

# Marwa Hassan

## List of Publications by Year in descending order

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Version: 2024-02-01

93  
papers

2,018  
citations

201385

27  
h-index

288905

40  
g-index

95  
all docs

95  
docs citations

95  
times ranked

1679  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaluation of the durability of titanium dioxide photocatalyst coating for concrete pavement. <i>Construction and Building Materials</i> , 2010, 24, 1456-1461.	3.2	197
2	Evaluation of Self-Healing Mechanisms in Concrete with Double-Walled Sodium Silicate Microcapsules. <i>Journal of Materials in Civil Engineering</i> , 2015, 27, .	1.3	100
3	Dicyclopentadiene and Sodium Silicate Microencapsulation for Self-Healing of Concrete. <i>Journal of Materials in Civil Engineering</i> , 2014, 26, 886-896.	1.3	98
4	Modeling of an integrated solar system. <i>Building and Environment</i> , 2008, 43, 804-810.	3.0	68
5	Sustainable Photocatalytic Asphalt Pavements for Mitigation of Nitrogen Oxide and Sulfur Dioxide Vehicle Emissions. <i>Journal of Materials in Civil Engineering</i> , 2013, 25, 365-371.	1.3	64
6	Life cycle assessment of nano-sized titanium dioxide coating on residential windows. <i>Construction and Building Materials</i> , 2013, 40, 314-321.	3.2	54
7	Evaluation of Environmental Effectiveness of Titanium Dioxide Photocatalyst Coating for Concrete Pavement. <i>Transportation Research Record</i> , 2010, 2164, 46-51.	1.0	49
8	Evaluation of the Environmental and Economic Impacts of Warm-Mix Asphalt Using Life-Cycle Assessment. <i>International Journal of Construction Education and Research</i> , 2010, 6, 238-250.	1.1	45
9	Evaluation of Sunflower Oil as a Rejuvenator and Its Microencapsulation as a Healing Agent. <i>Journal of Materials in Civil Engineering</i> , 2016, 28, .	1.3	45
10	Durability Quantification of TiO <sub>2</sub> Surface Coating on Concrete and Asphalt Pavements. <i>Journal of Materials in Civil Engineering</i> , 2014, 26, 331-337.	1.3	42
11	Smart Coating Embedded with pH-Responsive Nanocapsules Containing a Corrosion Inhibiting Agent. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 6451-6459.	4.0	42
12	Simulation of Concrete Paving Operations on Interstate-74. <i>Journal of Construction Engineering and Management - ASCE</i> , 2008, 134, 2-9.	2.0	39
13	Laboratory Evaluation of Environmental Performance of Photocatalytic Titanium Dioxide Warm-Mix Asphalt Pavements. <i>Journal of Materials in Civil Engineering</i> , 2012, 24, 599-605.	1.3	38
14	Micro-encapsulation of asphalt rejuvenators using melamine-formaldehyde. <i>Construction and Building Materials</i> , 2016, 114, 29-39.	3.2	38
15	Artificial intelligence modeling to evaluate field performance of photocatalytic asphalt pavement for ambient air purification. <i>Environmental Science and Pollution Research</i> , 2014, 21, 8847-8857.	2.7	37
16	Design, construction and performance prediction of integrated solar roof collectors using finite element analysis. <i>Construction and Building Materials</i> , 2007, 21, 1069-1078.	3.2	36
17	Laboratory Investigation of the Effect of Mixed Nitrogen Dioxide and Nitrogen Oxide Gases on Titanium Dioxide Photocatalytic Efficiency in Concrete Pavements. <i>Journal of Materials in Civil Engineering</i> , 2011, 23, 1087-1093.	1.3	36
18	Evaluation of Nano-Titanium Dioxide Additive on Asphalt Binder Aging Properties. <i>Transportation Research Record</i> , 2011, 2207, 11-15.	1.0	35

