Han Jiang

List of Publications by Year
in descending order

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70 papers	1,708 citations	279487 23 h-index	315357 38 g-index
71 all docs	71 docs citations	71 times ranked	1133 citing authors

#	Article	IF	Citations
1	Understanding of scratch-induced damage mechanisms in polymers. Polymer, 2009, 50, 4056-4065.	1.8	189
2	Influence of surface roughness and contact load on friction coefficient and scratch behavior of thermoplastic olefins. Applied Surface Science, 2008, 254, 4494-4499.	3.1	106
3	Finite element method parametric study on scratch behavior of polymers. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 1435-1447.	2.4	76
4	Quantitative evaluation of scratch visibility resistance of polymers. Applied Surface Science, 2010, 256, 6324-6329.	3.1	68
5	Mechanical Modeling of Scratch Behavior of Polymeric Coatings on Hard and Soft Substrates. Tribology Letters, 2010, 37, 159-167.	1.2	62
6	A novel magnetorheological shear-stiffening elastomer with self-healing ability. Composites Science and Technology, 2018, 168, 303-311.	3.8	55
7	Scratch behavior of epoxy nanocomposites containing Î±â€zirconium phosphate and coreâ€shell rubber particles. Polymer Engineering and Science, 2009, 49, 483-490.	1.5	50
8	Effect of constitutive behavior on scratch visibility resistance of polymersâ€"A finite element method parametric study. Wear, 2011, 270, 751-759.	1.5	48
9	Effect of stick-slip on the scratch performance of polypropylene. Tribology International, 2015, 91, 1-5.	3.0	47
10	Study the safeguarding performance of shear thickening gel by the mechanoluminescence method. Composites Part B: Engineering, 2020, 180, 107564.	5.9	44
11	Modeling of competition between shear yielding and crazing in amorphous polymersâ€™ scratch. International Journal of Solids and Structures, 2017, 124, 215-228.	1.3	38
12	A test procedure for separating viscous recovery and accumulated unrecoverable deformation of polymer under cyclic loading. Polymer Testing, 2013, 32, 1445-1451.	2.3	37
13	Highly Flexible Multilayered e-Skins for Thermal-Magnetic-Mechanical Triple Sensors and Intelligent Grippers. ACS Applied Materials & Interfaces, 2020, 12, 15675-15685.	4.0	34
14	Experimental studies on the uniaxial ratchetting of polycarbonate polymer at different temperatures. Polymer Testing, 2014, 39, 92-100.	2.3	33
15	Non-proportionally multiaxial cyclic deformation of AZ31 magnesium alloy: Experimental observations. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 671, 70-81.	2.6	30
16	Scratch behavior of soft thermoplastic olefins: effects of ethylene content and testing rate. Journal of Materials Science, 2008, 43, 1357-1365.	1.7	29
17	In-situ observation of temperature rise during scratch testing of poly (methylmethacrylate) and polycarbonate. Tribology International, 2016, 95, 1-4.	3.0	28
18	Constitutive modeling of the rate- and temperature-dependent macro-yield behavior of amorphous glassy polymers. International Journal of Mechanical Sciences, 2020, 179, 105653.	3.6	28

