

# Fractal Analysis on Pore Structure and Modeling of Hydrated Cement Paste

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Citation Report

#	ARTICLE	IF	CITATIONS
1	The Counterbalance of the Adverse Effect of Abrasion on the Properties of Concrete Incorporating Nano-SiO <sub>2</sub> and Polypropylene Fiber Based on Pore Structure Fractal Characteristics. <i>Fractal and Fractional</i> , 2022, 6, 392.	3.3	3
2	The Effect of Length and Content of Fiber on Glass Fiber and Basalt Fiber-Reinforced Granite Residual Soil. <i>Advances in Civil Engineering</i> , 2022, 2022, 1-9.	0.7	4
3	Crack fractal analysis of fractured polyethylene fiber reinforced alkali activated mortar under flexural load. <i>Construction and Building Materials</i> , 2022, 345, 128428.	7.2	14
4	Experimental and Numerical Investigation on the Shear Behavior of Engineered Cementitious Composite Beams with Hybrid Fibers. <i>Materials</i> , 2022, 15, 5059.	2.9	3
5	Fractal Analysis of Porous Alumina and Its Relationships with the Pore Structure and Mechanical Properties. <i>Fractal and Fractional</i> , 2022, 6, 460.	3.3	8
6	Surface Cracking and Fractal Characteristics of Cement Paste after Exposure to High Temperatures. <i>Fractal and Fractional</i> , 2022, 6, 465.	3.3	21
7	Internal Curing Effect of Waste Glass Beads on High-Strength Cement Composites. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 8385.	2.5	2
8	Drying shrinkage and thermal expansion of metakaolin-based geopolymer concrete pavement reinforced with biaxial geogrid. <i>Case Studies in Construction Materials</i> , 2022, 17, e01415.	1.7	3
9	Effect of polymer coatings on the freezing/thawing and carbonation resistances of nano-SiO <sub>2</sub> and polyvinyl alcohol fiber-reinforced cementitious composites. <i>Journal of Materials Research and Technology</i> , 2022, 21, 69-83.	5.8	14
10	Effects of steel fibre type and dosage on abrasion resistance of concrete against debris flow. <i>Cement and Concrete Composites</i> , 2022, 134, 104776.	10.7	13
11	Properties of fresh and hardened self-compacting concrete incorporating rice husk ash: A review. <i>Reviews on Advanced Materials Science</i> , 2022, 61, 563-575.	3.3	2
12	Research on Deflection of Partial Steel Fiber Reinforced Concrete Beams with BFRP Bars. <i>Advances in Materials Science and Engineering</i> , 2022, 2022, 1-12.	1.8	1
13	Stiffness Calculation for Negative Moment Region of Steel-Concrete Composite Beams considering the Influence of Cracking and Interface Slip. <i>Advances in Materials Science and Engineering</i> , 2022, 2022, 1-12.	1.8	1
14	Effect of industrial waste molecular sieves on internally cured cement-based materials. <i>Frontiers in Materials</i> , 0, 9, .	2.4	2
15	Effect of Single and Synergistic Reinforcement of PVA Fiber and Nano-SiO <sub>2</sub> on Workability and Compressive Strength of Geopolymer Composites. <i>Polymers</i> , 2022, 14, 3765.	4.5	36
16	Carbon Fibers and Graphite as Pore-Forming Agents for the Obtention of Porous Alumina: Correlating Physical and Fractal Characteristics. <i>Fractal and Fractional</i> , 2022, 6, 501.	3.3	5
17	Evaluation of the Contribution Rates of Different Phases on Pavement Performance of Cement-Casting Asphalt Mixture. <i>Advances in Materials Science and Engineering</i> , 2022, 2022, 1-14.	1.8	2
18	Mechanical properties of nano-SiO <sub>2</sub> reinforced engineered cementitious composites after exposure to high temperatures. <i>Construction and Building Materials</i> , 2022, 356, 129123.	7.2	17

