Paulo Jm Monteiro

List of Publications by Year in descending order

85 papers	6,011 citations	71004 43 h-index	81351 76 g-index
85 all docs	85 docs citations	85 times ranked	4339 citing authors

#	Article	IF	Citations
1	The role of sodium and sulfate sources on the rheology and hydration of C3A polymorphs. Cement and Concrete Research, 2022, 151, 106639.	4.6	24
2	Microstructure and durability performance of sustainable cementitious composites containing high-volume regenerative biosilica. Resources, Conservation and Recycling, 2022, 178, 106038.	5.3	18
3	Hydration of C3S and Al-doped C3S in the presence of gypsum. Cement and Concrete Research, 2022, 152, 106686.	4.6	18
4	Calcium silicate hydrate colloid at different humidities: Microstructure, deformation mechanism, and mechanical properties. Acta Materialia, 2022, 228, 117740.	3.8	9
5	Sub- and supercritical hydrothermal route for the synthesis of xonotlite nanofibers for application to green concrete materials. Journal of Supercritical Fluids, 2022, 184, 105583.	1.6	4
6	Hydration and interactions between pure and doped C3S and C3A in the presence of different calcium sulfates. Cement and Concrete Research, 2022, 159, 106893.	4.6	19
7	Microstructure and water absorption of ancient concrete from Pompeii: An integrated synchrotron microtomography and neutron radiography characterization. Cement and Concrete Research, 2021, 139, 106282.	4.6	24
8	Effect of iron (III) oxide concentration on the performance of meta-resonators embedded in cementitious matrix. Cement and Concrete Composites, 2021, 116, 103890.	4.6	1
9	Effect of polycarboxylate ether on the expansion of ye'elimite hydration in the presence of anhydrite. Cement and Concrete Research, 2021, 140, 106321.	4.6	28
10	Multi-scale imaging, strength and permeability measurements: Understanding the durability of Roman marine concrete. Construction and Building Materials, 2021, 272, 121812.	3.2	12
11	Normal and anomalous self-healing mechanism of crystalline calcium silicate hydrates. Cement and Concrete Research, 2021, 142, 106356.	4.6	15
12	Coordination environment of Si in calcium silicate hydrates, silicate minerals, and blast furnace slags: A XANES database. Cement and Concrete Research, 2021, 143, 106376.	4.6	27
13	Preferred orientation of calcium aluminosilicate hydrate compacts: Implications for creep and indentation. Cement and Concrete Research, 2021, 143, 106371.	4.6	44
14	Trans-scale multi-physics coupling finite element model of concrete during freezing and thawing. Finite Elements in Analysis and Design, 2021, 188, 103535.	1.7	6
15	Plastic deformation mechanism of calcium-silicate hydrates determined by deviatoric-stress Raman spectroscopy. Cement and Concrete Research, 2021, 146, 106476.	4.6	19
16	Investigation of the mechanical and durability properties of sustainable high performance concrete based on calcium sulfoaluminate cement. Journal of Building Engineering, 2021, 43, 102656.	1.6	20
17	Multiscale X-ray tomography of cementitious materials: A review. Cement and Concrete Research, 2020, 128, 105824.	4.6	127
18	Influences of cross-linking and Al incorporation on the intrinsic mechanical properties of tobermorite. Cement and Concrete Research, 2020, 136, 106170.	4.6	58

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19	Mechanical properties of struvite-K: A high-pressure X-ray diffraction study. Cement and Concrete Research, 2020, 136, 106171.	4.6	28
20	Fibrillar calcium silicate hydrate seeds from hydrated tricalcium silicate lower cement demand. Cement and Concrete Research, 2020, 137, 106195.	4.6	75
21	Synchrotron X-ray Raman scattering shows the changes of the Ca environment in C-S-H exposed to high pressure. Cement and Concrete Research, 2020, 132, 106066.	4.6	24
22	Understanding the sulfate attack of Portland cementâ€“based materials exposed to applied electric fields: Mineralogical alteration and migration behavior of ionic species. Cement and Concrete Composites, 2020, 111, 103630.	4.6	31
23	Eco-friendly mortar with high-volume diatomite and fly ash: Performance and life-cycle assessment with regional variability. Journal of Cleaner Production, 2020, 261, 121224.	4.6	59
24	Advances in characterizing and understanding the microstructure of cementitious materials. Cement and Concrete Research, 2019, 124, 105806.	4.6	104
25	Green concrete containing diatomaceous earth and limestone: Workability, mechanical properties, and life-cycle assessment. Journal of Cleaner Production, 2019, 223, 662-679.	4.6	99
26	The influence of expansive cement on the mechanical, physical, and microstructural properties of hybrid-fiber-reinforced concrete. Cement and Concrete Composites, 2019, 96, 21-32.	4.6	48
27	Modification of poly(ethylene glycol) on the microstructure and mechanical properties of calcium silicate hydrates. Cement and Concrete Research, 2019, 115, 20-30.	4.6	55
28	The chemistry and structure of calcium (alumino) silicate hydrate: A study by XANES, ptychographic imaging, and wide- and small-angle scattering. Cement and Concrete Research, 2019, 115, 367-378.	4.6	104
29	A high-pressure X-ray diffraction study of the crystalline phases in calcium aluminate cement paste. Cement and Concrete Research, 2018, 108, 38-45.	4.6	24
30	The effect of steel and polypropylene fibers on the chloride diffusivity and drying shrinkage of high-strength concrete. Composites Part B: Engineering, 2018, 139, 84-96.	5.9	149
31	Preferred orientation of calcium aluminosilicate hydrate induced by confined compression. Cement and Concrete Research, 2018, 113, 186-196.	4.6	63
32	Synchrotron X-ray nanotomographic and spectromicroscopic study of the tricalcium aluminate hydration in the presence of gypsum. Cement and Concrete Research, 2018, 111, 130-137.	4.6	79
33	Fracture properties of the alkali silicate gel using microscopic scratch testing. Cement and Concrete Composites, 2017, 79, 71-75.	4.6	13
34	Multi-scale study of high-strength low-thermal-conductivity cement composites containing cenospheres. Cement and Concrete Composites, 2017, 80, 91-103.	4.6	59
35	Solution chemistry of cubic and orthorhombic tricalcium aluminate hydration. Cement and Concrete Research, 2017, 100, 176-185.	4.6	59
36	Scalable 2.45ÂGHz electrically small antenna design for metaresonator array. Journal of Engineering, 2017, 2017, 170-174.	0.6	7