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19	Evaluation of the reuse and recycling of drill cuttings in concrete applications. Construction and Building Materials, 2018, 164, 400-409.	3.2	35
20	Effects of Shear Bond Characteristics of Tack Coats on Pavement Performance at the Interface. Transportation Research Record, 2011, 2209, 1-8.	1.0	33
21	Estimation of the degree of hydration of concrete through automated machine learning based microstructure analysis "A study on effect of image magnification. Advanced Engineering Informatics, 2019, 42, 100975.	4.0	33
22	Feasibility of low fiber content PVA-ECC for jointless pavement application. Construction and Building Materials, 2021, 268, 121131.	3.2	33
23	Microencapsulation of Calcium Nitrate for Concrete Applications. Transportation Research Record, 2016, 2577, 8-16.	1.0	32
24	Investigation of the Mechanical Properties of Engineered Cementitious Composites with Low Fiber Content and with Crumb Rubber and High Fly Ash Content. Transportation Research Record, 2019, 2673, 418-428.	1.0	32
25	Measuring the crack-repair efficiency of steel fiber reinforced concrete beams with microencapsulated calcium nitrate. Construction and Building Materials, 2019, 201, 526-538.	3.2	32
26	Heterogeneous Finite-Element Modeling of the Dynamic Complex Modulus Test of Asphalt Mixture Using X-ray Computed Tomography. Journal of Materials in Civil Engineering, 2014, 26, .	1.3	30
27	Development of Photocatalytic Pervious Concrete Pavement for Air and Storm Water Improvements. Transportation Research Record, 2012, 2290, 161-167.	1.0	29
28	Louisiana's Experience with WMA Technologies: Mechanistic, Environmental, and Economic Analysis. Journal of Materials in Civil Engineering, 2015, 27, .	1.3	28
29	Effect of Self-Healing Calcium Nitrate Microcapsules on Concrete Properties. Transportation Research Record, 2016, 2577, 69-77.	1.0	28
30	Microencapsulated Sunflower Oil for Rejuvenation and Healing of Asphalt Mixtures. Journal of Materials in Civil Engineering, 2017, 29, .	1.3	26
31	Rheological and Mechanical Evaluation of Polyurethane Prepolymer-Modified Asphalt Mixture with Self-Healing Abilities. Journal of Materials in Civil Engineering, 2020, 32, .	1.3	26
32	Dual Self-Healing Mechanisms with Microcapsules and Shape Memory Alloys in Reinforced Concrete. Journal of Materials in Civil Engineering, 2018, 30, 04017277.	1.3	24
33	Development and validation of a simple estimating tool to predict heating and cooling energy demand for attics of residential buildings. Energy and Buildings, 2012, 54, 12-21.	3.1	23
34	Laboratory and Construction Evaluation of Warm-Mix Asphalt. Journal of Materials in Civil Engineering, 2016, 28, .	1.3	23
35	Quantification of the Environmental Benefits of Ultrafine/Nanotitanium Dioxide Photocatalyst Coatings for Concrete Pavement Using Hybrid Life-Cycle Assessment. Journal of Infrastructure Systems, 2010, 16, 160-166.	1.0	21
36	New Approach to Recycling Asphalt Shingles in Hot-Mix Asphalt. Journal of Materials in Civil Engineering, 2012, 24, 1403-1411.	1.3	20

