Muhammed Basheer

List of Publications by Year
in descending order

137 papers	4,393 citations	94433 37 h-index	123424 61 g-index
143 all docs	143 docs citations	143 times ranked	3198 citing authors

#	Article	IF	Citations
1	Hydration and properties of sodium sulfate activated slag. Cement and Concrete Composites, 2013, 37, 20-29.	10.7	238
2	Mechanical and durability properties of high performance concretes containing supplementary cementitious materials. Construction and Building Materials, 2010, 24, 292-299.	7.2	204
3	Chemical and mechanical stability of sodium sulfate activated slag after exposure to elevated temperature. Cement and Concrete Research, 2012, 42, 333-343.	11.0	188
4	Properties of fly ash concrete modified with hydrated lime and silica fume. Construction and Building Materials, 2009, 23, 3233-3239.	7.2	182
5	Surface treatments for concrete: assessmentmethods and reported performance. Construction and Building Materials, 1997, 11, 413-429.	7.2	157
6	Strength and drying shrinkage properties of concrete containing furnace bottom ash as fine aggregate. Construction and Building Materials, 2005, 19, 691-697.	7.2	132
7	Influence of coarse aggregate on the permeation, durability and the microstructure characteristics of ordinary Portland cement concrete. Construction and Building Materials, 2005, 19, 682-690.	7.2	130
8	Shape stabilised phase change materials based on a high melt viscosity HDPE and paraffin waxes. Applied Energy, 2016, 162, 68-82.	10.1	123
9	Fluorescence based fibre optic pH sensor for the pH 10â€“13 range suitable for corrosion monitoring in concrete structures. Sensors and Actuators B: Chemical, 2014, 191, 498-507.	7.8	122
10	Chloride transport and the resulting corrosion of steel bars in alkali activated slag concretes. Materials and Structures/Materiaux Et Constructions, 2016, 49, 3663-3677.	3.1	106
11	Predictive models for deterioration of concrete structures. Construction and Building Materials, 1996, 10, 27-37.	7.2	94
12	Monitoring electrical resistance of concretes containing alternative cementitious materials to assess their resistance to chloride penetration. Cement and Concrete Composites, 2002, 24, 437-449.	10.7	94
13	Influence of service loading and the resulting micro-cracks on chloride resistance of concrete. Construction and Building Materials, 2016, 108, 56-66.	7.2	91
14	Alkali activated slag concretes designed for a desired slump, strength and chloride diffusivity. Construction and Building Materials, 2018, 190, 191-199.	7.2	84
15	Influence of combined carbonation and chloride ingress regimes on rate of ingress and redistribution of chlorides in concretes. Construction and Building Materials, 2017, 140, 173-183.	7.2	71
16	New Test Method to Obtain pH Profiles due to Carbonation of Concretes Containing Supplementary Cementitious Materials. Journal of Materials in Civil Engineering, 2007, 19, 936-946.	2.9	69
17	Near-surface moisture gradients and in situ permeation tests. Construction and Building Materials, 2001, 15, 105-114.	7.2	67
18	Carbonation and pH in Mortars Manufactured with Supplementary Cementitious Materials. Journal of Materials in Civil Engineering, 2009, 21, 217-225.	2.9	64

