Enrico M Masoero

List of Publications by Year
in descending order

43 papers	1,287 citations	471477 17 h-index	434170 31 g-index
49 all docs	49 docs citations	49 times ranked	1008 citing authors

#	Article	IF	Citations
1	Nanoscale shear cohesion between cement hydrates: The role of water diffusivity under structural and electrostatic confinement. Cement and Concrete Research, 2022, 154, 106716.	11.0	14
2	Topology optimization using the discrete element method. Part 1: Methodology, validation, and geometric nonlinearity. Meccanica, 2022, 57, 1213-1231.	2.0	4
3	Topology optimization using the discrete element method. Part 2: Material nonlinearity. Meccanica, 2022, 57, 1233-1250.	2.0	4
4	Recent Advances in Nature-Inspired Solutions for Ground Engineering (NiSE). International Journal of Geosynthetics and Ground Engineering, 2022, 8, 1.	2.0	25
5	A review of coarse grained and mesoscale simulations of Câ€"Sâ€"H. Cement and Concrete Research, 2022, 159, 106857.	11.0	14
6	Early age volume changes in metakaolin geopolymers: Insights from molecular simulations and experiments. Cement and Concrete Research, 2021, 144, 106428.	11.0	17
7	Nanoparticle simulations of logarithmic creep and microprestress relaxation in concrete and other disordered solids. Cement and Concrete Research, 2020, 137, 106181.	11.0	11
8	CASCO: a simulator of load paths in 2D frames during progressive collapse. SN Applied Sciences, 2020, 2, 1.	2.9	1
9	Simulations of Crystal Dissolution Using Interacting Particles: Prediction of Stress Evolution and Rates at Defects and Application to Tricalcium Silicate. Journal of Physical Chemistry C, 2020, 124, 19603-19615.	3.1	11
10	Mesoscale Mechanisms of Cement Hydration: BNG Model and Particle Simulations. , 2020, , 177-197.		0
11	Century-long expansion of hydrating cement counteracting concrete shrinkage due to humidity drop from selfdesiccation or external drying. Materials and Structures/Materiaux Et Constructions, 2019, 52, 1.	3.1	18
12	The ONIX model: a parameter-free multiscale framework for the prediction of self-desiccation in concrete. Cement and Concrete Composites, 2019, 103, 36-48.	10.7	33
13	Capillary Stress and Structural Relaxation in Moist Granular Materials. Langmuir, 2019, 35, 4397-4402.	3.5	17
14	Long-term creep deformations in colloidal calciumâ€"silicateâ€"hydrate gels by accelerated aging simulations. Journal of Colloid and Interface Science, 2019, 542, 339-346.	9.4	19
15	Cement pastes with UV-irradiated polypropylene: Fracture energy and the benefit of adding metakaolin. Construction and Building Materials, 2018, 165, 303-309.	7.2	5
16	Mesoscale Mechanisms of Cement Hydration: BNG Model and Particle Simulations. , 2018, , 1-21.		1
17	Atomistic Simulations of Geopolymer Models: The Impact of Disorder on Structure and Mechanics. ACS Applied Materials & Interfaces, 2018, 10, 22809-22820.	8.0	77
18	Câ€"Sâ€"H gel densification: The impact of the nanoscale on self-desiccation and sorption isotherms. Cement and Concrete Research, 2018, 109, 103-119.	11.0	28

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19	Precipitation Mechanisms of Mesoporous Nanoparticle Aggregates: Off-Lattice, Coarse-Grained, Kinetic Simulations. Crystal Growth and Design, 2017, 17, 1316-1327.	3.0	28
20	Topological Control on the Structural Relaxation of Atomic Networks under Stress. Physical Review Letters, 2017, 119, 035502.	7.8	51
21	Kinetic mechanisms and activation energies for hydration of standard and highly reactive forms of Î²-dicalcium silicate (C2S). Cement and Concrete Research, 2017, 100, 322-328.	11.0	56
22	Mesoscale texture of cement hydrates. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2029-2034.	7.1	193
23	Modelling Damage from the Nano-Scale Up. , 2015, , .		0
24	Hysteresis from Multiscale Porosity: Modeling Water Sorption and Shrinkage in Cement Paste. Physical Review Applied, 2015, 3, .	3.8	112
25	Kinetic Simulations of Cement Creep: Mechanisms from Shear Deformations of Glasses. , 2015, , .		2
26	Creep of Bulk C-S-H: Insights from Molecular Dynamics Simulations. , 2015, , .		7
27	Modelling Hysteresis in the Water Sorption and Drying Shrinkage of Cement Paste. , 2015, , .		3
28	The Meso-Scale Texture of Cement Hydrate Gels: Out-of-Equilibrium Evolution and Thermodynamic Driving. , 2015, , .		1
29	Hydration Kinetics and Gel Morphology of C-S-H. , 2015, , .		2
30	C-S-H across Length Scales: From Nano to Micron. , 2015, , .		1
31	The Role of Water on C-S-H Gel Shear Strength Studied by Molecular Dynamics Simulations. , 2015, , .		1
32	A soft matter in construction â€“ Statistical physics approach to formation and mechanics of Câ€“Sâ€“H gels in cement. European Physical Journal: Special Topics, 2014, 223, 2285-2295.	2.6	32
33	Nano-scale mechanics of colloidal Câ€“Sâ€“H gels. Soft Matter, 2014, 10, 491-499.	2.7	65
34	A Reaction Zone Hypothesis for the Effects of Particle Size and Waterâ€toâ€Cement Ratio on the Early Hydration Kinetics of C₃S. Journal of the American Ceramic Society, 2014, 97, 967-975.	3.8	49
35	Water Isotherms, Shrinkage and Creep of Cement Paste: Hypotheses, Models and Experiments. , 2013, , .		6
36	Shear deformations in calcium silicate hydrates. Soft Matter, 2013, 9, 7333.	2.7	109

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37	Progressive collapse of 2D framed structures: An analytical model. Engineering Structures, 2013, 54, 94-102.	5.3	36
38	Hierarchical Structures for a Robustness-Oriented Capacity Design. Journal of Engineering Mechanics - ASCE, 2012, 138, 1339-1347.	2.9	15
39	Nanostructure and Nanomechanics of Cement: Polydisperse Colloidal Packing. Physical Review Letters, 2012, 109, 155503.	7.8	161
40	Progressive Collapse Mechanisms of Brittle and Ductile Framed Structures. Journal of Engineering Mechanics - ASCE, 2010, 136, 987-995.	2.9	45
41	Optimization of Cutting Process for Ancient Masonry: The Greek Gymnasium in Naples. International Journal of Architectural Heritage, 2009, 3, 235-257.	3.1	1
42	Analogies between progressive collapse of structures and fracture of materials. International Journal of Fracture, 2008, 154, 177-193.	2.2	6
43	Energy-Based Study of Structures under Accidental Damage. Key Engineering Materials, 0, 417-418, 557-560.	0.4	3