Matthieu Vandamme

List of Publications by Year
in descending order

44 papers	3,670 citations	236833 25 h-index	254106 43 g-index
45 all docs	45 docs citations	45 times ranked	2357 citing authors

#	Article	IF	Citations
1	CO2 plume and pressure monitoring through pressure sensors above the caprock. International Journal of Greenhouse Gas Control, 2022, 117, 103660.	2.3	4
2	Modeling transient variations of permeability in coal seams at the reservoir scale. Journal of Natural Gas Science and Engineering, 2021, 88, 103796.	2.1	6
3	Impact of an SRA (hexylene glycol) on irreversible drying shrinkage and pore solution properties of cement pastes. Cement and Concrete Research, 2021, 143, 106227.	4.6	14
4	Advances in atomistic modeling and understanding of drying shrinkage in cementitious materials. Cement and Concrete Research, 2021, 148, 106536.	4.6	41
5	Experimental investigation of the short-term creep recovery of hardened cement paste at micrometre length scale. Cement and Concrete Research, 2021, 149, 106562.	4.6	13
6	Collapse and cavitation during the drying of water-saturated PDMS sponges with closed porosity. Soft Matter, 2020, 16, 9693-9704.	1.2	3
7	Micro-cantilever testing on the short-term creep behaviour of cement paste at micro-scale. Cement and Concrete Research, 2020, 134, 106105.	4.6	23
8	A viscoelastic poromechanical model for shrinkage and creep of concrete. Cement and Concrete Research, 2020, 129, 105970.	4.6	36
9	Dissolution kinetics of trapped air in a spherical void: Modeling the long-term saturation of cementitious materials. Cement and Concrete Research, 2020, 130, 105996.	4.6	3
10	Coupling between adsorption and mechanics (and vice versa). Current Opinion in Chemical Engineering, 2019, 24, 12-18.	3.8	25
11	Is long-term autogenous shrinkage a creep phenomenon induced by capillary effects due to self-desiccation?. Cement and Concrete Research, 2018, 108, 186-200.	4.6	42
12	Two models based on local microscopic relaxations to explain long-term basic creep of concrete. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2018, 474, 20180477.	1.0	8
13	Cavitation of water in hardened cement paste under short-term desorption measurements. Materials and Structures/Materiaux Et Constructions, 2018, 51, 1.	1.3	43
14	Permeability changes in coal seams: The role of anisotropy. International Journal of Coal Geology, 2018, 199, 52-64.	1.9	17
15	Flexibility of nanolayers and stacks: implications in the nanostructuration of clays. Soft Matter, 2018, 14, 7354-7367.	1.2	16
16	Hydration Phase Diagram of Clay Particles from Molecular Simulations. Langmuir, 2017, 33, 12766-12776.	1.6	51
17	Duality between Creep and Relaxation of a Cement Paste at Different Levels of Relative Humidity: Characterization by Microindentation and Analytical Modeling. Journal of Nanomechanics & Micromechanics, 2017, 7, .	1.4	11
18	Nanoscale origin of the thermo-mechanical behavior of clays. Acta Geotechnica, 2017, 12, 1261-1279.	2.9	36

#	Article	IF	Citations
19	Time evolutions of non-aging viscoelastic Poisson's ratio of concrete and implications for creep of C-S-H. Cement and Concrete Research, 2016, 90, 144-161.	4.6	24
20	Transient effects of drying creep in nanoporous solids: understanding the effects of nanoscale energy barriers. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160490.	1.0	11
21	Assessing the efficiency of entrained air voids for freeze-thaw durability through modeling. Cement and Concrete Research, 2016, 88, 43-59.	4.6	77
22	Effect of Water on Elastic and Creep Properties of Self-Standing Clay Films. Langmuir, 2016, 32, 1370-1379.	1.6	17
23	Micromechanical contribution for the prediction of the viscoelastic properties of high rate recycled asphalt and influence of the level blending. Archives of Civil and Mechanical Engineering, 2015, 15, 1037-1045.	1.9	2
24	Theoretical and practical differences between creep and relaxation Poissonâ€™s ratios in linear viscoelasticity. Mechanics of Time-Dependent Materials, 2015, 19, 537-555.	2.3	32
25	Creep of Lubricated Layered Nano-Porous Solids and Application To Cementitious Materials. Journal of Nanomechanics & Micromechanics, 2015, 5, .	1.4	12
26	A poromechanical model for coal seams saturated with binary mixtures of CH4 and CO2. Journal of the Mechanics and Physics of Solids, 2014, 71, 97-111.	2.3	37
27	Estimating diffusion-capacity parameters of a coal bed using the gas pressure measured in a hole and the solution of an inverse problem. Journal of Applied and Industrial Mathematics, 2014, 8, 267-273.	0.1	6
28	Long-term creep properties of cementitious materials: Comparing microindentation testing with macroscopic uniaxial compressive testing. Cement and Concrete Research, 2014, 58, 89-98.	4.6	99
29	Elastic Properties of Swelling Clay Particles at Finite Temperature upon Hydration. Journal of Physical Chemistry C, 2014, 118, 8933-8943.	1.5	83
30	Full 3D investigation and characterisation of capillary collapse of a loose unsaturated sand using X-ray CT. Granular Matter, 2013, 15, 783-800.	1.1	59
31	ESEM Study of the Humidity-Induced Swelling of Clay Film. Langmuir, 2013, 29, 12823-12833.	1.6	38
32	Nanoindentation investigation of creep properties of calcium silicate hydrates. Cement and Concrete Research, 2013, 52, 38-52.	4.6	241
33	Quantifying plasticity-independent creep compliance and relaxation of viscoelastoplastic materials under contact loading. Journal of Materials Research, 2012, 27, 302-312.	1.2	66
34	Adsorption-Induced Deformation of Microporous Materials: Coal Swelling Induced by CO₂â€“CH₄ Competitive Adsorption. Langmuir, 2012, 28, 2659-2670.	1.6	213
35	Poromechanics of microporous media. Journal of the Mechanics and Physics of Solids, 2012, 60, 606-622.	2.3	143
36	Does microstructure matter for statistical nanoindentation techniques?. Cement and Concrete Composites, 2010, 32, 92-99.	4.6	129

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37	Nanogranular packing of Câ€“Sâ€“H at substochiometric conditions. Cement and Concrete Research, 2010, 40, 14-26.	4.6	277
38	A Coupled Nanoindentation/SEMâ€EDS Study on Low Water/Cement Ratio Portland Cement Paste: Evidence for Câ€“Sâ€“H/Ca(OH)‹sub›2‹/sub› Nanocomposites. Journal of the American Ceramic Society, 2010, 93, 1484-1493.	1.9	251
39	Nanoindentation analysis as a two-dimensional tool for mapping the mechanical properties of complex surfaces. Journal of Materials Research, 2009, 24, 679-690.	1.2	170
40	Nanogranular origin of concrete creep. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10552-10557.	3.3	350
41	Surface roughness criteria for cement paste nanoindentation. Cement and Concrete Research, 2008, 38, 467-476.	4.6	338
42	Statistical Indentation Techniques for Hydrated Nanocomposites: Concrete, Bone, and Shale. Journal of the American Ceramic Society, 2007, 90, 2677-2692.	1.9	464
43	Viscoelastic solutions for conical indentation. International Journal of Solids and Structures, 2006, 43, 3142-3165.	1.3	138
44	CO2Storage in Coal Seams: Coupling Surface Adsorption and Strain. , 0, , 115-132.		1