

Zhenguo Shi

List of Publications by Citations

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99
papers

8,047
citations

43
h-index

89
g-index

104
ext. papers

10,417
ext. citations

7.7
avg, IF

6.82
L-index

#	Paper	IF	Citations
99	New cements for the 21st century: The pursuit of an alternative to Portland cement. <i>Cement and Concrete Research</i> , 2011 , 41, 750-763	10.3	784
98	Advances in understanding alkali-activated materials. <i>Cement and Concrete Research</i> , 2015 , 78, 110-125	10.3	617
97	Performance enhancement of recycled concrete aggregate [A review]. <i>Journal of Cleaner Production</i> , 2016 , 112, 466-472	10.3	432
96	Chloride binding of cement-based materials subjected to external chloride environment [A review]. <i>Construction and Building Materials</i> , 2009 , 23, 1-13	6.7	422
95	Alkali-Activated Cements and Concretes 2006 ,		331
94	A review on ultra high performance concrete: Part II. Hydration, microstructure and properties. <i>Construction and Building Materials</i> , 2015 , 96, 368-377	6.7	313
93	Durability of recycled aggregate concrete [A review]. <i>Cement and Concrete Composites</i> , 2018 , 89, 251-259	8.6	283
92	A review on the use of waste glasses in the production of cement and concrete. <i>Resources, Conservation and Recycling</i> , 2007 , 52, 234-247	11.9	280
91	A calorimetric study of early hydration of alkali-slag cements. <i>Cement and Concrete Research</i> , 1995 , 25, 1333-1346	10.3	237
90	Strength, pore structure and permeability of alkali-activated slag mortars. <i>Cement and Concrete Research</i> , 1996 , 26, 1789-1799	10.3	233
89	Effect of mixing proportions of concrete on its electrical conductivity and the rapid chloride permeability test (ASTM C1202 or ASSHTO T277) results. <i>Cement and Concrete Research</i> , 2004 , 34, 537-545	10.3	179
88	A review on concrete surface treatment Part I: Types and mechanisms. <i>Construction and Building Materials</i> , 2017 , 132, 578-590	6.7	178
87	Effect of constituents on rheological properties of fresh concrete-A review. <i>Cement and Concrete Composites</i> , 2017 , 83, 146-159	8.6	167
86	Acid corrosion resistance of different cementing materials. <i>Cement and Concrete Research</i> , 2000 , 30, 803-808	10.3	162
85	Performance Enhancement of Recycled Concrete Aggregates through Carbonation. <i>Journal of Materials in Civil Engineering</i> , 2015 , 27, 04015029	3	157
84	Recent progress in low-carbon binders. <i>Cement and Concrete Research</i> , 2019 , 122, 227-250	10.3	154
83	Friedel's salt profiles from thermogravimetric analysis and thermodynamic modelling of Portland cement-based mortars exposed to sodium chloride solution. <i>Cement and Concrete Composites</i> , 2017 , 78, 73-83	8.6	145

