

# Qingli Dai

## List of Publications by Year in descending order

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127  
papers

4,963  
citations

93792

39  
h-index

111975

67  
g-index

127  
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127  
docs citations

127  
times ranked

3231  
citing authors

#	ARTICLE	IF	CITATIONS
1	Experimental and Numerical Investigation of Fracture Behaviors of Steel Fiber-Reinforced Rubber Self-Compacting Concrete. <i>Journal of Materials in Civil Engineering</i> , 2022, 34, .	1.3	29
2	Discussion on molecular dynamics (MD) simulations of the asphalt materials. <i>Advances in Colloid and Interface Science</i> , 2022, 299, 102565.	7.0	63
3	Investigation of the mechanical and shrinkage properties of plastic-rubber compound modified cement mortar with recycled tire steel fiber. <i>Construction and Building Materials</i> , 2022, 334, 127391.	3.2	18
4	Laboratory shear bond test for chip-seal under varying environmental and material conditions. <i>International Journal of Pavement Engineering</i> , 2021, 22, 1107-1115.	2.2	13
5	Leaching evaluation and performance assessments of asphalt mixtures with recycled cathode ray tube glass: A preliminary study. <i>Journal of Cleaner Production</i> , 2021, 279, 123716.	4.6	24
6	A numerical study on rutting behaviour of direct coal liquefaction residue modified asphalt mixture. <i>Road Materials and Pavement Design</i> , 2021, 22, 1454-1468.	2.0	7
7	Integrated experimental and numerical study on flexural properties of cross laminated timber made of low-value sugar maple lumber. <i>Construction and Building Materials</i> , 2021, 280, 122508.	3.2	8
8	Mechanical Property Evaluation of Hybrid Mixed-Species CLT Panels with Sugar Maple and White Spruce. <i>Journal of Materials in Civil Engineering</i> , 2021, 33, .	1.3	9
9	Flexural and shear performance of CLT panels made from salvaged beetle-killed white spruce. <i>Construction and Building Materials</i> , 2021, 302, 124381.	3.2	6
10	A Review on Utilization of Electronic Waste Plastics for Use Within Asphaltic Concrete Materials: Development, Opportunities and Challenges for Successful Implementation. , 2020, , 737-749.		2
11	Mechanical property, nanopore structure and drying shrinkage of metakaolin-based geopolymer with waste glass powder. <i>Journal of Cleaner Production</i> , 2020, 242, 118502.	4.6	104
12	Fresh and mechanical performance and freeze-thaw durability of steel fiber-reinforced rubber self-compacting concrete (SRSCC). <i>Journal of Cleaner Production</i> , 2020, 277, 123180.	4.6	54
13	Design of pH-responsive SAP polymer for pore solution chemistry regulation and crack sealing in cementitious materials. <i>Composites Part B: Engineering</i> , 2020, 199, 108262.	5.9	18
14	Experimental and molecular dynamics simulation study on thermal, transport, and rheological properties of asphalt. <i>Construction and Building Materials</i> , 2020, 265, 120358.	3.2	48
15	Performance Evaluations of Pavement Underlying Chip-Seal: Laboratory Testing on Pavement Cores. , 2020, , .		0
16	Reliability Assessment of Electrical Grids Subjected to Wind Hazards and Ice Accretion with Concurrent Wind. <i>Journal of Structural Engineering</i> , 2020, 146, .	1.7	15
17	Stability and rheology of asphalt-emulsion under varying acidic and alkaline levels. <i>Journal of Cleaner Production</i> , 2020, 256, 120417.	4.6	16
18	Atomic-structure, microstructure and mechanical properties of glass powder modified metakaolin-based geopolymer. <i>Construction and Building Materials</i> , 2020, 254, 119303.	3.2	47