#	ARTICLE	IF	CITATIONS
19	Sporosarcina pasteurii-induced hydration and shrinkage properties of Portland cement. Construction and Building Materials, 2022, 356, 129213.	7.2	4
20	Fractal Dimension Analysis of Structure and Bending Strength of Porous Alumina Prepared Using Starch and Carbon Fiber as Pore-Forming Agents. Fractal and Fractional, 2022, 6, 574.	3.3	5
21	Strength Analysis of Cement Mortar with Carbon Nanotube Dispersion Based on Fractal Dimension of Pore Structure. Fractal and Fractional, 2022, 6, 609.	3.3	4
22	Mechanical Properties of Polyvinyl Alcohol Fiber-Reinforced Cementitious Composites after High-Temperature Exposure. Gels, 2022, 8, 662.	4.5	8
23	Study on Mechanical Properties and Microstructure of Basalt Fiber Reactive Powder Concrete. Buildings, 2022, 12, 1734.	3.1	11
24	Designing Efficient Flash-Calcined Sediment-Based Ecobinders. Materials, 2022, 15, 7107.	2.9	2
25	Study on the Construction Waste Composition and Strength Mechanism of Recycled Mixture. Advances in Materials Science and Engineering, 2022, 2022, 1-13.	1.8	1
26	Effects of Different Building Materials and Treatments on Sound Field Characteristics of the Concert Hall. Buildings, 2022, 12, 1613.	3.1	2
27	Fractal Characteristics of Geopolymer Mortar Containing Municipal Solid Waste Incineration Fly Ash and Its Correlations to Pore Structure and Strength. Fractal and Fractional, 2022, 6, 676.	3.3	11
28	Gray correlation analysis of factors influencing compressive strength and durability of nano-SiO <sub>2</sub> and PVA fiber reinforced geopolymer mortar. Nanotechnology Reviews, 2022, 11, 3195-3206.	5.8	16
29	High-temperature behavior of geopolymer mortar containing nano-silica. Construction and Building Materials, 2023, 364, 129983.	7.2	23
30	Effect of Recycled Aggregate and Slag as Substitutes for Natural Aggregate and Cement on the Properties of Concrete: A Review. Journal of Renewable Materials, 2023, 11, 1853-1879.	2.2	1
31	Optimized Preparation of Porous Coal Gangue-Based Geopolymer and Quantitative Analysis of Pore Structure. Buildings, 2022, 12, 2079.	3.1	2
32	Effect of tartaric acid on the early hydration process and water resistance of magnesium oxychloride cement. Journal of Building Engineering, 2023, 66, 105838.	3.4	4
33	Mechanical Behaviors and Acoustic Emission Fractal Characteristics of Bump-Prone Coal under Different Loading Rates. Fractal and Fractional, 2023, 7, 45.	3.3	2
34	Correlations between unconfined compressive strength, sorptivity and pore structures for geopolymer based on SEM and MIP measurements. Journal of Building Engineering, 2023, 67, 106011.	3.4	8
35	Research on discrete element simulation of slump test for fresh self-compacting concrete. Journal of Building Engineering, 2023, 70, 106464.	3.4	2
36	Comparative Study on LC3-50 with OPC Concrete Using Raw Materials from Pakistan. Advances in Materials Science and Engineering, 2023, 2023, 1-10.	1.8	1

#	ARTICLE	IF	CITATIONS
37	Study on Proportion Optimization of Magnesium Oxychloride Cement-Stabilized Clayey Soil Based on the Response Surface Methodology. <i>Advances in Materials Science and Engineering</i> , 2023, 2023, 1-15.	1.8	0
38	Nanocomposites as Substituent of Cement: Structure and Mechanical Properties. <i>Materials</i> , 2023, 16, 2398.	2.9	3
39	Investigation of the performance of cement mortar incorporating lithium slag as a super-fine aggregate. <i>Frontiers in Materials</i> , 0, 10, .	2.4	1
40	The Influence of Blast Furnace Slag on Cement Concrete Road by Microstructure Characterization and Assessment of Physical-Mechanical Resistances at 150/480 Days. <i>Materials</i> , 2023, 16, 3332.	2.9	4
41	Effect of Pore Characteristics on Sound Absorption Ability of Permeable Pavement Materials. <i>Advances in Civil Engineering</i> , 2023, 2023, 1-18.	0.7	3
42	Fractional-Order Model-Free Predictive Control for Voltage Source Inverters. <i>Fractal and Fractional</i> , 2023, 7, 433.	3.3	5
43	Experimental and Numerical Simulation on the Penetration for Basic Magnesium Sulfate Cement Concrete. <i>Materials</i> , 2023, 16, 4024.	2.9	1
44	A novel insight into the interface fracture between magnesium phosphate cement mortar and cement concrete. <i>International Journal of Pavement Engineering</i> , 2023, 24, .	4.4	2
45	Effect of coral sand on the mechanical properties and hydration mechanism of magnesium potassium phosphate cement mortar. <i>Journal of Zhejiang University: Science A</i> , 2024, 25, 116-129.	2.4	0
46	Monitoring of crack healing in geopolymer concrete using a nonlinear ultrasound approach in phase-space domain. <i>Ultrasonics</i> , 2023, 134, 107095.	3.9	2
47	Microstructural characteristics of bonding interfacial transition zone of concrete and magnesium ammonium phosphate cement. <i>Journal of Building Engineering</i> , 2023, 76, 107208.	3.4	1
48	Characterization, factors, and fractal dimension of pore structure of fly ash-based geopolymers. <i>Journal of Materials Research and Technology</i> , 2023, 26, 3395-3407.	5.8	3
49	Potential Role of GGBS and ACBFS Blast Furnace Slag at 90 Days for Application in Rigid Concrete Pavements. <i>Materials</i> , 2023, 16, 5902.	2.9	0
50	The Early Age Hydration Products and Mechanical Properties of Cement Paste with Steel Slag Powder as Additive under Steam Curing Conditions. <i>Buildings</i> , 2023, 13, 2192.	3.1	0
51	Comparative Study on High-Temperature Performance of MPC and BFPMP. <i>Journal of Materials in Civil Engineering</i> , 2023, 35, .	2.9	2
52	Evolution of the pore structure of pumice aggregate concrete and the effect on compressive strength. <i>Reviews on Advanced Materials Science</i> , 2023, 62, .	3.3	0
53	Preparation of Steel Slag Foam Concrete and Fractal Model for Their Thermal Conductivity. <i>Fractal and Fractional</i> , 2023, 7, 585.	3.3	1
54	Effect of Carbonation Treatment on the Strength and CO <sub>2</sub> Uptake Rate of Composite Cementitious Material with a High Steel Slag Powder Content. <i>Materials</i> , 2023, 16, 6204.	2.9	0