82	Microstructural changes in alkali-activated slag mortars induced by accelerated carbonation. <i>Cement and Concrete Research</i> , 2017 , 100, 214-226	10.3	141
81	A review on use of limestone powder in cement-based materials: Mechanism, hydration and microstructures. <i>Construction and Building Materials</i> , 2018 , 181, 659-672	6.7	138
80	Influence of carbonated recycled concrete aggregate on properties of cement mortar. <i>Construction and Building Materials</i> , 2015 , 98, 1-7	6.7	136
79	Role of calcium on chloride binding in hydrated Portland cement–metakaolin–limestone blends. <i>Cement and Concrete Research</i> , 2017 , 95, 205-216	10.3	131
78	Durability of alkali-activated materials in aggressive environments: A review on recent studies. <i>Construction and Building Materials</i> , 2017 , 152, 598-613	6.7	124
77	Experimental studies and thermodynamic modeling of the carbonation of Portland cement, metakaolin and limestone mortars. <i>Cement and Concrete Research</i> , 2016 , 88, 60-72	10.3	120
76	Cementitious properties of ladle slag fines under autoclave curing conditions. <i>Cement and Concrete Research</i> , 2003 , 33, 1851-1856	10.3	111
75	A review on surface treatment for concrete [Part 2: Performance. <i>Construction and Building Materials</i> , 2017 , 133, 81-90	6.7	105
74	An overview on the reuse of waste glasses in alkali-activated materials. <i>Resources, Conservation and Recycling</i> , 2019 , 144, 297-309	11.9	96
73	The hydration and microstructure of ultra high-strength concrete with cement–silica fume–slag binder. <i>Cement and Concrete Composites</i> , 2015 , 61, 44-52	8.6	90
72	On the measurement of evolution of structural build-up of cement paste with time by static yield stress test vs. small amplitude oscillatory shear test. <i>Cement and Concrete Research</i> , 2017 , 99, 183-189	10.3	84
71	A review on effects of limestone powder on the properties of concrete. <i>Construction and Building Materials</i> , 2018 , 192, 153-166	6.7	81
70	Effect of alkali dosage and silicate modulus on carbonation of alkali-activated slag mortars. <i>Cement and Concrete Research</i> , 2018 , 113, 55-64	10.3	72
69	AgNO ₃ -based colorimetric methods for measurement of chloride penetration in concrete. <i>Construction and Building Materials</i> , 2012 , 26, 1-8	6.7	68
68	Alkali-silica reaction in waterglass-activated slag mortars incorporating fly ash and metakaolin. <i>Cement and Concrete Research</i> , 2018 , 108, 10-19	10.3	66
67	A review on alkali-aggregate reactions in alkali-activated mortars/concretes made with alkali-reactive aggregates. <i>Materials and Structures/Materiaux Et Constructions</i> , 2015 , 48, 621-628	3-4	65
66	Compressive strength, pore structure and chloride transport properties of alkali-activated slag/fly ash mortars. <i>Cement and Concrete Composites</i> , 2019 , 104, 103392	8.6	54
65	Early age shrinkage and heat of hydration of cement-fly ash-slag ternary blends. <i>Construction and Building Materials</i> , 2017 , 153, 857-865	6.7	54

64	Effect of mineral admixtures on the structural build-up of cement paste. <i>Construction and Building Materials</i> , 2018 , 160, 117-126	6.7	53
63	Drying shrinkage and cracking resistance of concrete made with ternary cementitious components. <i>Construction and Building Materials</i> , 2017 , 149, 406-415	6.7	51
62	Synthesis, characterization, and water uptake property of alkali-silica reaction products. <i>Cement and Concrete Research</i> , 2019 , 121, 58-71	10.3	48
61	Mechanical and fracture properties of ultra-high performance geopolymer concrete: Effects of steel fiber and silica fume. <i>Cement and Concrete Composites</i> , 2020 , 112, 103665	8.6	48
60	Small amplitude oscillatory shear technique to evaluate structural build-up of cement paste. <i>Materials and Structures/Materiaux Et Constructions</i> , 2017 , 50, 1	3.4	45
59	Mixture design of concrete using simplex centroid design method. <i>Cement and Concrete Composites</i> , 2018 , 89, 76-88	8.6	44
58	Sulfate resistance of calcined clay [Limestone]Portland cements. <i>Cement and Concrete Research</i> , 2019 , 116, 238-251	10.3	44
57	Effects of pretreated fine lightweight aggregate on shrinkage and pore structure of ultra-high strength concrete. <i>Construction and Building Materials</i> , 2019 , 204, 276-287	6.7	43
56	Effects of alkali dosage and silicate modulus on alkali-silica reaction in alkali-activated slag mortars. <i>Cement and Concrete Research</i> , 2018 , 111, 104-115	10.3	42
55	Effect of alkali dosage on alkali-silica reaction in sodium hydroxide activated slag mortars. <i>Construction and Building Materials</i> , 2017 , 143, 16-23	6.7	41
54	Comparison of alkali-silica reactions in alkali-activated slag and Portland cement mortars. <i>Materials and Structures/Materiaux Et Constructions</i> , 2015 , 48, 743-751	3.4	40
53	Chloride binding of alkali-activated slag/fly ash cements. <i>Construction and Building Materials</i> , 2019 , 226, 21-31	6.7	38
52	Effects of inorganic surface treatment on water permeability of cement-based materials. <i>Cement and Concrete Composites</i> , 2016 , 67, 85-92	8.6	36
51	The role of calcium on the formation of alkali-silica reaction products. <i>Cement and Concrete Research</i> , 2019 , 126, 105898	10.3	36
50	Alkali-aggregate reaction in recycled aggregate concrete. <i>Journal of Cleaner Production</i> , 2020 , 255, 120238	10.3	29
49	Carbonation induced phase evolution in alkali-activated slag/fly ash cements: The effect of silicate modulus of activators. <i>Construction and Building Materials</i> , 2019 , 223, 566-582	6.7	29
48	Understanding the carbonation of concrete with supplementary cementitious materials: a critical review by RILEM TC 281-CCC. <i>Materials and Structures/Materiaux Et Constructions</i> , 2020 , 53, 1	3.4	29
47	Autogenous shrinkage and drying shrinkage of recycled aggregate concrete: A review. <i>Journal of Cleaner Production</i> , 2021 , 295, 126435	10.3	28

