Hydration of alkali-activated slag: thermodynamic mod

Advances in Cement Research 19, 81-92 DOI: 10.1680/adcr.2007.19.2.81

Citation Report

CITATION REDORT

#	Article	IF	CITATIONS
1	Hydration mechanisms of super sulphated slag cement. Cement and Concrete Research, 2008, 38, 983-992.	4.6	198
2	Chemistry of the Acid Neutralization Capacity of Bauxite Residue. Environmental Engineering Science, 2009, 26, 873-881.	0.8	69
3	Thermodynamic equilibrium calculations in cementitious systems. Materials and Structures/Materiaux Et Constructions, 2010, 43, 1413-1433.	1.3	171
4	Hydration of calcium sulfoaluminate cements — Experimental findings and thermodynamic modelling. Cement and Concrete Research, 2010, 40, 1239-1247.	4.6	602
5	Pore solution composition and alkali diffusion in inorganic polymer cement. Cement and Concrete Research, 2010, 40, 1386-1392.	4.6	274
6	Assessment of phase formation in alkali activated low and high calcium fly ashes in building materials. Construction and Building Materials, 2010, 24, 1086-1093.	3.2	172
7	Quantification of hydration phases in supersulfated cements: review and new approaches. Advances in Cement Research, 2011, 23, 265-275.	0.7	84
8	Advances in alternative cementitious binders. Cement and Concrete Research, 2011, 41, 1232-1243.	4.6	1,232
9	Influence of activator type on hydration kinetics, hydrate assemblage and microstructural development of alkali activated blast-furnace slags. Cement and Concrete Research, 2011, 41, 301-310.	4.6	720
10	Recent advances in the field of cement hydration and microstructure analysis. Cement and Concrete Research, 2011, 41, 666-678.	4.6	147
11	Influence of slag chemistry on the hydration of alkali-activated blast-furnace slag — Part I: Effect of MgO. Cement and Concrete Research, 2011, 41, 955-963.	4.6	534
12	Supplementary Cementitious Materials. Reviews in Mineralogy and Geochemistry, 2012, 74, 211-278.	2.2	350
13	6. Supplementary Cementitious Materials. , 2012, , 211-278.		215
14	Influence of slag chemistry on the hydration of alkali-activated blast-furnace slag — Part II: Effect of Al2O3. Cement and Concrete Research, 2012, 42, 74-83.	4.6	406
15	Natural specimen of triple solid solution ettringite–thaumasite–chromate-ettringite. Journal of Thermal Analysis and Calorimetry, 2013, 114, 777-783.	2.0	11
16	Interaction between Slag and Clinker during Cement Hydration Process. Advanced Materials Research, 2013, 857, 70-74.	0.3	0
17	Strength and drying shrinkage of reactive MgO modified alkali-activated slag paste. Construction and Building Materials, 2014, 51, 395-404.	3.2	230
18	Geopolymers and other alkali activated materials: why, how, and what?. Materials and Structures/Materiaux Et Constructions, 2014, 47, 11-25.	1.3	621

