Mokarram Hossain

List of Publications by Year
in descending order

79	2,769	172443 29	189881 50
papers	citations	h-index	g-index

81	81	81	1248
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Hyperelastic models for rubber-like materials: consistent tangent operators and suitability for Treloarâ€™s data. Archive of Applied Mechanics, 2012, 82, 1183-1217.	2.2	288
2	A review on magneto-mechanical characterizations of magnetorheological elastomers. Composites Part B: Engineering, 2020, 200, 108348.	12.0	186
3	Experimental study and numerical modelling of VHB 4910 polymer. Computational Materials Science, 2012, 59, 65-74.	3.0	132
4	A theory of finite deformation magneto-viscoelasticity. International Journal of Solids and Structures, 2013, 50, 3886-3897.	2.7	108
5	More hyperelastic models for rubber-like materials: consistent tangent operators and comparative study. Journal of the Mechanical Behavior of Materials, 2013, 22, 27-50.	1.8	105
6	The shape â€" morphing performance of magnetoactive soft materials. Materials and Design, 2021, 211, 110172.	7.0	94
7	Recent advances in hard-magnetic soft composites: Synthesis, characterisation, computational modelling, and applications. Composite Structures, 2022, 279, 114800.	5.8	92
8	Additive manufacturing and the COVID-19 challenges: An in-depth study. Journal of Manufacturing Systems, 2021, 60, 787-798.	13.9	84
9	A small-strain model to simulate the curing of thermosets. Computational Mechanics, 2009, 43, 769-779.	4.0	81
10	Magnetoâ€/ electroâ€responsive polymers toward manufacturing, characterization, and biomedical/ soft robotic applications. Applied Materials Today, 2022, 26, 101306.	4.3	70
11	A finite strain framework for the simulation of polymer curing. Part I: elasticity. Computational Mechanics, 2009, 44, 621-630.	4.0	66
12	On thermo-viscoelastic experimental characterization and numerical modelling of VHB polymer. International Journal of Non-Linear Mechanics, 2020, 118, 103263.	2.6	65
13	Flexible membrane structures for wave energy harvesting: A review of the developments, materials and computational modelling approaches. Renewable and Sustainable Energy Reviews, 2021, 151, 111478.	16.4	64
14	A comprehensive thermo-viscoelastic experimental investigation of Ecoflex polymer. Polymer Testing, 2020, 86, 106478.	4.8	59
15	A comprehensive characterization of the electro-mechanically coupled properties of VHB 4910 polymer. Archive of Applied Mechanics, 2015, 85, 523-537.	2.2	53
16	Eight-chain and full-network models and their modified versions for rubber hyperelasticity: a comparative study. Journal of the Mechanical Behavior of Materials, 2015, 24, 11-24.	1.8	49
17	Ecoflex polymer of different Shore hardnesses: Experimental investigations and constitutive modelling. Mechanics of Materials, 2020, 144, 103366.	3.2	49
18	A microstructural-based approach to model magneto-viscoelastic materials at finite strains. International Journal of Solids and Structures, 2021, 208-209, 119-132.	2.7	48

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19	A finite strain framework for the simulation of polymer curing. Part II. Viscoelasticity and shrinkage. Computational Mechanics, 2010, 46, 363-375.	4.0	46
20	Nonlinear magneto-viscoelasticity of transversally isotropic magneto-active polymers. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2014, 470, 20140082.	2.1	46
21	Temperature and strain rate dependent large tensile deformation and tensile failure behavior of transparent polyurethane at intermediate strain rates. International Journal of Impact Engineering, 2019, 129, 152-167.	5.0	45
22	3D printed elastomeric polyurethane: Viscoelastic experimental characterizations and constitutive modelling with nonlinear viscosity functions. International Journal of Non-Linear Mechanics, 2020, 126, 103546.	2.6	44
23	Towards a thermo-magneto-mechanical coupling framework for magneto-rheological elastomers. International Journal of Solids and Structures, 2017, 128, 117-132.	2.7	42
24	Numerical modeling of thermo-electro-viscoelasticity with field-dependent material parameters. International Journal of Non-Linear Mechanics, 2018, 106, 13-24.	2.6	40
25	Addition of Graphite Filler to Enhance Electrical, Morphological, Thermal, and Mechanical Properties in Poly (Ethylene Terephthalate): Experimental Characterization and Material Modeling. Polymers, 2019, 11, 1411.	4.5	40
26	Experimental and numerical investigations of the electro-viscoelastic behavior of VHB 4905TM. European Journal of Mechanics, A/Solids, 2019, 77, 103797.	3.7	39
27	Preparation of flameâ€retardant, hydrophobic, ultraviolet protective, and luminescent transparent wood. Luminescence, 2021, 36, 1922-1932.	2.9	38
28	Microstructural modelling of hard-magnetic soft materials: Dipoleâ€"dipole interactions versus Zeeman effect. Extreme Mechanics Letters, 2021, 48, 101382.	4.1	37
29	On the stress recovery behaviour of Ecoflex silicone rubbers. International Journal of Mechanical Sciences, 2021, 206, 106624.	6.7	36
30	Modelling the mechanical aspects of the curing process of magneto-sensitive elastomeric materials. International Journal of Solids and Structures, 2015, 58, 257-269.	2.7	30
31	A novel spectral formulation for transversely isotropic magneto-elasticity. Mathematics and Mechanics of Solids, 2017, 22, 1158-1176.	2.4	27
32	A linearized consistent mixed displacement-pressure formulation for hyperelasticity. Mechanics of Advanced Materials and Structures, 2022, 29, 267-284.	2.6	27
33	Mathematical formulations for elastic magneto-electrically coupled soft materials at finite strains: Time-independent processes. International Journal of Engineering Science, 2021, 159, 103429.	5.0	26
34	Degree of cure-dependent modelling for polymer curing processes at small-strain. Part I: consistent reformulation. Computational Mechanics, 2014, 53, 777-787.	4.0	25
35	A multi-scale approach to model the curing process in magneto-sensitive polymeric materials. International Journal of Solids and Structures, 2015, 69-70, 34-44.	2.7	24
36	On nonlinear thermo-electro-elasticity. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2016, 472, 20160170.	2.1	24

