

Dongshuai Hou

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2994723/publications.pdf>

Version: 2024-02-01

196
papers

7,686
citations

43973

48
h-index

74018

75
g-index

198
all docs

198
docs citations

198
times ranked

2826
citing authors

#	ARTICLE	IF	CITATIONS
1	Reactive molecular dynamics and experimental study of graphene-cement composites: Structure, dynamics and reinforcement mechanisms. <i>Carbon</i> , 2017, 115, 188-208.	5.4	301
2	Calcium silicate hydrate from dry to saturated state: Structure, dynamics and mechanical properties. <i>Acta Materialia</i> , 2014, 67, 81-94.	3.8	241
3	Molecular dynamics modeling of the structure, dynamics, energetics and mechanical properties of cement-polymer nanocomposite. <i>Composites Part B: Engineering</i> , 2019, 162, 433-444.	5.9	231
4	Mechanism of cement paste reinforced by graphene oxide/carbon nanotubes composites with enhanced mechanical properties. <i>RSC Advances</i> , 2015, 5, 100598-100605.	1.7	206
5	Reactive Molecular Simulation on Water Confined in the Nanopores of the Calcium Silicate Hydrate Gel: Structure, Reactivity, and Mechanical Properties. <i>Journal of Physical Chemistry C</i> , 2015, 119, 1346-1358.	1.5	194
6	Molecular Dynamics Study on the Structure and Dynamics of NaCl Solution Transport in the Nanometer Channel of CASH Gel. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 9498-9509.	3.2	172
7	Optimized design of ultra-high performance concrete (UHPC) with a high wet packing density. <i>Cement and Concrete Research</i> , 2019, 126, 105921.	4.6	151
8	Mechanical properties of calcium silicate hydrate (C-S-H) at nano-scale: A molecular dynamics study. <i>Materials Chemistry and Physics</i> , 2014, 146, 503-511.	2.0	146
9	Molecular dynamics study of water and ions transport in nano-pore of layered structure: A case study of tobermorite. <i>Microporous and Mesoporous Materials</i> , 2014, 195, 9-20.	2.2	141
10	Modified Lucas-Washburn function of capillary transport in the calcium silicate hydrate gel pore: A coarse-grained molecular dynamics study. <i>Cement and Concrete Research</i> , 2020, 136, 106166.	4.6	126
11	Chloride ions transport and adsorption in the nano-pores of silicate calcium hydrate: Experimental and molecular dynamics studies. <i>Construction and Building Materials</i> , 2016, 126, 991-1001.	3.2	108
12	Sustainable use of red mud in ultra-high performance concrete (UHPC): Design and performance evaluation. <i>Cement and Concrete Composites</i> , 2021, 115, 103862.	4.6	108
13	Effects of graphene oxide on the properties and microstructures of the magnesium potassium phosphate cement paste. <i>Construction and Building Materials</i> , 2016, 119, 107-112.	3.2	106
14	Interfacial Connection Mechanisms in Calcium-Silicate-Hydrates/Polymer Nanocomposites: A Molecular Dynamics Study. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 41014-41025.	4.0	106
15	Experimental and molecular dynamics studies on the transport and adsorption of chloride ions in the nano-pores of calcium silicate phase: The influence of calcium to silicate ratios. <i>Microporous and Mesoporous Materials</i> , 2018, 255, 23-35.	2.2	105
16	Comparative evaluation on the dispersion and stability of graphene oxide in water and cement pore solution by incorporating silica fume. <i>Cement and Concrete Composites</i> , 2018, 94, 33-42.	4.6	96
17	Two-scale modeling of transport properties of cement paste: Formation factor, electrical conductivity and chloride diffusivity. <i>Computational Materials Science</i> , 2015, 110, 270-280.	1.4	95
18	Uniaxial tension study of calcium silicate hydrate (C-S-H): structure, dynamics and mechanical properties. <i>Materials and Structures/Materiaux Et Constructions</i> , 2015, 48, 3811-3824.	1.3	84

