Hussain U Bahia

List of Publications by Year
in descending order

81 papers	2,491 citations	159525 30 h-index	214721 47 g-index
82 all docs	82 docs citations	82 times ranked	1247 citing authors

#	Article	IF	Citations
1	Measuring the Effect of Moisture on Asphaltâ€“Aggregate Bond with the Bitumen Bond Strength Test. Transportation Research Record, 2011, 2209, 70-81.	1.0	181
2	Aggregate structure characterisation of asphalt mixtures using two-dimensional image analysis. Road Materials and Pavement Design, 2012, 13, 433-454.	2.0	148
3	Adhesive and Cohesive Properties of Asphalt-Aggregate Systems Subjected to Moisture Damage. Road Materials and Pavement Design, 2010, 11, 11-32.	2.0	145
4	Modeling and Experimental Measurements of Strain Distribution in Asphalt Mixes. Journal of Transportation Engineering, 2001, 127, 477-485.	0.9	140
5	Distribution of Strains Within Hot-Mix Asphalt Binders: Applying Imaging and Finite-Element Techniques. Transportation Research Record, 2000, 1728, 21-27.	1.0	126
6	Modelling of Asphalt Mastic in Terms of Filler-Bitumen Interaction. Road Materials and Pavement Design, 2010, 11, 281-303.	2.0	78
7	Predicting low temperature physical hardening in asphalt binders. Construction and Building Materials, 2012, 34, 162-169.	3.2	78
8	Effect of moisture on the cohesion of asphalt mastics and bonding with surface of aggregates. Road Materials and Pavement Design, 2018, 19, 741-753.	2.0	71
9	Effects of high modulus asphalt binders on performance of typical asphalt pavement structures. Construction and Building Materials, 2013, 44, 207-213.	3.2	69
10	A nonlinear constitutive relationship for asphalt binders. Materials and Structures/Materiaux Et Constructions, 2012, 45, 457-473.	1.3	68
11	Measuring Effects of Warm-Mix Additives. Transportation Research Record, 2010, 2180, 85-92.	1.0	53
12	Advanced Characterization of Crumb Rubber-Modified Asphalts, Using Protocols Developed for Complex Binders. Transportation Research Record, 2001, 1767, 15-24.	1.0	52
13	Effects of Temperature and Pressure on Hot Mixed Asphalt Compaction: Field and Laboratory Study. Journal of Materials in Civil Engineering, 2008, 20, 440-448.	1.3	51
14	Modelling effects of aging on asphalt binder fatigue using complex modulus and the LAS test. International Journal of Fatigue, 2021, 146, 106150.	2.8	49
15	Comparison between SCB-IFIT, un-notched SCB-IFIT and IDEAL-CT for measuring cracking resistance of asphalt mixtures. Construction and Building Materials, 2020, 252, 119060.	3.2	47
16	Mechanisms of asphalt mixture rutting in the dry Hamburg Wheel Tracking test and the potential to be alternative test in measuring rutting resistance. Construction and Building Materials, 2017, 146, 175-182.	3.2	44
17	Effect of compaction conditions on aggregate packing using 2-dimensional image analysis and the relation to performance of HMA. Materials and Structures/Materiaux Et Constructions, 2014, 47, 1313-1324.	1.3	42
18	Device for Measuring Shear Resistance of Hot-Mix Asphalt in Gyratory Compactor. Transportation Research Record, 2000, 1723, 116-124.	1.0	41

