Tongqing Lu

List of Publications by Year in Descending Order

60 papers	1,444 citations	21 h-index	36 g-index
66 ext. papers	1,815 ext. citations	4.4 avg, IF	5.06 L-index

#	Paper	IF	Citations
60	A thermodynamic model of phase transition of poly(N-isopropylacrylamide) hydrogels in ionic solutions. *International Journal of Solids and Structures*, **2022**, 111434	3.1	0
59	High-throughput experiments for rare-event rupture of materials. *Matter*, **2022**, 5, 654-665	12.7	0
58	Mechanics-based design strategies for 4D printing: A review. *Forces in Mechanics*, **2022**, 7, 100081	1.5	3
57	Topoarchitected polymer networks expand the space of material properties.. *Nature Communications*, **2022**, 13, 1622	17.4	6
56	Toughening Mechanism of Unidirectional Stretchable Composite. *Frontiers in Robotics and AI*, **2021**, 8, 673307	2.8	3
55	Swell induced stress in a hydrogel coating. *Acta Mechanica Sinica/Lixue Xuebao*, **2021**, 37, 797-802	2	2
54	Hydrogel-mesh composite for wound closure. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	19
53	Fatigue behaviors of physical hydrogels based on hydrogen bonds. *Extreme Mechanics Letters*, **2021** , 46, 101320	3.9	5
52	Static and dynamic experiments on hydrogels: Effects of the chemical composition of the fluid. *Mechanics of Materials*, **2021**, 154, 103717	3.3	4
51	Nonlinear photoelasticity of rubber-like soft materials: comparison between theory and experiment. *Soft Matter*, **2021**, 17, 4998-5005	3.6	4
50	Fatigue-resistant adhesion II: Swell tolerance. *Extreme Mechanics Letters*, **2021**, 43, 101182	3.9	1
49	Flaw-sensitivity of a tough hydrogel under monotonic and cyclic loads. *Journal of the Mechanics and Physics of Solids*, **2021**, 153, 104483	5	6
48	Large actuation in an electromechanical actuator using gel, elastomer, and oil. *International Journal of Non-Linear Mechanics*, **2020**, 124, 103499	2.8	0
47	Solutions to ramp-hold dynamic oscillation indentation tests for assessing the viscoelasticity of hydrogel by Kelvin-Voigt fractional derivative modeling. *Mechanics of Materials*, **2020**, 148, 103431	3.3	0
46	Fatigue-resistant adhesion I. Long-chain polymers as elastic dissipaters. *Extreme Mechanics Letters*, **2020**, 39, 100813	3.9	14
45	The Stiffness-Threshold Conflict in Polymer Networks and a Resolution. *Journal of Applied Mechanics, Transactions ASME*, **2020**, 87,	2.7	17
44	Highly Stretchable and Transparent Ionic Conductor with Novel Hydrophobicity and Extreme-Temperature Tolerance. *Research*, **2020**, 2020, 2505619	7.8	23

43	Mechanics of dielectric elastomer structures: A review. *Extreme Mechanics Letters*, **2020**, 38, 100752	3.9	43
42	A pseudo-elasticity theory to model the strain-softening behavior of tough hydrogels. *Journal of the Mechanics and Physics of Solids*, **2020**, 137, 103832	5	19
41	A Universal Strategy for Tough Adhesion of Wet Soft Material. *Advanced Functional Materials*, **2020**, 30, 2003207	15.6	49
40	Experimental Investigations on the Out-of-Plane Sub-harmonic Vibration of a Circular Dielectric Elastomer Actuator. *Acta Mechanica Solida Sinica*, **2019**, 32, 591-598	2	8
39	Linear control of multi-electrode dielectric elastomer actuator with a finite element model. *International Journal of Mechanical Sciences*, **2019**, 159, 441-449	5.5	7
38	Hydrogel 3D printing with the capacitor edge effect. *Science Advances*, **2019**, 5, eaau8769	14.3	26
37	Integrated Soft Ionotronic Skin with Stretchable and Transparent Hydrogel-Elastomer Ionic Sensors for Hand-Motion Monitoring. *Soft Robotics*, **2019**, 6, 368-376	9.2	55
36	Preface to the Soft Matter Mechanics Special Issue of Acta Mechanica Solida Sinica. *Acta Mechanica Solida Sinica*, **2019**, 32, 533-534	2	1
35	Deformation study of an in-plane oscillating dielectric elastomer actuator having complex modes. *Journal of Sound and Vibration*, **2019**, 463, 114940	3.9	5
34	Highly stretchable and transparent dielectric gels for high sensitivity tactile sensors. *Smart Materials and Structures*, **2019**, 28, 024003	3.4	3
33	Fracture Toughness and Fatigue Threshold of Tough Hydrogels. *ACS Macro Letters*, **2019**, 8, 17-23	6.6	50
32	Super tough magnetic hydrogels for remotely triggered shape morphing. *Journal of Materials Chemistry B*, **2018**, 6, 2713-2722	7.3	46
31	Soft sensor for measuring wind pressure. *International Journal of Mechanical Sciences*, **2018**, 141, 386-393	5.5	18
30	A micro-structure based constitutive model for anisotropic stress-strain behaviors of artery tissues. *International Journal of Solids and Structures*, **2018**, 139-140, 55-64	3.1	5
29	Viscoelastic Effect on the Wrinkling of an Inflated Dielectric-Elastomer Balloon. *Journal of Applied Mechanics, Transactions ASME*, **2018**, 85,	2.7	10
28	Fatigue of double-network hydrogels. *Engineering Fracture Mechanics*, **2018**, 187, 74-93	4.2	96
27	A Phenomenological Model for Shakedown of Tough Hydrogels Under Cyclic Loads. *Journal of Applied Mechanics, Transactions ASME*, **2018**, 85,	2.7	8
26	Fine tuning the electro-mechanical response of dielectric elastomers. *Applied Physics Letters*, **2018**, 113, 162902	3.4	9