#	ARTICLE	IF	CITATIONS
19	Water and chloride ions migration in porous cementitious materials: An experimental and molecular dynamics investigation. <i>Cement and Concrete Research</i> , 2017, 102, 161-174.	4.6	83
20	Reactive force field simulation on polymerization and hydrolytic reactions in calcium aluminate silicate hydrate (Câ€“Aâ€“Sâ€“H) gel: structure, dynamics and mechanical properties. <i>RSC Advances</i> , 2015, 5, 448-461.	1.7	78
21	Water transport in the nano-pore of the calcium silicate phase: reactivity, structure and dynamics. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 1411-1423.	1.3	75
22	Experimental and computational investigation of magnesium phosphate cement mortar. <i>Construction and Building Materials</i> , 2016, 112, 331-342.	3.2	75
23	Nanoscale mechanism of ions immobilized by the geopolymer: A molecular dynamics study. <i>Journal of Nuclear Materials</i> , 2020, 528, 151841.	1.3	74
24	Reactive force-field molecular dynamics study on graphene oxide reinforced cement composite: functional group de-protonation, interfacial bonding and strengthening mechanism. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 8773-8789.	1.3	72
25	Combine ingress of chloride and carbonation in marine-exposed concrete under unsaturated environment: A numerical study. <i>Ocean Engineering</i> , 2019, 189, 106350.	1.9	72
26	Numerical study of carbonation and its effect on chloride binding in concrete. <i>Cement and Concrete Composites</i> , 2019, 104, 103402.	4.6	69
27	Molecular Dynamics Study of Water and Ions Transported during the Nanopore Calcium Silicate Phase: Case Study of Jennite. <i>Journal of Materials in Civil Engineering</i> , 2014, 26, 930-940.	1.3	67
28	Molecular dynamics simulation study on interfacial shear strength between calcium-silicate-hydrate and polymer fibers. <i>Construction and Building Materials</i> , 2020, 257, 119557.	3.2	67
29	Insights on the capillary transport mechanism in the sustainable cement hydrate impregnated with graphene oxide and epoxy composite. <i>Composites Part B: Engineering</i> , 2019, 173, 106907.	5.9	66
30	Two-scale modeling of the capillary network in hydrated cement paste. <i>Construction and Building Materials</i> , 2014, 64, 11-21.	3.2	65
31	Micro-mechanical properties of calcium sulfoaluminate cement and the correlation with microstructures. <i>Cement and Concrete Composites</i> , 2017, 80, 10-16.	4.6	64
32	Unraveling disadhesion mechanism of epoxy/CSH interface under aggressive conditions. <i>Cement and Concrete Research</i> , 2021, 146, 106489.	4.6	62
33	Molecular dynamics study on the chemical bound, physical adsorbed and ultra-confined water molecules in the nano-pore of calcium silicate hydrate. <i>Construction and Building Materials</i> , 2017, 151, 563-574.	3.2	61
34	Transport Properties of Sulfate and Chloride Ions Confined between Calcium Silicate Hydrate Surfaces: A Molecular Dynamics Study. <i>Journal of Physical Chemistry C</i> , 2018, 122, 28021-28032.	1.5	60
35	Molecular dynamics study on the mode I fracture of calcium silicate hydrate under tensile loading. <i>Engineering Fracture Mechanics</i> , 2014, 131, 557-569.	2.0	59
36	Insight on the mechanism of sulfate attacking on the cement paste with granulated blast furnace slag: An experimental and molecular dynamics study. <i>Construction and Building Materials</i> , 2018, 169, 601-611.	3.2	58

#	ARTICLE	IF	CITATIONS
37	Tuning interfacial structure and mechanical properties of graphene oxide sheets/polymer nanocomposites by controlling functional groups of polymer. <i>Applied Surface Science</i> , 2020, 504, 144152.	3.1	58
38	Morphology of calcium silicate hydrate (C-S-H) gel: a molecular dynamic study. <i>Advances in Cement Research</i> , 2015, 27, 135-146.	0.7	56
39	Cement-based material modified by in-situ polymerization: From experiments to molecular dynamics investigation. <i>Composites Part B: Engineering</i> , 2020, 194, 108036.	5.9	56
40	Effect of environmental pH values on phase composition and microstructure of Portland cement paste under sulfate attack. <i>Composites Part B: Engineering</i> , 2021, 216, 108862.	5.9	55
41	Estimate the relative electrical conductivity of C-S-H gel from experimental results. <i>Construction and Building Materials</i> , 2014, 71, 392-396.	3.2	54
42	Insights into the interfacial strengthening mechanisms of calcium-silicate-hydrate/polymer nanocomposites. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 8247-8266.	1.3	53
43	Theoretical investigation of epoxy detachment from C-S-H interface under aggressive environment. <i>Construction and Building Materials</i> , 2020, 264, 120232.	3.2	53
44	Preparation and mechanism of graphene oxide/isobutyltriethoxysilane composite emulsion and its effects on waterproof performance of concrete. <i>Construction and Building Materials</i> , 2019, 208, 343-349.	3.2	52
45	Molecular dynamics simulation of the interfacial bonding properties between graphene oxide and calcium silicate hydrate. <i>Construction and Building Materials</i> , 2020, 260, 119927.	3.2	51
46	Experimental and molecular modeling of polyethylene fiber/cement interface strengthened by graphene oxide. <i>Cement and Concrete Composites</i> , 2020, 112, 103676.	4.6	51
47	Molecular simulation of "hydrolytic weakening": A case study on silica. <i>Acta Materialia</i> , 2014, 80, 264-277.	3.8	50
48	External sulfate attack to reinforced concrete under drying-wetting cycles and loading condition: Numerical simulation and experimental validation by ultrasonic array method. <i>Construction and Building Materials</i> , 2017, 139, 365-373.	3.2	50
49	The effect of water molecules on the structure, dynamics, and mechanical properties of sodium aluminosilicate hydrate (NASH) gel: A molecular dynamics study. <i>Construction and Building Materials</i> , 2018, 193, 491-500.	3.2	50
50	Molecular structure, dynamics, and mechanical behavior of sodium aluminosilicate hydrate (NASH) gel at elevated temperature: a molecular dynamics study. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 20695-20711.	1.3	49
51	Insights into the interfacial strengthening mechanism of waste rubber/cement paste using polyvinyl alcohol: Experimental and molecular dynamics study. <i>Cement and Concrete Composites</i> , 2020, 114, 103791.	4.6	49
52	Superhydrophobic anticorrosive coating for concrete through in-situ bionic induction and gradient mineralization. <i>Construction and Building Materials</i> , 2020, 257, 119510.	3.2	49
53	A preliminary investigation of the properties of potassium magnesium phosphate cement-based grouts mixed with fly ash, water glass and bentonite. <i>Construction and Building Materials</i> , 2020, 237, 117501.	3.2	48
54	Application of neutron radiography in observing and quantifying the time-dependent moisture distributions in multi-cracked cement-based composites. <i>Cement and Concrete Composites</i> , 2017, 78, 13-20.	4.6	47

