William Mars

List of Publications by Year
in descending order

39 papers	1,748 citations	361413 20 h-index	345221 36 g-index
40 all docs	40 docs citations	40 times ranked	672 citing authors

#	Article	IF	Citations
1	A literature survey on fatigue analysis approaches for rubber. International Journal of Fatigue, 2002, 24, 949-961.	5.7	387
2	Factors that Affect the Fatigue Life of Rubber: A Literature Survey. Rubber Chemistry and Technology, 2004, 77, 391-412.	1.2	257
3	Cracking Energy Density as a Predictor of Fatigue Life under Multiaxial Conditions. Rubber Chemistry and Technology, 2002, 75, 1-17.	1.2	107
4	Fatigue crack nucleation and growth in filled natural rubber. Fatigue and Fracture of Engineering Materials and Structures, 2003, 26, 779-789.	3.4	91
5	Fatigue life analysis and predictions for NR and SBR under variable amplitude and multiaxial loading conditions. International Journal of Fatigue, 2008, 30, 1231-1247.	5.7	81
6	Observations of the Constitutive Response and Characterization of Filled Natural Rubber Under Monotonic and Cyclic Multiaxial Stress States. Journal of Engineering Materials and Technology, Transactions of the ASME, 2004, 126, 19-28.	1.4	78
7	Multiaxial fatigue of rubber: Part II: experimental observations and life predictions. Fatigue and Fracture of Engineering Materials and Structures, 2005, 28, 523-538.	3.4	63
8	Multiaxial fatigue of rubber: Part I: equivalence criteria and theoretical aspects. Fatigue and Fracture of Engineering Materials and Structures, 2005, 28, 515-522.	3.4	58
9	A Phenomenological Model for the Effect of R Ratio on Fatigue of Strain Crystallizing Rubbers. Rubber Chemistry and Technology, 2003, 76, 1241-1258.	1.2	57
10	Nucleation and growth of small fatigue cracks in filled natural rubber under multiaxial loading. Journal of Materials Science, 2006, 41, 7324-7332.	3.7	49
11	Fatigue crack growth of filled rubber under constant and variable amplitude loading conditions. Fatigue and Fracture of Engineering Materials and Structures, 2007, 30, 640-652.	3.4	47
12	Multiaxial stress effects on fatigue behavior of filled natural rubber. International Journal of Fatigue, 2006, 28, 521-529.	5.7	43
13	Energy release rate of small cracks in hyperelastic materials. International Journal of Non-Linear Mechanics, 2012, 47, 22-29.	2.6	35
14	Fatigue Life Prediction for Elastomeric Structures. Rubber Chemistry and Technology, 2007, 80, 481-503.	1.2	33
15	The Effect of a Dwell Period on Fatigue Crack Growth Rates in Filled SBR and NR. Rubber Chemistry and Technology, 2007, 80, 838-853.	1.2	32
16	A novel specimen for investigating the mechanical behavior of elastomers under multiaxial loading conditions. Experimental Mechanics, 2004, 44, 136-146.	2.0	30
17	Computed Dependence of Rubber'S Fatigue Behavior on Strain Crystallization. Rubber Chemistry and Technology, 2009, 82, 51-61.	1.2	30
18	Crack precursor size for natural rubber inferred from relaxing and non-relaxing fatigue experiments. International Journal of Fatigue, 2015, 80, 50-57.	5.7	27

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19	Validation of a Steady-State Transport Analysis for Rolling Treaded Tires. Tire Science and Technology, 2007, 35, 183-208.	0.4	27
20	Characterizing Distributions of Tensile Strength and Crack Precursor Size to Evaluate Filler Dispersion Effects and Reliability of Rubber. Polymers, 2020, 12, 203.	4.5	25
21	Characterizing the Intrinsic Strength (Fatigue Threshold) of Natural Rubber/Butadiene Rubber Blends. Tire Science and Technology, 2019, 47, 292-307.	0.4	19
22	Critical Plane Analysis of Rubber Bushing Durability under Road Loads. , 0, , .		17
23	FATIGUE CHARACTERIZATION OF A THERMOPLASTIC ELASTOMER. Rubber Chemistry and Technology, 2017, 90, 367-380.	1.2	17
24	Fatigue crack orientation in NR and SBR under variable amplitude and multiaxial loading conditions. Journal of Materials Science, 2008, 43, 1783-1794.	3.7	16
25	The Correlation of Fatigue Crack Growth Rates in Rubber Subjected to Multiaxial Loading Using Continuum Mechanical Parameters. Rubber Chemistry and Technology, 2007, 80, 169-182.	1.2	15
26	Analysis of Fatigue Life under Complex Loading: Revisiting Cadwell, Merrill, Sloman, and Yost. Rubber Chemistry and Technology, 2006, 79, 589-601.	1.2	13
27	Fatigue Investigation of Elastomeric Structures. Tire Science and Technology, 2010, 38, 194-212.	0.4	13
28	Computing Tire Component Durability via Critical Plane Analysis. Tire Science and Technology, 2019, 47, 31-54.	0.4	13
29	ANALYSIS OF STIFFNESS VARIATIONS IN CONTEXT OF STRAIN-, STRESS-, AND ENERGY-CONTROLLED PROCESSES. Rubber Chemistry and Technology, 2011, 84, 178-186.	1.2	11
30	The Fatigue Threshold of Rubber and Its Characterization Using the Cutting Method. Advances in Polymer Science, 2020, , 57-83.	0.8	11
31	Computing Remaining Fatigue Life Under Incrementally Updated Loading Histories. , 0, , .		9
32	Characterisation of cut and chip behaviour for NR, SBR and BR compounds with an instrumented laboratory device. Plastics, Rubber and Composites, 2019, 48, 14-23.	2.0	8
33	Heat Build-Up and Rolling Resistance Analysis of a Solid Tire: Experimental Observation and Numerical Simulation with Thermo-Mechanical Coupling Method. Polymers, 2022, 14, 2210.	4.5	8
34	Incremental, Critical Plane Analysis of Standing Wave Development, Self-Heating, and Fatigue during Regulatory High-Speed Tire Testing Protocols. Tire Science and Technology, 2021, 49, 172-205.	0.4	6
35	Finite Element Modeling and Critical Plane Analysis of a Cut-and-Chip Experiment for Rubber. Tire Science and Technology, 2020, , .	0.4	5
36	Constitutive Behavior and Temperature Effects in NR and SBR Under Variable Amplitude and Multiaxial Loading Conditions. Journal of Engineering Materials and Technology, Transactions of the ASME, 2008, 130, .	1.4	4

#	Article	IF	Citations
37	Comparison of Test Specimens for Characterizing the Dynamic Properties of Rubber. Experimental Mechanics, 2008, 48, 1-8.	2.0	3
38	FINITELY SCOPED, HIGH RELIABILITY FATIGUE CRACK GROWTH MEASUREMENTS. Rubber Chemistry and Technology, 2018, 91, 644-650.	1.2	3
39	John R. Luchini â€" Tire Science Giant. Tire Science and Technology, 2013, 41, 228-231.	0.4	0