time. Advances in Materials Science and Engineering, 2016, 2016, 1-10.	1.0	3

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73	Evaluation of the Carbon Dioxide Uptake of Slag-Blended Concrete Structures, Considering the Effect of Carbonation. Sustainability, 2016, 8, 312.	1.6	17
74	Evaluation of compressive strength development and carbonation depth of high volume slag-blended concrete. Construction and Building Materials, 2016, 124, 45-54.	3.2	34
75	Analysis of the effects of rice husk ash on the hydration of cementitious materials. Construction and Building Materials, 2016, 105, 196-205.	3.2	48
76	Analysis of Compressive Strength Development and Carbonation Depth of High-Volume Fly Ash Cement Pastes. ACI Materials Journal, 2016, 113, .	0.3	5
77	Evaluation of the Chemical and Mechanical Properties of Hardening High-Calcium Fly Ash Blended Concrete. Materials, 2015, 8, 5933-5952.	1.3	34
78	Prediction of Chloride Penetration into Hardening Concrete. Advances in Materials Science and Engineering, 2015, 2015, 1-8.	1.0	11
79	Evaluation of CO2 emissionâ€“absorption of fly-ash-blended concrete structures using cement-hydration-based carbonation model. Materials and Structures/Materiaux Et Constructions, 2015, 48, 3949-3963.	1.3	9
80	Analysis of the Optimum Usage of Slag for the Compressive Strength of Concrete. Materials, 2015, 8, 1213-1229.	1.3	35
81	Analysis of compressive strength development of concrete containing high volume fly ash. Construction and Building Materials, 2015, 98, 810-819.	3.2	90
82	Modeling of hydration reactions to predict the properties of slag blended concrete. Canadian Journal of Civil Engineering, 2014, 41, 421-431.	0.7	2
83	Experimental Investigation and Theoretical Modeling of Nanosilica Activity in Concrete. Journal of Nanomaterials, 2014, 2014, 1-10.	1.5	4
84	Effect of fly ash on properties evolution of cement based materials. Construction and Building Materials, 2014, 69, 32-40.	3.2	64
85	Properties prediction of ultra high performance concrete using blended cement hydration model. Construction and Building Materials, 2014, 64, 1-10.	3.2	41
86	Prediction of temperature distribution in hardening silica fume-blended concrete. Computers and Concrete, 2014, 13, 97-115.	0.7	1
87	Modeling of temperature history in the hardening of ultra-high-performance concrete. Journal of the Korea Institute of Building Construction, 2014, 14, 273-284.	0.1	1
88	Prediction of compressive strength of slag concrete using a blended cement hydration model. Computers and Concrete, 2014, 14, 247-262.	0.7	2
89	Evaluation of compressive strength of hardening silica fume blended concrete. Journal of Materials Science, 2013, 48, 5953-5961.	1.7	8
90	Properties prediction of fly ash blended concrete using hydration model. Science China Technological Sciences, 2013, 56, 2317-2325.	2.0	8

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91	Modeling of chloride diffusion in concrete containing low-calcium fly ash. Materials Chemistry and Physics, 2013, 138, 917-928.	2.0	10
92	Simulation of temperature rises in hardening Portland cement concrete and fly ash blended concrete. Magazine of Concrete Research, 2013, 65, 930-941.	0.9	11
93	Heat of hydration models of cementitious materials. Advances in Cement Research, 2012, 24, 77-90.	0.7	19
94	Modeling of hydration kinetics in cement based materials considering the effects of curing temperature and applied pressure. Construction and Building Materials, 2012, 28, 1-13.	3.2	39
95	Evaluation of the mechanical properties of concrete considering the effects of temperature and aging. Construction and Building Materials, 2012, 29, 581-590.	3.2	20
96	Modeling of chloride diffusion in a hydrating concrete incorporating silica fume. Computers and Concrete, 2012, 10, 523-539.	0.7	6
97	Prediction of temperature distribution in concrete incorporating fly ash or slag using a hydration model. Composites Part B: Engineering, 2011, 42, 27-40.	5.9	33
98	The Evaluation of Carbonation Depth of Concrete Incorporating Industrial By-Product Materials. International Journal of Sustainable Building Technology and Urban Development, 2011, 2, 253-258.	1.0	1
99	Evaluation of Properties of Concrete Incorporating Fly Ash or Slag Using a Hydration Model. Journal of Materials in Civil Engineering, 2011, 23, 1113-1123.	1.3	3
100	Simulation of a temperature rise in concrete incorporating fly ash or slag. Materials and Structures/Materiaux Et Constructions, 2010, 43, 737-754.	1.3	14
101	A multi-phase kinetic model to simulate hydration of slagâ€“cement blends. Cement and Concrete Composites, 2010, 32, 468-477.	4.6	55
102	Modeling the hydration of concrete incorporating fly ash or slag. Cement and Concrete Research, 2010, 40, 984-996.	4.6	174
103	Simulation of a temperature rise in concrete incorporating silica fume. Magazine of Concrete Research, 2010, 62, 637-646.	0.9	7
104	A model for predicting the carbonation depth of concrete containing low-calcium fly ash. Construction and Building Materials, 2009, 23, 725-733.	3.2	57
105	A model predicting carbonation depth of concrete containing silica fume. Materials and Structures/Materiaux Et Constructions, 2009, 42, 691-704.	1.3	21