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19	Macroscopic and microscopic investigations on uniaxial ratchetting of two-phase Tiâ€“6Alâ€“4V alloy. Materials Characterization, 2014, 92, 26-35.	1.9	26
20	Effect of thermal aging on the scratch behavior of poly (methyl methacrylate). Tribology International, 2016, 101, 110-114.	3.0	26
21	Multiaxial ratcheting of 20 carbon steel: Macroscopic experiments and microscopic observations. Materials Characterization, 2013, 83, 1-12.	1.9	25
22	Experimental observation on multiaxial ratchetting of polycarbonate polymer at room temperature. Polymer Testing, 2016, 50, 135-144.	2.3	25
23	Viscoelastic constitutive model for uniaxial timeâ€dependent ratcheting of polyetherimide polymer. Polymer Engineering and Science, 2012, 52, 1874-1881.	1.5	24
24	Two-Dimensional Frictionless Contact of a Coated Half-Plane Based on Couple Stress Theory. International Journal of Applied Mechanics, 2018, 10, 1850049.	1.3	24
25	An experimental study on uniaxial ratcheting of polycarbonate polymers with different molecular weights. Materials & Design, 2015, 67, 644-648.	5.1	23
26	Scratch behavior of the aged hydrogenated nitrile butadiene rubber. Wear, 2016, 352-353, 155-159.	1.5	23
27	Measurement of tensile strength of nuclear graphite based on ring compression test. Journal of Nuclear Materials, 2018, 511, 134-140.	1.3	23
28	Accelerated aging test of hydrogenated nitrile butadiene rubber using the timeâ€“temperatureâ€“strain superposition principle. RSC Advances, 2015, 5, 90178-90183.	1.7	22
29	Determination of epoxy coating wet-adhesive strength using a standardized ASTM/ISO scratch test. Journal of Coatings Technology Research, 2011, 8, 255-263.	1.2	21
30	Investigation of nano-scale scratch and stick-slip behaviors of polycarbonate using atomic force microscopy. Tribology International, 2018, 125, 59-65.	3.0	21
31	Rate dependent shear debonding between a highly stretchable elastomer and a rigid substrate: Delayed debonding and pre-stretch effect. Engineering Fracture Mechanics, 2019, 222, 106743.	2.0	18
32	A meso-mechanical constitutive model of bulk metallic glass composites considering the local failure of matrix. International Journal of Plasticity, 2019, 115, 238-267.	4.1	18
33	Effect of crystalline content on ratchetting of ultra-high molecular weight polyethylene polymers: Experimental investigation and constitutive model. Mechanics of Materials, 2019, 133, 37-54.	1.7	18
34	Uniaxial cyclic deformation and internal heat production of ultra-high molecular weight polyethylene. Journal of Polymer Research, 2015, 22, 1.	1.2	17
35	Accelerated ratcheting testing of polycarbonate using the time-temperature-stress equivalence method. Polymer Testing, 2015, 44, 8-14.	2.3	17
36	Scratch behavior of low density polyethylene film: Effects of pre-stretch and aging. Materials and Design, 2018, 157, 235-243.	3.3	17

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37	Modified cohesive zone model for soft adhesive layer considering rate dependence of intrinsic fracture energy. Engineering Fracture Mechanics, 2021, 258, 108089.	2.0	17
38	Effect of relative humidity on uniaxial cyclic softening/hardening and intrinsic heat generation of polyamide-6 polymer. Polymer Testing, 2016, 56, 19-28.	2.3	16
39	Effect of direct fluorination on the mechanical and scratch performance of nitrile butadiene rubber. Wear, 2017, 376-377, 1314-1320.	1.5	16
40	Inverse identification of tensile and compressive damage properties of graphite material based on a single four-point bending test. Journal of Nuclear Materials, 2018, 509, 445-453.	1.3	16
41	Effect of fiber content and orientation on the scratch behavior of short glass fiber reinforced PBT composites. Tribology International, 2020, 146, 106221.	3.0	16
42	Application of time-temperature-stress superposition principle on the accelerated physical aging test of polycarbonate. Polymer Engineering and Science, 2015, 55, 2215-2221.	1.5	15
43	A viscoelastic-plastic constitutive model for uniaxial ratcheting behaviors of polycarbonate. Polymer Engineering and Science, 2015, 55, 2559-2565.	1.5	15
44	Time-Dependent Uniaxial Ratchetting of Ultrahigh Molecular Weight Polyethylene Polymer: Viscoelasticâ€“Viscoplastic Constitutive Model. Journal of Applied Mechanics, Transactions ASME, 2016, 83, .	1.1	15
45	Experimental and numerical investigations of evaluation criteria and material parameters' coupling effect on polypropylene scratch. Polymer Engineering and Science, 2018, 58, 118-122.	1.5	15
46	Temperatureâ€dependent uniaxial ratchetting of ultraâ€high molecular weight polyethylene. Fatigue and Fracture of Engineering Materials and Structures, 2016, 39, 839-849.	1.7	14
47	Non-proportional multiaxial ratchetting of ultrahigh molecular weight polyethylene polymer: Experiments and constitutive model. Mechanics of Materials, 2017, 112, 76-87.	1.7	14
48	Finite deformation constitutive model for macro-yield behavior of amorphous glassy polymers with a molecular entanglement-based internal-state variable. International Journal of Mechanical Sciences, 2019, 161-162, 105064.	3.6	13
49	A visco-hyperelastic model of brain tissue incorporating both tension/compression asymmetry and volume compressibility. Acta Mechanica, 2019, 230, 2125-2135.	1.1	13
50	Preparation and performances of form-stable polyethylene glycol/methylcellulose composite phase change materials. Journal of Polymer Research, 2020, 27, 1.	1.2	13
51	Dynamic multifunctional devices enabled by ultrathin metal nanocoatings with optical/photothermal and morphological versatility. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	13
52	Meso-mechanical constitutive model of bulk metallic glass matrix composites. Mechanics of Materials, 2016, 103, 68-77.	1.7	12
53	Analytical model of friction behavior during polymer scratching with conical tip. Friction, 2019, 7, 466-478.	3.4	12
54	Investigation of zero-degree peeling behavior of visco-hyperelastic highly stretchable adhesive tape on rigid substrate. Engineering Fracture Mechanics, 2021, 241, 107368.	2.0	11

