Accelerated carbonation of reactive MgO cements

Advances in Cement Research 19, 67-79 DOI: 10.1680/adcr.2007.19.2.67

Citation Report

#	Article	IF	CITATIONS
1	Influence of carbonation on the properties of reactive magnesia cement-based pressed masonry units. Advances in Cement Research, 2008, 20, 53-64.	0.7	102
2	Application of Two Novel Magnesia-Based Cements in the Stabilization/Solidification of Contaminated Soils. , 2008, , .		7
3	Ultra-green construction: reactive magnesia masonry products. Proceedings of Institution of Civil Engineers: Waste and Resource Management, 2009, 162, 185-196.	0.9	42
4	Sustainable binders for soil stabilisation. Proceedings of the Institution of Civil Engineers: Ground Improvement, 2010, 163, 53-61.	0.7	71
5	Incorporation of Mg and Ca into Nanostructured Fe ₂ O ₃ Improves Fe Solubility in Dilute Acid and Sensory Characteristics in Foods. Journal of Food Science, 2011, 76, N2-10.	1.5	34
6	Iron fortification: Flame-made nanostructured Mg- or Ca-doped Fe oxides. Materials Research Society Symposia Proceedings, 2011, 1316, 1.	0.1	0
7	Scaled-up commercial production of reactive magnesia cement pressed masonry units. Part II: Performance. Proceedings of Institution of Civil Engineers: Construction Materials, 2012, 165, 225-243.	0.7	41
8	Scaled-up commercial production of reactive magnesium cement pressed masonry units. Part I: Production. Proceedings of Institution of Civil Engineers: Construction Materials, 2012, 165, 211-223.	0.7	37
9	Performance of magnesia cements in porous blocks in acid and magnesium environments. Advances in Cement Research, 2012, 24, 221-232.	0.7	53
10	Effects of accelerated carbonation on the microstructure of Portland cement pastes containing reactive MgO. Cement and Concrete Research, 2012, 42, 769-777.	4.6	207
11	Carbonating magnesia for soil stabilization. Canadian Geotechnical Journal, 2013, 50, 899-905.	1.4	100
12	Evaluation on Hydration Reactivity of Reactive Magnesium Oxide Prepared by Calcining Magnesite at Lower Temperatures. Industrial & Engineering Chemistry Research, 2013, 52, 6430-6437.	1.8	22
13	Properties of binary and ternary reactive MgO mortar blends subjected to CO2 curing. Cement and Concrete Composites, 2013, 38, 40-49.	4.6	82
14	Accelerated carbonation – A potential approach to sequester CO2 in cement paste containing slag and reactive MgO. Cement and Concrete Composites, 2013, 43, 69-77.	4.6	136
15	Impact of hydrated magnesium carbonate additives on the carbonation of reactive MgO cements. Cement and Concrete Research, 2013, 54, 87-97.	4.6	211
16	Effects of Reactive Magnesia on Microstructure and Frost Durability of Portland Cement–Based Binders. Journal of Materials in Civil Engineering, 2013, 25, 1941-1950.	1.3	19
17	Reactive magnesia cement. , 2013, , 523-543.		35
20	Enhancing the carbonation of MgO cement porous blocks through improved curing conditions. Cement and Concrete Research, 2014, 59, 55-65.	4.6	192

