Miguel Ãngel Climent

List of Publications by Year
in descending order

71 papers	1,891 citations	201674 27 h-index	276875 41 g-index
72 all docs	72 docs citations	72 times ranked	1257 citing authors

#	Article	IF	Citations
1	A test method for measuring chloride diffusion coefficients through nonsaturated concrete. Cement and Concrete Research, 2002, 32, 1113-1123.	11.0	110
2	Microstructural modifications in Portland cement concrete due to forced ionic migration tests. Study by impedance spectroscopy. Cement and Concrete Research, 2008, 38, 1015-1025.	11.0	102
3	Efficiency of a conductive cement-based anodic system for the application of cathodic protection, cathodic prevention and electrochemical chloride extraction to control corrosion in reinforced concrete structures. Corrosion Science, 2015, 96, 102-111.	6.6	92
4	Long-term effects of waste brick powder addition in the microstructure and service properties of mortars. Construction and Building Materials, 2018, 182, 691-702.	7.2	89
5	A test method for measuring chloride diffusion coefficients through partially saturated concrete. Part II: The instantaneous plane source diffusion case with chloride binding consideration. Cement and Concrete Research, 2007, 37, 714-724.	11.0	82
6	Embeddable Ag/AgCl sensors for in-situ monitoring chloride contents in concrete. Cement and Concrete Research, 1996, 26, 1157-1161.	11.0	76
7	Electrochemical extraction of chlorides from reinforced concrete using a conductive cement paste as the anode. Corrosion Science, 2010, 52, 1576-1581.	6.6	71
8	Procedure for calculating the chloride diffusion coefficient and surface concentration from a profile having a maximum beyond the concrete surface. Materials and Structures/Materiaux Et Constructions, 2015, 48, 863-869.	3.1	61
9	Determination of chloride diffusivity through partially saturated Portland cement concrete by a simplified procedure. Construction and Building Materials, 2011, 25, 785-790.	7.2	55
10	Feasibility of electrochemical chloride extraction from structural reinforced concrete using a sprayed conductive graphite powderâ€“cement paste as anode. Corrosion Science, 2013, 77, 128-134.	6.6	54
11	Effect of the reinforcement bar arrangement on the efficiency of electrochemical chloride removal technique applied to reinforced concrete structures. Corrosion Science, 2006, 48, 531-545.	6.6	52
12	Impedance spectroscopy study of the effect of environmental conditions in the microstructure development of OPC and slag cement mortars. Archives of Civil and Mechanical Engineering, 2015, 15, 569-583.	3.8	48
13	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
14	Durability related transport properties of OPC and slag cement mortars hardened under different environmental conditions. Construction and Building Materials, 2012, 27, 176-183.	7.2	39
15	Microstructure and durability of fly ash cement grouts for micropiles. Construction and Building Materials, 2016, 117, 47-57.	7.2	37
16	Recommendation of RILEM TC 178-TMC: Testing and modelling chloride penetration in concrete*. Materials and Structures/Materiaux Et Constructions, 2013, 46, 337-344.	3.1	36
17	The behaviour of platinum single-crystal electrodes in neutral phosphate buffered solutions. Journal of Electroanalytical Chemistry, 1992, 326, 113-127.	3.8	35
18	Analysis of acid-soluble chloride in cement, mortar, and concrete by potentiometric titration without filtration steps. Cement and Concrete Research, 1999, 29, 893-898.	11.0	35

