Erik Schlangen

List of Publications by Year
in descending order

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258 papers	12,359 citations	20759 60 h-index	32761 100 g-index
271 all docs	271 docs citations	271 times ranked	5423 citing authors

#	Article	IF	Citations
1	Application of bacteria as self-healing agent for the development of sustainable concrete. Ecological Engineering, 2010, 36, 230-235.	1.6	1,041
2	Fracture simulations of concrete using lattice models: Computational aspects. Engineering Fracture Mechanics, 1997, 57, 319-332.	2.0	448
3	Simple lattice model for numerical simulation of fracture of concrete materials and structures. Materials and Structures/Materiaux Et Constructions, 1992, 25, 534-542.	1.3	341
4	Experimental and numerical analysis of micromechanisms of fracture of cement-based composites. Cement and Concrete Composites, 1992, 14, 105-118.	4.6	317
5	Bacteria-based self-healing concrete to increase liquid tightness of cracks. Construction and Building Materials, 2016, 122, 118-125.	3.2	278
6	Self-healing behavior of strain hardening cementitious composites incorporating local waste materials. Cement and Concrete Composites, 2009, 31, 613-621.	4.6	243
7	Self-healing in cementitious materials: Materials, methods and service conditions. Materials and Design, 2016, 92, 499-511.	3.3	237
8	Electrical conductivity of asphalt mortar containing conductive fibers and fillers. Construction and Building Materials, 2009, 23, 3175-3181.	3.2	218
9	Induction heating of electrically conductive porous asphalt concrete. Construction and Building Materials, 2010, 24, 1207-1213.	3.2	205
10	Preparation of capsules containing rejuvenators for their use in asphalt concrete. Journal of Hazardous Materials, 2010, 184, 603-611.	6.5	177
11	Influence of curing condition and precracking time on the self-healing behavior of Engineered Cementitious Composites. Cement and Concrete Composites, 2010, 32, 686-693.	4.6	174
12	Induction healing of asphalt mastic and porous asphalt concrete. Construction and Building Materials, 2011, 25, 3746-3752.	3.2	160
13	Lattice modeling of chloride diffusion in sound and cracked concrete. Cement and Concrete Composites, 2013, 42, 30-40.	4.6	159
14	New method for simulating fracture using an elastically uniform random geometry lattice. International Journal of Engineering Science, 1996, 34, 1131-1144.	2.7	150
15	Cracking of the concrete cover due to reinforcement corrosion: A two-dimensional lattice model study. Construction and Building Materials, 2013, 44, 626-638.	3.2	145
16	Synthesis and characterization of a new polymeric microcapsule and feasibility investigation in self-healing cementitious materials. Construction and Building Materials, 2016, 105, 487-495.	3.2	141
17	Improving printability of limestone-calcined clay-based cementitious materials by using viscosity-modifying admixture. Cement and Concrete Research, 2020, 132, 106040.	4.6	141
18	Evaluation of the induction healing effect of porous asphalt concrete through four point bending fatigue test. Construction and Building Materials, 2012, 29, 403-409.	3.2	135