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19	Influence of calcium content on the atomic structure and phase formation of alkali-activated cement binder. <i>Journal of the American Ceramic Society</i> , 2019, 102, 1479-1494.	1.9	21
20	Kinetic analysis and thermodynamic simulation of alkali-silica reaction in cementitious materials. <i>Journal of the American Ceramic Society</i> , 2019, 102, 1463-1478.	1.9	13
21	Mechanical and durability performance evaluation of crumb rubber-modified epoxy polymer concrete overlays. <i>Construction and Building Materials</i> , 2019, 203, 469-480.	3.2	64
22	Investigation of adhesion and interface bond strength for pavements underlying chip-seal: Effect of asphalt-aggregate combinations and freeze-thaw cycles on chip-seal. <i>Construction and Building Materials</i> , 2019, 203, 322-330.	3.2	45
23	Mechanical, durability, and microstructural properties of macro synthetic polypropylene (PP) fiber-reinforced rubber concrete. <i>Journal of Cleaner Production</i> , 2019, 234, 1351-1364.	4.6	167
24	A critical review of corrosion development and rust removal techniques on the structural/environmental performance of corroded steel bridges. <i>Journal of Cleaner Production</i> , 2019, 233, 126-146.	4.6	57
25	Strength and durability of dry-processed stone matrix asphalt containing cement pre-coated scrap tire rubber particles. <i>Construction and Building Materials</i> , 2019, 214, 475-483.	3.2	26
26	High-Frequency Fatigue Performance of Cracked Mortar after Epoxy Grouting Reinforcement. <i>International Journal of Geomechanics</i> , 2019, 19, 04019035.	1.3	8
27	Evaluation of cathode ray tube (CRT) glass concrete with/without surface treatment. <i>Journal of Cleaner Production</i> , 2019, 226, 85-95.	4.6	23
28	Evaluation of contact angle between asphalt binders and aggregates using Molecular Dynamics (MD) method. <i>Construction and Building Materials</i> , 2019, 212, 727-736.	3.2	36
29	Nanomodified asphalt mixture with enhanced performance. , 2019, , 187-201.		1
30	Numerical and Experimental Study of Internal Curing Effects on Permeability of Mortar Samples. <i>Journal of Engineering Mechanics - ASCE</i> , 2019, 145, .	1.6	2
31	Effect of calcium and lithium on alkali-silica reaction kinetics and phase development. <i>Cement and Concrete Research</i> , 2019, 115, 220-229.	4.6	20
32	Study on Rubberized Concrete Reinforced with Different Fibers. <i>ACI Materials Journal</i> , 2019, 116, .	0.3	2
33	Evaluation of laboratory performance of self-consolidating concrete with recycled tire rubber. <i>Journal of Cleaner Production</i> , 2018, 180, 823-831.	4.6	100
34	Neutron scattering measurement of water content and chemical composition of alkali-glass powder reacted gel. <i>Materials Characterization</i> , 2018, 136, 165-174.	1.9	0
35	A new approach of quantitatively analyzing water states by neutron scattering in hardened cement paste. <i>Materials Characterization</i> , 2018, 136, 134-143.	1.9	1
36	Modulus simulation of asphalt binder models using Molecular Dynamics (MD) method. <i>Construction and Building Materials</i> , 2018, 162, 430-441.	3.2	43