#	ARTICLE	IF	CITATIONS
55	Insights on Capillary Adsorption of Aqueous Sodium Chloride Solution in the Nanometer Calcium Silicate Channel: A Molecular Dynamics Study. <i>Journal of Physical Chemistry C</i> , 2017, 121, 13786-13797.	1.5	47
56	Fabrication of superhydrophobicity on foamed concrete surface by GO/silane coating. <i>Materials Letters</i> , 2020, 265, 127423.	1.3	47
57	Alkali-activated artificial aggregates fabricated by red mud and fly ash: Performance and microstructure. <i>Construction and Building Materials</i> , 2021, 281, 122552.	3.2	47
58	The mechanism of cesium ions immobilization in the nanometer channel of calcium silicate hydrate: a molecular dynamics study. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 27974-27986.	1.3	45
59	Microscopic insight into nanodiamond polymer composites: reinforcement, structural, and interaction properties. <i>Nanoscale</i> , 2020, 12, 24107-24118.	2.8	45
60	Insights on the molecular structure evolution for tricalcium silicate and slag composite: From ^{29}Si and ^{27}Al NMR to molecular dynamics. <i>Composites Part B: Engineering</i> , 2020, 202, 108401.	5.9	45
61	Nanoscale insight on the epoxy-cement interface in salt solution: A molecular dynamics study. <i>Applied Surface Science</i> , 2020, 509, 145322.	3.1	45
62	A novel Zn(SCN) ₂ /ZnS nanocomposite for highly efficient Cr^{6+} removal from aqueous solutions. <i>RSC Advances</i> , 2017, 7, 35075-35085.	1.7	44
63	Nano-scale mechanical properties investigation of C-S-H from hydrated tri-calcium silicate by nano-indentation and molecular dynamics simulation. <i>Construction and Building Materials</i> , 2018, 189, 265-275.	3.2	44
64	Molecular structure and dynamics of an aqueous sodium chloride solution in nano-pores between portlandite surfaces: a molecular dynamics study. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 2059-2069.	1.3	43
65	Confined Water Dissociation in Disordered Silicate Nanometer-Channels at Elevated Temperatures: Mechanism, Dynamics and Impact on Substrates. <i>Langmuir</i> , 2016, 32, 4153-4168.	1.6	42
66	Influence of aluminates on the structure and dynamics of water and ions in the nanometer channel of calcium silicate hydrate (C-S-H) gel. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 2373-2387.	1.3	41
67	Insights on magnesium and sulfate ions' adsorption on the surface of sodium alumino-silicate hydrate (NASH) gel: a molecular dynamics study. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 18297-18310.	1.3	41
68	Molecular dynamics study on the weakening effect of moisture content on graphene oxide reinforced cement composite. <i>Chemical Physics Letters</i> , 2018, 708, 177-182.	1.2	41
69	Compositions and microstructures of hardened cement paste with carbonation curing and further water curing. <i>Construction and Building Materials</i> , 2021, 267, 121724.	3.2	41
70	Ionic hydration structure, dynamics and adsorption mechanism of sulfate and sodium ions in the surface of calcium silicate hydrate gel: A molecular dynamics study. <i>Applied Surface Science</i> , 2018, 448, 559-570.	3.1	40
71	Molecular dynamics study on ions and water confined in the nanometer channel of Friedel's salt: structure, dynamics and interfacial interaction. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 27049-27058.	1.3	40
72	Atomistic insights into cesium chloride solution transport through the ultra-confined calcium silicate hydrate channel. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 11892-11902.	1.3	40