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19	Characterization of sustainable bio-based mortar for concrete repair. Construction and Building Materials, 2014, 67, 344-352.	3.2	131
20	Properties of capsules containing rejuvenators for their use in asphalt concrete. Fuel, 2011, 90, 583-591.	3.4	121
21	Use of fine recycled concrete aggregates in concrete: A critical review. Journal of Building Engineering, 2021, 38, 102196.	1.6	121
22	Selfâ€Healing Asphalt Review: From Idea to Practice. Advanced Materials Interfaces, 2018, 5, 1800536.	1.9	120
23	Investigation the possibility of a new approach of using microcapsules containing waste cooking oil: In situ rejuvenation for aged bitumen. Construction and Building Materials, 2015, 74, 83-92.	3.2	119
24	Synthesis and physicochemical properties of high compact microcapsules containing rejuvenator applied in asphalt. Chemical Engineering Journal, 2012, 198-199, 289-300.	6.6	116
25	Interpretable Ensemble-Machine-Learning models for predicting creep behavior of concrete. Cement and Concrete Composites, 2022, 125, 104295.	4.6	109
26	Sustainable materials for 3D concrete printing. Cement and Concrete Composites, 2021, 122, 104156.	4.6	108
27	Induction heating of mastic containing conductive fibers and fillers. Materials and Structures/Materiaux Et Constructions, 2011, 44, 499-508.	1.3	104
28	An approach to develop printable strain hardening cementitious composites. Materials and Design, 2019, 169, 107651.	3.3	102
29	Stability investigation of self-healing microcapsules containing rejuvenator for bitumen. Polymer Degradation and Stability, 2013, 98, 1205-1215.	2.7	101
30	A simple model to define induction heating in asphalt mastic. Construction and Building Materials, 2012, 31, 38-46.	3.2	99
31	Design and construction of microcapsules containing rejuvenator for asphalt. Powder Technology, 2013, 235, 563-571.	2.1	99
32	The Effect of Viscosity-Modifying Admixture on the Extrudability of Limestone and Calcined Clay-Based Cementitious Material for Extrusion-Based 3D Concrete Printing. Materials, 2019, 12, 1374.	1.3	98
33	Investigation the self-healing mechanism of aged bitumen using microcapsules containing rejuvenator. Construction and Building Materials, 2015, 85, 49-56.	3.2	94
34	Addressing Infrastructure Durability and Sustainability by Self Healing Mechanisms - Recent Advances in Self Healing Concrete and Asphalt. Procedia Engineering, 2013, 54, 39-57.	1.2	92
35	Calcium alginate capsules encapsulating rejuvenator as healing system for asphalt mastic. Construction and Building Materials, 2018, 169, 379-387.	3.2	87
36	Modeling of the internal damage of saturated cement paste due to ice crystallization pressure during freezing. Cement and Concrete Composites, 2011, 33, 562-571.	4.6	85

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37	Effect of printing parameters on interlayer bond strength of 3D printed limestone-calcined clay-based cementitious materials: An experimental and numerical study. Construction and Building Materials, 2020, 262, 120094.	3.2	85
38	Investigating porous concrete with improved strength: Testing at different scales. Construction and Building Materials, 2013, 41, 480-490.	3.2	83
39	Effect of fibres addition on the physical and mechanical properties of asphalt mixtures with crack-healing purposes by microwave radiation. Construction and Building Materials, 2016, 127, 369-382.	3.2	83
40	Effect of different grade levels of calcined clays on fresh and hardened properties of ternary-blended cementitious materials for 3D printing. Cement and Concrete Composites, 2020, 114, 103708.	4.6	81
41	Investigation of the optimal self-healing temperatures and healing time of asphalt binders. Construction and Building Materials, 2016, 113, 1029-1033.	3.2	80
42	Corrosion induced cover cracking studied by X-ray computed tomography, nanoindentation, and energy dispersive X-ray spectrometry (EDS). Materials and Structures/Materiaux Et Constructions, 2015, 48, 2043-2062.	1.3	78
43	Use of phase change materials (PCMs) to mitigate early age thermal cracking in concrete: Theoretical considerations. Construction and Building Materials, 2016, 126, 332-344.	3.2	78
44	Temperature and moisture effects on electrical resistance and strain sensitivity of smart concrete. Construction and Building Materials, 2019, 224, 420-427.	3.2	78
45	Recommendation of RILEM TC 200-HTC: mechanical concrete properties at high temperaturesâ€"modelling and applications. Materials and Structures/Materiaux Et Constructions, 2007, 40, 841-853.	1.3	77
46	Towards understanding the influence of porosity on mechanical and fracture behaviour of quasi-brittle materials: experiments and modelling. International Journal of Fracture, 2017, 205, 57-72.	1.1	77
47	Microscale Testing and Modelling of Cement Paste as Basis for Multi-Scale Modelling. Materials, 2016, 9, 907.	1.3	76
48	Self-healing properties of recycled asphalt mixtures containing metal waste: An approach through microwave radiation heating. Journal of Environmental Management, 2018, 214, 242-251.	3.8	76
49	Experimental and numerical study on the behavior of concrete subjected to biaxial tension and shear. Advanced Cement Based Materials, 1993, 1, 22-37.	0.4	74
50	Modeling of frost salt scaling. Cement and Concrete Research, 2008, 38, 27-39.	4.6	74
51	Self-healing mortar with pH-sensitive superabsorbent polymers: testing of the sealing efficiency by water flow tests. Smart Materials and Structures, 2016, 25, 084007.	1.8	73
52	Effect of RAP and fibers addition on asphalt mixtures with self-healing properties gained by microwave radiation heating. Construction and Building Materials, 2018, 159, 164-174.	3.2	72
53	Micromechanical Properties of a New Polymeric Microcapsule for Self-Healing Cementitious Materials. Materials, 2016, 9, 1025.	1.3	71
54	Limestone and Calcined Clay-Based Sustainable Cementitious Materials for 3D Concrete Printing: A Fundamental Study of Extrudability and Early-Age Strength Development. Applied Sciences (Switzerland), 2019, 9, 1809.	1.3	69