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37	On the advantages of mixed formulation and higher-order elements for computational morphoelasticity. Journal of the Mechanics and Physics of Solids, 2021, 148, 104289.	4.8	23
38	A unified numerical approach for soft to hard magneto-viscoelastically coupled polymers. Mechanics of Materials, 2022, 166, 104207.	3.2	23
39	Effects of soft and hard magnetic particles on the mechanical performance of ultra-soft magnetorheological elastomers. Smart Materials and Structures, 2022, 31, 065018.	3.5	23
40	Modelling the curing process in magneto-sensitive polymers: Rate-dependence and shrinkage. International Journal of Non-Linear Mechanics, 2015, 74, 108-121.	2.6	22
41	Modelling electro-active polymers with a dispersion-type anisotropy. Smart Materials and Structures, 2018, 27, 025010.	3.5	21
42	Modeling strategy for dynamic-modal mechanophore in double-network hydrogel composites with self-growing and tailorable mechanical strength. Composites Part B: Engineering, 2019, 179, 107528.	12.0	21
43	Enhanced performance of core-shell hybrid magnetorheological elastomer with nanofillers. Materials Letters, 2021, 297, 129944.	2.6	21
44	A robust and computationally efficient finite element framework for coupled electromechanics. Computer Methods in Applied Mechanics and Engineering, 2020, 372, 113443.	6.6	18
45	Silicone composites cured under a high electric field: an electromechanical experimental study. Polymer Composites, 2021, 42, 914-930.	4.6	18
46	Large viscoelastic deformation of hard-magnetic soft beams. Extreme Mechanics Letters, 2022, 54, 101773.	4.1	18
47	Cooperative dynamics of heuristic swelling and inhibitive micellization in double-network hydrogels by ionic dissociation of polyelectrolyte. Polymer, 2020, 186, 122039.	3.8	16
48	Enhancement of electromechanical properties of natural rubber by adding barium titanate filler: An electroâ€mechanical study. Journal of Applied Polymer Science, 2021, 138, 50991.	2.6	16
49	Finite deformation analysis of hard-magnetic soft materials based on micropolar continuum theory. International Journal of Solids and Structures, 2022, 251, 111747.	2.7	16
50	An additively manufactured silicone polymer: Thermo-viscoelastic experimental study and computational modelling. Additive Manufacturing, 2020, 35, 101395.	3.0	15
51	Continuum Physics of Materials with Time-Dependent Properties. Advances in Applied Mechanics, 2015, 48, 141-259.	2.3	13
52	Modelling the curing process in particle-filled electro-active polymers with a dispersion anisotropy. Continuum Mechanics and Thermodynamics, 2020, 32, 351-367.	2.2	13
53	Experimental study and phenomenological modelling of flaw sensitivity of two polymers used as dielectric elastomers. Continuum Mechanics and Thermodynamics, 2020, 32, 489-500.	2.2	12
54	Facile production of smart superhydrophobic nanocomposite for wood coating towards longâ€lasting glowâ€inâ€theâ€dark photoluminescence. Luminescence, 2021, 36, 2004-2013.	2.9	12