ARTICLE IF CITATIONS # MgOâ€Based Binder for Treating Contaminated Sediments: Characteristics of Metal Stabilization and 0.7 19 21 Mineral Carbonation. Clean - Soil, Air, Water, 2014, 42, 355-363. Strength and deformation characteristics of carbonated reactive magnesia treated silt soil. Journal 1.2 of Central South University, 2015, 22, 1859-1868. Development of an MgO-based binder for stabilizing fine sediments and storing CO2. Environmental 23 1.8 8 Geochemistry and Health, 2015, 37, 1063-1072. The role of brucite, ground granulated blastfurnace slag, and magnesium silicates in the carbonation 24 101 and performance of MgO cements. Construction and Building Materials, 2015, 94, 629-643. Physical properties, electrical resistivity, and strength characteristics of carbonated silty soil 25 1.4 74 admixed with reactive magnesia. Canadian Geotechnical Journal, 2015, 52, 1699-1713. Effects of carbonation treatment on the properties of hydrated fly ash-MgO-Portland cement blends. Construction and Building Materials, 2015, 96, 147-154. 3.2 Experimental study on mechanical and acid-alkali properties of reactive magnesia 27 0.2 1 carbonated-stabilized soil. Japanese Geotechnical Society Special Publication, 2016, 2, 317-320. Effectiveness of using CO 2 pressure to enhance the carbonation of Portland cement-fly ash-MgO 28 4.6 54 mortars. Cement and Concrete Composites, 2016, 70, 78-85. Review on recent advances in CO2 utilization and sequestration technologies in cement-based 29 3.2 209 materials. Construction and Building Materials, 2016, 127, 762-773. Investigation of carbonation depth and its influence on the performance and microstructure of MgO 3.2 cement and PC mixes. Construction and Building Materials, 2016, 120, 349-363. Is magnesia cement low carbon? Life cycle carbon footprint comparing with Portland cement. Journal 31 4.6 82 of Cleaner Production, 2016, 131, 20-27. Magnesia-Based Cements: A Journey of 150 Years, and Cements for the Future?. Chemical Reviews, 2016, 564 116, 4170-4204. Effect of carbonation on leachability, strength and microstructural characteristics of KMP binder 33 4.2 64 stabilized Zn and Pb contaminated soils. Chemosphere, 2016, 144, 1033-1042. Property changes of reactive magnesia–stabilized soil subjected to forced carbonation. Canadian Geotechnical Journal, 2016, 53, 314-325. 1.4 Development of low-carbon cementitious materials via carbonating Portland cementâ€"fly 35 ash–magnesia blends under various curing scenarios: a comparative study. Journal of Cleaner 4.6 67 Production, 2017, 163, 252-261. Assessing the carbon sequestration potential of magnesium oxychloride cement building materials. Cement and Concrete Composites, 2017, 78, 97-107. Compaction and mechanical characteristics and stabilization mechanism of carbonated reactive 37 0.9 35 MgO-stabilized silt. KSCE Journal of Civil Engineering, 2017, 21, 2641-2654. Influence of mix design on the carbonation, mechanical properties and microstructure of reactive 38 114 MgO cement-based concrete. Cement and Concrete Composites, 2017, 80, 104-114.

#	Article	IF	CITATIONS
39	Effect of air entrainment on the performance of reactive MgO and PC mixes. Construction and Building Materials, 2017, 142, 221-232.	3.2	39
40	Recycling and reuse of reactive MgO cements – A feasibility study. Construction and Building Materials, 2017, 157, 172-181.	3.2	56
41	Recycling contaminated sediment into eco-friendly paving blocks by a combination of binary cement and carbon dioxide curing. Journal of Cleaner Production, 2017, 164, 1279-1288.	4.6	72
42	Review on carbonation curing of cement-based materials. Journal of CO2 Utilization, 2017, 21, 119-131.	3.3	398
43	Investigation of the performance and thermal decomposition of MgO and MgO-SiO2 formulations. Thermochimica Acta, 2017, 655, 251-261.	1.2	29
44	Investigation of the accelerated carbonation of a MgO-based binder used to treat contaminated sediment. Environmental Earth Sciences, 2017, 76, 1.	1.3	8
45	Stability of MgO-modified geopolymeric gel structure exposed to a CO2-rich environment. Construction and Building Materials, 2017, 151, 178-185.	3.2	18
46	Influences of Activity Index on Mechanical and Microstructural Characteristics of Carbonated Reactive Magnesia-Admixed Silty Soil. Journal of Materials in Civil Engineering, 2017, 29, .	1.3	17
47	Performance and Microstructure of Calcined Dolomite and Reactive Magnesia-Based Concrete Samples. Journal of Materials in Civil Engineering, 2017, 29, .	1.3	35
48	Sustainable hemp-based composites for the building industry application. AIP Conference Proceedings, 2017, , .	0.3	3
49	Fiber-reinforced reactive magnesia-based tensile strain-hardening composites. Cement and Concrete Composites, 2018, 89, 52-61.	4.6	63
50	Mechanical properties and rapid chloride permeability of carbonated concrete containing reactive MgO. Construction and Building Materials, 2018, 172, 77-85.	3.2	25
51	Water absorption of carbonated reactive MgO concrete and its correlation with the pore structure. Journal of CO2 Utilization, 2018, 24, 350-360.	3.3	43
52	Characterization of Mg components in reactive MgO – Portland cement blends during hydration and carbonation. Journal of CO2 Utilization, 2018, 27, 518-527.	3.3	46
53	Development of reactive MgO-based Engineered Cementitious Composite (ECC) through accelerated carbonation curing. Construction and Building Materials, 2018, 191, 23-31.	3.2	82
54	Durability of carbonated MgO concrete containing fly ash and ground granulated blast-furnace slag. Construction and Building Materials, 2018, 192, 403-415.	3.2	38
55	Effect of CO2 concentration on strength development and carbonation of a MgO-based binder for treating fine sediment. Environmental Science and Pollution Research, 2018, 25, 22552-22560.	2.7	8
56	Synergistic effects of curing conditions and magnesium oxide addition on the physico-mechanical properties and firing resistivity of Portland cement mortar. Construction and Building Materials, 2018, 176, 676-689.	3.2	21