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37	A critical review on the performance of portland cement concrete with recycled organic components. <i>Journal of Cleaner Production</i> , 2018, 188, 92-112.	4.6	39
38	Investigation on the freeze-thaw damage to the jointed plain concrete pavement under different climate conditions. <i>Frontiers of Structural and Civil Engineering</i> , 2018, 12, 227-238.	1.2	18
39	Reduced alkali-silica reaction damage in recycled glass mortar samples with supplementary cementitious materials. <i>Journal of Cleaner Production</i> , 2018, 172, 3621-3633.	4.6	45
40	Cepstrum-based operational modal analysis of wind turbines with and without external flaps. <i>Journal of Renewable and Sustainable Energy</i> , 2018, 10, 063303.	0.8	0
41	Investigation of properties and performances of Polyvinyl Alcohol (PVA) fiber-reinforced rubber concrete. <i>Construction and Building Materials</i> , 2018, 193, 631-642.	3.2	118
42	Rheological Performance of Bio-Char Modified Asphalt with Different Particle Sizes. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 1665.	1.3	33
43	Advanced Pavement Technologies. <i>Journal of Materials in Civil Engineering</i> , 2018, 30, 02018001.	1.3	0
44	Nonlinear Fatigue Damage of Cracked Cement Paste after Grouting Enhancement. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 1105.	1.3	4
45	Design and simulation of Macro-Fiber composite based serrated microflap for wind turbine blade fatigue load reduction. <i>Materials Research Express</i> , 2018, 5, 055505.	0.8	7
46	Characteristics of Water-Foamed Asphalt Mixture under Multiple Freeze-Thaw Cycles: Laboratory Evaluation. <i>Journal of Materials in Civil Engineering</i> , 2018, 30, .	1.3	53
47	Advanced Paving Materials and Technologies. <i>Applied Sciences (Switzerland)</i> , 2018, 8, 588.	1.3	1
48	Assessment of nanoparticles dispersion in asphalt during bubble escaping and bursting: Nano hydrated lime modified foamed asphalt. <i>Construction and Building Materials</i> , 2018, 184, 391-399.	3.2	31
49	Microwave-healing performance of modified asphalt mixtures with flake graphite and exfoliated graphite nanoplatelet. <i>Construction and Building Materials</i> , 2018, 187, 865-875.	3.2	22
50	Evaluation of properties and performance of rubber-modified concrete for recycling of waste scrap tire. <i>Journal of Cleaner Production</i> , 2017, 148, 681-689.	4.6	234
51	Rapid microwave irradiation synthesis of carbon nanotubes on graphite surface and its application on asphalt reinforcement. <i>Composites Part B: Engineering</i> , 2017, 124, 134-143.	5.9	33
52	Laboratory performance evaluation of both flake graphite and exfoliated graphite nanoplatelet modified asphalt composites. <i>Construction and Building Materials</i> , 2017, 149, 515-524.	3.2	19
53	Experimental investigation of physical properties and accelerated sunlight-healing performance of flake graphite and exfoliated graphite nanoplatelet modified asphalt materials. <i>Construction and Building Materials</i> , 2017, 134, 412-423.	3.2	29
54	Design and Simulation of Active External Trailing-Edge Flaps for Wind Turbine Blades on Load Reduction. <i>Journal of Aerospace Engineering</i> , 2017, 30, .	0.8	8