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37	Supervised Intelligence Committee Machine to Evaluate Field Performance of Photocatalytic Asphalt Pavement for Ambient Air Purification. <i>Transportation Research Record</i> , 2015, 2528, 96-105.	1.0	20
38	Effect of Sodium Alginate Fibers Encapsulating Rejuvenators on the Self-Healing Capability and Cracking Resistance of Asphalt Mixtures. <i>Journal of Materials in Civil Engineering</i> , 2020, 32, .	1.3	20
39	Characterization of nanoparticles released during construction of photocatalytic pavements using engineered nanoparticles. <i>Journal of Nanoparticle Research</i> , 2012, 14, 1.	0.8	19
40	Evaluating the Self-Healing Efficiency of Hydrogel-Encapsulated Bacteria in Concrete. <i>Transportation Research Record</i> , 2020, 2674, 113-123.	1.0	19
41	Performance evaluation of an attic radiant barrier system using three-dimensional transient finite element method. <i>Journal of Building Physics</i> , 2013, 36, 247-264.	1.2	18
42	Laboratory Testing of Self-Healing Microcapsules in Asphalt Mixtures Prepared with Recycled Asphalt Shingles. <i>Journal of Materials in Civil Engineering</i> , 2017, 29, .	1.3	18
43	Characterization of Self-Healing Processes Induced by Calcium Nitrate Microcapsules in Cement Mortar. <i>Journal of Materials in Civil Engineering</i> , 2017, 29, .	1.3	18
44	Evaluating photocatalytic asphalt pavement effectiveness in real-world environments through developing models: a statistical and kinetic study. <i>Road Materials and Pavement Design</i> , 2013, 14, 92-105.	2.0	17
45	Cost-Effective ECC with Low Fiber Content for Pavement Application. <i>MATEC Web of Conferences</i> , 2019, 271, 07001.	0.1	16
46	Quantification of Reduction of Nitrogen Oxides by Nitrate Accumulation on Titanium Dioxide Photocatalytic Concrete Pavement. <i>Transportation Research Record</i> , 2012, 2290, 147-153.	1.0	15
47	Effects of Paver Stoppage on Temperature Segregation in Asphalt Pavements. <i>Journal of Materials in Civil Engineering</i> , 2017, 29, .	1.3	15
48	Rheological properties of asphalt binder modified with recycled asphalt materials and light-activated self-healing polymers. <i>Construction and Building Materials</i> , 2019, 220, 187-195.	3.2	15
49	Effects of Roadway Contaminants on Titanium Dioxide Photodegradation of Nitrogen Oxides. <i>Transportation Research Record</i> , 2011, 2240, 22-29.	1.0	14
50	Feasibility of ECC with high contents of post-processed bagasse ash as partial cement replacement. <i>Construction and Building Materials</i> , 2022, 319, 126023.	3.2	14
51	Mechanical Characteristics of Asphaltic Mixtures Containing Titanium-Dioxide Photocatalyst. <i>Journal of Testing and Evaluation</i> , 2012, 40, 998-1005.	0.4	13
52	Field Evaluation of Ability of Photocatalytic Concrete Pavements to Remove Nitrogen Oxides. <i>Transportation Research Record</i> , 2012, 2290, 154-160.	1.0	12
53	Performance and Cost-Effectiveness of Sustainable Technologies in Flexible Pavements Using the Mechanistic-Empirical Pavement Design Guide. <i>Journal of Materials in Civil Engineering</i> , 2012, 24, 239-247.	1.3	12
54	Properties of Engineered Cementitious Composites with Raw Sugarcane Bagasse Ash Used as Sand Replacement. <i>Journal of Materials in Civil Engineering</i> , 2021, 33, 04021231.	1.3	11

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55	Variability and Characteristics of Recycled Asphalt Shingles Sampled from Different Sources. Journal of Materials in Civil Engineering, 2014, 26, 748-754.	1.3	10
56	Performance of Asphalt Rejuvenators in Hot-Mix Asphalt Containing Recycled Asphalt Shingles. Transportation Research Record, 2017, 2633, 108-116.	1.0	9
57	Effects of Light-Activated Self-Healing Polymers on the Rheological Behaviors of Asphalt Binder Containing Recycled Asphalt Shingles. Transportation Research Record, 2018, 2672, 301-310.	1.0	9
58	Mechanical and Self-Healing Performances of Asphalt Mixtures Containing Recycled Asphalt Materials and Light-Activated Self-Healing Polymer. Journal of Materials in Civil Engineering, 2019, 31, .	1.3	8
59	Influence of Production Methodology on the Pozzolanic Activity of Sugarcane Bagasse Ash. MATEC Web of Conferences, 2019, 271, 07003.	0.1	8
60	Evaluation of hollow-fibers encapsulating a rejuvenator in asphalt binders with recycled asphalt shingles. International Journal of Pavement Research and Technology, 2020, 13, 108-119.	1.3	8
61	Evaluation of the thermal performance of a roof-mounted radiant barrier in residential buildings: Experimental study. Journal of Building Physics, 2014, 38, 66-80.	1.2	7
62	Laboratory Testing of Self-Healing Fibers in Asphalt Mixtures Prepared with Recycled Materials. Transportation Research Record, 2019, 2673, 513-523.	1.0	7
63	SDFlex: A Framework for the Assessment and Construction of Sustainable Flexible Pavements. Journal of Green Building, 2008, 3, 108-118.	0.4	7
64	Effect of calcium nitrate healing microcapsules on concrete strength and air permeability. Magazine of Concrete Research, 2019, 71, 195-206.	0.9	6
65	Evaluation of novel jointless engineered cementitious composite ultrathin whitetopping (ECC-UTW) overlay. Construction and Building Materials, 2020, 265, 120659.	3.2	6
66	Effect of Raw Sugarcane Bagasse Ash as Sand Replacement on the Fiber-Bridging Properties of Engineered Cementitious Composites. Transportation Research Record, 0, , 036119812110237.	1.0	6
67	Electrochemical evaluation of epoxy-coated-rebar containing pH-responsive nanocapsules in simulated carbonated concrete pore solution. Progress in Organic Coatings, 2021, 161, 106549.	1.9	6
68	Decision-Making Tool for Incorporating Cradle-to-Gate Sustainability Measures into Pavement Design. Journal of Transportation Engineering Part B: Pavements, 2018, 144, 04018051.	0.8	5
69	Predicting the Retroreflectivity Degradation of Waterborne Paint Pavement Markings using Advanced Machine Learning Techniques. Transportation Research Record, 2021, 2675, 483-494.	1.0	5
70	New Approach to Compare Glare and Light Characteristics of Conventional and Balloon Lighting Systems. Journal of Construction Engineering and Management - ASCE, 2011, 137, 39-44.	2.0	4
71	Quantification of Residential Energy Consumption Reduction Using Glass-Modified Asphalt Shingle. Journal of Architectural Engineering, 2015, 21, .	0.8	4
72	Laboratory Testing of Self-Healing Polymer Modified Asphalt Mixtures Containing Recycled Asphalt Materials (RAP/RAS). MATEC Web of Conferences, 2019, 271, 03003.	0.1	4