#	Article	IF	CITATIONS
57	Carbon dioxide sequestration in magnesium-based binders. , 2018, , 129-173.		15
58	Quantification and micro-mechanisms of CO2 sequestration in magnesia-lime-fly ash/slag solidified soils. International Journal of Greenhouse Gas Control, 2019, 91, 102827.	2.3	17
59	Dynamic modeling and simulation of inchworm movement towards bio-inspired soft robot design. Bioinspiration and Biomimetics, 2019, 14, 066012.	1.5	20
60	Longitudinal Deformation of Mortar Bars Containing Reactive MgO during Carbonation Curing and Sulfate Solution Immersion. Journal of Materials in Civil Engineering, 2019, 31, 04019275.	1.3	4
61	Effects of Drying-Wetting Cycles on Durability of Carbonated Reactive Magnesia-Admixed Clayey Soil. Journal of Materials in Civil Engineering, 2019, 31, 04019276.	1.3	13
62	Sulfate resistance of carbonated ternary mortar blends: Portland cement, reactive MgO and supplementary cementitious materials. Journal of Cleaner Production, 2019, 238, 117933.	4.6	16
63	Formation of carbonate phases and their effect on the performance of reactive MgO cement formulations. Cement and Concrete Research, 2019, 125, 105894.	4.6	82
64	Stabilization/solidification of lead- and zinc-contaminated soils using MgO and CO2. Journal of CO2 Utilization, 2019, 33, 215-221.	3.3	45
65	Special Cements. , 2019, , 585-640.		8
66	Hydration of Reactive MgO as Partial Cement Replacement and Its Influence on the Macroperformance of Cementitious Mortars. Advances in Materials Science and Engineering, 2019, 2019, 1-12.	1.0	24
67	Comparison of reactive magnesia, quick lime, and ordinary Portland cement for stabilization/solidification of heavy metal-contaminated soils. Science of the Total Environment, 2019, 671, 741-753.	3.9	119
68	Influence of drying-wetting cycles on engineering properties of carbonated silt admixed with reactive MgO. Construction and Building Materials, 2019, 204, 84-93.	3.2	45
69	Strength gain and microstructure of carbonated reactive MgO-fly ash solidified sludge from East Lake, China. Engineering Geology, 2019, 251, 37-47.	2.9	59
70	CO2 carbonation-induced improvement in strength and microstructure of reactive MgO-CaO-fly ash-solidified soils. Construction and Building Materials, 2019, 229, 116914.	3.2	57
71	11. Mineral carbon sequestration. , 2019, , 187-202.		0
72	The Effects of Reactive MgO on the Mechanical Properties of Rock Flour Mortar. Iranian Journal of Science and Technology - Transactions of Civil Engineering, 2019, 43, 589-598.	1.0	1
73	Autogenous healing of fiber-reinforced reactive magnesia-based tensile strain-hardening composites. Cement and Concrete Research, 2019, 115, 401-413.	4.6	55
74	Performance and Microstructure of Carbonated MgO Samples under High Temperatures. Journal of Materials in Civil Engineering, 2019, 31, .	1.3	5

