High Strain Rate Mechanics of Polymers: A Review

Journal of Dynamic Behavior of Materials 2, 15-32 DOI: 10.1007/s40870-016-0052-8

Citation Report

#	ARTICLE	IF	CITATIONS
1	Mechanical Properties of Low Density Polyethylene. Journal of Dynamic Behavior of Materials, 2016, 2, 411-420.	1.7	77
2	Microstructural foundations of the strength and resilience of LLDPE artificial turf yarn. Journal of Applied Polymer Science, 2016, 133, .	2.6	9
3	Strain Rate Effects in Polymer Matrix Composites Under Shear Loading: A Critical Review. Journal of Dynamic Behavior of Materials, 2017, 3, 110-132.	1.7	13
4	The mechanism of rate-dependent off-axis compression of a low fibre volume fraction thermoplastic matrix composite. Composite Structures, 2017, 168, 685-697.	5.8	9
5	Compressive mechanical properties of HTPB propellant at low temperatures and high strain rates. Results in Physics, 2017, 7, 4079-4084.	4.1	24
6	Experimental Study and Modelling of Poly (Methyl Methacrylate) and Polycarbonate Compressive Behavior from Low to High Strain Rates. Journal of Dynamic Behavior of Materials, 2018, 4, 179-189.	1.7	7
7	Experimental Investigation of Strain Rate and Temperature Dependent Response of an Epoxy Resin Undergoing Large Deformation. Journal of Dynamic Behavior of Materials, 2018, 4, 114-128.	1.7	31
8	The principles of cascading power limits in small, fast biological and engineered systems. Science, 2018, 360, .	12.6	187
9	Application of the Virtual Fields Method to a relaxation behaviour of rubbers. Journal of the Mechanics and Physics of Solids, 2018, 116, 416-431.	4.8	13
10	A thermovisco-hyperelastic constitutive model of HTPB propellant with damage at intermediate strain rates. Mechanics of Time-Dependent Materials, 2018, 22, 291-314.	4.4	21
11	Framework for analyzing hyper-viscoelastic polymers. AIP Conference Proceedings, 2018, , .	0.4	0
12	Predicting the high strain rate response of plasticised poly(vinyl chloride) using a fractional derivative model. EPJ Web of Conferences, 2018, 183, 01013.	0.3	1
13	Low pressure shock response and dynamic failure of high density polyethylene (HDPE). AIP Conference Proceedings, 2018, , .	0.4	4
14	Microstructure and mechanical properties of hard Acrocomia mexicana fruit shell. Scientific Reports, 2018, 8, 9668.	3.3	28
15	High strain rate effects on mechanical properties of inductively coupled plasma treated carbon nanotube reinforced epoxy composites. Composites Part B: Engineering, 2018, 154, 209-215.	12.0	8
16	Extreme Energy Absorption in Glassy Polymer Thin Films by Supersonic Micro-projectile Impact. Materials Today, 2018, 21, 817-824.	14.2	55
17	Investigation of the Effects of Mold Temperature, Test Temperature and Strain Rate on Mechanical Behaviour of Polypropylene. Journal of Dynamic Behavior of Materials, 2019, 5, 344-360.	1.7	7
18	Comprehensive molecular dynamics studies of the ballistic resistance of multilayer graphene-polymer composite. Computational Materials Science, 2019, 170, 109171.	3.0	40