#	Article	IF	Citations
19	Raman spectroscopic investigation of Friedel's salt. Cement and Concrete Composites, 2018, 86, 306-314.	10.7	63
20	Effects of three durability enhancing products on some physical properties of near surface concrete. Construction and Building Materials, 1995, 9, 267-272.	7.2	61
21	Chloride ingress into marine exposed concrete: A comparison of empirical- and physically- based models. Cement and Concrete Composites, 2016, 72, 133-145.	10.7	59
22	Establishment of a preconditioning regime for air permeability and sorptivity of alkali-activated slag concrete. Cement and Concrete Composites, 2016, 73, 19-28.	10.7	55
23	Effect of relative humidity and air permeability on prediction of the rate of carbonation of concrete. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 2001, 146, 319-326.	0.8	52
24	Obtaining progressive chloride profiles in cementitious materials. Construction and Building Materials, 2005, 19, 666-673.	7.2	52
25	Near-surface temperature cycling of stone and its implications for scales of surface deterioration. Geomorphology, 2011, 130, 76-82.	2.6	51
26	Characterisation of pore structure development of alkali-activated slag cement during early hydration using electrical responses. Cement and Concrete Composites, 2018, 89, 139-149.	10.7	49
27	Field monitoring of electrical conductivity of cover-zone concrete. Cement and Concrete Composites, 2005, 27, 809-817.	10.7	47
28	Round-Robin Test on methods for determining chloride transport parameters in concrete. Materials and Structures/Materiaux Et Constructions, 2006, 39, 955-990.	3.1	46
29	Development of a new in situ test method to measure the air permeability of high performance concretes. NDT and E International, 2014, 64, 30-40.	3.7	44
30	Nearâ€“surface sensors for condition monitoring of cover-zone concrete. Construction and Building Materials, 2001, 15, 115-124.	7.2	43
31	Microstructural and mechanical properties of nickel-base plasma sprayed coatings on steel and cast iron substrates. Surface and Coatings Technology, 2005, 197, 177-184.	4.8	43
32	Suitability of alkali activated slag/fly ash (AA-GGBS/FA) concretes for chloride environments: Characterisation based on mix design and compliance testing. Construction and Building Materials, 2019, 216, 612-621.	7.2	43
33	Characterization of physio-chemical processes and hydration kinetics in concretes containing supplementary cementitious materials using electrical property measurements. Cement and Concrete Research, 2013, 50, 26-33.	11.0	41
34	Protection provided by surface treatments against chloride induced corrosion. Materials and Structures/Materiaux Et Constructions, 1998, 31, 459-464.	3.1	40
35	Slag hydration and chloride binding in slag cements exposed to a combined chloride-sulphate solution. Construction and Building Materials, 2019, 195, 238-248.	7.2	39
36	Exposure of mortars to cyclic chloride ingress and carbonation. Advances in Cement Research, 2013, 25, 3-11.	1.6	38

#	Article	IF	Citations
37	Depth-related variation in conductivity to study cover-zone concrete during wetting and drying. Cement and Concrete Composites, 2002, 24, 415-426.	10.7	37
38	Developments in Performance Monitoring of Concrete Exposed to Extreme Environments. Journal of Infrastructure Systems, 2012, 18, 167-175.	1.8	37
39	Optical Fiber Refractive Index Sensor for Chloride Ion Monitoring. IEEE Sensors Journal, 2009, 9, 525-532.	4.7	35
40	Fiber-Optic Strain Sensor System With Temperature Compensation for Arch Bridge Condition Monitoring. IEEE Sensors Journal, 2012, 12, 1470-1476.	4.7	35
41	Maturity testing of lightweight self-compacting and vibrated concretes. Construction and Building Materials, 2013, 47, 118-125.	7.2	35
42	Conductivity/activation energy relationships for cement-based materials undergoing cyclic thermal excursions. Journal of Materials Science, 2015, 50, 1129-1140.	3.7	35
43	â€˜PERMITâ€™ ion migration test for measuring the chloride ion transport of concrete on site. NDT and E International, 2005, 38, 219-229.	3.7	33
44	Clam' Tests for Measuring in-Situ Permeation Properties of Concrete. Nondestructive Testing and Evaluation, 1995, 12, 53-73.	2.1	32
45	Investigation of moisture condition and Autoclam sensitivity on air permeability measurements for both normal concrete and high performance concrete. Construction and Building Materials, 2013, 48, 306-314.	7.2	32
46	Use of nanocrystal seeding chemical admixture in improving Portland cement strength development: application for precast concrete industry. Advances in Applied Ceramics, 2014, 113, 478-484.	1.1	31
47	Modifications of phases, microstructure and hardness of Ni-based alloy plasma coatings due to thermal treatment. Surface and Coatings Technology, 2004, 185, 18-29.	4.8	30
48	Study of reliability of fibre Bragg grating fibre optic strain sensors for field-test applications. Sensors and Actuators A: Physical, 2012, 185, 8-16.	4.1	30
49	Commissioning and Evaluation of a Fiber-Optic Sensor System for Bridge Monitoring. IEEE Sensors Journal, 2013, 13, 2555-2562.	4.7	30
50	Monitoring of Corrosion in Structural Reinforcing Bars: Performance Comparison Using In Situ Fiber-Optic and Electric Wire Strain Gauge Systems. IEEE Sensors Journal, 2009, 9, 1494-1502.	4.7	29
51	Building Stone Condition Monitoring Using Specially Designed Compensated Optical Fiber Humidity Sensors. IEEE Sensors Journal, 2012, 12, 1011-1017.	4.7	29
52	Expansion of CEM I and slag-blended cement mortars exposed to combined chloride-sulphate environments. Cement and Concrete Research, 2019, 123, 105794.	11.0	29
53	Influence of furnace bottom ash on properties of concrete. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 2003, 156, 85-92.	0.8	27
54	The long-term failure mechanisms of alkali-activated slag mortar exposed to wet-dry cycles of sodium sulphate. Cement and Concrete Composites, 2021, 116, 103893.	10.7	26

