Kim Van Tittelboom

List of Publications by Year
in descending order

54 papers	4,181 citations	186209 28 h-index	168321 53 g-index
55 all docs	55 docs citations	55 times ranked	2019 citing authors

#	Article	IF	Citations
1	Mechanical and microstructural properties of 3D printable concrete in the context of the twin-pipe pumping strategy. Cement and Concrete Composites, 2022, 125, 104324.	4.6	21
2	3D printable concrete with natural and recycled coarse aggregates: Rheological, mechanical and shrinkage behaviour. Cement and Concrete Composites, 2022, 125, 104311.	4.6	52
3	Influence of substrate surface roughness and moisture content on tensile adhesion performance of 3D printable concrete. Cement and Concrete Composites, 2022, 126, 104350.	4.6	20
4	Performance criteria, environmental impact and cost assessment for 3D printable concrete mixtures. Resources, Conservation and Recycling, 2022, 181, 106255.	5.3	19
5	Reservoir-Vascular Tubes Network for Self-Healing Concrete: Performance Analysis by Acoustic Emission, Digital Image Correlation and Ultrasound Velocity. Applied Sciences (Switzerland), 2022, 12, 4821.	1.3	12
6	Influence of aluminum sulfate on mobility and adhesion of hydroxyethyl methyl cellulose in cement-based materials for tunnel linings. Cement and Concrete Composites, 2022, 131, 104594.	4.6	10
7	Durability of self-healing cementitious systems with encapsulated polyurethane evaluated with a new pre-standard test method. Materials and Structures/Materiaux Et Constructions, 2022, 55, .	1.3	9
8	The Production of a Topology-Optimized 3D-Printed Concrete Bridge. RILEM Bookseries, 2022, , 37-42.	0.2	4
9	Salt Scaling Resistance of 3D Printed Concrete. RILEM Bookseries, 2022, , 188-193.	0.2	3
10	Influence of the Print Process on the Durability of Printed Cementitious Materials. RILEM Bookseries, 2022, , 194-199.	0.2	1
11	Hydration re-initiation of borated CSA systems with a two-stage mixing process: An application in extrusion-based concrete 3D printing. Cement and Concrete Research, 2022, 159, 106870.	4.6	19
12	Shape stability of 3D printable concrete with river and manufactured sand characterized by squeeze flow. Cement and Concrete Composites, 2022, 133, 104674.	4.6	4
13	Rheological and pumping behaviour of 3D printable cementitious materials with varying aggregate content. Cement and Concrete Research, 2021, 139, 106258.	4.6	95
14	Extrusion-based concrete 3D printing from a material perspective: A state-of-the-art review. Cement and Concrete Composites, 2021, 115, 103855.	4.6	175
15	Early age hydration, rheology and pumping characteristics of CSA cement-based 3D printable concrete. Construction and Building Materials, 2021, 275, 122136.	3.2	45
16	A review of vascular networks for self-healing applications. Smart Materials and Structures, 2021, 30, 063001.	1.8	42
17	Stiffening control of cement-based materials using accelerators in inline mixing processes: Possibilities and challenges. Cement and Concrete Composites, 2021, 119, 103972.	4.6	74
18	Development of 3D Printable Cementitious Composites with the Incorporation of Polypropylene Fibers. Materials, 2021, 14, 4474.	1.3	13