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73	Self-Healing of SMA and Steel-Reinforced Mortar with Microcapsules. Journal of Materials in Civil Engineering, 2019, 31, .	1.3	4
74	Development of Cost-Effective Restriping Strategies using Standard Width and Wide Waterborne Paints on Asphalt Pavements in Hot and Humid Climates. Transportation Research Record, 2021, 2675, 284-295.	1.0	4
75	Evaluation of Cementitious Matrices for the Development of Ultra-High Performance Engineered Cementitious Composites. , 2021, , .		4
76	Development of Cost-Effective High-Modulus Asphalt Concrete Mixtures Using Crumb Rubber and Local Construction Materials in Louisiana. Transportation Research Record, 2022, 2676, 274-286.	1.0	4
77	Measurement of Pavement Surface Reflectance for a Balloon Lighting System. Journal of Transportation Engineering, 2008, 134, 432-437.	0.9	3
78	Effect of overhead lifting on neck and shoulder muscle activity and upper extremity joint angles. Occupational Ergonomics, 2012, 10, 165-174.	0.3	3
79	Kinetic Study of Photocatalytic Degradation of Nitrogen Monoxide with Titanium Dioxide Nanoparticles in Concrete Pavements. Transportation Research Record, 2014, 2441, 38-45.	1.0	3
80	Development of Practical and Cost-Effective Ultra-High-Performance Engineered Cementitious Composites Using Natural Sand and No Silica Fume. Transportation Research Record, 2022, 2676, 312-328.	1.0	3
81	Nitrogen Oxide Reduction and Nitrate Measurements on TiO <sub>2</sub> Photocatalytic Pervious Concrete Pavement. , 2012, , .		2
82	Evaluation of Raw Bagasse Ash as Sand Replacement for the Production of Engineered Cementitious Composites. , 2021, , .		2
83	Evaluation of the effects of engineered cementitious composites (ECC) plasticity on concrete pavement performance. International Journal of Pavement Engineering, 2022, 23, 4474-4486.	2.2	2
84	Field Evaluation and Cost-Effectiveness of Cement-Stabilized Full-Depth Reclamation of Asphalt Pavements in Hot and Humid Climates. Journal of Transportation Engineering Part B: Pavements, 2022, 148, .	0.8	2
85	Potential of Nanoparticles and Nitrates Released to Water from Photocatalytic Pavements. , 2014, , .		1
86	Effect of Sand Type and PVA Fiber Content on the Properties of Metakaolin Based Engineered Geopolymer Composites. Transportation Research Record, 2021, 2675, 475-491.	1.0	1
87	Evaluation of the Environmental and Economic Impacts of Warm-Mix Asphalt Using Life-Cycle Assessment. , 0, .		1
88	Feasibility of Engineered Cementitious Composites Implementing Combined Systems of Post-Processed Bagasse Ash and Fly Ash as SCMs. , 2021, , .		1
89	Evaluation of Alternative Sources of SCMs for Concrete Materials. , 2021, , .		1
90	Evaluation of Alternative Sources of Supplementary Cementitious Materials for Concrete Materials. Transportation Research Record, 2022, 2676, 287-301.	1.0	1

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91	Development of the Simple Estimating Tool to Assess the Energy Cost Savings of Attic Radiant Barrier System in Temperate Climate Regions. , 2014, , .		0
92	Characterization of Recycled Asphalt Shingles. , 2016, , .		0
93	Mechanistic, Environmental, and Economic Analysis of WMA Technologies in Louisiana. , 2016, , .		0