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55	Lattice modeling of rapid chloride migration in concrete. Cement and Concrete Research, 2014, 61-62, 49-63.	4.6	67
56	Anm: a geometrical model for the composite structure of mortar and concrete using real-shape particles. Materials and Structures/Materiaux Et Constructions, 2016, 49, 149-158.	1.3	66
57	Deformation and fracture of 3D printed disordered lattice materials: Experiments and modeling. Materials and Design, 2019, 162, 143-153.	3.3	66
58	Self Healing of Concrete Structures - Novel Approach Using Porous Network Concrete. Journal of Advanced Concrete Technology, 2012, 10, 185-194.	0.8	63
59	A novel capsule-based self-recovery system with a chloride ion trigger. Scientific Reports, 2015, 5, 10866.	1.6	63
60	Experimentally validated multi-scale modelling scheme of deformation and fracture of cement paste. Cement and Concrete Research, 2017, 102, 175-186.	4.6	63
61	Combined experimental and numerical study of fracture behaviour of cement paste at the microlevel. Cement and Concrete Research, 2015, 73, 123-135.	4.6	61
62	Size effect on splitting strength of hardened cement paste: Experimental and numerical study. Cement and Concrete Composites, 2018, 94, 264-276.	4.6	60
63	Self-Healing Technology for Asphalt Pavements. Advances in Polymer Science, 2015, , 285-306.	0.4	58
64	Induction heating of asphalt mastic for crack control. Construction and Building Materials, 2013, 41, 345-351.	3.2	56
65	Research on the Mechanical, Thermal, Induction Heating and Healing Properties of Steel Slag/Steel Fibers Composite Asphalt Mixture. Applied Sciences (Switzerland), 2017, 7, 1088.	1.3	56
66	Effect of metallic waste addition on the electrical, thermophysical and microwave crack-healing properties of asphalt mixtures. Construction and Building Materials, 2018, 187, 1039-1050.	3.2	56
67	Recommendation of RILEM TC 200-HTC: mechanical concrete properties at high temperaturesâ€"modelling and applications. Materials and Structures/Materiaux Et Constructions, 2007, 40, 855-864.	1.3	55
68	Turning Back Time. Transportation Research Record, 2014, 2444, 52-62.	1.0	55
69	A comparative study of the induction healing behaviors of hot and warm mix asphalt. Construction and Building Materials, 2017, 144, 663-670.	3.2	55
70	Combined experimental and numerical study of uniaxial compression failure of hardened cement paste at micrometre length scale. Cement and Concrete Research, 2019, 126, 105925.	4.6	55
71	Experimentally informed micromechanical modelling of cement paste: An approach coupling X-ray computed tomography and statistical nanoindentation. Composites Part B: Engineering, 2019, 157, 109-122.	5.9	54
72	Tailoring the Mechanical Properties of Highâ€Aspectâ€Ratio Carbon Nanotube Arrays using Amorphous Silicon Carbide Coatings. Advanced Functional Materials, 2014, 24, 5737-5744.	7.8	53