#	Article	IF	Citations
19	An Investigation of Suitable Healing Agents for Vascular-Based Self-Healing in Cementitious Materials. Sustainability, 2021, 13, 12948.	1.6	12
20	Manual Application versus Autonomous Release of Water Repellent Agent to Prevent Reinforcement Corrosion in Cracked Concrete. Processes, 2021, 9, 2101.	1.3	0
21	Bond strength between concrete and repair mortar and its relation with concrete removal techniques and substrate composition. Construction and Building Materials, 2020, 230, 116900.	3.2	33
22	Addressing the need for standardization of test methods for self-healing concrete: an inter-laboratory study on concrete with macrocapsules. Science and Technology of Advanced Materials, 2020, 21, 661-682.	2.8	50
23	Neutron radiography to study the water ingress via the interlayer of 3D printed cementitious materials for continuous layering. Construction and Building Materials, 2020, 258, 119587.	3.2	33
24	The Use of Superabsorbent Polymers in High Performance Concrete to Mitigate Autogenous Shrinkage in a Large-Scale Demonstrator. Sustainability, 2020, 12, 4741.	1.6	18
25	Sealing efficiency of cement-based materials containing extruded cementitious capsules. Construction and Building Materials, 2020, 251, 119039.	3.2	31
26	Evaluating the Influence of Aggregate Content on Pumpability of 3D Printable Concrete. RILEM Bookseries, 2020, , 333-341.	0.2	10
27	Feasibility study on real-scale, self-healing concrete slab by developing a smart capsules network and assessed by a plethora of advanced monitoring techniques. Construction and Building Materials, 2019, 228, 116780.	3.2	29
28	Microstructural Characterization of 3D Printed Cementitious Materials. Materials, 2019, 12, 2993.	1.3	105
29	Durability of self-healing concrete. MATEC Web of Conferences, 2019, 289, 01003.	0.1	8
30	Parameter Study of Superabsorbent Polymers (SAPs) for Use in Durable Concrete Structures. Materials, 2019, 12, 1541.	1.3	31
31	Poly(methyl methacrylate) capsules as an alternative to the â€˜â€™proof-of-conceptâ€™â€™ glass capsules used in self-healing concrete. Cement and Concrete Composites, 2018, 89, 260-271.	4.6	66
32	Xâ€ray Radiography to Visualize the Rebarâ€“Cementitious Matrix Interface and Judge the Delay in Corrosion through Selfâ€Repair by Encapsulated Polyurethane. Advanced Materials Interfaces, 2018, 5, 1701021.	1.9	9
33	Development of an improved cracking method to reduce the variability in testing the healing efficiency of self-healing mortar containing encapsulated polymers. MATEC Web of Conferences, 2018, 199, 02017.	0.1	7
34	Nitrite producing bacteria inhibit reinforcement bar corrosion in cementitious materials. Scientific Reports, 2018, 8, 14092.	1.6	27
35	Chloride induced reinforcement corrosion behavior in self-healing concrete with encapsulated polyurethane. Cement and Concrete Research, 2018, 113, 130-139.	4.6	80
36	Validation of Selfâ€Healing Properties of Construction Materials through Nondestructive and Minimal Invasive Testing. Advanced Materials Interfaces, 2018, 5, 1800179.	1.9	26

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37	A Novel Design of Autonomously Healed Concrete: Towards a Vascular Healing Network. Materials, 2017, 10, 49.	1.3	88
38	Quantification of the Service Life Extension and Environmental Benefit of Chloride Exposed Self-Healing Concrete. Materials, 2017, 10, 5.	1.3	50
39	Simulation-Aided Design of Tubular Polymeric Capsules for Self-Healing Concrete. Materials, 2017, 10, 10.	1.3	36
40	Neutron Radiography Based Visualization and Profiling of Water Uptake in (Un)cracked and Autonomously Healed Cementitious Materials. Materials, 2016, 9, 311.	1.3	31
41	The microstructure of capsule containing self-healing materials: A micro-computed tomography study. Materials Characterization, 2016, 119, 99-109.	1.9	26
42	Comparison of different approaches for self-healing concrete in a large-scale lab test. Construction and Building Materials, 2016, 107, 125-137.	3.2	171
43	Selfâ€repair of thermal cracks in concrete sandwich panels. Structural Concrete, 2015, 16, 273-288.	1.5	11
44	The efficiency of self-healing concrete using alternative manufacturing procedures and more realistic crack patterns. Cement and Concrete Composites, 2015, 57, 142-152.	4.6	79
45	Design of polymeric capsules for self-healing concrete. Cement and Concrete Composites, 2015, 55, 298-307.	4.6	172
46	Activation of Pozzolanic and Latent-Hydraulic Reactions by Alkalis in Order to Repair Concrete Cracks. Journal of Materials in Civil Engineering, 2015, 27, .	1.3	16
47	Self-healing cementitious materials by the combination of microfibres and superabsorbent polymers. Journal of Intelligent Material Systems and Structures, 2014, 25, 13-24.	1.4	335
48	Use of neutron radiography and tomography to visualize the autonomous crack sealing efficiency in cementitious materials. Materials and Structures/Materiaux Et Constructions, 2013, 46, 105-121.	1.3	48
49	Self-Healing in Cementitious Materialsâ€"A Review. Materials, 2013, 6, 2182-2217.	1.3	650
50	Influence of mix composition on the extent of autogenous crack healing by continued hydration or calcium carbonate formation. Construction and Building Materials, 2012, 37, 349-359.	3.2	232
51	Use of silica gel or polyurethane immobilized bacteria for self-healing concrete. Construction and Building Materials, 2012, 26, 532-540.	3.2	538
52	Acoustic emission analysis for the quantification of autonomous crack healing in concrete. Construction and Building Materials, 2012, 28, 333-341.	3.2	133
53	Self-healing efficiency of cementitious materials containing tubular capsules filled with healing agent. Cement and Concrete Composites, 2011, 33, 497-505.	4.6	313
54	Surface modification as a technique to improve inter-layer bonding strength in 3D printed cementitious materials. RILEM Technical Letters, 0, 4, 33-38.	0.0	47