#	Article	IF	CITATIONS
19	Anisotropic Mechanical Responses of Poly(Ethylene Oxide)â€Based Lithium Ions Containing Solid Polymer Electrolytes. Macromolecular Chemistry and Physics, 2019, 220, 1900348.	2.2	5
20	Characterization and physical properties of aluminium foam–polydimethylsiloxane nanocomposite hybrid structures. Composite Structures, 2019, 230, 111521.	5.8	22
21	Modeling and experimental verification of nonlinear behavior of cellulose nanocrystals reinforced poly(lactic acid) composites. Mechanics of Materials, 2019, 135, 77-87.	3.2	21
22	Piezoelectric Stack Actuator for Measurement of Interfacial Shear Strength at High Strain Rates. Experimental Mechanics, 2019, 59, 979-990.	2.0	8
23	Strain Rate Dependent Compressive Response of Open Cell Polyurethane Foam. Experimental Mechanics, 2019, 59, 1087-1103.	2.0	42
24	Developing space-time dependent boundary conditions for composite RVEs at high strain-rates. International Journal of Solids and Structures, 2019, 166, 197-212.	2.7	8
25	Micromechanical modeling of the effects of adiabatic heating on the high strain rate deformation of polymer matrix composites. Composite Structures, 2019, 215, 377-384.	5.8	17
26	Structural origin for the strain rate dependence of mechanical response of fluoroelastomer F2314. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 607-620.	2.1	11
27	Silkworms with Spider Silklike Fibers Using Synthetic Silkworm Chow Containing Calcium Lignosulfonate, Carbon Nanotubes, and Graphene. ACS Omega, 2019, 4, 4832-4838.	3.5	14
28	Energy dissipation of stitched and unstitched woven composite materials during dynamic compression test. Composites Part B: Engineering, 2019, 167, 487-496.	12.0	36
29	A Tough Metal oordinated Elastomer: A Fatigueâ€Resistant, Notchâ€Insensitive Material with an Excellent Selfâ€Healing Capacity. ChemPlusChem, 2019, 84, 432-440.	2.8	18
30	Effect of molecular structures on static and dynamic compression properties of clay and amphiphilic clay/carbon nanofibers used as fillers in UHMWPE/composites for highâ€energyâ€impact loading. Journal of Applied Polymer Science, 2019, 136, 47094.	2.6	7
31	Visco-hyperelastic constitutive modeling of strain rate sensitive soft materials. Journal of the Mechanics and Physics of Solids, 2020, 135, 103777.	4.8	53
32	High strain rate behavior of graphene-epoxy nanocomposites. Polymer Testing, 2020, 81, 106219.	4.8	31
33	Instrumented indentation of an elastomeric material, protocol and application to vulcanization gradient. Polymer Testing, 2020, 81, 106278.	4.8	4
34	An improved plastically dilatant unified viscoplastic constitutive formulation for multiscale analysis of polymer matrix composites under high strain rate loading. Composites Part B: Engineering, 2020, 184, 107669.	12.0	17
35	High strain-rate shear and friction characterization of fully-dense polyurethane and epoxy. International Journal of Impact Engineering, 2020, 138, 103472.	5.0	2
36	Nanostructured ZnO Interphase for Carbon Fiber Reinforced Composites with Strain Rate Tailored Interfacial Strength. Advanced Materials Interfaces, 2020, 7, 1901544.	3.7	17

#	Article	IF	CITATIONS
37	Modeling and experimental validation of material flow during FSW of polycarbonate. Materials Today Communications, 2020, 22, 100796.	1.9	42
38	Adapting Mechanical Characterization of a Biodegradable Polymer to Physiological Approach of Anterior Cruciate Ligament Functions. Irbm, 2022, 43, 39-48.	5.6	5
39	Bio-treatment of poplar via amino acid for interface control in biocomposites. Composites Part B: Engineering, 2020, 199, 108276.	12.0	16
40	Analytical solution for high-pressure torsion in the framework of geometrically nonlinear non-associative plasticity. International Journal of Solids and Structures, 2020, 206, 383-395.	2.7	4
41	PEDOT:PSS Microchannelâ€Based Highly Sensitive Stretchable Strain Sensor. Advanced Electronic Materials, 2020, 6, 2000445.	5.1	97
42	Experimental investigation and numerical modelling of 3D printed polyamide 12 with viscoplasticity and a crack model at different strain rates. Materials Today Communications, 2020, 25, 101542.	1.9	6
43	Strain rate dependent mechanical behavior of B. mori silk, A. assama silk, A. pernyi silk and A. ventricosus spider silk. Materials and Design, 2020, 195, 108988.	7.0	10
44	Effect of high strain rates and temperature on the micromechanical properties of 3D-printed polymer structures made by two-photon lithography. Materials and Design, 2020, 195, 108977.	7.0	39
45	High strain rate compression of epoxy micropillars. Extreme Mechanics Letters, 2020, 40, 100905.	4.1	7
46	A Simple Rate–Temperature Dependent Hyperelastic Model Applied to Neoprene Rubber. Journal of Dynamic Behavior of Materials, 2020, 6, 336-347.	1.7	12
47	A review of impact resistant biological and bioinspired materials and structures. Journal of Materials Research and Technology, 2020, 9, 15705-15738.	5.8	96
48	Progressive Failure and Energy Absorption of Chopped Bamboo Fiber Reinforced Polybenzoxazine Composite under Impact Loadings. Polymers, 2020, 12, 1809.	4.5	10
49	Anomalous tensile response of bacterial cellulose nanopaper at intermediate strain rates. Scientific Reports, 2020, 10, 15260.	3.3	5
50	Intrinsic Dynamics and Toughening Mechanism of Multilayer Graphene upon Microbullet Impact. ACS Applied Nano Materials, 2020, 3, 9185-9191.	5.0	9
51	Effect of the Strain Rate on Damage in Filled EPDM during Single and Cyclic Loadings. Polymers, 2020, 12, 3021.	4.5	9
52	Strain rate effect of mode II interlaminar fracture toughness on the impact response of a thermoplastic PEEK composite. Composites Part C: Open Access, 2020, 2, 100031.	3.2	1
53	Strain Rate Dependent Behaviour of Self-Reinforced Polypropylene Composites and their Hybrids. Procedia Manufacturing, 2020, 47, 969-973.	1.9	0
54	Strain Rate Dependencies and Competitive Effects of Dynamic Strength of Some Engineering Materials. Applied Sciences (Switzerland), 2020, 10, 3293.	2.5	5