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73	Development of a bacteria-based self healing concrete. , 2008, , 109-109.		52
74	3D printing of calcined clay-limestone-based cementitious materials. Cement and Concrete Research, 2021, 149, 106553.	4.6	52
75	Micromechanical Analysis of Fracture of Concrete. International Journal of Damage Mechanics, 1992, 1, 435-454.	2.4	51
76	Induction Healing of Porous Asphalt Concrete Beams on an Elastic Foundation. Journal of Materials in Civil Engineering, 2013, 25, 880-885.	1.3	51
77	3D MODELING OF FRACTURE IN CEMENT-BASED MATERIALS. Journal of Multiscale Modeling, 2009, 01, 245-261.	1.0	50
78	The reinforcement and healing of asphalt mastic mixtures by rejuvenator encapsulation in alginate compartmented fibres. Smart Materials and Structures, 2016, 25, 084003.	1.8	50
79	Two Ways of Closing Cracks on Asphalt Concrete Pavements: Microcapsules and Induction Heating. Key Engineering Materials, 0, 417-418, 573-576.	0.4	49
80	A novel self-healing system: Towards a sustainable porous asphalt. Journal of Cleaner Production, 2020, 259, 120815.	4.6	49
81	Optimization of composition and mixing process of a self-healing porous asphalt. Construction and Building Materials, 2012, 30, 59-65.	3.2	48
82	Experimental investigation of self-healing behavior of bitumen/microcapsule composites by a modified beam on elastic foundation method. Materials and Structures/Materiaux Et Constructions, 2015, 48, 4067-4076.	1.3	48
83	Characterization of air-void systems in 3D printed cementitious materials using optical image scanning and X-ray computed tomography. Materials Characterization, 2021, 173, 110948.	1.9	47
84	Influence of Microencapsulated Phase Change Material (PCM) Addition on (Micro) Mechanical Properties of Cement Paste. Materials, 2017, 10, 863.	1.3	46
85	Experimentally informed multi-scale modelling of mechanical properties of quasi-brittle nuclear graphite. Engineering Fracture Mechanics, 2016, 153, 360-377.	2.0	45
86	Towards understanding stochastic fracture performance of cement paste at micro length scale based on numerical simulation. Construction and Building Materials, 2018, 183, 189-201.	3.2	45
87	Bio-Based Self-Healing Concrete: From Research to Field Application. Advances in Polymer Science, 2016, , 345-385.	0.4	44
88	Modeling Framework for Fracture in Multiscale Cement-Based Material Structures. Materials, 2017, 10, 587.	1.3	43
89	CoRncrete: A corn starch based building material. Construction and Building Materials, 2017, 154, 411-423.	3.2	42
90	Effect of viscosity modifier admixture on Portland cement paste hydration and microstructure. Construction and Building Materials, 2019, 212, 818-840.	3.2	42

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91	Tailoring strain-hardening cementitious composite repair systems through numerical experimentation. Cement and Concrete Composites, 2014, 53, 200-213.	4.6	41
92	Microstructure informed micromechanical modelling of hydrated cement paste: Techniques and challenges. Construction and Building Materials, 2020, 251, 118983.	3.2	41
93	Micromechanical Study of the Interface Properties in Concrete Repair Systems. Journal of Advanced Concrete Technology, 2014, 12, 320-339.	0.8	40
94	Combined experimental and numerical study on micro-cube indentation splitting test of cement paste. Engineering Fracture Mechanics, 2018, 199, 773-786.	2.0	39
95	A 3D Lattice Modelling Study of Drying Shrinkage Damage in Concrete Repair Systems. Materials, 2016, 9, 575.	1.3	38
96	Induction Healing of Porous Asphalt. Transportation Research Record, 2012, 2305, 95-101.	1.0	37
97	Experimental observation of the self-healing microcapsules containing rejuvenator states in asphalt binder. Construction and Building Materials, 2017, 147, 533-542.	3.2	37
98	Strengthening of concrete structures with ultra high performance fiber reinforced concrete (UHPFRC): A critical review. Construction and Building Materials, 2022, 336, 127398.	3.2	37
99	Simulation-Aided Design of Tubular Polymeric Capsules for Self-Healing Concrete. Materials, 2017, 10, 10.	1.3	36
100	An Evaluation of the Efficiency of Compartmented Alginate Fibres Encapsulating a Rejuvenator as an Asphalt Pavement Healing System. Applied Sciences (Switzerland), 2017, 7, 647.	1.3	36
101	Experimentally informed fracture modelling of interfacial transition zone at micro-scale. Cement and Concrete Composites, 2019, 104, 103383.	4.6	36
102	Investigation of the Potential Use of Calcium Alginate Capsules for Self-Healing in Porous Asphalt Concrete. Materials, 2019, 12, 168.	1.3	36
103	Unravelling porous asphalt concrete with induction heating. Construction and Building Materials, 2014, 71, 152-157.	3.2	35
104	Fabrication and characterization of self-healing microcapsules containing bituminous rejuvenator by a nano-inorganic/organic hybrid method. Construction and Building Materials, 2016, 121, 471-482.	3.2	35
105	Cementitious cellular composites with auxetic behavior. Cement and Concrete Composites, 2020, 111, 103624.	4.6	35
106	Influence of internal dilation on the fracture behaviour of multi-phase materials. Engineering Fracture Mechanics, 2007, 74, 18-33.	2.0	34
107	Healing of Porous Asphalt Concrete via Induction Heating. Road Materials and Pavement Design, 2010, 11, 527-542.	2.0	34
108	Mimicking Bone Healing Process to Self Repair Concrete Structure Novel Approach Using Porous Network Concrete. Procedia Engineering, 2013, 54, 315-326.	1.2	34