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55	Durability performance of rubberized mortar and concrete with NaOH-Solution treated rubber particles. <i>Construction and Building Materials</i> , 2017, 153, 496-505.	3.2	136
56	Microstructure characterization of alkali-glass particle and alkali-glass powder reacted gels with neutron scattering and imaging techniques. <i>Materials Characterization</i> , 2017, 131, 98-107.	1.9	11
57	X-ray CT characterization and fracture simulation of ASR damage of glass particles in alkaline solution and mortar. <i>Theoretical and Applied Fracture Mechanics</i> , 2017, 92, 76-88.	2.1	15
58	Evaluation of Recovered Fracture Strength after Light-Healing of Graphite-Modified Asphalt Mixtures with Integrated Computational-Experimental Approach. <i>Journal of Materials in Civil Engineering</i> , 2017, 29, 04016289.	1.3	5
59	Ultrasonic Techniques for Air Void Size Distribution and Property Evaluation in Both Early-Age and Hardened Concrete Samples. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 290.	1.3	16
60	Property Analysis of Exfoliated Graphite Nanoplatelets Modified Asphalt Model Using Molecular Dynamics (MD) Method. <i>Applied Sciences (Switzerland)</i> , 2017, 7, 43.	1.3	23
61	Investigation of the asphalt aggregate interaction using molecular dynamics. <i>Petroleum Science and Technology</i> , 2017, 35, 586-593.	0.7	22
62	Rheological properties, low-temperature cracking resistance, and optical performance of exfoliated graphite nanoplatelets modified asphalt binder. <i>Construction and Building Materials</i> , 2016, 113, 988-996.	3.2	85
63	Ultrasonic scattering measurement of air void size distribution in hardened concrete samples. <i>Construction and Building Materials</i> , 2016, 113, 415-422.	3.2	29
64	Review on heterogeneous model reconstruction of stone-based composites in numerical simulation. <i>Construction and Building Materials</i> , 2016, 117, 229-243.	3.2	67
65	Investigation of microwave healing performance of electrically conductive carbon fiber modified asphalt mixture beams. <i>Construction and Building Materials</i> , 2016, 126, 1012-1019.	3.2	68
66	Aerodynamic Analysis of Flow-Control Devices for Wind Turbine Applications Based on the Trailing-Edge Slotted-Flap Concept. <i>Journal of Aerospace Engineering</i> , 2016, 29, .	0.8	10
67	Integrated computational experimental approach for evaluating recovered fracture strength after induction healing of asphalt concrete beam samples. <i>Construction and Building Materials</i> , 2016, 106, 700-710.	3.2	23
68	Molecular dynamics simulation of physicochemical properties of the asphalt model. <i>Fuel</i> , 2016, 164, 83-93.	3.4	126
69	Investigation of internal curing effects on microstructure and permeability of interface transition zones in cement mortar with SEM imaging, transport simulation and hydration modeling techniques. <i>Construction and Building Materials</i> , 2015, 76, 366-379.	3.2	47
70	Surface-dependence of interfacial binding strength between zinc oxide and graphene. <i>RSC Advances</i> , 2015, 5, 65719-65724.	1.7	15
71	Integrated Experimental-Numerical Approach for Estimating Asphalt Mixture Induction Healing Level through Discrete Element Modeling of a Single-Edge Notched Beam Test. <i>Journal of Materials in Civil Engineering</i> , 2015, 27, .	1.3	36
72	Fourier Transform Infrared Spectroscopy characterization of aging-related properties of original and nano-modified asphalt binders. <i>Construction and Building Materials</i> , 2015, 101, 1078-1087.	3.2	179

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73	Chemo-physical analysis and molecular dynamics (MD) simulation of moisture susceptibility of nano hydrated lime modified asphalt mixtures. <i>Construction and Building Materials</i> , 2015, 101, 536-547.	3.2	92
74	Transmission X-Ray Microscope Nanoscale Characterization and 3D Micromechanical Modeling of Internal Frost Damage in Cement Paste. <i>Journal of Nanomechanics &amp; Micromechanics</i> , 2014, 4, .	1.4	9
75	Computational investigation of pore permeability and connectivity from transmission X-ray microscope images of a cement paste specimen. <i>Construction and Building Materials</i> , 2014, 68, 240-251.	3.2	32
76	Side-groove influenced parameters for determining fracture toughness of self-healing composites using a tapered double cantilever beam specimen. <i>Theoretical and Applied Fracture Mechanics</i> , 2014, 74, 23-29.	2.1	14
77	Mechanical performance of asphalt mixtures modified by bio-oils derived from waste wood resources. <i>Construction and Building Materials</i> , 2014, 51, 424-431.	3.2	176
78	2D cohesive zone modeling of crack development in cementitious digital samples with microstructure characterization. <i>Construction and Building Materials</i> , 2014, 54, 584-595.	3.2	35
79	Numerical investigation of internal frost damage of digital cement paste samples with cohesive zone modeling and SEM microstructure characterization. <i>Construction and Building Materials</i> , 2014, 50, 266-275.	3.2	15
80	Investigation of internal frost damage in cementitious materials with micromechanics analysis, SEM imaging and ultrasonic wave scattering techniques. <i>Construction and Building Materials</i> , 2014, 50, 478-485.	3.2	23
81	Modeling stability of flap-enabled HAWT blades using spinning finite elements. , 2014, , .		0
82	Investigation of induction healing effects on electrically conductive asphalt mastic and asphalt concrete beams through fracture-healing tests. <i>Construction and Building Materials</i> , 2013, 49, 729-737.	3.2	87
83	Investigation of Internal Frost Damage in Concrete with Thermodynamic Analysis, Microdamage Modeling, and Time-Domain Reflectometry Sensor Measurements. <i>Journal of Materials in Civil Engineering</i> , 2013, 25, 1248-1259.	1.3	18
84	Micromechanical analysis and finite element modeling of electromechanical properties of active piezoelectric structural fiber (PSF) composites. , 2013, , .		0
85	Integration of computational model and SEM imaging technology to investigate internal frost damage in cementitious materials. <i>Proceedings of SPIE</i> , 2013, , .	0.8	0
86	Damage investigation of single-edge notched beam tests with concrete specimens using acoustic emission techniques. <i>Proceedings of SPIE</i> , 2013, , .	0.8	0
87	Investigation of electromechanical properties of piezoelectric structural fiber composites with micromechanics analysis and finite element modeling. <i>Mechanics of Materials</i> , 2012, 53, 29-46.	1.7	27
88	Tailored Extended Finite-Element Model for Predicting Crack Propagation and Fracture Properties within Idealized and Digital Cementitious Material Samples. <i>Journal of Engineering Mechanics - ASCE</i> , 2012, 138, 89-100.	1.6	10
89	Damage investigation of single-edge notched beam tests with normal strength concrete and ultra high performance concrete specimens using acoustic emission techniques. <i>Construction and Building Materials</i> , 2012, 31, 231-242.	3.2	45
90	Review of advances in understanding impacts of mix composition characteristics on asphalt concrete (AC) mechanics. <i>International Journal of Pavement Engineering</i> , 2011, 12, 385-405.	2.2	25