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19	Moisture Distribution in Partially Saturated Concrete Studied by Impedance Spectroscopy. Journal of Nondestructive Evaluation, 2013, 32, 362-371.	2.4	35
20	Determination of the selectivity coefficient of a chloride ion selective electrode in alkaline media simulating the cement paste pore solution. Journal of Electroanalytical Chemistry, 2010, 639, 43-49.	3.8	31
21	Non-Destructive Study of the Microstructural Effects of Sodium and Magnesium Sulphate Attack on Mortars Containing Silica Fume Using Impedance Spectroscopy. Applied Sciences (Switzerland), 2017, 7, 648.	2.5	31
22	Behaviour of the Cr(III)/Cr(II) reaction on goldî—graphite electrodes. Application to redox flow storage cell. Journal of Power Sources, 1991, 35, 225-234.	7.8	30
23	Alkali metal cations and pH effects on a splitting of the unusual adsorption states of Pt(111) voltammograms in phosphate buffered solutions. Journal of Electroanalytical Chemistry, 1993, 345, 475-481.	3.8	30
24	Impedance spectroscopy: An efficient tool to determine the nonâ€steadyâ€state chloride diffusion coefficient in building materials. Materials and Corrosion - Werkstoffe Und Korrosion, 2011, 62, 139-145.	1.5	30
25	Long-Term Behaviour of Fly Ash and Slag Cement Grouts for Micropiles Exposed to a Sulphate Aggressive Medium. Materials, 2017, 10, 598.	2.9	30
26	Use of Non-Linear Ultrasonic Techniques to Detect Cracks Due to Steel Corrosion in Reinforced Concrete Structures. Materials, 2019, 12, 813.	2.9	29
27	Improvement of the chloride ingress resistance of OPC mortars by using spent cracking catalyst. Cement and Concrete Research, 2009, 39, 126-139.	11.0	27
28	Generalization of the possibility of eliminating the filtration step in the determination of acid-soluble chloride content in cement and concrete by potentiometric titration. Cement and Concrete Research, 2004, 34, 2291-2295.	11.0	26
29	Effects of Red Mud Addition in the Microstructure, Durability and Mechanical Performance of Cement Mortars. Applied Sciences (Switzerland), 2019, 9, 984.	2.5	26
30	Influence of using slag cement on the microstructure and durability related properties of cement grouts for micropiles. Construction and Building Materials, 2013, 38, 84-93.	7.2	25
31	Influence of different ways of chloride contamination on the efficiency of cathodic protection applied on structural reinforced concrete elements. Journal of Electroanalytical Chemistry, 2017, 793, 8-17.	3.8	23
32	An improved procedure for obtaining and maintaining well characterized partial water saturation states on concrete samples to be used for mass transport tests. Materials and Structures/Materiaux Et Constructions, 2013, 46, 1389-1400.	3.1	22
33	Depassivation time estimation in reinforced concrete structures exposed to chloride ingress: A probabilistic approach. Cement and Concrete Composites, 2017, 79, 21-33.	10.7	22
34	Chlorideâ€ion Activities in Simplified Synthetic Concrete Pore Solutions: The Effect of the Accompanying Ions. Journal of the American Ceramic Society, 2000, 83, 640-644.	3.8	21
35	Detecting cracks due to steel corrosion in reinforced cement mortar using intermodulation generation of ultrasonic waves. Construction and Building Materials, 2021, 286, 122915.	7.2	21
36	Performance of Sustainable Fly Ash and Slag Cement Mortars Exposed to Simulated and Real In Situ Mediterranean Conditions along 90 Warm Season Days. Materials, 2017, 10, 1254.	2.9	20

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37	Durability and compressive strength of blast furnace slag-based cement grout for special geotechnical applications. Materiales De Construccion, 2014, 64, e003.	0.7	20
38	Graphiteâ€“Cement Paste: A New Coating of Reinforced Concrete Structural Elements for the Application of Electrochemical Anti-Corrosion Treatments. Coatings, 2016, 6, 32.	2.6	19
39	Electrocatalytic oxidation of L(+)-ascorbic acid on single crystal Pt surfaces modified by irreversibly adsorbed Bi. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1989, 260, 237-244.	0.1	18
40	Proof by UV-visible modulated reflectance spectroscopy of the breakdown by carbonation of the passivating layer on iron in alkaline solution. Surface Science, 1995, 330, L651-L656.	1.9	17
41	Influencia de diferentes condiciones de curado en la estructura porosa y en las propiedades a edades tempranas de morteros que contienen ceniza volante y escoria de alto horno. Materiales De Construccion, 2013, 63, 219-234.	0.7	17
42	Shape Effect of Electrochemical Chloride Extraction in Structural Reinforced Concrete Elements Using a New Cement-Based Anodic System. Materials, 2015, 8, 2901-2917.	2.9	16
43	Influence of Silica Fume Addition in the Long-Term Performance of Sustainable Cement Grouts for Micropiles Exposed to a Sulphate Aggressive Medium. Materials, 2017, 10, 890.	2.9	14
44	Influence of Waste Glass Powder Addition on the Pore Structure and Service Properties of Cement Mortars. Sustainability, 2018, 10, 842.	3.2	14
45	Viabilidad de utilizaciÃ³n de una pasta de cemento con nanofibras de carbono como Ã¡nodo en la extracciÃ³n electroquÃmica de cloruros en hormigÃ³n. Materiales De Construccion, 2013, 63, 39-48.	0.7	14
46	Chloride Penetration Prediction in Concrete through an Empirical Model Based on Constant Flux Diffusion. Journal of Materials in Civil Engineering, 2015, 27, .	2.9	13
47	Use of Higher-Harmonic and Intermodulation Generation of Ultrasonic Waves to Detecting Cracks due to Steel Corrosion in Reinforced Cement Mortar. International Journal of Concrete Structures and Materials, 2020, 14, .	3.2	13
48	Impedance Spectroscopy Study of the Effect of Environmental Conditions on the Microstructure Development of Sustainable Fly Ash Cement Mortars. Materials, 2017, 10, 1130.	2.9	12
49	Skin friction coefficient change on cement grouts for micropiles due to sulfate attack. Construction and Building Materials, 2018, 163, 80-86.	7.2	12
50	Short-Term Performance of Sustainable Silica Fume Mortars Exposed to Sulfate Attack. Sustainability, 2018, 10, 2517.	3.2	10
51	The Use of Volcanic Powder as a Cement Replacement for the Development of Sustainable Mortars. Applied Sciences (Switzerland), 2020, 10, 1460.	2.5	10
52	Voltammetric and subtractively normalized interfacial FTIR study of the adsorption and oxidation ofL(+)-ascorbic acid on Pt electrodes in acid medium: effect of Bi adatoms. Journal of the Chemical Society, Faraday Transactions, 1994, 90, 609-615.	1.7	9
53	Short-Term Behavior of Slag Concretes Exposed to a Real In Situ Mediterranean Climate Environment. Materials, 2017, 10, 915.	2.9	9
54	Effects of Environment in the Microstructure and Properties of Sustainable Mortars with Fly Ash and Slag after a 5-Year Exposure Period. Sustainability, 2018, 10, 663.	3.2	9