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19	Critical Considerations toward Better Implementation of the Multiple Stress Creep and Recovery Test. Journal of Materials in Civil Engineering, 2017, 29, .	1.3	39
20	Effect of mineral filler on changes in molecular size distribution of asphalts during oxidative ageing. Road Materials and Pavement Design, 2015, 16, 55-72.	2.0	38
21	Influence of Filler Fractional Voids on Mastic and Mixture Performance. Transportation Research Record, 2012, 2294, 74-80.	1.0	37
22	The role of binders in mixture cracking resistance measured by ideal-CT test. International Journal of Fatigue, 2021, 142, 105947.	2.8	37
23	Evaluation and Selection of Aggregate Gradations for Asphalt Mixtures Using Superpave. Transportation Research Record, 1997, 1583, 91-97.	1.0	36
24	Influence of Test Geometry, Temperature, Stress Level, and Loading Duration on Binder Properties Measured Using DSR. Journal of Materials in Civil Engineering, 2011, 23, 1422-1432.	1.3	35
25	Modeling Thermal Stress in Asphalt Mixtures Undergoing Glass Transition and Physical Hardening. Transportation Research Record, 2012, 2296, 106-114.	1.0	35
26	Importance of Elastic Recovery in the DSR for Binders and Mastics. Engineering Journal, 2012, 16, 99-106.	0.5	35
27	Estimating the Effect of Recycled Asphalt Pavements and Asphalt Shingles on Fresh Binder, Low-Temperature Properties without Extraction and Recovery. Transportation Research Record, 2011, 2208, 48-55.	1.0	34
28	Effect of particle mobility on aggregate structure formation in asphalt mixtures. Road Materials and Pavement Design, 2013, 14, 16-34.	2.0	32
29	The Relationship between Nonlinearity of Asphalt Binders and Asphalt Mixture Permanent Deformation. Road Materials and Pavement Design, 2010, 11, 653-680.	2.0	31
30	Asphalt Binder Contribution to Mixture Workability and Application of Asphalt Lubricity Test to Estimate Compactability Temperatures for Warm-Mix Asphalt. Transportation Research Record, 2013, 2371, 87-95.	1.0	31
31	Evaluation of Stability, Nature of Modifier, and Short-Term Aging of Modified Binders Using New Tests: LAST, PAT, and Modified RTFO. Transportation Research Record, 1998, 1638, 64-71.	1.0	30
32	Effect of cross-linking agents on the rheological properties of polymer-modified bitumen. Road Materials and Pavement Design, 2015, 16, 349-361.	2.0	30
33	Applicability of Superpave Binder Testing Protocols to Modified Binders. Transportation Research Record, 1997, 1586, 16-23.	1.0	29
34	Effect of Fine Aggregate Angularity on Compaction and Shearing Resistance of Asphalt Mixtures. Transportation Research Record, 2002, 1789, 14-24.	1.0	29
35	Estimation of Reclaimed Asphalt Pavement Binder Low-Temperature Properties without Extraction. Transportation Research Record, 2010, 2179, 58-65.	1.0	26
36	The evaluation of relative effect of moisture in Hamburg wheel tracking test. Construction and Building Materials, 2017, 153, 337-345.	3.2	25

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37	Distribution of mortar film thickness and its relationship to mixture cracking resistance. International Journal of Pavement Engineering, 2022, 23, 824-833.	2.2	25
38	Estimating asphalt binder fatigue at multiple temperatures using a simplified pseudo-strain energy analysis approach in the LAS test. Construction and Building Materials, 2021, 266, 120911.	3.2	24
39	Estimation of low-temperature performance of recycled asphalt mixtures through relaxation modulus analysis. Cold Regions Science and Technology, 2017, 133, 36-45.	1.6	23
40	Effects of recycling agents (RAs) on rutting resistance and moisture susceptibility of mixtures with high RAP/RAS content. Construction and Building Materials, 2021, 270, 121369.	3.2	23
41	Storage stability of modified binders using the newly developed LAST procedure. Road Materials and Pavement Design, 2000, 1, 53-73.	2.0	22
42	Low-temperature mechanics of hot recycled mixtures through Asphalt Thermal Cracking Analyzer (ATCA). Construction and Building Materials, 2015, 84, 54-65.	3.2	20
43	Blending Charts Based on Performance-Graded Asphalt Binder Specification. Transportation Research Record, 1999, 1661, 7-14.	1.0	19
44	Influence of Physical Hardening on the Low-Temperature Properties of Bitumen and Asphalt Mixtures. Procedia, Social and Behavioral Sciences, 2012, 53, 504-513.	0.5	19
45	Effect of Film Thickness on Rheological Behavior of Asphalt Binders. Transportation Research Record, 2000, 1728, 7-14.	1.0	17
46	Rheological Behavior of Emulsion Residues Produced by Evaporative Recovery Method. Transportation Research Record, 2010, 2179, 102-108.	1.0	14
47	Impacts of lubricating oils on rheology and chemical compatibility of asphalt binders. Road Materials and Pavement Design, 2015, 16, 50-74.	2.0	14
48	Development of Emulsion Residue Testing Framework for Improved Chip Seal Performance. Transportation Research Record, 2012, 2293, 106-113.	1.0	13
49	Evaluation of analysis methods of the semi-circular bend (SCB) test results for measuring cracking resistance of asphalt mixtures. International Journal of Pavement Research and Technology, 2019, 12, 456-463.	1.3	13
50	Challenges in using the Disc-Shaped Compact Tension (DCT) test to determine role of asphalt mix design variables in cracking resistance at low temperatures. International Journal of Pavement Engineering, 2019, 20, 1275-1284.	2.2	13
51	New Parameter to Evaluate Moisture Damage of Asphalt-Aggregate Bond in Using Dynamic Shear Rheometer. Journal of Materials in Civil Engineering, 2010, 22, 267-276.	1.3	12
52	Pseudo-variables method to calculate HMA relaxation modulus through low-temperature induced stress and strain. Materials & Design, 2015, 76, 141-149.	5.1	12
53	Effects of Aggregate Surface and Water on Rheology of Asphalt Films. Transportation Research Record, 2007, 1998, 10-17.	1.0	11
54	Establishing use of asphalt binder cracking tests for prevention of pavement cracking. Road Materials and Pavement Design, 2014, 15, 279-299.	2.0	8

