

Kim Van Tittelboom

List of Publications by Year in descending order

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Version: 2024-02-01

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	Self-Healing in Cementitious Materialsâ€™ A Review. <i>Materials</i> , 2013, 6, 2182-2217.	1.3	650
2	Use of silica gel or polyurethane immobilized bacteria for self-healing concrete. <i>Construction and Building Materials</i> , 2012, 26, 532-540.	3.2	538
3	Self-healing cementitious materials by the combination of microfibres and superabsorbent polymers. <i>Journal of Intelligent Material Systems and Structures</i> , 2014, 25, 13-24.	1.4	335
4	Self-healing efficiency of cementitious materials containing tubular capsules filled with healing agent. <i>Cement and Concrete Composites</i> , 2011, 33, 497-505.	4.6	313
5	Influence of mix composition on the extent of autogenous crack healing by continued hydration or calcium carbonate formation. <i>Construction and Building Materials</i> , 2012, 37, 349-359.	3.2	232
6	Extrusion-based concrete 3D printing from a material perspective: A state-of-the-art review. <i>Cement and Concrete Composites</i> , 2021, 115, 103855.	4.6	175
7	Design of polymeric capsules for self-healing concrete. <i>Cement and Concrete Composites</i> , 2015, 55, 298-307.	4.6	172
8	Comparison of different approaches for self-healing concrete in a large-scale lab test. <i>Construction and Building Materials</i> , 2016, 107, 125-137.	3.2	171
9	Acoustic emission analysis for the quantification of autonomous crack healing in concrete. <i>Construction and Building Materials</i> , 2012, 28, 333-341.	3.2	133
10	Microstructural Characterization of 3D Printed Cementitious Materials. <i>Materials</i> , 2019, 12, 2993.	1.3	105
11	Rheological and pumping behaviour of 3D printable cementitious materials with varying aggregate content. <i>Cement and Concrete Research</i> , 2021, 139, 106258.	4.6	95
12	A Novel Design of Autonomously Healed Concrete: Towards a Vascular Healing Network. <i>Materials</i> , 2017, 10, 49.	1.3	88
13	Chloride induced reinforcement corrosion behavior in self-healing concrete with encapsulated polyurethane. <i>Cement and Concrete Research</i> , 2018, 113, 130-139.	4.6	80
14	The efficiency of self-healing concrete using alternative manufacturing procedures and more realistic crack patterns. <i>Cement and Concrete Composites</i> , 2015, 57, 142-152.	4.6	79
15	Stiffening control of cement-based materials using accelerators in inline mixing processes: Possibilities and challenges. <i>Cement and Concrete Composites</i> , 2021, 119, 103972.	4.6	74
16	Poly(methyl methacrylate) capsules as an alternative to the â€™â€™proof-of-conceptâ€™â€™ glass capsules used in self-healing concrete. <i>Cement and Concrete Composites</i> , 2018, 89, 260-271.	4.6	66
17	3D printable concrete with natural and recycled coarse aggregates: Rheological, mechanical and shrinkage behaviour. <i>Cement and Concrete Composites</i> , 2022, 125, 104311.	4.6	52
18	Quantification of the Service Life Extension and Environmental Benefit of Chloride Exposed Self-Healing Concrete. <i>Materials</i> , 2017, 10, 5.	1.3	50

#	ARTICLE	IF	CITATIONS
19	Addressing the need for standardization of test methods for self-healing concrete: an inter-laboratory study on concrete with macrocapsules. <i>Science and Technology of Advanced Materials</i> , 2020, 21, 661-682.	2.8	50
20	Use of neutron radiography and tomography to visualize the autonomous crack sealing efficiency in cementitious materials. <i>Materials and Structures/Materiaux Et Constructions</i> , 2013, 46, 105-121.	1.3	48
21	Surface modification as a technique to improve inter-layer bonding strength in 3D printed cementitious materials. <i>RILEM Technical Letters</i> , 0, 4, 33-38.	0.0	47
22	Early age hydration, rheology and pumping characteristics of CSA cement-based 3D printable concrete. <i>Construction and Building Materials</i> , 2021, 275, 122136.	3.2	45
23	A review of vascular networks for self-healing applications. <i>Smart Materials and Structures</i> , 2021, 30, 063001.	1.8	42
24	Simulation-Aided Design of Tubular Polymeric Capsules for Self-Healing Concrete. <i>Materials</i> , 2017, 10, 10.	1.3	36
25	Bond strength between concrete and repair mortar and its relation with concrete removal techniques and substrate composition. <i>Construction and Building Materials</i> , 2020, 230, 116900.	3.2	33
26	Neutron radiography to study the water ingress via the interlayer of 3D printed cementitious materials for continuous layering. <i>Construction and Building Materials</i> , 2020, 258, 119587.	3.2	33
27	Neutron Radiography Based Visualization and Profiling of Water Uptake in (Un)cracked and Autonomously Healed Cementitious Materials. <i>Materials</i> , 2016, 9, 311.	1.3	31
28	Parameter Study of Superabsorbent Polymers (SAPs) for Use in Durable Concrete Structures. <i>Materials</i> , 2019, 12, 1541.	1.3	31
29	Sealing efficiency of cement-based materials containing extruded cementitious capsules. <i>Construction and Building Materials</i> , 2020, 251, 119039.	3.2	31
30	Feasibility study on real-scale, self-healing concrete slab by developing a smart capsules network and assessed by a plethora of advanced monitoring techniques. <i>Construction and Building Materials</i> , 2019, 228, 116780.	3.2	29
31	Nitrite producing bacteria inhibit reinforcement bar corrosion in cementitious materials. <i>Scientific Reports</i> , 2018, 8, 14092.	1.6	27
32	The microstructure of capsule containing self-healing materials: A micro-computed tomography study. <i>Materials Characterization</i> , 2016, 119, 99-109.	1.9	26
33	Validation of Self-Healing Properties of Construction Materials through Nondestructive and Minimal Invasive Testing. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800179.	1.9	26
34	Mechanical and microstructural properties of 3D printable concrete in the context of the twin-pipe pumping strategy. <i>Cement and Concrete Composites</i> , 2022, 125, 104324.	4.6	21
35	Influence of substrate surface roughness and moisture content on tensile adhesion performance of 3D printable concrete. <i>Cement and Concrete Composites</i> , 2022, 126, 104350.	4.6	20
36	Performance criteria, environmental impact and cost assessment for 3D printable concrete mixtures. <i>Resources, Conservation and Recycling</i> , 2022, 181, 106255.	5.3	19