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55	A new form of equivalent stress for combined axialâ€“torsional loading considering the tensionâ€“compression asymmetry of polymeric materials. RSC Advances, 2015, 5, 72780-72784.	1.7	10
56	Effect of stress relaxation on accelerated physical aging of hydrogenated nitrile butadiene rubber using time-temperature-strain superposition principle. Advanced Industrial and Engineering Polymer Research, 2019, 2, 61-68.	2.7	10
57	Numerical study on toughening mechanism of bulk metallic glass composites from martensite transformation of toughening phase. Journal of Non-Crystalline Solids, 2019, 506, 88-97.	1.5	8
58	Mechanism of temperature rise due to crazing evolution during PMMA scratch. International Journal of Solids and Structures, 2020, 199, 120-130.	1.3	6
59	Integrity of 3LPE Pipeline Coatings: Residual Stresses and Adhesion Degradation. , 2008, , .		5
60	Experimental investigation into the failure mechanism of ductile line contact structures. Mechanics of Materials, 2019, 129, 375-380.	1.7	4
61	Experimental and simulation study on stress concentration of graphite components in tension. Mechanics of Materials, 2019, 130, 88-94.	1.7	4
62	Scratch behavior of polymeric materials. Tribology and Interface Engineering Series, 2008, , 354-373.	0.0	3
63	Scratch behavior of polymeric materials. , 2013, , 513-550.		3
64	Controllable peeling of an elastic strip on a viscoelastic substrate. Engineering Fracture Mechanics, 2021, 256, 107990.	2.0	3
65	The Fined COD Transform Formula for CT Specimens to Investigate Material Fracture Toughness. Applied Mechanics and Materials, 2012, 188, 11-16.	0.2	2
66	Experimental Studies on Deformation Behaviors of Rubbery Materials under Cyclic Loading. Applied Mechanics and Materials, 0, 853, 106-111.	0.2	2
67	Time-temperature superposition principle for the shear fracture behaviour of soft adhesive layers: From bulk to interface. International Journal of Adhesion and Adhesives, 2022, 117, 103180.	1.4	2
68	Study of Material Parametersâ€™ Effect on Polymer Scratch Using SOM Method. Advanced Materials Research, 2012, 452-453, 1420-1423.	0.3	0
69	An Improved Thermo-Ratcheting Boundary of Pressure Pipeline. Key Engineering Materials, 0, 725, 311-315.	0.4	0
70	MECHANICAL PROPERTIES' INFLUENCE ON POLYMER SCRATCH BEHAVIOR: EXPERIMENTAL STUDY AND MECHANISMS ANALYSIS. , 2015, , 45-46.		0