#	Article	IF	CITATIONS
75	Influence of Reactive MgO Hydration and Cement Content on C&DW Aggregate Concrete Characteristics. International Journal of Civil Engineering, 2019, 17, 1095-1106.	0.9	7
76	Influence of soil type on strength and microstructure of carbonated reactive magnesia-treated soil. European Journal of Environmental and Civil Engineering, 2020, 24, 248-266.	1.0	25
77	Design of carbonated râ€MgOâ€PC binder system: Effect of râ€MgO replacement level and waterâ€ŧoâ€binder ratio. Journal of the American Ceramic Society, 2020, 103, 656-669.	1.9	10
78	Autogenous healing of Engineered Cementitious Composites (ECC) based on MgO-fly ash binary system activated by carbonation curing. Construction and Building Materials, 2020, 238, 117672.	3.2	43
79	Accelerated carbonation of reactive magnesium oxide cement (RMC)-based composite with supercritical carbon dioxide (scCO2). Journal of Cleaner Production, 2020, 248, 119282.	4.6	51
80	Magnesium Oxychloride Cement Composites with Silica Filler and Coal Fly Ash Admixture. Materials, 2020, 13, 2537.	1.3	16
81	Sustainable building material from CO2 mineralization slag: Aggregate for concretes and effect of CO2 curing. Journal of CO2 Utilization, 2020, 40, 101196.	3.3	35
82	CO2 sequestration on cement. , 2020, , 109-142.		4
83	Carbon Dioxide Uptake by MOC-Based Materials. Applied Sciences (Switzerland), 2020, 10, 2254.	1.3	40
84	Influence of crack width on the stiffness recovery and self-healing of reactive magnesia-based binders under CO2-H2O conditioning. Construction and Building Materials, 2021, 269, 121360.	3.2	11
85	The past and future of sustainable concrete: A critical review and new strategies on cement-based materials. Journal of Cleaner Production, 2021, 281, 123558.	4.6	181
86	Influence of CO2 concentration on the performance of MgO cement mixes. Cement and Concrete Composites, 2021, 115, 103826.	4.6	53
87	Improving the carbonation resistance of Na2CO3-activated slag mixes via the use of reactive MgO and nucleation seeding. Cement and Concrete Composites, 2021, 115, 103832.	4.6	23
88	Fundamental understanding of carbonation curing and durability of carbonation-cured cement-based composites: A review. Journal of CO2 Utilization, 2021, 44, 101428.	3.3	142
89	Influence of Carbonization Process on the Mechanical Properties of Nano-MgO Modified Cement Soil. Sustainability, 2021, 13, 3558.	1.6	14
90	Mechanical and microstructural changes in reactive magnesium oxide cement-based concrete mixes subjected to high temperatures. Cement and Concrete Composites, 2021, 118, 103955.	4.6	31
91	Use of microbial carbonation process to enable selfâ€́carbonation of reactive MgO cement mixes. Cement and Concrete Research, 2021, 143, 106391.	4.6	31
92	Influence of carbonation curing on hydration and microstructure of magnesium potassium phosphate cement concrete. Journal of Building Engineering, 2021, 38, 102203.	1.6	12

#	Article	IF	CITATIONS
93	Carbonation curing influencing factors of Carbonated Reactive Magnesia Cements (CRMC) – A review. Journal of Cleaner Production, 2021, 305, 127210.	4.6	26
94	The occurrence of MgO and its influence on properties of clinker and cement: A review. Construction and Building Materials, 2021, 293, 123494.	3.2	26
95	MgO-Based Cementitious Composites for Sustainable and Energy Efficient Building Design. Sustainability, 2021, 13, 9188.	1.6	10
96	Mechanical performances and microstructural characteristics of reactive MgO-carbonated silt subjected to freezing-thawing cycles. Journal of Rock Mechanics and Geotechnical Engineering, 2021, 13, 875-884.	3.7	20
97	Advances in the hydration of reactive MgO cement blends incorporating different magnesium carbonates. Construction and Building Materials, 2021, 294, 123573.	3.2	22
98	Sustainable materials for 3D concrete printing. Cement and Concrete Composites, 2021, 122, 104156.	4.6	108
100	Experimental Study of Carbonation Resistance of Alkali-Activated Slag Concrete. ACI Materials Journal, 2019, 116, .	0.3	6
101	Preliminary Laboratory-Scale Model Auger Installation and Testing of Carbonated Soil-MgO Columns. Geotechnical Testing Journal, 2013, 36, 384-393.	0.5	42
102	Characteristics of Solidification/Carbonation in the Heavy-Metal-Contaminated Sediment Treated by MgO-Based Binder. Journal of Soil and Groundwater Environment, 2013, 18, 102-111.	0.1	1
103	Accelerated Carbonation Technology of Reactive MgO-Stabilized Soil for Possible CO2 Sequestration. Environmental Science and Engineering, 2019, , 73-80.	0.1	0
104	Recent Advances in Magnesia Blended Cement Studies for Geotechnical Well Construction—A Review. Frontiers in Materials, 2021, 8, .	1.2	7
105	The Immobilisation of Heavy Metals from Sewage Sludge Ash in CO2-Cured Mortars. Sustainability, 2021, 13, 12893.	1.6	6
106	Potential additives for magnesia-based concrete with enhanced performance and propensity for CO2 sequestration. Journal of CO2 Utilization, 2022, 56, 101834.	3.3	11
107	Feasibility for co-utilisation of Carbonated Reactive Magnesia Cement (CRMC) and industrial wastes in circular economy and CO2 mineralisation. Construction and Building Materials, 2022, 323, 126488.	3.2	8
108	Low CO2 reactive magnesia cements and their applications via nano-modification. , 2022, , 407-458.		1
109	Strength and electrical resistivity characteristic of carbonating reactive MgO-mixed red clay under different water contents. Arabian Journal of Geosciences, 2022, 15, 1.	0.6	2
110	Enhancing carbonation and strength of MgO cement through 3D printing. Construction and Building Materials, 2022, 328, 126867.	3.2	7
111	Hydration and hardening properties of reactive magnesia and Portland cement composite. Construction and Building Materials, 2022, 327, 126779.	3.2	6