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109	The compartmented alginate fibres optimisation for bitumen rejuvenator encapsulation. Journal of Traffic and Transportation Engineering (English Edition), 2017, 4, 347-359.	2.0	34
110	Chloride ingress in cracked concrete: a laser induced breakdown spectroscopy (LIBS) study. Journal of Advanced Concrete Technology, 2014, 12, 425-442.	0.8	33
111	Expansion and degradation of cement paste in sodium sulfate solutions. Construction and Building Materials, 2018, 158, 410-422.	3.2	33
112	Mechanical Behavior of Printed Strain Hardening Cementitious Composites. Materials, 2020, 13, 2253.	1.3	33
113	Test methods to determine durability of concrete under combined environmental actions andÂmechanical load: finalÂreport of RILEM TC 246-TDC. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	1.3	32
114	The role of rejuvenators in embedded damage healing for asphalt pavement. Materials and Design, 2021, 202, 109564.	3.3	32
115	Modelling of stresses and strains in bonded concrete overlays subjected to differential volume changes. Theoretical and Applied Fracture Mechanics, 2008, 49, 199-205.	2.1	30
116	Characterization of the material from the induction healing porous asphalt concrete trial section. Materials and Structures/Materiaux Et Constructions, 2013, 46, 831-839.	1.3	30
117	Optimization of the Calcium Alginate Capsules for Self-Healing Asphalt. Applied Sciences (Switzerland), 2019, 9, 468.	1.3	30
118	A review of printing strategies, sustainable cementitious materials and characterization methods in the context of extrusion-based 3D concrete printing. Journal of Building Engineering, 2022, 45, 103599.	1.6	30
119	Tensile cracking in concrete and sandstone: Part 2â€"Effect of boundary rotations. Materials and Structures/Materiaux Et Constructions, 1996, 29, 87-96.	1.3	29
120	Synthesis and characterization of silica microcapsules using a sustainable solvent system template. Materials Research Bulletin, 2011, 46, 2445-2449.	2.7	29
121	Analyses of anchor pull-out in concrete. Materials and Structures/Materiaux Et Constructions, 1994, 27, 251-259.	1.3	28
122	Dynamic behavior of porous concretes under drop weight impact testing. Cement and Concrete Composites, 2013, 39, 1-11.	4.6	28
123	Bio-based Self-healing Mortar: An Experimental and Numerical Study. Journal of Advanced Concrete Technology, 2017, 15, 536-543.	0.8	28
124	Experimentally validated meso-scale fracture modelling of mortar using output from micromechanical models. Cement and Concrete Composites, 2020, 110, 103567.	4.6	28
125	A two component bacteria-based self-healing concrete. , 2008, , 119-120.		27
126	Experimental examination on chloride penetration through micro-crack in concrete. KSCE Journal of Civil Engineering, 2014, 18, 188-198.	0.9	27