#	ARTICLE	IF	CITATIONS
73	Design of sustainable ultra-high performance concrete: A review. <i>Construction and Building Materials</i> , 2021, 307, 124643.	3.2	40
74	RSM-based modelling and optimization of magnesium phosphate cement-based rapid-repair materials. <i>Construction and Building Materials</i> , 2020, 263, 120190.	3.2	39
75	Molecular dynamics study of solvated aniline and ethylene glycol monomers confined in calcium silicate nanochannels: a case study of tobermorite. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 15145-15159.	1.3	37
76	Molecular insight into the fluidity of cement pastes: Nano-boundary lubrication of cementitious materials. <i>Construction and Building Materials</i> , 2022, 316, 125800.	3.2	37
77	Calcite crystallization in the cement system: morphological diversity, growth mechanism and shape evolution. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 14174-14181.	1.3	36
78	Structure, Dynamics, and Mechanical Properties of Cross-Linked Calcium Aluminosilicate Hydrate: A Molecular Dynamics Study. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 9403-9417.	3.2	36
79	Reactive molecular simulation on the ordered crystal and disordered glass of the calcium silicate hydrate gel. <i>Ceramics International</i> , 2016, 42, 4333-4346.	2.3	34
80	A reactive molecular dynamics study of graphene oxide sheets in different saturated states: structure, reactivity and mechanical properties. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 11053-11066.	1.3	34
81	Characterization of sustainable ultra-high performance concrete (UHPC) including expanded perlite. <i>Construction and Building Materials</i> , 2021, 303, 124245.	3.2	34
82	Insights into the molecular structure and reinforcement mechanism of the hydrogel-cement nanocomposite: An experimental and molecular dynamics study. <i>Composites Part B: Engineering</i> , 2019, 177, 107421.	5.9	33
83	Structural, dynamic and mechanical evolution of water confined in the nanopores of disordered calcium silicate sheets. <i>Microfluidics and Nanofluidics</i> , 2015, 19, 1309-1323.	1.0	31
84	Modification of incorporation and in-situ polymerization of aniline on the nano-structure and meso-structure of calcium silicate hydrates. <i>Construction and Building Materials</i> , 2018, 182, 459-468.	3.2	31
85	Na and Cl immobilization by size controlled calcium silicate hydrate nanometer pores. <i>Construction and Building Materials</i> , 2019, 202, 622-635.	3.2	31
86	Unraveling the microstructural properties of cement-slag composite pastes incorporated with smart polymer-based corrosion inhibitors: From experiment to molecular dynamics. <i>Cement and Concrete Composites</i> , 2022, 125, 104298.	4.6	31
87	Electrochemical chloride extraction (ECE) based on the high performance conductive cement-based composite anode. <i>Construction and Building Materials</i> , 2018, 173, 149-159.	3.2	29
88	Experimental and computational study on chloride ion transport and corrosion inhibition mechanism of rubber concrete. <i>Construction and Building Materials</i> , 2021, 268, 121105.	3.2	29
89	Insights on the adhesive properties and debonding mechanism of CFRP/concrete interface under sulfate environment: From experiments to molecular dynamics. <i>Construction and Building Materials</i> , 2021, 269, 121247.	3.2	29
90	Comprehensive performances of carbon nanotube reinforced foam concrete with tetraethyl orthosilicate impregnation. <i>Construction and Building Materials</i> , 2017, 131, 512-516.	3.2	28