46	Autogenous and drying shrinkage of alkali-activated slag mortars. <i>Journal of the American Ceramic Society</i> , 2019 , 102, 4963-4975	3.8	26
45	Influences of shear-mixing rate and fly ash on rheological behavior of cement pastes under continuous mixing. <i>Construction and Building Materials</i> , 2018 , 188, 170-177	6.7	24
44	The combined effect of potassium, sodium and calcium on the formation of alkali-silica reaction products. <i>Cement and Concrete Research</i> , 2020 , 127, 105914	10.3	24
43	Properties and microstructure of CO ₂ surface treated cement mortars with subsequent lime-saturated water curing. <i>Cement and Concrete Composites</i> , 2019 , 99, 89-99	8.6	23
42	Characterization of amorphous and crystalline ASR products formed in concrete aggregates. <i>Cement and Concrete Research</i> , 2020 , 137, 106190	10.3	22
41	A quantitative study on physical and chemical effects of limestone powder on properties of cement pastes. <i>Construction and Building Materials</i> , 2019 , 204, 58-69	6.7	21
40	Atomistic structure of alkali-silica reaction products refined from X-ray diffraction and micro X-ray absorption data. <i>Cement and Concrete Research</i> , 2020 , 129, 105958	10.3	19
39	Interactions between inorganic surface treatment agents and matrix of Portland cement-based materials. <i>Construction and Building Materials</i> , 2016 , 113, 721-731	6.7	19
38	Effect of inorganic surface treatment on surface hardness and carbonation of cement-based materials. <i>Cement and Concrete Composites</i> , 2018 , 90, 218-224	8.6	18
37	Influences of chloride immersion on zeta potential and chloride concentration index of cement-based materials. <i>Cement and Concrete Research</i> , 2018 , 106, 49-56	10.3	18
36	Calculation of chloride ion concentration in expressed pore solution of cement-based materials exposed to a chloride salt solution. <i>Cement and Concrete Research</i> , 2016 , 89, 168-176	10.3	18
35	Effects of triisopropanol amine, sodium chloride and limestone on the compressive strength and hydration of Portland cement. <i>Construction and Building Materials</i> , 2016 , 125, 210-218	6.7	17
34	Rheological behavior of Portland clinker-calcium sulphoaluminate clinker-anhydrite ternary blend. <i>Cement and Concrete Composites</i> , 2019 , 104, 103403	8.6	14
33	Formation of shlykovite and ASR-P1 in concrete under accelerated alkali-silica reaction at 60 and 80°C. <i>Cement and Concrete Research</i> , 2020 , 137, 106213	10.3	14
32	Factorial Design Method for Designing Ternary Composite Cements to Mitigate ASR Expansion. <i>Journal of Materials in Civil Engineering</i> , 2016 , 28, 04016064	3	13
31	Thixotropic structural build-up of cement-based materials: A state-of-the-art review. <i>Cement and Concrete Composites</i> , 2021 , 122, 104152	8.6	13
30	Microstructural and micromechanical characteristics of ultra-high performance concrete with superabsorbent polymer (SAP). <i>Cement and Concrete Research</i> , 2021 , 149, 106560	10.3	13
29	Moisture stability of crystalline alkali-silica reaction products formed in concrete exposed to natural environment. <i>Materials and Design</i> , 2020 , 195, 109066	8.1	12