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91	Investigation of Fracture Behavior of Heterogeneous Infrastructure Materials with Extended-Finite-Element Method and Image Analysis. <i>Journal of Materials in Civil Engineering</i> , 2011, 23, 1662-1671.	1.3	36
92	Development of Micromechanics Models and Innovative Sensor Technologies to Evaluate Internal Frost Damage of Concrete. <i>Transportation Research Record</i> , 2011, 2240, 50-58.	1.0	6
93	Micromechanics models and innovative sensor technologies to evaluate internal-frost damage of concrete. <i>Proceedings of SPIE</i> , 2011, , .	0.8	2
94	Two- and three-dimensional micromechanical viscoelastic finite element modeling of stone-based materials with X-ray computed tomography images. <i>Construction and Building Materials</i> , 2011, 25, 1102-1114.	3.2	89
95	Nanoclay-modified asphalt materials: Preparation and characterization. <i>Construction and Building Materials</i> , 2011, 25, 1072-1078.	3.2	349
96	Three-Dimensional Micromechanical Finite-Element Network Model for Elastic Damage Behavior of Idealized Stone-Based Composite Materials. <i>Journal of Engineering Mechanics - ASCE</i> , 2011, 137, 410-421.	1.6	12
97	Micromechanical analysis of constitutive properties of active piezoelectric structural fiber (PSF) composites. , 2011, , .		0
98	Three-Dimensional Microstructural-Based Discrete Element Viscoelastic Modeling of Creep Compliance Tests for Asphalt Mixtures. <i>Journal of Materials in Civil Engineering</i> , 2011, 23, 79-87.	1.3	61
99	Micromechanical viscoelastoâ€plastic models and finite element implementation for rateâ€independent and rateâ€dependent permanent deformation of stoneâ€based materials. <i>International Journal for Numerical and Analytical Methods in Geomechanics</i> , 2010, 34, 1321-1345.	1.7	3
100	Prediction of Dynamic Modulus and Phase Angle of Stone-Based Composites Using a Micromechanical Finite-Element Approach. <i>Journal of Materials in Civil Engineering</i> , 2010, 22, 618-627.	1.3	38
101	Stiffness of Sand Mastic versus Stiffness of Asphalt Binder Using Three-Dimensional Discrete Element Method. , 2010, , .		1
102	A Microstructure-Based Approach for Simulating Viscoelastic Behaviors of Asphalt Mixtures. , 2010, , .		2
103	Micromechanical analysis of damping performance of piezoelectric structural fiber composites. <i>Proceedings of SPIE</i> , 2010, , .	0.8	1
104	An eXtended Finite Element Model for Characterization of Concrete Fracture Properties with Compact Tension Tests. , 2010, , .		1
105	Air void effect on an idealised asphalt mixture using two-dimensional and three-dimensional discrete element modelling approach. <i>International Journal of Pavement Engineering</i> , 2010, 11, 381-391.	2.2	14
106	Determining the specific gravities of coarse aggregates utilizing vacuum saturation approach. <i>Construction and Building Materials</i> , 2009, 23, 1316-1322.	3.2	11
107	Viscoelastic Model for Discrete Element Simulation of Asphalt Mixtures. <i>Journal of Engineering Mechanics - ASCE</i> , 2009, 135, 324-333.	1.6	172
108	Micromechanical finite element framework for predicting viscoelastic properties of asphalt mixtures. <i>Materials and Structures/Materiaux Et Constructions</i> , 2008, 41, 1025-1037.	1.3	56