#	ARTICLE	IF	CITATIONS
91	Molecular dynamics study on calcium silicate hydrate subjected to tension loading and water attack: structural evolution, dynamics degradation and reactivity mechanism. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 11130-11144.	1.3	27
92	Experiment and molecular dynamics study on the mechanism for hydrophobic impregnation in cement-based materials: A case of octadecane carboxylic acid. <i>Construction and Building Materials</i> , 2019, 229, 116871.	3.2	27
93	Experimental and molecular dynamics studies on the durability of sustainable cement-based composites: Reinforced by graphene. <i>Construction and Building Materials</i> , 2020, 257, 119566.	3.2	27
94	Silane Coupling Agent Modification Treatment to Improve the Properties of Rubber-Cement Composites. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 12899-12911.	3.2	27
95	Insights on molecular structure and micro-properties of alkali-activated slag materials: A reactive molecular dynamics study. <i>Construction and Building Materials</i> , 2017, 139, 430-437.	3.2	26
96	Reactive molecular simulation on the calcium silicate hydrates/polyethylene glycol composites. <i>Chemical Physics Letters</i> , 2017, 687, 184-187.	1.2	26
97	Characterization of the corrosion profiles of reinforcement with different impressed current densities by X-ray micro-computed tomography. <i>Cement and Concrete Composites</i> , 2020, 109, 103583.	4.6	26
98	Enhancing interfacial bonding between epoxy and CSH using graphene oxide: An atomistic investigation. <i>Applied Surface Science</i> , 2021, 568, 150896.	3.1	26
99	Molecular Simulation of the Ions Ultraconfined in the Nanometer-Channel of Calcium Silicate Hydrate: Hydration Mechanism, Dynamic Properties, and Influence on the Cohesive Strength. <i>Inorganic Chemistry</i> , 2017, 56, 1881-1896.	1.9	25
100	Molecular dynamics study on the Tri-calcium silicate hydration in sodium sulfate solution: Interface structure, dynamics and dissolution mechanism. <i>Construction and Building Materials</i> , 2018, 170, 402-417.	3.2	24
101	Hydrophobic silane coating films for the inhibition of water ingress into the nanometer pore of calcium silicate hydrate gels. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 19026-19038.	1.3	24
102	Molecular dynamics study on sodium chloride solution transport through the Calcium-Silicate-Hydrate nanocone channel. <i>Construction and Building Materials</i> , 2022, 342, 128068.	3.2	24
103	Hydration for the Alite mineral: Morphology evolution, reaction mechanism and the compositional influences. <i>Construction and Building Materials</i> , 2017, 155, 413-426.	3.2	23
104	The effect of mechanical load on transport property and pore structure of alkali-activated slag concrete. <i>Construction and Building Materials</i> , 2018, 189, 397-408.	3.2	23
105	Molecular dynamics study on water and ions on the surface of graphene oxide sheet: Effects of functional groups. <i>Computational Materials Science</i> , 2019, 167, 237-247.	1.4	23
106	Insight on the sodium and chloride ions adsorption mechanism on the ettringite crystal: Structure, dynamics and interfacial interaction. <i>Computational Materials Science</i> , 2018, 153, 479-492.	1.4	22
107	Protective Mechanism of Silane on Concrete upon Marine Exposure. <i>Coatings</i> , 2019, 9, 558.	1.2	22
108	Concentration-induced wettability alteration of nanoscale NaCl solution droplets on the CSH surface. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 7449-7461.	1.3	22

#	ARTICLE	IF	CITATIONS
109	Mesoscale insights on the structure, mechanical performances and the damage process of calcium-silicate-hydrate. <i>Construction and Building Materials</i> , 2021, 287, 123031.	3.2	22
110	Investigation of composite silane emulsion modified by in-situ functionalized graphene oxide for cement-based materials. <i>Construction and Building Materials</i> , 2021, 304, 124662.	3.2	22
111	Performance cement-based composite obtained by in-situ growth of organic-inorganic frameworks during the cement hydration. <i>Construction and Building Materials</i> , 2022, 336, 127533.	3.2	22
112	Nanoscale insights on the interface between passive film of steel and cement hydrate: Diffusion, kinetics and mechanics. <i>Applied Surface Science</i> , 2020, 514, 145898.	3.1	21
113	The design and evaluation of a smart polymer-based fluids transport inhibitor. <i>Journal of Cleaner Production</i> , 2020, 257, 120528.	4.6	21
114	Molecular insight in the wetting behavior of nanoscale water droplet on CSH surface: Effects of Ca/Si ratio. <i>Applied Surface Science</i> , 2022, 587, 152811.	3.1	21
115	Functionalization enhancement interfacial bonding strength between graphene sheets and calcium silicate hydrate: Insights from molecular dynamics simulation. <i>Construction and Building Materials</i> , 2020, 261, 120500.	3.2	20
116	Effects of water and ions on bonding behavior between epoxy and hydrated calcium silicate: a molecular dynamics simulation study. <i>Journal of Materials Science</i> , 2021, 56, 16475-16490.	1.7	20
117	Multi-scale study water and ions transport in the cement-based materials:from molecular dynamics to random walk. <i>Microporous and Mesoporous Materials</i> , 2021, 325, 111330.	2.2	20
118	Effect of sulfate attack on the composition and micro-mechanical properties of C-A-S-H gel in cement-slag paste: A combined study of nanoindentation and SEM-EDS. <i>Construction and Building Materials</i> , 2022, 345, 128275.	3.2	20
119	Structure, reactivity and mechanical properties of water ultra-confined in the ordered crystal: A case study of jennite. <i>Microporous and Mesoporous Materials</i> , 2015, 204, 106-114.	2.2	19
120	The inhibiting effect and mechanisms of smart polymers on the transport of fluids throughout nano-channels. <i>Applied Surface Science</i> , 2020, 500, 144019.	3.1	19
121	Synthesis, microstructure and mechanical properties of tricalcium phosphate-hydroxyapatite (TCP/HA) composite ceramic. <i>Ceramics International</i> , 2020, 46, 9810-9816.	2.3	19
122	Water distribution characteristics in cement paste with capillary absorption. <i>Construction and Building Materials</i> , 2020, 240, 117767.	3.2	19
123	Molecular dynamics study on ultra-confined NaCl solution in the silane coupling agent modified rubber calcium silicate hydrate nano-pore. <i>Construction and Building Materials</i> , 2021, 270, 121418.	3.2	19
124	Research and application progress of nano-modified coating in improving the durability of cement-based materials. <i>Progress in Organic Coatings</i> , 2021, 161, 106529.	1.9	19
125	Molecular dynamics study on calcium aluminosilicate hydrate at elevated temperatures: Structure, dynamics and mechanical properties. <i>Materials Chemistry and Physics</i> , 2019, 233, 276-287.	2.0	18
126	Structure, dynamics and mechanical properties evolution of calcium silicate hydrate induced by dehydration and dehydroxylation. <i>Construction and Building Materials</i> , 2021, 291, 123327.	3.2	18