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127	Chemo-physico-mechanical properties of the interface zone between bacterial PLA self-healing capsules and cement paste. Cement and Concrete Research, 2020, 138, 106228.	4.6	27
128	Tunable mechanical behavior of auxetic cementitious cellular composites (CCCs): Experiments and simulations. Construction and Building Materials, 2021, 266, 121388.	3.2	27
129	The Effect of Cracks on Chloride Penetration into Concrete. Key Engineering Materials, 2007, 348-349, 769-772.	0.4	26
130	Characteristics of Ceramic Fiber Modified Asphalt Mortar. Materials, 2016, 9, 788.	1.3	26
131	Experimental and numerical study of crack behaviour for capsule-based self-healing cementitious materials. Construction and Building Materials, 2017, 156, 219-229.	3.2	26
132	Numerical investigation of crack self-sealing in cement-based composites with superabsorbent polymers. Cement and Concrete Composites, 2019, 104, 103395.	4.6	26
133	Crack propagation in sandstone: Combined experimental and numerical approach. Rock Mechanics and Rock Engineering, 1995, 28, 93-110.	2.6	25
134	Assessment of cracks in reinforced concrete by means of electrical resistance and image analysis. Construction and Building Materials, 2014, 65, 417-426.	3.2	25
135	Selection of Nutrient Used in Biogenic Healing Agent for Cementitious Materials. Frontiers in Materials, 2017, 4, .	1.2	24
136	A discrete lattice model for assessment of buildability performance of 3Dâ€printed concrete. Computer-Aided Civil and Infrastructure Engineering, 2021, 36, 638-655.	6.3	24
137	Design and analyses of printable strain hardening cementitious composites with optimized particle size distribution. Construction and Building Materials, 2022, 324, 126411.	3.2	24
138	Lattice Fracture Model for Concrete Fracture Revisited: Calibration and Validation. Applied Sciences (Switzerland), 2020, 10, 4822.	1.3	23
139	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
140	Static and Fatigue Tests on Cementitious Cantilever Beams Using Nanoindenter. Micromachines, 2018, 9, 630.	1.4	22
141	Investigation of drying-induced non-uniform deformation, stress, and micro-crack propagation in concrete. Cement and Concrete Composites, 2020, 114, 103786.	4.6	22
142	PrediccÃ³n de las propiedades mecÃ¡nicas del cemento en la micro-escala. Materiales De Construccion, 2010, 60, 7-18.	0.2	22
143	Tensile cracking in concrete and sandstone: Part 1â€”Basic instruments. Materials and Structures/Materiaux Et Constructions, 1996, 29, 9-18.	1.3	21
144	Upscaling Cement Paste Microstructure to Obtain the Fracture, Shear, and Elastic Concrete Mechanical LDPM Parameters. Materials, 2017, 10, 242.	1.3	20

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145	Modeling of microstructural effects on the creep of hardened cement paste using an experimentally informed lattice model. Computer-Aided Civil and Infrastructure Engineering, 2021, 36, 560-576.	6.3	20
146	Influence of Cracking on Moisture Uptake in Strain-Hardening Cementitious Composites. Journal of Nanomechanics & Micromechanics, 2017, 7, .	1.4	19
147	Micromechanical testing and modelling of blast furnace slag cement pastes. Construction and Building Materials, 2020, 239, 117841.	3.2	19
148	Physical, chemical and mineralogical characterization of Dutch fine recycled concrete aggregates: A comparative study. Construction and Building Materials, 2021, 270, 121475.	3.2	19
149	Fundamental investigation on the frost resistance of mortar with microencapsulated phase change materials. Cement and Concrete Composites, 2020, 113, 103705.	4.6	18
150	Effect of coarse aggregate size on non-uniform stress/strain and drying-induced microcracking in concrete. Composites Part B: Engineering, 2021, 216, 108880.	5.9	18
151	CRACK HEALING OF EARLY AGE CRACKS IN CONCRETE. , 2006, , 273-284.		18
152	Convolutional neural network for predicting crack pattern and stress-crack width curve of air-void structure in 3D printed concrete. Engineering Fracture Mechanics, 2022, 271, 108624.	2.0	18
153	Crack Development in Concrete, Part 2: Modelling of Fracture Process. Key Engineering Materials, 0, 385-387, 73-76.	0.4	17
154	The kinetics of softening and microstructure evolution of martensite in Feâ€“Câ€“Mn steel during tempering at 300Â°C.. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 560, 351-357.	2.6	17
155	Understanding fracture behaviour of PGA reactor core graphite: Perspective. Materials Science and Technology, 2014, 30, 129-145.	0.8	17
156	Experimental Investigation of the Performance of a Hybrid Self-Healing System in Porous Asphalt under Fatigue Loadings. Materials, 2021, 14, 3415.	1.3	17
157	Microstructure-informed deep convolutional neural network for predicting short-term creep modulus of cement paste. Cement and Concrete Research, 2022, 152, 106681.	4.6	17
158	Effect of slags of different origins and the role of sulfur in slag on the hydration characteristics of cement-slag systems. Construction and Building Materials, 2022, 316, 125266.	3.2	17
159	The Use of Alkaliphilic Bacteria-based Repair Solution for Porous Network Concrete Healing Mechanism. Procedia Engineering, 2017, 171, 606-613.	1.2	16
160	Modelling of deformation and fracture for a model quasi-brittle material with controlled porosity: Synthetic versus real microstructure. Engineering Fracture Mechanics, 2019, 205, 399-417.	2.0	15
161	Elucidating the Effect of Accelerated Carbonation on Porosity and Mechanical Properties of Hydrated Portland Cement Paste Using X-Ray Tomography and Advanced Micromechanical Testing. Micromachines, 2020, 11, 471.	1.4	15
162	Crack Development in Concrete, Part 1: Fracture Experiments and CT-Scan Observations. Key Engineering Materials, 0, 385-387, 69-72.	0.4	14