#	Article	IF	Citations
55	Modelling the rapid retreat of building sandstones: a case study from a polluted maritime environment. Geological Society Special Publication, 2002, 205, 347-362.	1.3	24
56	The influence of reusing â€˜Formtexâ€™ controlled permeability formwork on strength and durability of concrete. Materials and Structures/Materiaux Et Constructions, 2008, 41, 1363-1375.	3.1	24
57	The use and meanings of â€˜time of wetnessâ€™ in understanding building stone decay. Quarterly Journal of Engineering Geology and Hydrogeology, 2013, 46, 469-476.	1.4	24
58	TECHNICAL NOTE. A BRIEF REVIEW OF METHODS FOR MEASURING THE PERMEATION PROPERTIES OF CONCRETE IN SITU.. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 1993, 99, 74-83.	0.8	22
59	Changing climate, changing process: implications for salt transportation and weathering within building sandstones in the UK. Environmental Earth Sciences, 2013, 69, 1225-1235.	2.7	21
60	Development and Longer Term In Situ Evaluation of Fiber-Optic Sensors for Monitoring of Structural Concrete. IEEE Sensors Journal, 2009, 9, 1537-1545.	4.7	20
61	The performance of concrete exposed to marine environments: Predictive modelling and use of laboratory/on site test methods. Construction and Building Materials, 2015, 93, 831-840.	7.2	20
62	A Raman spectroscopy based optical fibre system for detecting carbonation profile of cementitious materials. Sensors and Actuators B: Chemical, 2018, 257, 635-649.	7.8	20
63	The role of calcium stearate on regulating activation to form stable, uniform and flawless reaction products in alkali-activated slag cement. Cement and Concrete Composites, 2019, 103, 242-251.	10.7	20
64	Influence of axial loads on CO2 and Clâ“ transport in concrete phases: Paste, mortar and ITZ. Construction and Building Materials, 2019, 204, 875-883.	7.2	20
65	Permeation Analysis. , 2001, , 658-737.		19
66	Retrofit versus new-build house using life-cycle assessment. Proceedings of the Institution of Civil Engineers: Engineering Sustainability, 2013, 166, 122-137.	0.7	18
67	Characterisation of carbonated Portland cement paste with optical fibre excitation Raman spectroscopy. Construction and Building Materials, 2017, 135, 369-376.	7.2	18
68	Fibre optic chemical sensor systems for internal concrete condition monitoring. , 2004, 5502, 334.		17
69	In Situ Cross-Calibration of In-Fiber Bragg Grating and Electrical Resistance Strain Gauges for Structural Monitoring Using an Extensometer. IEEE Sensors Journal, 2009, 9, 1355-1360.	4.7	17
70	Effects of seawater-neutralised bauxite refinery residue on properties of concrete. Cement and Concrete Composites, 2011, 33, 668-679.	10.7	17
71	Monitoring and repair of an impact damaged prestressed bridge. Proceedings of the Institution of Civil Engineers: Bridge Engineering, 2013, 166, 16-29.	0.6	17
72	Preliminary Development and Evaluation of Fiber-Optic Chemical Sensors. Journal of Materials in Civil Engineering, 2011, 23, 1200-1210.	2.9	16