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109	DEM Models of Idealized Asphalt Mixtures. , 2008, , .		2
110	Three-Dimensional Discrete Element Models for Asphalt Mixtures. Journal of Engineering Mechanics - ASCE, 2008, 134, 1053-1063.	1.6	156
111	Micromechanical Finite Element Models for Micro-Damage and Complex Constitutive Behavior of Asphalt Mixes. , 2008, , .		0
112	Two Dimensional and Three Dimensional Discrete Element Models for HMA. , 2008, , .		1
113	Dynamic Moduli for M-E Design of Asphalt Pavements. , 2008, , .		2
114	A Three-Dimensional Micro-Frame Element Network Model for Damage Behavior of Asphalt Mixtures. , 2008, , .		0
115	Aggregate Effect on Asphalt Mixture Properties by Modeling Particle-to-Particle Interaction. , 2007, , .		5
116	Investigation of Linear and Damage-Coupled Viscoelastic Properties of Sustainable Asphalt Mixture Using a Micromechanical Finite Element Approach. , 2007, , .		1
117	Dynamic complex modulus predictions of hot-mix asphalt using a micromechanical-based finite element model. Canadian Journal of Civil Engineering, 2007, 34, 1519-1528.	0.7	42
118	Review of advances in micromechanical modeling of aggregate-“aggregate interactions in asphalt mixtures. Canadian Journal of Civil Engineering, 2007, 34, 239-252.	0.7	34
119	Prediction of Creep Stiffness of Asphalt Mixture with Micromechanical Finite-Element and Discrete-Element Models. Journal of Engineering Mechanics - ASCE, 2007, 133, 163-173.	1.6	168
120	A micromechanical finite element model for linear and damage-coupled viscoelastic behaviour of asphalt mixture. International Journal for Numerical and Analytical Methods in Geomechanics, 2006, 30, 1135-1158.	1.7	60
121	A comparison of micro-mechanical modeling of asphalt materials using finite elements and doublet mechanics. Mechanics of Materials, 2005, 37, 641-662.	1.7	48
122	Development and Implementation of a Finite Element Model for Asphalt Mixture to Predict Compressive Complex Moduli at Low and Intermediate Temperatures. , 2005, , 21.		4
123	Prediction of Damage Behaviors in Asphalt Materials Using a Micromechanical Finite-Element Model and Image Analysis. Journal of Engineering Mechanics - ASCE, 2005, 131, 668-677.	1.6	84
124	A Micromechanical Viscoelasto-Plastic Model for Asphalt Mixture. , 2005, , 12.		3
125	Parametric Model Study of Microstructure Effects on Damage Behavior of Asphalt Samples. International Journal of Pavement Engineering, 2004, 5, 19-30.	2.2	28
126	Microstructural Simulation of Asphalt Materials: Modeling and Experimental Studies. Journal of Materials in Civil Engineering, 2004, 16, 107-115.	1.3	83



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127	Simulation of Asphalt Materials Using Finite Element Micromechanical Model with Damage Mechanics. Transportation Research Record, 2003, 1832, 86-95.	1.0	63