#	Article	IF	CITATIONS
55	Calibration of hyperelastic material models for structural silicone and hybrid polymer adhesives for the application of bonded glass. Construction and Building Materials, 2020, 254, 119204.	7.2	14
56	A micromechanically based model for strain rate effects in unidirectional composites. Mechanics of Materials, 2020, 148, 103491.	3.2	5
57	Static and dynamic mechanical behavior and constitutive model of polyvinyl chloride elastomers for design processes of soft polymer materials. Advances in Mechanical Engineering, 2020, 12, 168781402092678.	1.6	4
58	The Effect of Temperature Gradients on Elastic Wave Propagation in Split Hopkinson Pressure Bars. Journal of Dynamic Behavior of Materials, 2020, 6, 278-286.	1.7	12
59	A novel methodology for predicting the high rate mechanical response of polymers from low rate data: application to (plasticised) poly(vinyl chloride). Mechanics of Time-Dependent Materials, 2021, 25, 383-409.	4.4	9
60	Application of Linear Viscoelastic Continuum Damage Theory to the Low and High Strain Rate Response of Thermoplastic Polyurethane. Experimental Mechanics, 2020, 60, 925-936.	2.0	10
61	Ultrasound evaluation of the mechanical properties as an investigation tool for the wood-polymer composites including olive wood flour. Mechanics of Materials, 2020, 148, 103445.	3.2	21
62	Dynamics of Entangled Networks in Ultrafast Perforation of Polystyrene Nanomembranes. Macromolecules, 2020, 53, 1701-1705.	4.8	19
63	Role of free volume in molecular mobility and performance of glassy polymers for corrosion-protective coatings. Corrosion Engineering Science and Technology, 2020, 55, 145-158.	1.4	11
64	Mechanical response of low density expanded polypropylene foams in compression and tension at different loading rates and temperatures. Materials Today Communications, 2020, 23, 100917.	1.9	18
65	ZnO Nanostructured Interphase for Multifunctional and Lightweight Glass Fiber Reinforced Composite Materials under Various Loading Conditions. ACS Applied Nano Materials, 2020, 3, 1363-1372.	5.0	17
66	Superior Energy Dissipation by Ultrathin Semicrystalline Polymer Films Under Supersonic Microprojectile Impacts. Nano Letters, 2020, 20, 5632-5638.	9.1	36
67	Analysis of a New Shape of Test Specimen for Block Shear Impact Test. Materials, 2020, 13, 1693.	2.9	1
68	Fracture behavior of additively printed ABS: Effects of print architecture and loading rate. International Journal of Solids and Structures, 2021, 212, 80-95.	2.7	16
69	Elastic properties of polyethylene from high pressure sound speed measurements. Polymer, 2021, 212, 123164.	3.8	17
70	Adiabatic heating and damage onset in a pultruded glass fiber reinforced composite under compressive loading at different strain rates International Journal of Impact Engineering, 2021, 147, 103728.	5.0	12
71	A Novel Method of Validating Polymer Relaxation Using Hopkinson Bar and Quasi-Static Loading. Conference Proceedings of the Society for Experimental Mechanics, 2021, , 69-73.	0.5	0
72	Modelling nonlinear material response of polymer matrices used in fibre-reinforced composites. , 2021, , 219-242.		0

#	Article	IF	CITATIONS
73	The experimental methodology and comparators used for in vivo hernia mesh testing: a 10-year scoping review. Hernia: the Journal of Hernias and Abdominal Wall Surgery, 2022, 26, 297-307.	2.0	5
74	Experimental Investigations of 3D Woven Layer to-Layer Carbon/Epoxy Composites at Different Strain Rates. EPJ Web of Conferences, 2021, 250, 01029.	0.3	1
75	Mechanical response of two different molecular weight polycarbonates at varying rates and temperatures. EPJ Web of Conferences, 2021, 250, 06013.	0.3	0
76	Hypervelocity Impact Response of Polyethylene Plates. , 2021, , .		6
77	Polymer-based nanocomposites for impact loading: A review. Mechanics of Advanced Materials and Structures, 2022, 29, 2581-2606.	2.6	19
78	Incorporation of the effect of strain rate in Mie-Gruneisen equation of state for polyethylene. Journal of Strain Analysis for Engineering Design, 2022, 57, 38-46.	1.8	0
79	Microgel structure-driven linear and non-linear mechanical properties of self-assembled microgel films. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 613, 126082.	4.7	6
80	Assessing the Elastic Moduli of Pavement Marking Tapes using the Tape Drape Test. Transportation Research Record, 2021, 2675, 570-579.	1.9	2
81	High-Rate In-Plane Shear Testing of IM7/8552 Using the Split Hopkinson Tension Bar. AIAA Journal, 2021, 59, 4257-4263.	2.6	6
82	Simulation of Reversible Plasticity Shape Memory Polymer with Designed Strain Rate Dependent Failure Model. Multiscale Science and Engineering, 2021, 3, 88-94.	1.7	2
83	Failure Mechanisms of an Al 6061 Alloy Foam under Dynamic Conditions. Materials, 2021, 14, 1349.	2.9	2
84	Dynamic mechanical response of VO2 - UHMWPE polymer composite across the phase transition. Materials Today Communications, 2021, 26, 102003.	1.9	4
85	Mechanical characterisation and modelling of a thermoreversible superamolecular polyurethane over a wide range of rates. Polymer, 2021, 221, 123607.	3.8	6
86	Molecular dynamics study of the penetration resistance of multilayer polymer/ceramic nanocomposites under supersonic projectile impacts. Extreme Mechanics Letters, 2021, 44, 101238.	4.1	23
87	Benefits of Semi-Analytical Model Polymer Techniques (SAMP-1 with GISSMO Failure) for Crashworthiness of Critical Thermoplastic Automotive Structural Parts. , 0, , .		1
88	Cross-Linking Methodology for Fully Atomistic Models of Hydroxyl-Terminated Polybutadiene and Determination of Mechanical Properties. Macromolecules, 2021, 54, 4488-4496.	4.8	7
89	Response of High Density Polyethylene to Impact Loading. Journal of Dynamic Behavior of Materials, 2021, 7, 553-565.	1.7	1
90	Characterising the frequencyâ€response of ultraâ€soft polymers with the Virtual Fields Method. Strain, 2021, 57, e12386.	2.4	6