#	ARTICLE	IF	CITATIONS
127	Insight on the nanoscale chemical degradation mechanism of MgCl ₂ attack in cement paste. <i>Construction and Building Materials</i> , 2020, 238, 117777.	3.2	17
128	Characterization of fly ash-cement paste and molecular structure in the presence of seawater by ²⁷ Al and ²⁹ Si MAS NMR spectroscopy. <i>Construction and Building Materials</i> , 2020, 262, 120823.	3.2	17
129	Insights into vitamin B3, B6 and C as inhibitor of steel reinforcement: A DFT+U study. <i>Construction and Building Materials</i> , 2021, 294, 123571.	3.2	17
130	Microscale peridynamic simulation of damage process of hydrated cement paste subjected to tension. <i>Construction and Building Materials</i> , 2019, 228, 117053.	3.2	16
131	Visualized tracing of capillary absorption process in cementitious material based on X ray computed tomography. <i>Cement and Concrete Composites</i> , 2020, 107, 103487.	4.6	16
132	The corrosion deterioration of reinforced passivation Film: The impact of defects. <i>Applied Surface Science</i> , 2022, 582, 152408.	3.1	16
133	Molecular Simulation of Calcium Silicate Composites: Structure, Dynamics, and Mechanical Properties. <i>Journal of the American Ceramic Society</i> , 2015, 98, 758-769.	1.9	15
134	Molecular structure, dynamics and adsorption behavior of water molecules and ions on [001] surface of β -FeOOH: A molecular dynamics approach. <i>Construction and Building Materials</i> , 2019, 224, 785-795.	3.2	15
135	Effect of SiO ₂ Sol/Silane Emulsion in Reducing Water and Chloride Ion Penetration in Concrete. <i>Coatings</i> , 2020, 10, 682.	1.2	15
136	Insights on failure modes of calcium-silicate-hydrate interface strengthened by polyacrylamides: Structure, dynamic and mechanical properties. <i>Construction and Building Materials</i> , 2021, 278, 122406.	3.2	15
137	Preparation and characterization of an expanded perlite/paraffin/graphene oxide composite with enhanced thermal conductivity and leakage-bearing properties. <i>RSC Advances</i> , 2015, 5, 107514-107521.	1.7	14
138	Precipitated calcium hydroxide morphology in nanoparticle suspensions: An experimental and molecular dynamics study. <i>Cement and Concrete Composites</i> , 2018, 94, 201-214.	4.6	14
139	Microstructural Evolution Mechanism of C-(A)-S-H Gel in Portland Cement Pastes Affected by Sulfate Ions. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2018, 33, 639-647.	0.4	14
140	Recyclable rubber-cement composites produced by interfacial strengthened strategy from polyvinyl alcohol. <i>Construction and Building Materials</i> , 2020, 264, 120541.	3.2	14
141	Influence of a New Type of Graphene Oxide/Silane Composite Emulsion on the Permeability Resistance of Damaged Concrete. <i>Coatings</i> , 2021, 11, 208.	1.2	14
142	Atypical adsorption of polycarboxylate superplasticizers on calcium silicate hydrate surface: Converting interaction by solvent effects. <i>Construction and Building Materials</i> , 2022, 330, 127160.	3.2	14
143	Large-scale simulation of calcium silicate hydrate by molecular dynamics. <i>Advances in Cement Research</i> , 2015, 27, 278-288.	0.7	13
144	A novel microporous amorphous-ZnO@TiO ₂ /graphene ternary nanocomposite with enhanced photocatalytic activity. <i>RSC Advances</i> , 2017, 7, 36787-36792.	1.7	13