ARTICLE IF CITATIONS # The fate of iron in blast furnace slag particles during alkali-activation. Materials Chemistry and 19 2.0 36 Physics, 2014, 146, 1-5. A thermodynamic model for C-(N-)A-S-H gel: CNASH_ss. Derivation and validation. Cement and Concrete 4.6 Research, 2014, 66, 27-47. Geopolymers and Related Alkali-Activated Materials. Annual Review of Materials Research, 2014, 44, 21 4.3 908 299-327. Engineering properties of cementless concrete produced from GCBFS and recycled desulfurization slag. Construction and Building Materials, 2014, 63, 189-196. A review on alkali-aggregate reactions in alkali-activated mortars/concretes made with alkali-reactive 23 1.3 84 aggregates. Materials and Structures/Materiaux Et Constructions, 2015, 48, 621-628. Co-existence of aluminosilicate and calcium silicate gel characterized through selective dissolution 4.6 and FTIR spectral subtraction. Cement and Concrete Research, 2015, 70, 39-49. Advances in understanding alkali-activated materials. Cement and Concrete Research, 2015, 78, 110-125. 25 4.6 954 Thermodynamic modelling of alkali-activated slag cements. Applied Geochemistry, 2015, 61, 233-247. 1.4 26 160 Influence of slag composition on the hydration of alkali-activated slags. Journal of Sustainable 27 1.7 53 Cement-Based Materials, 2015, 4, 85-100. Intrinsic differences in atomic ordering of calcium (alumino)silicate hydrates in conventional and 4.6 alkali-activated cements. Cement and Concrete Research, 2015, 67, 66-73. Quantitative Analysis of Phase Assemblage and Chemical Shrinkage of Alkali-Activated Slag. Journal of 29 72 0.8 Advanced Concrete Technology, 2016, 14, 245-260. Phase evolution of C-(N)-A-S-H/N-A-S-H gel blends investigated via alkali-activation of synthetic calcium 4.6 256 aluminosilicate precursors. Cement and Concrete Research, 2016, 89, 120-135. Impact of chemical variability of ground granulated blast-furnace slag on the phase formation in alkali-activated slag pastes. Cement and Concrete Research, 2016, 89, 310-319. $\mathbf{31}$ 4.6 82 StrÃtingite: compatibility with sulfate and carbonate cement phases. Materials and Structures/Materiaux Et Constructions, 2016, 49, 3569-3577. 1.3 38 Characterization of alkali-activated slag paste containing dredged marine sediment. Desalination and 33 1.0 2 Water Treatment, 2016, 57, 24688-24696. Phase diagrams for alkali-activated slag binders. Cement and Concrete Research, 2017, 95, 30-38. Effect of alkali dosage on alkali-silica reaction in sodium hydroxide activated slag mortars. 35 3.266 Construction and Building Materials, 2017, 143, 16-23. Structural evolution of synthetic alkali-activated CaO-MgO-Na 2 O-Al 2 O 3 -SiO 2 materials is influenced by Mg content. Cement and Concrete Research, 2017, 99, 155-171.

CITATION REPORT

#	Article	IF	CITATIONS
37	Study of the volume stability of slag cement mortar applied to desulfurization slag during high temperature operation. Construction and Building Materials, 2017, 144, 147-157.	3.2	6
38	Mechanism of zinc oxide retardation in alkali-activated materials: an in situ X-ray pair distribution function investigation. Journal of Materials Chemistry A, 2017, 5, 11794-11804.	5.2	89
39	Solidification of ion exchange resins saturated with Na+ ions: Comparison of matrices based on Portland and blast furnace slag cement. Journal of Nuclear Materials, 2017, 483, 121-131.	1.3	11
40	Influence of slag composition on the stability of steel in alkali-activated cementitious materials. Journal of Materials Science, 2018, 53, 5016-5035.	1.7	45
41	Effect of various alkalis on hydration properties of alkali-activated slag cements. Journal of Thermal Analysis and Calorimetry, 2018, 131, 3093-3104.	2.0	22
42	Interaction of Magnesia with Limestone-Metakaolin-Calcium Hydroxide Ternary Alkali-Activated Systems. Advances in Materials Science and Engineering, 2018, 2018, 1-8.	1.0	3
43	Microstructure and mechanical properties of alkali-activated slag mortar modified with latex. Construction and Building Materials, 2018, 191, 32-38.	3.2	15
44	Understanding the role of silicate concentration on the early-age reaction kinetics of a calcium containing geopolymeric binder. Construction and Building Materials, 2018, 191, 206-215.	3.2	24
45	Binders alternative to Portland cement and waste management for sustainable construction—part 1. Journal of Applied Biomaterials and Functional Materials, 2018, 16, 186-202.	0.7	57
46	Coupled thermodynamic modelling and experimental study of sodium hydroxide activated slag. Construction and Building Materials, 2018, 188, 262-279.	3.2	51
47	Effects of slag substitution on physical and mechanical properties of fly ash-based alkali activated binders (AABs). Cement and Concrete Research, 2019, 122, 118-135.	4.6	119
48	Solid-state nuclear magnetic resonance spectroscopy of cements. Materials Today Advances, 2019, 1, 100007.	2.5	110
49	<i>In situ</i> quasi-elastic neutron scattering study on the water dynamics and reaction mechanisms in alkali-activated slags. Physical Chemistry Chemical Physics, 2019, 21, 10277-10292.	1.3	20
50	Geopolymers and Other Alkali-Activated Materials. , 2019, , 779-805.		17
51	Cements Made From Blastfurnace Slag. , 2019, , 469-507.		9
52	Effects of Fineness and Chemical Composition of Blast Furnace Slag on Properties of Alkaliâ€Activated Binder. Materials, 2019, 12, 3447.	1.3	28
53	Pore solution composition of alkali-activated slag/fly ash pastes. Cement and Concrete Research, 2019, 115, 230-250.	4.6	138
54	Activation of Blast Furnace Slag with Soda Production Waste. Journal of Materials in Civil Engineering, 2020, 32, .	1.3	17