25	Dielectric gels with ultra-high dielectric constant, low elastic modulus, and excellent transparency. *NPG Asia Materials*, **2018**, 10, 821-826	10.3	38
24	Phase-separation induced extraordinary toughening of magnetic hydrogels. *Journal of Applied Physics*, **2018**, 123, 185105	2.5	4
23	Anomalous bulging behaviors of a dielectric elastomer balloon under internal pressure and electric actuation. *Journal of the Mechanics and Physics of Solids*, **2017**, 102, 1-16	5	26
22	A Constitutive Model for Soft Materials Incorporating Viscoelasticity and Mullins Effect. *Journal of Applied Mechanics, Transactions ASME*, **2017**, 84,	2.7	49
21	Electromechanical phase transition of a dielectric elastomer tube under internal pressure of constant mass. *Theoretical and Applied Mechanics Letters*, **2017**, 7, 121-125	1.8	6
20	Numerical study on the electromechanical behavior of dielectric elastomer with the influence of surrounding medium. *International Journal of Smart and Nano Materials*, **2016**, 7, 52-68	3.6	3
19	Response time and dynamic range for a dielectric elastomer actuator. *Sensors and Actuators A: Physical*, **2016**, 239, 8-17	3.9	16
18	Nonlinear vibration of dielectric elastomer incorporating strain stiffening. *International Journal of Solids and Structures*, **2016**, 87, 70-80	3.1	39
17	Bioinspired bicipital muscle with fiber-constrained dielectric elastomer actuator. *Extreme Mechanics Letters*, **2016**, 6, 75-81	3.9	50
16	Band-gap tunable dielectric elastomer filter for low frequency noise. *Smart Materials and Structures* , **2016**, 25, 055047	3.4	9
15	Electromechanical Catastrophe. *International Journal of Applied Mechanics*, **2016**, 08, 1640005	2.4	14
14	Electro-mechanical coupling bifurcation and bulging propagation in a cylindrical dielectric elastomer tube. *Journal of the Mechanics and Physics of Solids*, **2015**, 85, 160-175	5	49
13	Current leakage performance of dielectric elastomers under different boundary conditions. *Applied Physics Letters*, **2015**, 107, 152901	3.4	13
12	Experimental investigation of the electromechanical phase transition in a dielectric elastomer tube. *Smart Materials and Structures*, **2015**, 24, 035006	3.4	66
11	Charge localization instability in a highly deformable dielectric elastomer. *Applied Physics Letters*, **2014**, 104, 022905	3.4	16
10	The Design and Analysis of Pneumatic Rubber Actuator of Soft Robotic Fish. *Lecture Notes in Computer Science*, **2014**, 320-327	0.9	5
9	Highly deformable actuators made of dielectric elastomers clamped by rigid rings. *Journal of Applied Physics*, **2014**, 115, 184105	2.5	25
8	Asymptotic solutions for buckling delamination induced crack propagation in the thin film-compliant substrate system. *Theoretical and Applied Mechanics Letters*, **2014**, 4, 041003	1.8	1

7	Bulge test at nano-scale: The surface effects. *Applied Physics Letters*, **2013**, 103, 053110	3.4	9
6	Computational model of deformable lenses actuated by dielectric elastomers. *Journal of Applied Physics*, **2013**, 114, 104104	2.5	19
5	Large conversion of energy in dielectric elastomers by electromechanical phase transition. *Acta Mechanica Sinica/Lixue Xuebao*, **2012**, 28, 1106-1114	2	36
4	Large, uni-directional actuation in dielectric elastomers achieved by fiber stiffening. *Applied Physics Letters*, **2012**, 100, 211901	3.4	77
3	Dielectric elastomer actuators under equal-biaxial forces, uniaxial forces, and uniaxial constraint of stiff fibers. *Soft Matter*, **2012**, 8, 6167	3.6	200
2	Two types of transitions to wrinkles in dielectric elastomers. *Soft Matter*, **2012**, 8, 8840	3.6	67
1	The surface effect on the strain energy release rate of buckling delamination in thin film–substrate systems. *International Journal of Engineering Science*, **2011**, 49, 967-975	5.7	40