#	ARTICLE	IF	CITATIONS
145	Insights on ions migration in the nanometer channel of calcium silicate hydrate under external electric field. <i>Electrochimica Acta</i> , 2019, 320, 134637.	2.6	13
146	Study on Unsaturated Transport of Cement-Based Silane Sol Coating Materials. <i>Coatings</i> , 2019, 9, 427.	1.2	13
147	Insights on the ion migration throughout the nano-channel of ettringite under an external electric field: Structure, dynamics, and mechanisms. <i>Construction and Building Materials</i> , 2020, 262, 120074.	3.2	13
148	Freezing mechanism of NaCl solution ultra-confined on surface of calcium-silicate-hydrate: A molecular dynamics study. <i>Cement and Concrete Research</i> , 2022, 154, 106722.	4.6	13
149	Bond behaviour between steel bar and concrete under sustained load and dry-wet cycles. <i>Magazine of Concrete Research</i> , 2019, 71, 700-709.	0.9	12
150	Water Transport Mechanisms of Poly(acrylic acid), Poly(vinyl alcohol), and Poly(ethylene glycol) in C-S-H Nanochannels: A Molecular Dynamics Study. <i>Journal of Physical Chemistry B</i> , 2020, 124, 6095-6104.	1.2	12
151	Strength and hydration attributes of cement pastes containing nano titania and cenosphere. <i>Advances in Cement Research</i> , 2020, 32, 557-572.	0.7	12
152	Nanoscale insight on the initial hydration mechanism of magnesium phosphate cement. <i>Construction and Building Materials</i> , 2021, 276, 122213.	3.2	12
153	Molecular dynamics study on water and ions transport mechanism in nanometer channel of 13X zeolite. <i>Chemical Engineering Journal</i> , 2021, 420, 129975.	6.6	12
154	Nanoscale insights into the anti-erosion performance of concrete: A molecular dynamics study. <i>Applied Surface Science</i> , 2022, 593, 153403.	3.1	12
155	Effect of magnesium on the C-S-H nanostructure evolution and aluminate phases transition in cement-slag blend. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2018, 33, 108-116.	0.4	11
156	Experimentally validated peridynamic fracture modelling of mortar at the meso-scale. <i>Construction and Building Materials</i> , 2021, 267, 120939.	3.2	11
157	Molecular dynamics study the structure, bonding, dynamic and mechanical properties of calcium silicate hydrate with ultra-confined water: Effects of nanopore size. <i>Construction and Building Materials</i> , 2021, 280, 122477.	3.2	11
158	Evaluation and regulation of Ultra-High Performance Concrete (UHPC) crack resistance based on physicochemical multi-factor coupling approach. <i>Construction and Building Materials</i> , 2021, 301, 124100.	3.2	11
159	Molecular dynamics simulation of calcium silicate hydrate/tannic acid interfacial interactions at different temperatures: configuration, structure and dynamic. <i>Construction and Building Materials</i> , 2022, 326, 126820.	3.2	11
160	Load transfer mechanism at the calcium silicate hydrate/carbon nanotubes interface changed by carbon nanotubes surface modification investigated from atomic simulation. <i>Applied Surface Science</i> , 2022, 594, 153487.	3.1	11
161	A preliminary study of the properties of potassium phosphate magnesium cement-based grouts admixed with metakaolin, sodium silicate and bentonite. <i>Construction and Building Materials</i> , 2020, 262, 119893.	3.2	10
162	The Effect of Water Repellent Surface Impregnation on Durability of Cement-Based Materials. <i>Advances in Materials Science and Engineering</i> , 2017, 2017, 1-9.	1.0	9