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37	CaL_{2,3}-edge near edge X-ray absorption fine structure of tricalcium aluminate, gypsum, and calcium (sulfo)aluminate hydrates. American Mineralogist, 2017, 102, 900-908.	0.9	21
38	Concrete mixture proportioning for desired strength and reduced global warming potential. Construction and Building Materials, 2016, 128, 410-421.	3.2	60
39	Fiber reinforced mortar affected by alkali-silica reaction: A study by synchrotron microtomography. Cement and Concrete Composites, 2016, 68, 123-130.	4.6	26
40	Comparison indices for design and proportioning of concrete mixtures taking environmental impacts into account. Cement and Concrete Composites, 2016, 68, 131-143.	4.6	54
41	Developments in TEM Nanotomography of Calcium Silicate Hydrate. Journal of the American Ceramic Society, 2015, 98, 2307-2312.	1.9	15
42	Soft Xâ€ray Spectromicroscopic Investigation of Synthetic Câ€Sâ€H and C 3 S Hydration Products. Journal of the American Ceramic Society, 2015, 98, 2914-2920.	1.9	19
43	Mechanical properties of jennite: A theoretical and experimental study. Cement and Concrete Research, 2015, 71, 106-114.	4.6	33
44	Advances in understanding hydration of Portland cement. Cement and Concrete Research, 2015, 78, 38-56.	4.6	762
45	Atomic and nano-scale characterization of a 50-year-old hydrated C3S paste. Cement and Concrete Research, 2015, 77, 36-46.	4.6	42
46	Development of ultra-lightweight cement composites with low thermal conductivity and high specific strength for energy efficient buildings. Construction and Building Materials, 2015, 87, 100-112.	3.2	153
47	Mechanical properties, durability, and life-cycle assessment of self-consolidating concrete mixtures made with blended portland cements containing fly ash and limestone powder. Cement and Concrete Composites, 2015, 56, 59-72.	4.6	324
48	First-principles elasticity of monocarboaluminate hydrates. American Mineralogist, 2014, 99, 1360-1368.	0.9	21
49	Multiscale characterization of chemicalâ€“mechanical interactions between polymer fibers and cementitious matrix. Cement and Concrete Composites, 2014, 48, 9-18.	4.6	23
50	In situ 3D monitoring of corrosion on carbon steel and ferritic stainless steel embedded in cement paste. Corrosion Science, 2014, 83, 409-418.	3.0	67
51	Statistical evaluation of the mechanical properties of high-volume class F fly ash concretes. Construction and Building Materials, 2014, 54, 432-442.	3.2	55
52	Calcium sulfoaluminate (Ye'elimite) hydration in the presence of gypsum, calcite, and vaterite. Cement and Concrete Research, 2014, 65, 15-20.	4.6	176
53	Characterization of natural pozzolan-based geopolymeric binders. Cement and Concrete Composites, 2014, 53, 97-104.	4.6	83
54	Characterization of morphology and hydration products of high-volume fly ash paste by monochromatic scanning x-ray micro-diffraction (Î¼-SXRD). Cement and Concrete Research, 2014, 59, 155-164.	4.6	51