CITATION REPORT

#	ARTICLE Nanostructure of	IF	CITATIONS
55	CaO-(Na ₂ O)-Al ₂ O ₃ -SiO ₂ -H ₂ O Gels Revealed by Multinuclear Solid-State Magic Angle Spinning and Multiple Quantum Magic Angle Spinning Nuclear Magnetic Resonance Spectroscopy. Journal of Physical Chemistry C, 2020, 124, 1681-1694.	1.5	19
56	Reaction kinetics and kinetics models of alkali activated phosphorus slag. Construction and Building Materials, 2020, 237, 117728.	3.2	26
57	Analytical investigation of phase assemblages of alkali-activated materials in CaO-SiO2-Al2O3 systems: The management of reaction products and designing of precursors. Materials and Design, 2020, 194, 108975.	3.3	91
58	Microstructural evolution in sulfate solutions of alkali-activated binders synthesized at various calcium contents. Journal of Materials Research and Technology, 2020, 9, 10377-10385.	2.6	12
59	Preliminary Interpretation of the Induction Period in Hydration of Sodium Hydroxide/Silicate Activated Slag. Materials, 2020, 13, 4796.	1.3	28
60	Geochemical modelling of the effect of waste degradation processes on the long-term performance of waste forms. Applied Geochemistry, 2020, 115, 104539.	1.4	9
61	Study on the interaction mechanism between slags and alkali silicate activators: A hydration kinetics approach. Construction and Building Materials, 2020, 250, 118900.	3.2	13
62	Thermal behaviour of ladle slag mortars containing ferrochrome slag aggregates. Advances in Cement Research, 2021, 33, 168-182.	0.7	10
63	Iron speciation in blast furnace slag cements. Cement and Concrete Research, 2021, 140, 106287.	4.6	24
64	Lattice Boltzmann simulation of the dissolution of slag in alkaline solution using real-shape particles. Cement and Concrete Research, 2021, 140, 106313.	4.6	5
65	GeoMicro3D: A novel numerical model for simulating the reaction process and microstructure formation of alkali-activated slag. Cement and Concrete Research, 2021, 141, 106328.	4.6	5
66	Relation between activator ratio, hydration products and mechanical properties of alkali-activated slag. Construction and Building Materials, 2021, 266, 120940.	3.2	30
67	Using glass content to determine the reactivity of fly ash for thermodynamic calculations. Cement and Concrete Composites, 2021, 115, 103849.	4.6	29
68	Role of Curing Conditions and Precursor on the Microstructure and Phase Chemistry of Alkali-Activated Fly Ash and Slag Pastes. Materials, 2021, 14, 1918.	1.3	7
69	Fly Ash–Ca(OH) ₂ Reactivity in Hypersaline NaCl and CaCl ₂ Brines. ACS Sustainable Chemistry and Engineering, 2021, 9, 8561-8571.	3.2	7
70	Coupling machine learning with thermodynamic modelling to develop a composition-property model for alkali-activated materials. Composites Part B: Engineering, 2021, 216, 108801.	5.9	29
71	Proposal for enhancing the compressive strength of alkali-activated materials-based binder jetting 3D printed outputs. Construction and Building Materials, 2021, 303, 124377.	3.2	8
72	Historical Aspects and Overview. RILEM State-of-the-Art Reports, 2014, , 11-57.	0.3	18