#	ARTICLE	IF	CITATIONS
112	CO2-Mineralised Nesquehonite: A New "Green―Building Material. , 2021, 5, .		5
113	EFFECT OF CARBONISATION ON THE MECHANICAL PROPERTIES AND HYDRATION OF MAGNESIUM AMMONIUM PHOSPHATE CEMENT. Ceramics - Silikaty, 2021, , 10-18.	0.2	2
114	An industrial demonstration study on CO2 mineralization curing for concrete. IScience, 2022, 25, 104261.	1.9	6
115	Fresh state properties and compressive strength development of reactive MgO-based systems. Materials Today: Proceedings, 2022, 65, 1064-1069.	0.9	3
116	Enhancing carbonation of magnesium oxide (MgO) cement (RMC)-based composites with calcined limestone. Cement, 2022, 9, 100037.	0.9	8
117	Effect of Hollow Natural Fiber (Hnf) Fraction on the Carbonation and Strength Development of Reactive Magnesium Cement (Rmc)-Based Composites. SSRN Electronic Journal, 0, , .	0.4	0
118	New frontiers in sustainable cements: Improving the performance of carbonated reactive MgO concrete via microbial carbonation process. Construction and Building Materials, 2022, 356, 129243.	3.2	4
119	The state of the art of carbonation technology in geotechnical engineering: A comprehensive review. Renewable and Sustainable Energy Reviews, 2023, 171, 112986.	8.2	7
120	The role of biomass bottom ash in Carbonated Reactive Magnesia Cement (CRMC) for CO2 mineralisation. Journal of Cleaner Production, 2022, 380, 135092.	4.6	2
121	Proportioning, Carbonation, Performance Assessment, and Application of Reactive Magnesium Oxide Cement–Based Composites with Superplasticizers. Journal of Materials in Civil Engineering, 2023, 35, .	1.3	4
123	Developing CO2-Sequstrating Strain-Hardening Magnesia-Based Composite (SHMC) with Hybrid Synthetic-Natural Fibers. RILEM Bookseries, 2023, , 43-52.	0.2	0
124	Dimensional change of cement paste subjected to carbonation in CO2 sequestration and utilization context: A critical review on the mechanisms. Journal of CO2 Utilization, 2023, 70, 102444.	3.3	11
125	Recent advances in magnesium-based materials: CO2 sequestration and utilization, mechanical properties and environmental impact. Cement and Concrete Composites, 2023, 138, 104983.	4.6	20
126	Effect of Low Nesquehonite Addition on the Hydration Product and Pore Structure of Reactive Magnesia Paste. Materials, 2023, 16, 2445.	1.3	0
127	A Review of Efficient and Low-Carbon Pile Technologies for Extra-Thick Soft Strata. Energies, 2023, 16, 2836.	1.6	2
128	Model investigation of the low-carbon MgO-treated soil foundation based on CO2 overall carbonation. Journal of Rock Mechanics and Geotechnical Engineering, 2023, , .	3.7	0

0

130 Carbon mineralization. , 2023, , 191-214.