#	ARTICLE	IF	CITATIONS
55	Incorporation of Steel Fibers to Enhance Performance of Sustainable Concrete Made with Waste Brick Aggregates: Experimental and Regression-Based Approaches. Buildings, 2023, 13, 2820.	3.1	0
56	Experimental study of macroscopic and microscopic properties of long-age hydraulic concrete based on high-temperature accelerated curing. Construction and Building Materials, 2024, 411, 134208.	7.2	0
57	A fractal model for characterizing multi-scaling particle diffusion behaviors in alkali-activated materials system. Cement and Concrete Research, 2024, 175, 107386.	11.0	0
58	A new mesoscopic calculation model of chloride ion erosion in recycled coarse aggregate concrete (RAC): Characteristic fractal dimension of pore structure and service life prediction. Developments in the Built Environment, 2023, 16, 100282.	4.0	0
59	Pozzolan attributes of hydraulic cement paste hybridized with agricultural by-product and Nano-carbon. Construction and Building Materials, 2024, 411, 134119.	7.2	0
60	Exploration of the effects of electrolytic manganese residue on the environmental, economic, and engineering performance of magnesium oxychloride cement: A possible utilization method of electrolytic manganese residue. Construction and Building Materials, 2024, 411, 134230.	7.2	0
61	Study on microstructural evolutions and properties of the magnesium oxysulfate cement in the initial curing processes. Materials Today Communications, 2023, 37, 107458.	1.9	0
62	Strength and Microstructural Changes in Cementitious Composites Containing Waste Oyster Shell Powder. Buildings, 2023, 13, 3078.	3.1	1
63	Preparation and Performance Investigation of Epoxy Resin-Based Permeable Concrete Containing Ceramsite. Polymers, 2023, 15, 4704.	4.5	0
64	Mechanical properties and microstructure of cement-fly ash-dacite powder composite cementitious system. Developments in the Built Environment, 2024, 17, 100305.	4.0	0
65	Effects of dosage and reactivity of modified dolomite dust waste on mechanical properties and shrink-resist of mortar. Developments in the Built Environment, 2024, 17, 100308.	4.0	0
66	Gas-Water Two-Phase Displacement Mechanism in Coal Fractal Structures Based on a Low-Field Nuclear Magnetic Resonance Experiment. Sustainability, 2023, 15, 15440.	3.2	0
67	Enhancement of magnesium phosphate cement with sintered sludge ash. Developments in the Built Environment, 2024, 17, 100313.	4.0	0
68	A Binary Medium Constitutive Model for Frozen Solidified Saline Soil in Cold Regions and Its Fractal Characteristics Analysis. Fractal and Fractional, 2024, 8, 33.	3.3	0
69	Improvement of magnesium oxysulfide cement used in geological environment of oil and gas wells. Construction and Building Materials, 2024, 413, 134896.	7.2	0
70	Preparation and properties of gradient fire & corrosion protection magnesium phosphate cement coatings. Developments in the Built Environment, 2024, 17, 100327.	4.0	0
71	Frost resistance and sustainability of seawater-mixed sintered sludge cement paste. Developments in the Built Environment, 2024, 17, 100325.	4.0	0
72	Repair interface crack resistance mechanism: A case of magnesium phosphate cement overlay repair cement concrete pavement surface. Developments in the Built Environment, 2024, 17, 100355.	4.0	0

#	ARTICLE	IF	CITATIONS
73	Study on Mechanical Properties and Microscopic Mechanism of PVA-Modified Recycled Brick Aggregate Concrete. Sustainability, 2024, 16, 1292.	3.2	0
74	Effect of unidirectional temperature conduction on the strength evolution of shotcrete in a high geothermal environment. , 2024, 24, .		0
75	Phase and microstructure evolution of the hydration products of magnesium phosphate cements under sulfuric acid environments. Construction and Building Materials, 2024, 418, 135465.	7.2	0
76	Upscaling coarse-grained simulation study for hydrated cement paste from mesoscale to microscale. Developments in the Built Environment, 2024, 17, 100379.	4.0	0
77	Effect of surface treatment by mineral admixture-magnesium potassium phosphate cement on the mechanical properties, durability, and microstructure of recycled aggregate concrete. Developments in the Built Environment, 2024, 17, 100377.	4.0	0
78	Investigation of the impact of fiber incorporation on the properties of high belite cement. Journal of Materials Research and Technology, 2024, 30, 930-944.	5.8	0