#	Article	IF	CITATIONS
73	Binder Chemistry – High-Calcium Alkali-Activated Materials. RILEM State-of-the-Art Reports, 2014, , 59-91.	0.3	41
74	Green concrete with ground granulated blast-furnace slag activated by desulfurization gypsum and electric arc furnace reducing slag. Journal of Cleaner Production, 2020, 269, 122212.	4.6	51
75	Prediction of chloride binding isotherms for blended cements. Computers and Concrete, 2016, 17, 655-672.	0.7	26
76	Investigation of the Reactivity of Fly Ash and Its Effect on Mixture Properties. ACI Materials Journal, 2019, 116, .	0.3	12
77	Comparative Analysis of the Influence of Sodium and Potassium Silicate Solutions on the Kinetics and Products of Slag Activation. Advances in Civil Engineering Materials, 2014, 3, 371-387.	0.2	6
78	C-S-H COMPOSITION OF SLAG PASTE ACTIVATED BY Na ₂ CO ₃ . Cement Science and Concrete Technology, 2015, 69, 69-75.	0.1	2
79	Non-Equilibrium Thermodynamic Modeling Framework for Ordinary Portland Cement/Supplementary Cementitious Material Systems. ACI Materials Journal, 2020, 117, .	0.3	2
80	Relationships between reaction products and carbonation performance of alkali-activated slag with similar pore structure. Journal of Building Engineering, 2022, 45, 103605.	1.6	1
81	Hydration mechanism of calcium sulfoaluminate-activated supersulfated cement. Journal of Cleaner Production, 2022, 333, 130094.	4.6	21
82	Durability properties of sustainable alkali-activated cementitious materials as marine engineering material: A review. Materials Today Sustainability, 2022, 17, 100099.	1.9	30
83	Comparison of Testing Methods for Evaluating the Resistance of Alkali-Activated Blast Furnace Slag Systems to Sulfur Dioxide. Materials, 2022, 15, 1344.	1.3	5
84	A review: Reaction mechanism and strength of slag and fly ash-based alkali-activated materials. Construction and Building Materials, 2022, 326, 126843.	3.2	86
85	Hydration Characteristics and Microstructure of Alkali-Activated Slag Concrete: A Review. Engineering, 2023, 20, 162-179.	3.2	45
86	Effect of polymer latex on the efflorescence, drying shrinkage and microstructure of alkali-activated slag paste. Journal of Sustainable Cement-Based Materials, 2023, 12, 460-470.	1.7	4
87	How Brine Composition Affects Fly Ash Reactions: The Influence of (Cat-, An-)ion Type. Advances in Civil Engineering Materials, 2022, 11, 619-638.	0.2	3
88	Electrochemical performance of low-alloy steel and low-carbon steel immersed in the simulated pore solutions of alkali-activated slag/steel slag pastes in the presence of chlorides. Corrosion Science, 2022, 205, 110438.	3.0	7
89	Characterization of an aged alkali-activated slag roof tile after 30 years of exposure to Northern Scandinavian weather. RSC Advances, 2022, 12, 25822-25832.	1.7	3
90	Resistance of alkali-activated blast furnace slag to acids. Journal of Physics: Conference Series, 2022, 2341, 012002.	0.3	0

#	Article	IF	CITATIONS
91	Effect of limestone on engineering properties of alkali-activated concrete: A review. Construction and Building Materials, 2023, 362, 129709.	3.2	8
92	Rheological and microstructural properties of FA+GGBFS-based engineered geopolymer composites (EGCs) capable of comparing with M45-ECC as mechanical performance. Journal of Building Engineering, 2023, 65, 105792.	1.6	1
93	Reactivity of waterglass in cementitious systems. Cement, 2023, 12, 100067.	0.9	0
94	Microstructure development of slag activated with sodium silicate solution: Experimental characterization and thermodynamic modeling. Journal of Building Engineering, 2023, 71, 106398.	1.6	4
95	One-part pastes and mortars of CaO-Na2CO3 activated blast furnace slag: Microstructural evolution, cost and CO2 emissions. Construction and Building Materials, 2023, 368, 130431.	3.2	5
96	Fresh, Hardened, and Microstructural Properties of Ambient Cured One-Part Alkali-Activated Self-Consolidating Concrete. Sustainability, 2023, 15, 2451.	1.6	3
97	Mechanical properties of concrete produced with alkali-activated slag-fly ash and recycled concrete aggregate and designed using the densified mixture design algorithm (DMDA) method: Effects of recycled aggregate content and alkaline solution. Developments in the Built Environment, 2023, 14, 100125.	2.0	2
98	M45-ECC ve uçucu kül+cüruf esaslı tasarlanmış geopolimer kompozitlerin mekanik ve mikroyapısal özellikleri. Ömer Halisdemir Üniversitesi Mühendislik Bilimleri Dergisi, 0, , .	0.2	0
100	Correlating Hydration of Alkali-Activated Slag Modified by Organic Additives to the Evolution of Its Properties. Materials, 2023, 16, 1908.	1.3	2
101	Performance analysis of coagulation hardening effect of geopolymer prepared from high calcium-based ladle furnace slag. Construction and Building Materials, 2023, 374, 130963.	3.2	4
102	New insights on dehydration at elevated temperature and rehydration of GCBS blended cement. Cement and Concrete Composites, 2023, 139, 105068.	4.6	13
103	Chloride penetration and binding behavior in unsaturated alkali-activated slag mortars. Cement and Concrete Composites, 2023, 140, 105098.	4.6	7