#	Article	IF	CITATIONS
91	Analyzing the Effects of Particle Diameter in Cold Spraying of Thermoplastic Polymers. Journal of Thermal Spray Technology, 2021, 30, 1226-1238.	3.1	11
92	Molecular Dynamics Simulations of Shock Propagation and Spallation in Amorphous Polymers. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	2.2	17
93	Mechanical writing of electrical polarization in poly (L-lactic) acid. Acta Biomaterialia, 2021, 139, 249-249.	8.3	3
94	Evaluation of Stress and Fatigue of a Rail Vehicle Suspension Component. Energies, 2021, 14, 3410.	3.1	7
95	Prediction of real tensile properties using extrapolations from atomistic simulations; An assessment on thermoplastic starch. Polymer, 2021, 228, 123919.	3.8	7
96	Quasi-static and dynamic crush behaviour of 3D printed thin-walled profiles reinforced with continuous carbon and glass fibres. Composites Part B: Engineering, 2021, 217, 108865.	12.0	21
97	<scp>Highâ€strainâ€rate</scp> mechanical performance of particle―and fiberâ€reinforced polymer composites measured with split Hopkinson bar: A review. Polymer Composites, 2021, 42, 4932-4948.	4.6	16
98	Evaluation of the vibration characteristics and handle vibration damping of diesel-fueled 15-HP single-axle tractor. Advances in Mechanical Engineering, 2021, 13, 168781402110406.	1.6	2
99	Extreme Tribological Characteristics of Copolymers Induced by Dynamic Rheological Instability. ACS Applied Polymer Materials, 2021, 3, 4413-4418.	4.4	5
100	Characterisation and Modelling of PLA Filaments and Evolution with Time. Polymers, 2021, 13, 2899.	4.5	11
101	Mechanics of hyperelastic composites reinforced with nonlinear elastic fibrous materials in finite plane elastostatics. International Journal of Engineering Science, 2021, 165, 103491.	5.0	9
102	Strain rate effects on thermoplastic composites with mechanical interlocking. Polymer Composites, 0,	4.6	3
103	Miniature Kolsky bar Methods. , 2022, , 149-189.		3
104	Nonparametric extraction of the constitutive response of low-impedance materials at high rates. , 2022, , 125-149.		0
105	Projectile Impact Shock-Induced Deformation of One-Component Polymer Nanocomposite Thin Films. ACS Nano, 2021, 15, 2439-2446.	14.6	20
106	Leading edge erosion of wind turbine blades: Multiaxial critical plane fatigue model of coating degradation under random liquid impacts. Wind Energy, 2020, 23, 1752-1766.	4.2	24
107	The Image-Based Inertial Release (IBIR) Test: A New High Strain Rate Test for Stiffness Strain-Rate Sensitivity Identification. Experimental Mechanics, 2020, 60, 493-508.	2.0	6
108	Modified Split Hopkinson Pressure Bar for the investigations of dynamic behaviour of magnetorheological materials. Journal of Theoretical and Applied Mechanics, 0, , 323.	0.5	4