28	Synthesis of alkali-silica reaction product structurally identical to that formed in field concrete. <i>Materials and Design</i> , 2020 , 190, 108562	8.1	11
27	Design of high performance concrete with multiple performance requirements for #2 Dongting Lake Bridge. <i>Construction and Building Materials</i> , 2018 , 165, 825-832	6.7	11
26	Effect of Al on the formation and structure of alkali-silica reaction products. <i>Cement and Concrete Research</i> , 2021 , 140, 106311	10.3	11
25	Effect of Na ₂ O concentration and water/binder ratio on carbonation of alkali-activated slag/fly ash cements. <i>Construction and Building Materials</i> , 2021 , 269, 121258	6.7	11
24	Durability of Portland Cement Blends Including Calcined Clay and Limestone: Interactions with Sulfate, Chloride and Carbonate Ions. <i>RILEM Bookseries</i> , 2015 , 133-141	0.5	10
23	A review on the modelling of carbonation of hardened and fresh cement-based materials. <i>Cement and Concrete Composites</i> , 2022 , 125, 104315	8.6	10
22	Effect of PCEs with different structures on hydration and properties of cementitious materials with low water-to-binder ratio. <i>Cement and Concrete Research</i> , 2021 , 142, 106343	10.3	10
21	Review on corrosion of steel reinforcement in alkali-activated concretes in chloride-containing environments. <i>Construction and Building Materials</i> , 2021 , 293, 123484	6.7	10
20	Expansion behavior and microstructure change of alkali-activated slag grouting material in carbonate environment. <i>Construction and Building Materials</i> , 2020 , 262, 120593	6.7	9
19	Mechanical behavior and phase change of alkali-silica reaction products under hydrostatic compression. <i>Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials</i> , 2020 , 76, 674-682	1.8	9
18	Changes of pore structure and chloride content in cement pastes after pore solution expression. <i>Cement and Concrete Composites</i> , 2020 , 106, 103465	8.6	8
17	Effect of bound chloride on extraction of water soluble chloride in cement-based materials exposed to a chloride salt solution. <i>Construction and Building Materials</i> , 2018 , 160, 223-232	6.7	8
16	An in-situ 3D micro-XRD investigation of water uptake by alkali-silica-reaction (ASR) product. <i>Cement and Concrete Research</i> , 2021 , 141, 106331	10.3	7
15	Expansion behavior and microstructure change of alkali-activated slag grouting material in sulfate environment. <i>Construction and Building Materials</i> , 2020 , 260, 119909	6.7	6
14	Intermolecular interactions of nanocrystalline alkali-silica reaction products under sorption. <i>Cement and Concrete Research</i> , 2020 , 136, 106155	10.3	6
13	Effect of early CO ₂ curing on the chloride transport and binding behaviors of fly ash-blended Portland cement. <i>Construction and Building Materials</i> , 2021 , 288, 123113	6.7	6
12	Investigation on influential factors on chloride concentration index of cement-based materials by pore solution expression method. <i>Construction and Building Materials</i> , 2020 , 231, 117135	6.7	6
11	Accelerated carbonation as a fast curing technology for concrete blocks 2017 , 313-341		5

10	AC impedance spectroscopy characteristics of chloride-exposed cement pastes. <i>Construction and Building Materials</i> , 2020 , 233, 117267	6.7	5
9	Effect of CO ₂ surface treatment on penetrability and microstructure of cement-fly ashslag ternary concrete. <i>Cement and Concrete Composites</i> , 2021 , 123, 104194	8.6	5
8	Chloride migration in cement mortars with ultra-low water to binder ratio. <i>Cement and Concrete Composites</i> , 2021 , 118, 103974	8.6	4
7	Specific ion effects control the thermoelastic behavior of nanolayered materials: the case of crystalline alkali-silica reaction products. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 27800-27810	3.6	3
6	Relationship between the composition and hydration-microstructure-mechanical properties of cement-metakaolin-limestone ternary system. <i>Construction and Building Materials</i> , 2021 , 302, 124175	6.7	3
5	Formulation of an alkali-free accelerator and its effects on hydration and mechanical properties of Portland cement. <i>Cement and Concrete Composites</i> , 2022 , 129, 104485	8.6	2
4	Carbon dioxide sequestration on masonry blocks 2018 , 411-430		1
3	Effects of applied voltage on chloride binding and microstructure of cement pastes subjected to chloride solutions. <i>Materials and Structures/Materiaux Et Constructions</i> , 2019 , 52, 1	3.4	1
2	Correlation of interlayer properties and rheological behaviors of 3DPC with various printing time intervals. <i>Additive Manufacturing</i> , 2021 , 47, 102327	6.1	1
1	Determination of free chloride in seawater cement paste with low water-binder ratio. <i>Cement and Concrete Composites</i> , 2021 , 124, 104217	8.6	1