#	ARTICLE	IF	CITATIONS
163	Basic properties and mechanism of high activity phosphate-based slurry for dynamic water blocking-A feasibility research. <i>Construction and Building Materials</i> , 2021, 275, 122040.	3.2	9
164	The unification of light weight and ultra-high strength in LWC: A new homogeneity enhancement approach. <i>Construction and Building Materials</i> , 2022, 315, 125647.	3.2	9
165	Understanding the wetting discrepancy in calcium alumino silicate hydrate induced by Al/Si ratio. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 6973-6987.	1.3	9
166	Influence of Cu Doping on the Hydration of Dicalcium Silicate: A First-Principles Study. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 8094-8104.	3.2	9
167	Molecular Modeling of Capillary Transport in the Nanometer Pore of Nanocomposite of Cement Hydrate and Graphene/GO. <i>Journal of Physical Chemistry C</i> , 2019, 123, 15557-15568.	1.5	8
168	Effects of internally introduced sulfate on early age concrete properties: Active acoustic monitoring and molecular dynamics simulation. <i>Construction and Building Materials</i> , 2018, 188, 1014-1024.	3.2	7
169	Structure, dynamics and transport behavior of migrating corrosion inhibitors on the surface of calcium silicate hydrate: a molecular dynamics study. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 3267-3280.	1.3	7
170	Molecular-scale insights on structure-efficiency relationship of silane-based waterproofing agents. <i>Construction and Building Materials</i> , 2022, 327, 126985.	3.2	7
171	Understanding the deformation mechanism and mechanical characteristics of cementitious mineral analogues from first principles and reactive force field molecular dynamics. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 13920-13933.	1.3	6
172	Preparation of Modified Silane Composite Emulsion and Its Effect on Surface Properties of Cement-Based Materials. <i>Coatings</i> , 2021, 11, 272.	1.2	6
173	Structure, dynamics and mechanical properties evolution of calcium-silicate-hydrate induced by Fe ions: A molecular dynamics study. <i>Construction and Building Materials</i> , 2021, 287, 122875.	3.2	6
174	Rapid visualization and quantification of water penetration into cement paste through cracks with X-ray imaging. <i>Cement and Concrete Composites</i> , 2022, 125, 104293.	4.6	6
175	Nanomodified Cement-Based Materials: Review (2015–2020) of Molecular Dynamics Studies. <i>Journal of Materials in Civil Engineering</i> , 2022, 34, .	1.3	6
176	Preparation of Heavyweight Ultra-high Performance Concrete Using Barite Sand and Titanium-rich Heavy Slag Sand. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2021, 36, 644-652.	0.4	6
177	Polymer functional coatings modified by ZrP-based composites: Preparation and applications on marine concrete. <i>Journal of Applied Polymer Science</i> , 2022, 139, .	1.3	6
178	Formation and Structure of Inhibitive Molecular Film of Oxadiazole on Iron Surface. <i>Journal of Physical Chemistry C</i> , 2017, 121, 21420-21429.	1.5	5
179	Visual analysis for microscopic cracking propagation of rubberized concrete. <i>Construction and Building Materials</i> , 2020, 265, 120599.	3.2	5
180	Efficacy and mechanism of GO/lBTS coating against microbial fouling of concrete surfaces in marine tidal areas. <i>Journal of Coatings Technology Research</i> , 2022, 19, 875-885.	1.2	5

#	ARTICLE	IF	CITATIONS
181	Numerical Analysis and Optimization on Piezoelectric Properties of 0°/3 Type Piezoelectric Cement-Based Materials with Interdigitated Electrodes. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 233.	1.3	4
182	Efficacy and mechanism of graphene oxide modified silane emulsions on waterproof performance of foamed concrete. <i>Case Studies in Construction Materials</i> , 2022, 16, e00908.	0.8	4
183	Piezoelectric and magnetoelectric behaviors of multifunctional cement-based laminated composites. <i>Construction and Building Materials</i> , 2018, 180, 334-341.	3.2	3
184	Effect of Stirrup Corrosion and Fire on Shear Behavior of Reinforced Concrete Beams. <i>KSCE Journal of Civil Engineering</i> , 2021, 25, 3424-3436.	0.9	3
185	A molecular dynamics study of silicene reinforced cement composite at different humidity: Surface structure, bonding, and mechanical properties. <i>Construction and Building Materials</i> , 2021, 291, 123242.	3.2	3
186	Enhancement of Cement Paste with Carboxylated Carbon Nanotubes and Poly(vinyl alcohol). <i>ACS Applied Nano Materials</i> , 2022, 5, 6877-6889.	2.4	3
187	Nanoscale insight on the durability of magnesium phosphate cement: a molecular dynamics study. <i>RSC Advances</i> , 2020, 10, 40180-40195.	1.7	2
188	Temperature Effect of Hydration and Microstructure of Tricalcium Silicate-Slag Powder Hydrated Composites: An Experimental and Molecular Dynamics Investigation. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 13773-13787.	3.2	2
189	Molecular Dynamics Study on Cement-Graphene Nanocomposite. , 2020, , 159-185.		1
190	Research on Preparation and Performance of Clay-Based Shield Tunnel Nonsintered Bricks. <i>Advances in Materials Science and Engineering</i> , 2021, 2021, 1-13.	1.0	1
191	Editorial: Molecular Simulation on Cementitious Materials: From Computational Chemistry Method to Application. <i>Frontiers in Materials</i> , 2021, 8, .	1.2	1
192	Modelling and Simulation for Concrete Durability: Mechanism and Prediction. <i>Modelling and Simulation in Engineering</i> , 2021, 2021, 1-2.	0.4	0
193	The Optimal Design on the Molecular Structure of a Fluid Transport Inhibitor Applied to Reinforced Concrete Structures. <i>ACS Omega</i> , 2021, 6, 29692-29702.	1.6	0
194	Molecular Simulation of Water and Ions Migration in the Nanometer Channel of Calcium Silicate Phase. , 2020, , 87-130.		0
195	Introduction to Modeling of Cement Hydrate at Nanoscale. , 2020, , 7-33.		0
196	Models for the Cross-Linked Calcium Aluminate Silicate Hydrate (C-A-S-H) Gel. , 2020, , 131-157.		0