#	Article	IF	CITATIONS
109	Atomistic Insights into the Tunable Transition from Cavitation to Crazing in Diamond Nanothread-Reinforced Polymer Composites. Research, 2020, 2020, 7815462.	5.7	29
110	Strain Rate Effects on Tensile Properties of HDPE-PP Composite Prepared by Extrusion and Injection Moulding Method. Materials Sciences and Applications, 2019, 10, 205-215.	0.4	5
111	New Advances in Materials Science and Engineering Vol. 1. , 2019, , .		1
112	Structure-Property Relationships of Polyamide 12 Grades Exposed to Rapid Crack Extension. Materials, 2021, 14, 5899.	2.9	3
113	Effective Mechanical Properties of Additive Manufactured Strut‣attice Structures: Experimental and Finite Element Study. Advanced Engineering Materials, 2022, 24, .	3.5	15
114	Undular bores generated by fracture. Physical Review E, 2021, 104, 044207.	2.1	9
115	The influence of microstructure and polymorphic conformer on the shock sensitivity of 1,3,5,7-tetranitro-1,3,5,7-tetrazoctane (HMX). Journal of Energetic Materials, 2023, 41, 483-509.	2.0	3
116	On the Dynamic Electro-Mechanical Failure Behavior of Automotive High-Voltage Busbars Using a Split Hopkinson Pressure Bar. Materials, 2021, 14, 6320.	2.9	1
117	High Strain-rate Shear and Friction Characterization of Fully-Dense Polyurethane and Epoxy. , 2019, , .		0
118	Could light-curing time, post-space region and cyclic fatigue affect the nanomechanical behavior of a dual-curing cement for fiber post luting?. Journal of the Mechanical Behavior of Biomedical Materials, 2022, 125, 104886.	3.1	9
120	Effect of pre-orientation on formation of microstructure of lamella crystal and the stress response of semicrystalline polymers: Molecular dynamics simulations. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 038101.	0.5	1
121	Single-Walled Carbon Nanotube-Enhanced Bagasse-Epoxy Hybrid Composites under Varied Low Tensile Strain Rates. Applied Mechanics, 2021, 2, 863-877.	1.5	1
122	Thermal Gradients Govern Impact Dynamics in Thermoplastic Polymer Cold Spray. Journal of Thermal Spray Technology, 2021, 30, 2034-2049.	3.1	7
123	The effect of loading rate on the in-plane shear strength of tri-axial braided composites. Journal of Composite Materials, 2022, 56, 421-426.	2.4	1
124	Effect of friction on a crashworthiness test of flat composite plates. Forces in Mechanics, 2022, 6, 100070.	2.8	4
125	Stress-strain behavior and corresponding crystalline structures of four types of polyethylene under a wide range of strain rates. Polymer Testing, 2022, 106, 107460.	4.8	9
126	Hypervelocity impact response of monolithic UHMWPE and HDPE plates. International Journal of Impact Engineering, 2022, 161, 104081.	5.0	13
127	Strain-rate effect of polymers and correction methodology in a SHPB test. International Journal of Impact Engineering, 2022, 161, 104109.	5.0	12

	CITATION	Report	
#	Article	IF	CITATIONS
128	Formation of long strain waves in viscoelastic bar subjected to a longitudinal pulse load. , 2021, , .		0
129	A new look at tensile yielding in isotactic polypropylene: role of strain rate and thermal softening. Polymer Bulletin, 2022, 79, 11157-11176.	3.3	2
130	Characterization of polymers. , 2022, , 273-299.		2
131	General properties of polymers. , 2022, , 19-48.		0
132	Effect of weave pattern on high strain rate performance of glass/ <scp>polytetrafluoroethylene</scp> composites. Polymer Composites, 2022, 43, 1809-1822.	4.6	4
133	Machine Learning-Based Mechanical Behavior Optimization of 3D Print Constructs Manufactured Via the FFF Process. Journal of Materials Engineering and Performance, 2022, 31, 4697-4706.	2.5	14
134	High strain-rate compression behavior of polymeric rod and plate Kelvin lattice structures. Mechanics of Materials, 2022, 166, 104216.	3.2	17
135	Strain rate-dependent crash simulation of woven glass fabric thermoplastic composites. Journal of Reinforced Plastics and Composites, 2022, 41, 637-658.	3.1	3
136	Strain-Rate-Dependent Phase Transition Mechanism in Polybutene-1 during Uniaxial Stretching: From Quasi-Static to Dynamic Loading Conditions. Macromolecules, 2022, 55, 2333-2344.	4.8	14
137	Biodegradable, Stretchable and Transparent Plastic Films from Modified Waterborne Polyurethane Dispersions. Polymers, 2022, 14, 1199.	4.5	5
138	Dynamic fracture of glass fiber-reinforced ductile polymer matrix composites and loading rate effect. Composites Part B: Engineering, 2022, 235, 109754.	12.0	7
139	Experimental characterisation and modelling of the strain rate dependent mechanical response of a filled thermo-reversible supramolecular polyurethane. International Journal of Impact Engineering, 2022, 166, 104239.	5.0	1
140	Data processing of wave propagation in viscoelastic split Hopkinson pressure bar. AIP Advances, 2022, 12, 045210.	1.3	0
141	Strength Characterization of Soils' Properties at High Strain Rates Using the Hopkinson Technique—A Review of Experimental Testing. Materials, 2022, 15, 274.	2.9	6
142	Extreme Dynamic Performance of Nanofiber Mats under Supersonic Impacts Mediated by Interfacial Hydrogen Bonds. ACS Nano, 2021, 15, 19945-19955.	14.6	17
143	Characterization and modelling of bisphenol-a type epoxy polymer over a wide range of rates and temperatures. Polymer, 2022, 249, 124860.	3.8	7
144	Hugoniot and dynamic strength in polyurea. Journal of Applied Physics, 2022, 131, .	2.5	7
145	Deviatoric stress driven transient melting below the glass transition temperature in shocked polymers. Journal of Applied Physics, 2022, 132, .	2.5	3