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37	Hydration re-initiation of borated CSA systems with a two-stage mixing process: An application in extrusion-based concrete 3D printing. <i>Cement and Concrete Research</i> , 2022, 159, 106870.	4.6	19
38	The Use of Superabsorbent Polymers in High Performance Concrete to Mitigate Autogenous Shrinkage in a Large-Scale Demonstrator. <i>Sustainability</i> , 2020, 12, 4741.	1.6	18
39	Activation of Pozzolanic and Latent-Hydraulic Reactions by Alkalis in Order to Repair Concrete Cracks. <i>Journal of Materials in Civil Engineering</i> , 2015, 27, .	1.3	16
40	Development of 3D Printable Cementitious Composites with the Incorporation of Polypropylene Fibers. <i>Materials</i> , 2021, 14, 4474.	1.3	13
41	An Investigation of Suitable Healing Agents for Vascular-Based Self-Healing in Cementitious Materials. <i>Sustainability</i> , 2021, 13, 12948.	1.6	12
42	Reservoir-Vascular Tubes Network for Self-Healing Concrete: Performance Analysis by Acoustic Emission, Digital Image Correlation and Ultrasound Velocity. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 4821.	1.3	12
43	Self-€repair of thermal cracks in concrete sandwich panels. <i>Structural Concrete</i> , 2015, 16, 273-288.	1.5	11
44	Evaluating the Influence of Aggregate Content on Pumpability of 3D Printable Concrete. <i>RILEM Bookseries</i> , 2020, , 333-341.	0.2	10
45	Influence of aluminum sulfate on mobility and adhesion of hydroxyethyl methyl cellulose in cement-based materials for tunnel linings. <i>Cement and Concrete Composites</i> , 2022, 131, 104594.	4.6	10
46	Xâ€ray Radiography to Visualize the Rebarâ€™Cementitious Matrix Interface and Judge the Delay in Corrosion through Selfâ€™Repair by Encapsulated Polyurethane. <i>Advanced Materials Interfaces</i> , 2018, 5, 1701021.	1.9	9
47	Durability of self-healing cementitious systems with encapsulated polyurethane evaluated with a new pre-standard test method. <i>Materials and Structures/Materiaux Et Constructions</i> , 2022, 55, .	1.3	9
48	Durability of self-healing concrete. <i>MATEC Web of Conferences</i> , 2019, 289, 01003.	0.1	8
49	Development of an improved cracking method to reduce the variability in testing the healing efficiency of self-healing mortar containing encapsulated polymers. <i>MATEC Web of Conferences</i> , 2018, 199, 02017.	0.1	7
50	The Production of a Topology-Optimized 3D-Printed Concrete Bridge. <i>RILEM Bookseries</i> , 2022, , 37-42.	0.2	4
51	Shape stability of 3D printable concrete with river and manufactured sand characterized by squeeze flow. <i>Cement and Concrete Composites</i> , 2022, 133, 104674.	4.6	4
52	Salt Scaling Resistance of 3D Printed Concrete. <i>RILEM Bookseries</i> , 2022, , 188-193.	0.2	3
53	Influence of the Print Process on the Durability of Printed Cementitious Materials. <i>RILEM Bookseries</i> , 2022, , 194-199.	0.2	1
54	Manual Application versus Autonomous Release of Water Repellent Agent to Prevent Reinforcement Corrosion in Cracked Concrete. <i>Processes</i> , 2021, 9, 2101.	1.3	0