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55	Modelling the residually stressed magneto-electrically coupled soft elastic materials. International Journal of Non-Linear Mechanics, 2021, 137, 103802.	2.6	12
56	Analytical study on growth-induced axisymmetric deformations and shape-control of circular hyperelastic plates. International Journal of Engineering Science, 2022, 170, 103594.	5.0	12
57	CRACK PROPAGATION BEHAVIOR OF LATERALLY CONSTRAINED POLYMERS USED AS DIELECTRIC ELASTOMERS. Rubber Chemistry and Technology, 2021, 94, 476-493.	1.2	11
58	A complete thermoâ€“electroâ€“viscoelastic characterization of dielectric elastomers, Part I: Experimental investigations. Journal of the Mechanics and Physics of Solids, 2021, 157, 104603.	4.8	11
59	Experimental investigations of the human oesophagus: anisotropic properties of the embalmed muscular layer under large deformation. Biomechanics and Modeling in Mechanobiology, 2022, 21, 1169-1186.	2.8	10
60	A complete thermo-electro-viscoelastic characterization of dielectric elastomers, Part II: Continuum modeling approach. Journal of the Mechanics and Physics of Solids, 2021, 157, 104625.	4.8	8
61	Dynamic coordination of miscible polymer blends towards highly designable shape memory effect. Polymer, 2020, 208, 122946.	3.8	7
62	Renormalized <scp>Floryâ€Huggins</scp> lattice model of physicochemical kinetics and dynamic complexity in selfâ€healing doubleâ€network hydrogel. Journal of Applied Polymer Science, 2021, 138, 50304.	2.6	7
63	Experimental and Theoretical Analysis of Mechanical Properties of Graphite/Polyethylene Terephthalate Nanocomposites. Polymers, 2022, 14, 1718.	4.5	7
64	A Methodology of Hydrodynamic Complexity in Topologically Hyperâ€Branched Polymers Undergoing Hierarchical Multiple Relaxations. Macromolecular Chemistry and Physics, 2020, 221, 2000052.	2.2	5
65	Multi-modal commutative dynamics in semi-crystalline polymers undergoing multiple shape memory behavior. Smart Materials and Structures, 2021, 30, 045003.	3.5	5
66	Investigating the dynamic compression response of elastomeric, additively manufactured fluid-filled structures via experimental and finite element analyses. Additive Manufacturing, 2021, 39, 101885.	3.0	5
67	The Use of Contravariant Tensors to Model Anisotropic Soft Tissues. International Journal of Applied Mechanics, 0, , 2150039.	2.2	4
68	Predicting Percolation Threshold Value of EMI SE for Conducting Polymer Composite Systems Through Different Sigmoidal Models. Journal of Electronic Materials, 2022, 51, 1788-1803.	2.2	4
69	Extension of the Arruda-Boyce model to the modelling of the curing process of polymers. Proceedings in Applied Mathematics and Mechanics, 2011, 11, 389-390.	0.2	3
70	On phenomenological and microâ€mechanical models in finite elasticity and viscoelasticity for rubberâ€like materials. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 4060051-4060052.	0.2	2
71	Scaling dynamics of globule-to-coil phase transition in double-network hydrogel with ultra-high stretchable strength. Smart Materials and Structures, 2020, 29, 085050.	3.5	2
72	Experimental and numerical investigation of the electro-mechanical response of particle filled elastomers - Part I: Experimental investigations. European Journal of Mechanics, A/Solids, 2022, 96, 104651.	3.7	2

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73	Mathematical modelling of finite strain magneto-viscoelastic deformations. Proceedings in Applied Mathematics and Mechanics, 2013, 13, 163-164.	0.2	1
74	Nonlocal plasticity-based damage modeling in quasi-brittle materials using an isogeometric approach. Engineering Computations, 2021, 38, 2604-2630.	1.4	1
75	Towards Modeling the Curing Processes of Thermosets. Proceedings in Applied Mathematics and Mechanics, 2008, 8, 10427-10428.	0.2	0
76	On consistent tangent operator derivation and comparative study of rubber-like material models at finite strains. Proceedings in Applied Mathematics and Mechanics, 2012, 12, 349-350.	0.2	0
77	Degree of cure-dependent modelling for polymer curing processes at small strains. Proceedings in Applied Mathematics and Mechanics, 2013, 13, 217-218.	0.2	0
78	Towards modelling the curing process in particle-filled electro-active polymers. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 301-302.	0.2	0
79	Experimental and numerical investigations of the electro-mechanical response of particle filled elastomersâ€"Part II: Continuum modeling approach. European Journal of Mechanics, A/Solids, 2022, 96, 104661.	3.7	0