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163	Optimization of Steel Fiber Used for Induction Heating in Porous Asphalt Concrete. , 2010, , .		14
164	The influence of admixed micelles on the microstructural properties and global performance of cement-based materials. Cement and Concrete Research, 2012, 42, 1122-1133.	4.6	14
165	Assessing strain rate sensitivity of cement paste at the micro-scale through micro-cantilever testing. Cement and Concrete Composites, 2021, 121, 104084.	4.6	14
166	Effect of curing methods during a long time gap between two printing sessions on the interlayer bonding of 3D printed cementitious materials. Construction and Building Materials, 2022, 332, 127394.	3.2	14
167	Development of ductile cementitious composites incorporating microencapsulated phase change materials. International Journal of Advances in Engineering Sciences and Applied Mathematics, 2017, 9, 169-180.	0.7	13
168	Microstructure-Based Prediction of the Elastic Behaviour of Hydrating Cement Pastes. Applied Sciences (Switzerland), 2018, 8, 442.	1.3	13
169	The Prospect of Microwave Heating: Towards a Faster and Deeper Crack Healing in Asphalt Pavement. Processes, 2021, 9, 507.	1.3	13
170	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
171	Experimental and numerical investigation on the role of interface for crack-width control of hybrid SHCC concrete beams. Engineering Structures, 2022, 251, 113378.	2.6	13
172	A numerical approach for the design of multiscale fibre-reinforced cementitious composites. Philosophical Magazine, 2015, 95, 3305-3327.	0.7	12
173	Modelling deformation and fracture of Gilsocarbon graphite subject to service environments. Journal of Nuclear Materials, 2018, 499, 18-28.	1.3	12
174	Effect of relative humidity on drying-induced damage in concrete: A comparative study of digital image correlation and lattice modelling. Materials and Design, 2020, 196, 109128.	3.3	12
175	Fresh and hardened properties of self-compacting concrete containing recycled fine clay brick aggregates. Materials and Structures/Materiaux Et Constructions, 2021, 54, 1.	1.3	12
176	Durability of an UHPFRC under mechanical and chloride loads. Construction and Building Materials, 2021, 311, 125223.	3.2	12
177	Fatigue life and cracking characterization of engineered cementitious composites (ECC) under flexural cyclic load. Construction and Building Materials, 2022, 335, 127465.	3.2	12
178	Recommendation of RILEM TC 246-TDC: test methods to determine durability of concrete under combined environmental actions and mechanical load. Materials and Structures/Materiaux Et Constructions, 2017, 50, 1.	1.3	11
179	Feasibility of Using Low CO2 Concrete Alternatives in Extrusion-Based 3D Concrete Printing. RILEM Bookseries, 2019, , 269-276.	0.2	11
180	Modelling of Effect of ASR on Concrete Microstructure. Key Engineering Materials, 2007, 348-349, 809-812.	0.4	10

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