#	Article	IF	Citations
73	Fiber optic chemical sensor systems for monitoring pH changes in concrete. , 2004, , .		15
74	In-situ monitoring of early hydration of clinker and Portland cement with optical fiber excitation Raman spectroscopy. Cement and Concrete Composites, 2020, 112, 103664.	10.7	15
75	A machine vision approach to the grading of crushed aggregate. Machine Vision and Applications, 2005, 16, 229-235.	2.7	14
76	State-of-the-art applications of the pull-off test in civil engineering. International Journal of Structural Engineering, 2009, 1, 93.	0.4	14
77	Monitoring the cementitious materials subjected to sulfate attack with optical fiber excitation Raman spectroscopy. Optical Engineering, 2013, 52, 104107.	1.0	14
78	Influence of carbonation on the bound chloride concentration in different cementitious systems. Construction and Building Materials, 2021, 302, 124171.	7.2	14
79	Potential use of spent mushroom compost ash as an activator for pulverised fuel ash. Construction and Building Materials, 2005, 19, 698-702.	7.2	13
80	Sustainable bridge construction through innovative advances. Proceedings of the Institution of Civil Engineers: Bridge Engineering, 2008, 161, 183-188.	0.6	13
81	Understanding the aqueous phases of alkali-activated slag paste under water curing. Advances in Cement Research, 2021, 33, 59-73.	1.6	13
82	Influence of Different European Cements on the Hydration of Cover-Zone Concrete during the Curing and Postcuring Periods. Journal of Materials in Civil Engineering, 2013, 25, 1335-1343.	2.9	11
83	FACTORIAL EXPERIMENTAL DESIGN FOR CONCRETE DURABILITY RESEARCH.. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 1994, 104, 449-462.	0.8	10
84	Hydration Characteristics of Cement Paste Containing Supplementary Cementitious Materials. Arabian Journal for Science and Engineering, 2012, 37, 535-544.	1.1	10
85	Repeatability and Reliability of New Air and Water Permeability Tests for Assessing the Durability of High-Performance Concretes. Journal of Materials in Civil Engineering, 2015, 27, .	2.9	10
86	PROTECTIVE QUALITIES OF SURFACE TREATMENTS FOR CONCRETE.. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 1997, 122, 339-346.	0.8	9
87	Strength and durability of concrete with ash aggregate. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 2005, 158, 191-199.	0.8	9
88	Fibre Bragg grating sensors for reinforcement corrosion monitoring in civil engineering structures. Journal of Physics: Conference Series, 2007, 76, 012018.	0.4	9
89	A durability performance-index for concrete: developments in a novel test method. International Journal of Structural Engineering, 2015, 6, 2.	0.4	9
90	Assessment of the effectiveness of the guard ring in obtaining a uni-directional flow in an in situ water permeability test. Materials and Structures/Materiaux Et Constructions, 2015, 48, 167-183.	3.1	9

#	Article	IF	Citations
91	Effectiveness of In Situ Moisture Preconditioning Methods for Concrete. Journal of Materials in Civil Engineering, 2000, 12, 131-138.	2.9	8
92	Comparative Study of Alkali-Activated Fly Ash Manufactured Under Pulsed Microwave Curing and Thermal Oven Curing. , 2014, , .		8
93	Engineering performance of a new siloxane-based corrosion inhibitor. Materials and Structures/Materiaux Et Constructions, 2014, 47, 1531-1543.	3.1	7
94	Recommendation of RILEM TC 189-NEC "Non-destructive evaluation of the concrete cover": Comparative test - Part I: Comparative test of 'penetrability' methods. Materials and Structures/Materiaux Et Constructions, 2005, 38, 895-906.	3.1	7
95	Grading of construction aggregate through machine vision: Results and prospects. Computers in Industry, 2005, 56, 905-917.	9.9	6
96	An investigation into the behaviour of concrete containing seawater-neutralised bauxite refinery residues in silage effluent. Biosystems Engineering, 2010, 106, 433-439.	4.3	6
97	Rapid construction of arch bridges using the innovative FlexiArch. Proceedings of the Institution of Civil Engineers: Bridge Engineering, 2013, 166, 143-153.	0.6	6
98	A testing methodology for performance-based specification. Journal of Structural Integrity and Maintenance, 2017, 2, 78-88.	1.5	6
99	Influence of furnace bottom ash on properties of concrete. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 2003, 156, 85-92.	0.8	6
100	Corrosion induced strain monitoring through fibre optic sensors. Journal of Physics: Conference Series, 2007, 85, 012017.	0.4	5
101	Effect of Bauxsol on properties of cement pastes. Proceedings of Institution of Civil Engineers: Construction Materials, 2011, 164, 241-250.	1.1	5
102	Principles of the Performance-Based Approach for Concrete Durability. RILEM State-of-the-Art Reports, 2016, , 107-131.	0.7	5
103	Effect of relative humidity and air permeability on prediction of the rate of carbonation of concrete. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 2001, 146, 319-326.	0.8	5
104	External Sulphate Attack on Alkali-Activated Slag and Slag/Fly Ash Concrete. Buildings, 2022, 12, 94.	3.1	5
105	Testing the effectiveness of commonly-used site curing regimes. Materiaux Et Constructions, 1997, 30, 53-60.	0.3	4
106	Effectiveness of preconditioning regimes for assessing water permeability of high performance concrete. Cement and Concrete Composites, 2018, 94, 126-135.	10.7	4
107	Characterisation of temporal variations of alkali-activated slag cement property using microstructure features and electrical responses. Construction and Building Materials, 2020, 261, 119884.	7.2	4
108	Use of Fiber Optic and Electrical Resistance Sensors for Monitoring Moisture Movement in Building Stones Subjected to Simulated Climatic Conditions. Journal of ASTM International, 2010, 7, 1-11.	0.2	4