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55	Three-Stage Damage Evolution of Asphalt Mixture in the Wet Hamburg Wheel Tracking Device Test Using X-Ray Computed Tomography. Journal of Materials in Civil Engineering, 2018, 30, .	1.3	8
56	Long-Term Aging Performance Analysis of Oil Modified Asphalt Binders. Transportation Research Record, 2019, 2673, 404-412.	1.0	8
57	Predicting rutting performance of asphalt mixture from binder properties and mixture design variables. Road Materials and Pavement Design, 2022, 23, 62-79.	2.0	8
58	Effects of Curing and Oxidative Aging on Raveling in Emulsion Chip Seals. Transportation Research Record, 2013, 2361, 69-79.	1.0	7
59	Proposed asphalt binder fatigue criteria for various traffic conditions using the LAS or the G-R parameters. Materials and Structures/Materiaux Et Constructions, 2022, 55, 1.	1.3	7
60	Incorporating temperature into the constitutive equation for plastic deformation in asphalt binders. Construction and Building Materials, 2012, 29, 647-658.	3.2	6
61	Rheology measurements of recycling oils and their aging resistance in asphalt binders. International Journal of Pavement Engineering, 2022, 23, 1707-1722.	2.2	6
62	Quantification of re-refined engine oil bottoms (REOB) in asphalt binder using ATR-FTIR spectroscopy associated with partial least squares (PLS) regression. Road Materials and Pavement Design, 2022, 23, 958-972.	2.0	6
63	The Relationship between Nonlinearity of Asphalt Binders and Asphalt Mixture Permanent Deformation. Road Materials and Pavement Design, 2010, 11, 653-680.	2.0	6
64	Extended aging performance of high RAP mixtures and the role of softening oils. International Journal of Pavement Engineering, 2022, 23, 2773-2784.	2.2	5
65	Characterization of mortar film distribution of asphalt mixtures containing reclaimed asphalt pavement and its relationship with fracture performance using image analysis method. Construction and Building Materials, 2022, 345, 128338.	3.2	5
66	Estimation of rheological properties of RAP binder. Journal Wuhan University of Technology, Materials Science Edition, 2010, 25, 866-870.	0.4	4
67	Mixture Design and Compaction. RILEM State-of-the-Art Reports, 2013, , 85-142.	0.3	4
68	Effects of Binder Modification on Aggregate Structure and Thermovolumetric Properties of Asphalt Mixtures. Transportation Research Record, 2014, 2445, 21-28.	1.0	4
69	Mechanisms of Failure in Uniaxial Repeated Creep Test and the Relationship to Aggregate Packing. RILEM Bookseries, 2016, , 757-771.	0.2	4
70	Effects of Reheating Procedure and Oven Type on Performance Testing Results of Asphalt Mixtures. Transportation Research Record, 2018, 2672, 124-133.	1.0	4
71	More Practical Wheel Tracking Test for Rutting Resistance of Asphalt Mixtures. Transportation Research Record, 2019, 2673, 508-518.	1.0	4
72	Factors Affecting the Tracking Performance of Tack Coat Materials. Transportation Research Record, 2019, 2673, 355-364.	1.0	4

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73	Modelling asphalt binder fatigue at multiple temperatures using complex modulus and the LAS test. International Journal of Pavement Engineering, 2022, 23, 4600-4609.	2.2	4
74	Factors controlling pre- and post-peak behavior of asphalt mixtures containing RAP in the SCB test. Materials and Structures/Materiaux Et Constructions, 2022, 55, .	1.3	3
75	Laboratory Testing Methods for Evaluating the Moisture Damage on the Aggregate-Asphalt System. RILEM Bookseries, 2016, , 533-543.	0.2	2
76	Study of Factors Affecting Curing of Asphalt Emulsion Tack Coats. Transportation Research Record, 2019, 2673, 619-627.	1.0	2
77	Factors Affecting the Interlayer Shear Strength of Laboratory and Field Samples. Transportation Research Record, 2021, 2675, 234-244.	1.0	2
78	Use of Blended Binder Tests to Estimate Performance of Mixtures with High Reclaimed Asphalt Pavement/Recycled Asphalt Shingles Content. Transportation Research Record, 2021, 2675, 281-293.	1.0	2
79	Asphalt Emulsion Sprayability and Drain-Out Characteristics in Chip Seals. Transportation Research Record, 2013, 2361, 80-87.	1.0	0
80	Factors Affecting Mortar Thickness Distribution and Its Relationship to Cracking Resistance of Asphalt Mixtures. RILEM Bookseries, 2022, , 919-926.	0.2	0
81	Prediction models for semi-circular-bend test parameters from binderâ€™s LAS parameters and mixture volumetric properties. International Journal of Pavement Engineering, 0, , 1-12.	2.2	0