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55	A comparative study of self-consolidating concretes incorporating high-volume natural pozzolan or high-volume fly ash. Construction and Building Materials, 2014, 67, 14-19.	3.2	102
56	Incorporating carbon sequestration materials in civil infrastructure: A micro and nano-structural analysis. Cement and Concrete Composites, 2013, 40, 14-20.	4.6	28
57	Determination of the elastic properties of amorphous materials: Case study of alkaliâ€“silica reaction gel. Cement and Concrete Research, 2013, 54, 55-60.	4.6	24
58	Unlocking the secrets of Al-tobermorite in Roman seawater concrete. American Mineralogist, 2013, 98, 1669-1687.	0.9	133
59	A coupled mechanical and chemical damage model for concrete affected by alkaliâ€“silica reaction. Cement and Concrete Research, 2013, 53, 196-210.	4.6	40
60	Early age hydration of calcium sulfoaluminate (synthetic ye'elimite,) in the presence of gypsum and varying amounts of calcium hydroxide. Cement and Concrete Research, 2013, 48, 105-115.	4.6	160
61	Molecular Dynamics Study of Water Molecules in Interlayer of 14 Ã... Tobermorite. Journal of Advanced Concrete Technology, 2013, 11, 180-188.	0.8	12
62	Rietveld refinement of the structures of 1.0 C-S-H and 1.5 C-S-H. Cement and Concrete Research, 2012, 42, 1534-1548.	4.6	104
63	Morphological quantification of hierarchical geomaterials by X-ray nano-CT bridges the gap from nano to micro length scales. American Mineralogist, 2012, 97, 480-483.	0.9	66
64	High pressure study of low compressibility tetracalcium aluminum carbonate hydrates 3CaOÂ·Al2O3Â·CaCO3Â·11H2O. Cement and Concrete Research, 2012, 42, 105-110.	4.6	64
65	Experimental determination of bulk modulus of 14Ã... tobermorite using high pressure synchrotron X-ray diffraction. Cement and Concrete Research, 2012, 42, 397-403.	4.6	67
66	Microstructural and compositional change of NaOH-activated high calcium fly ash by incorporating Na-aluminate and co-existence of geopolymeric gel and Câ€“Sâ€“H(I). Cement and Concrete Research, 2012, 42, 673-685.	4.6	39
67	Elastic Properties of Tricalcium Aluminate from Highâ€Pressure Experiments and Firstâ€Principles Calculations. Journal of the American Ceramic Society, 2012, 95, 2972-2978.	1.9	32
68	Determination of the bulk modulus of hydroxycancrinite, a possible zeolitic precursor in geopolymers, by high-pressure synchrotron X-ray diffraction. Cement and Concrete Composites, 2011, 33, 1014-1019.	4.6	19
69	Does the Al substitution in Câ€“Sâ€“H(I) change its mechanical property?. Cement and Concrete Research, 2011, 41, 102-106.	4.6	57
70	Bulk modulus of basic sodalite, Na8[AlSiO4]6(OH)2Â·2H2O, a possible zeolitic precursor in coal-fly-ash-based geopolymers. Cement and Concrete Research, 2011, 41, 107-112.	4.6	29
71	Pressure induced reactions amongst calcium aluminate hydrate phases. Cement and Concrete Research, 2011, 41, 571-578.	4.6	37
72	The study of disorder and nanocrystallinity in Câ€“Sâ€“H, supplementary cementitious materials and geopolymers using pair distribution function analysis. Cement and Concrete Research, 2011, 41, 696-710.	4.6	99

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73	The evolution of strength and crystalline phases for alkali-activated ground blast furnace slag and fly ash-based geopolymers. Cement and Concrete Research, 2010, 40, 189-196.	4.6	381
74	The structure of alkali silicate gel by total scattering methods. Cement and Concrete Research, 2010, 40, 892-897.	4.6	46
75	Poroelastic model for concrete exposed to freezing temperatures. Cement and Concrete Research, 2008, 38, 40-48.	4.6	223
76	Single-crystal elastic constants of natural ettringite. Cement and Concrete Research, 2008, 38, 885-889.	4.6	60
77	The influence of polymers on the hydration of portland cement phases analyzed by soft X-ray transmission microscopy. Cement and Concrete Research, 2006, 36, 1501-1507.	4.6	93
78	A model to predict the amount of calcium hydroxide in concrete containing mineral admixtures. Cement and Concrete Research, 2005, 35, 1914-1921.	4.6	76
79	The alkaliâ€“silica reaction. Cement and Concrete Research, 2001, 31, 1549-1552.	4.6	31
80	Stress analysis of expansive reactions in concrete. Cement and Concrete Research, 2000, 30, 843-848.	4.6	28
81	The alkali-silica reaction. Cement and Concrete Research, 1999, 29, 527-530.	4.6	48
82	INHOMOGENEOUS INTERFACIAL TRANSITION ZONE MODEL FOR THE BULK MODULUS OF MORTAR. Cement and Concrete Research, 1997, 27, 1113-1122.	4.6	156
83	Concrete: A three phase material. Cement and Concrete Research, 1993, 23, 147-151.	4.6	176
84	Analysis of the aggregate-cement paste interface using grazing incidence X-ray scattering. Cement and Concrete Research, 1989, 19, 987-988.	4.6	8
85	Texture of calcium hydroxide near the cement paste-aggregate interface. Cement and Concrete Research, 1988, 18, 823-829.	4.6	35