#	Article	IF	Citations
109	Influence of Micro and Macro Cracks Due to Sustained Loading on Chloride-Induced Corrosion of Reinforced Concrete Beams. , 2014, , .		4
110	Comparative testâ€"Part IIâ€"Comparative test of â€œcovermetersâ€• Materials and Structures/Materiaux Et Constructions, 2005, 38, 907-911.	3.1	3
111	Experimental research on concrete strength prediction by Limpet pull-off test in China. International Journal of Structural Engineering, 2014, 5, 1.	0.4	3
112	<title>Benchmarking segmentation results using a Markov model and a Bayes information criterion</title>. , 2003, , .		2
113	Optical fibre humidity sensor design for building stone condition monitoring. , 2010, , .		2
114	UKâ€"China Science Bridge â€" Sustainable solutions for the built environment. Construction and Building Materials, 2013, 47, 20-28.	7.2	2
115	Design of a steady-state in situ test to determine the air permeability coefficient of covercrete. Construction and Building Materials, 2019, 195, 671-681.	7.2	2
116	<title>Machine vision methods for the grading of crushed aggregate</title>. , 2003, 4877, 264.		1
117	Optical fibre sensor systems: new solutions for structural monitoring applications?. Proceedings of SPIE, 2005, 5826, 412.	0.8	1
118	Structural health monitoring - better solutions using fiber optic sensors?. , 2009, , .		1
119	Arch-bridge Lift Process Monitoring by Using Packaged Optical Fibre Strain Sensors with Temperature Compensation. Journal of Physics: Conference Series, 2011, 307, 012029.	0.4	1
120	Research on the Correlation between Autoclam Permeability Test and Seepage Height Method. Applied Mechanics and Materials, 0, 438-439, 135-140.	0.2	1
121	Use of Fiber Optic and Electrical Resistance Sensors for Monitoring Moisture Movement in Building Stones Subjected to Simulated Climatic Conditions. , 0, , 179-179-15.		1
122	Challenges and opportunities for assessing transport properties of high-performance concrete. Revista ALCONPAT, 2018, 8, 246-263.	0.3	1
123	Use of Two-Pressure-Head Method to Assess Water Permeability of Structural Concrete. ACI Materials Journal, 2018, 115, .	0.2	1
124	Using calciumâ€rich precursors to improve the earlyâ€compressive strength of alkaliâ€activated slag cement at low temperature. Structural Concrete, 2022, 23, 2221-2232.	3.1	1
125	Advances in the in-situ assessment of construction materials. , 2007, , 591-605.		0
126	Long period grating-based refractive index sensor for chloride concentration measurement. , 2008, , .		0

#	Article	IF	Citations
127	Design and evaluation of optical fibre sensors in civil engineering applications for Structural Health Monitoring. , 2009, , .		0
128	Real-time monitoring of covercrete response to environmental action. International Journal of Modelling, Identification and Control, 2009, 7, 219.	0.2	0
129	Preliminary research on monitoring the durability of concrete subjected to sulfate attack with optical fibre Raman spectroscopy. Proceedings of SPIE, 2013, , .	0.8	0
130	Shape stabilised phase change materials (SSPCMs): High density polyethylene and hydrocarbon waxes. , 2014, , .		0
131	Effectiveness of two field methods of saturating near surface concrete on the water permeability of in situ concrete. MATEC Web of Conferences, 2019, 289, 06004.	0.2	0
132	Monitoring the development of microcracks in reinforced concrete caused by sustained loading and chloride induced corrosion. , 2014, , 603-609.		0
133	Progress of Carbonation in Chloride Contaminated Concretes. , 2016, , .		0
134	Effectiveness of Vacuum Saturation Preconditioning Regime for Assessing Water Permeability of High Performance Concrete. , 2016, , .		0
135	Electrical Resistance to Monitor Carbonation and Chloride Ingress. ACI Materials Journal, 2019, 116, .	0.2	0
136	Strength and durability of concrete with ash aggregate. Proceedings of the Institution of Civil Engineers: Structures and Buildings, 2005, 158, 191-199.	0.8	0
137	Gaussian Segmentation of BSE Images to Assess the Porosity of Concrete. , 0, , .		0