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55	Influence of curing conditions on the mechanical properties and durability of cement mortars. , 2009, , .		9
56	Early Detection of Corrosion-Induced Concrete Micro-cracking by Using Nonlinear Ultrasonic Techniques: Possible Influence of Mass Transport Processes. Corrosion and Materials Degradation, 2022, 3, 235-257.	2.4	8
57	ExtracciÃ³n electroquÃmica de cloruros del hormigÃ³n armado: estudio de diferentes variables que influyen en la eficiencia del tratamiento. Materiales De Construccion, 2006, 56, .	0.7	6
58	Cement mortar cracking under accelerated steel corrosion test: A mechanical and electrochemical model. Journal of Electroanalytical Chemistry, 2021, 896, 115222.	3.8	5
59	Comparison BetweenDcritConsidering the Abrupt Variation and Inï¬‚exion in the Concrete Mercury Intrusion Porosimetry Curve. Experimental Techniques, 2015, 39, 43-52.	1.5	4
60	FTIR study of surface structure influence on the electrochemical behaviour of the ascorbate anion at platinum electrodes in neutral solutions. Journal of Electroanalytical Chemistry, 1994, 374, 263-268.	3.8	3
61	Bit shape geometric considerations when sampling by dry drilling for obtaining chloride profiles in concrete. Materials and Structures/Materiaux Et Constructions, 2001, 34, 150-154.	3.1	3
62	Investigation of performance properties of novel composite fire-extinguishing powders based on mineral raw materials. WIT Transactions on Engineering Sciences, 2009, , .	0.0	3
63	Rebar Shape Time-Evolution During a Reinforced Concrete Corrosion Test: An Electrochemical Model. Applied Sciences (Switzerland), 2019, 9, 3061.	2.5	2
64	Modelos de estimativa do grau de saturaÃ§Ã£o do concreto a partir das variÃ¡veis ambientais aplicados Ã anÃ¡lise de confiabilidade de estruturas de concreto armado atacadas por Ãons cloreto. Revista Materia, 2021, 26, .	0.2	2
65	Experimental confirmation of some aspects of the microstructural model of the impedance spectra of porous materials. , 2009, , .		1
66	Impedance spectroscopy as a tool to study modifications in the microstructure of concrete in ionic migration experiments. WIT Transactions on Engineering Sciences, 2007, , .	0.0	0
67	Use of impedance spectroscopy to determine the displacement of water in cement paste under small loads. WIT Transactions on Engineering Sciences, 2007, , .	0.0	0
68	Application of combined electrochemical treatments to reinforced concrete: Electrochemical chloride extraction plus cathodic protection. Hormigon Y Acero, 2018, , .	0.2	0
69	Recomendaciones sobre DifusiÃ³n de Cloruros. , 2020, , 1-21.		0
70	Non-destructive evaluation of internal sulphate attack in cement-based materials applying non-linear ultrasonic techniques. , 2020, 67, .		0
71	Violin Ceramic Joist Slabs: Evaluation and Proposal for Intervention with Duplex-Type Stainless Steel. Buildings, 2022, 12, 942.	3.1	0