#	Article	IF	CITATIONS
146	Characterization of Polyethylene Using a New Test Method Based on Stress Response to Relaxation and Recovery. Polymers, 2022, 14, 2763.	4.5	0
147	Effective mechanical properties of additive manufactured triply periodic minimal surfaces: experimental and finite element study. International Journal of Advanced Manufacturing Technology, 2022, 121, 7169-7189.	3.0	16
148	High-accuracy virtual testing of air conditioner's digital twin focusing on key material's deformation and fracture behavior prediction. Scientific Reports, 2022, 12, .	3.3	5
149	Transition of elastomers from a rubber to glassy state under laser shock conditions. Soft Matter, 2022, 18, 5782-5790.	2.7	2
150	Prediction of moisture diffusion and failure in glass/steel adhesive joints. Glass Structures and Engineering, 2022, 7, 381-397.	1.7	4
151	The Texas A&M University Hypervelocity Impact Laboratory: A modern aeroballistic range facility. Review of Scientific Instruments, 2022, 93, .	1.3	9
152	Experimentally simulating adiabatic behaviour: Capturing the high strain rate compressive response of polymers using low strain rate experiments with programmed temperature profiles. Polymer Testing, 2022, 116, 107773.	4.8	4
153	Damage-ignition mechanism studies on modified propellant with different crosslinking density under dynamic loading. Defence Technology, 2023, 28, 155-164.	4.2	2
154	Modeling of Rigidly Mounted PTFE Face Seals Subject to Small Strain Harmonic Vibrations. Tribology Letters, 2022, 70, .	2.6	1
156	Mechanical Behavior of Polymer Nanocomposites via Atomistic Simulations: Conformational Heterogeneity and the Role of Strain Rate. Journal of Physical Chemistry B, 2022, 126, 7429-7444.	2.6	2
157	Theoretical estimates of the parameters of longitudinal undular bores in polymethylmethacrylate bars based on their measured initial speeds. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2022, 478, .	2.1	1
158	Numerical simulation of strain-softening behavior of glass-filled polymer composites: Comparison of two-dimensional and three-dimensional analyses using Arruda-Boyce and Three-Network viscoplastic models. Mechanics of Materials, 2022, 175, 104481.	3.2	5
159	Functionality Test Methods for Biodegradable Polymers. , 2022, , 207-225.		0
160	Effect of build orientation and post-curing of (meth)acrylateâ€based photocurable resin fabricated by stereolithography on the mechanical behavior from quasi-static to high strain rate loadings. International Journal of Advanced Manufacturing Technology, 2022, 123, 1877-1887.	3.0	1
161	High Strain Rate Failure Behavior of Polycarbonate Plates due to Hypervelocity Impact. Macromolecules, 2022, 55, 9640-9649.	4.8	2
162	Peptideâ€Reinforced Amphiphilic Polymer Conetworks. Advanced Functional Materials, 2022, 32, .	14.9	6
163	Morphology and stress whitening in polypropylene at various strain rates. Polymer Bulletin, 2023, 80, 9465-9477.	3.3	1
164	Influence of Entanglements on Ultrahigh Strain Rate Deformation of Polystyrene Microprojectiles. Macromolecules, 0, , .	4.8	2

#	Article	IF	CITATIONS
165	Modeling the strain-softening behavior of glass-filled epoxy composites using a hyperelastic–viscoplastic model. Mechanics of Time-Dependent Materials, 2023, 27, 929-947.	4.4	1
166	Open challenges in tensile testing of additively manufactured polymers: A literature survey and a case study in fused filament fabrication. Polymer Testing, 2023, 117, 107859.	4.8	18
167	Development of novel additive manufactured hybrid architected materials and investigation of their mechanical behavior. Mechanics of Materials, 2023, 176, 104525.	3.2	6
168	Hydraulic-based testing and material modelling to investigate uniaxial compression of thermoset and thermoplastic polymers in quasistatic-to-dynamic regime. Materials and Design, 2022, 224, 111367.	7.0	4
169	Determining Dynamic Mechanical Properties for Elastic Concrete Material Based on the Inversion of Spherical Wave. Materials, 2022, 15, 8181.	2.9	1
170	Origami-inspired metamaterials with switchable energy absorption based on bifurcated motions of a Tachi-Miura polyhedron. Materials and Design, 2023, 225, 111497.	7.0	6
171	Tensile testing of polymers: Integration of digital image correlation, infrared thermography and finite element modelling. Journal of the Mechanics and Physics of Solids, 2023, 171, 105161.	4.8	9
172	Compressive behaviors of thermo-oxidative aged three-dimensional angle-interlock woven composites under different strain rates. Textile Reseach Journal, 0, , 004051752211423.	2.2	0
173	A Study of the Dynamic Response of Materials and Multilayer Structures to Shock Loads. Lecture Notes in Mechanical Engineering, 2023, , 304-313.	0.4	2
174	Investigation of thermo-oxidative aging of silicone-based adhesives: substantiating separability between environmental and mechanical damages. Journal of Polymer Research, 2023, 30, .	2.4	1
175	Mechanical Testing of Three-Dimensional Printed Acrylonitrile Butadiene Styrene under Various Strain Rates. Journal of Testing and Evaluation, 2023, 51, 3294-3312.	0.7	0
176	Distribution estimation of Johnson-Cook parameters considering correlation in quasi-static state. International Journal of Mechanical Sciences, 2023, 244, 108086.	6.7	3
177	Distribution Estimation of Johnson-Cook Model Parameters Considering Correlation. SSRN Electronic Journal, 0, , .	0.4	0
178	Determination of Dynamic Interlayer Strength Properties of Layered Composites Using Measuring Bars. Advanced Structured Materials, 2023, , 39-53.	0.5	0
179	Simulating Hypervelocity Impacts to High-Density Polyethylene. , 2023, , .		1
180	Crashworthiness of recycled carbon fiber composite sinusoidal structures at dynamic rates. Composite Structures, 2023, 311, 116847.	5.8	2
181	Workflow for computational characterization of PDMS cross-linked systems. Frontiers in Built Environment, 0, 8, .	2.3	0
182	A novel approach to evaluate the mechanical responses of elastin-like bioresorbable poly(glycolide-co-caprolactone) (PGCL) suture. Journal of the Mechanical Behavior of Biomedical Materials. 2023. 140. 105723.	3.1	2

ARTICLE IF CITATIONS # Characterizing Pure Polymers under High Speed Compression for the Micromechanical Prediction of 183 4.5 3 Unidirectional Composites. Polymers, 2023, 15, 1262. Fatigue performance of wind turbine rotor blade epoxy adhesives. Polymer Testing, 2023, 121, 107975. 184 4.8 Mechanical response of four polycarbonates at a wide range of strain rates and temperatures. 185 4.8 0 Polymer Testing, 2023, 121, 107986. Development of biodegradable customized tibial scaffold with advanced architected materials utilizing additive manufacturing. Journal of the Mechanical Behavior of Biomedical Materials, 2023, 186 3.1 141, 105796. Soft Multimaterial Magnetic Fibers and Textiles. Advanced Materials, 2023, 35, . 187 21.0 12 Investigation of effects of added hemp fiber particles on tensile behavior of acrylonitrile-butadiene-styrene. Journal of Composite Materials, 0, , 002199832311720. 188 2.4 Possibilities of Using Selected Additive Methods for the Production of Polymer Harmonic Drive 189 2.9 0 Prototypes. Materials, 2023, 16, 4073. Effects of nonâ€proportionality and tensionâ€" compression asymmetry on the fatigue life prediction of 3.4 equivalent stress criteria. Fatigue and Fracture of Engineering Materials and Structures, 0, , . 191 High-rate testing of structural adhesives., 2023, , 711-750. 0 Prediction on the Performance of Polymer-Based Mechanical Low-Pass Filters for High-G 0.2 Accelerometers. Journal of the Korea İnstitute of Military Science and Technology, 2023, 26, 262-272. Effects of build orientation and strain rate on the tensile-shear behaviour of polyamide-12 193 7.0 1 manufactured via laser powder bed fusion. Materials and Design, 2023, 232, 112162. Microstructures and failure in 3D printed viscous materials. Additive Manufacturing, 2023, 74, 103710. 194 3.0 Thermomechanical analysis of polypropylene in tensile tests. Journal of the Brazilian Society of 195 1.6 0 Mechanical Sciences and Engineering, 2023, 45, . Extreme Plasticity, Adhesion, and Nanostructural Changes of Diblock Copolymer Microparticles in Cold Spray Additive Manufacturing. ACS Applied Polymer Materials, 0, , . 4.4 Evaluating the effect of environmental conditions on high compressive strain rates in unfilled and 197 0 1.5 filled neoprene rubbers. Journal of Elastomers and Plastics, 0, , . Shock compression of semiflexible polymers. Soft Matter, 2023, 19, 6131-6139. A Coherent Assessment of the Compressive Strain Rate Response of PC, PETG, PMMA, and TPU 199 4.53 Thermoplastics in MEX Additive Manufacturing. Polymers, 2023, 15, 3926. Frequency domain analyses of low-velocity impact loading of elastomeric foams. Mechanical Systems and Signal Processing, 2023, 205, 110881.

#	Article	IF	CITATIONS
201	Influence of Epoxidized Natural Rubber of the thermoformability of Poly(Lactic Acid) biopolymer films using elevated temperature ball burst tests. Journal of Thermal Analysis and Calorimetry, 0, , .	3.6	0
202	Molecular dynamics simulations of several linear homopolymers: Assessment and comparison of shock properties. Polymer, 2024, 290, 126524.	3.8	0
203	A three-dimensional continuum model for the mechanics of an elastic medium reinforced with fibrous materials in finite elastostatics. Continuum Mechanics and Thermodynamics, 0, , .	2.2	0
204	Shear yielding and crazing in dry and wet amorphous PLA at body temperature. Polymer, 2023, 289, 126477.	3.8	0
205	Terahertz characterization of combined pressure-shear shock loaded aromatic polyurea. Polymer Testing, 2023, 129, 108279.	4.8	0
206	Polyvinyl Alcohol/Nafion®–Zirconia Phosphate Nanocomposite Membranes for Polymer Electrolyte Membrane Fuel Cell Applications: Synthesis and Characterisation. Membranes, 2023, 13, 887.	3.0	0
207	Compressive double yielding in high-density polyethylene over a wide range of strain rates. Polymer, 2024, 291, 126590.	3.8	0
208	Hysteresisâ€Free, Elastic, and Tough Hydrogel with Stretchâ€Rate Independence and High Stability in Physiological Conditions. Small, 0, , .	10.0	0
209	Compression of additively manufactured PLA for biomedical applications: Effects of test conditions on properties of solid samples. Polymer Testing, 2024, 130, 108320.	4.8	0
210	Lodging Variability in Sorghum Stalks Is Dependent on the Biomechanical and Chemical Composition of the Stalk Rinds. Crops, 2024, 4, 3-26.	1.4	0
211	Dynamic behavior of bio-based materials. , 2024, , 633-680.		0
212	Transient response of non-prismatic heterogeneous viscoelastic rods and identification of their material properties. European Journal of Mechanics, A/Solids, 2024, 105, 105241.	3.7	0
213	Into a rapid polymer characterization employing optical measurement systems and high-power ultrasonic excitation. Polymer, 2024, 294, 126730.	3.8	0
214	Impact Response of Polyurea Elastomeric Foams. Journal of Dynamic Behavior of Materials, 0, , .	1.7	0
215	Temperature and strain rate sensitivity of modulus and yield strength of epoxy resin under compressive loads. Polymer, 2024, 295, 126744.	3.8	0
216	Effects of loading rate on void growth in amorphous glassy polymers. European Journal of Mechanics, A/Solids, 2024, 105, 105253.	3.7	0
217	Characterization Techniques in Different Strain-Rate Spectra. Engineering Materials, 2024, , 51-62.	0.6	0
218	Reformable and sustainable thermosetting carbon fiber composites from epoxy vitrimer. Composites Part B: Engineering, 2024, 274, 111270.	12.0	0

#	Article	IF	CITATIONS
219	A <scp>3D</scp> viscoelastic–viscoplastic behavior of carbon nanotubeâ€reinforced polymers: Constitutive model and experimental characterization. Polymer Composites, 2024, 45, 6425-6438.	4.6	0
220	Accuracy enhancement for airbag deployment simulations considering the strain rate and temperature-dependent mechanical properties of thermoplastic olefin and polypropylene. Composites Part B: Engineering, 2024, 275, 111292.	12.0	0
221	Predicting Ductile–Brittle transition temperatures for polyolefins using convolutional neural networks and instrumented notched Charpy experiments. Polymer, 2024, 296, 126797.	3.8	0
222	Thermomechanical characterisation of a thermoplastic polymer and its short glass fibre reinforced composite: Influence of fibre, fibre orientation, strain rates and temperatures. Composites Part A: Applied Science and Manufacturing, 2024, 180, 108099.	7.6	0
223	3D-printed polycaprolactone/tricalcium silicate scaffolds modified with decellularized bone ECM-oxidized alginate for bone tissue engineering. International Journal of Biological Macromolecules, 2024, 265, 130827.	7.5	0
224	Novel hyper-viscoelastic approach to modelling elastomer mechanic behaviour with relaxation spectrum. Polymer Testing, 2024, 133, 108375.	4.8	0
225	Extraction of Mechanical Parameters via Molecular Dynamics Simulation: Application to Polyimides. Polymers, 2024, 16, 813.	4.5	0
226	Hyper-Elastic Characterization of Polydimethylsiloxane by Optimization Algorithms and Finite Element Methods. Arabian Journal for Science and Engineering, 0, , .	3.0	0