

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

129 papers	3,034 citations	32 h-index	50 g-index
137 ext. papers	4,149 ext. citations	6.2 avg, IF	5.84 L-index

#	Paper	IF	Citations
129	Bonding dissimilar polymer networks in various manufacturing processes. <i>Nature Communications</i> , 2018 , 9, 846	17.4	136
128	Self-powered soft robot in the Mariana Trench. <i>Nature</i> , 2021 , 591, 66-71	50.4	131
127	3D Printing of Multifunctional Hydrogels. <i>Advanced Functional Materials</i> , 2019 , 29, 1900971	15.6	114
126	Electromechanical and dynamic analyses of tunable dielectric elastomer resonator. <i>International Journal of Solids and Structures</i> , 2012 , 49, 3754-3761	3.1	106
125	Effect of pre-existing shear bands on the tensile mechanical properties of a bulk metallic glass. <i>Acta Materialia</i> , 2010 , 58, 1276-1292	8.4	103
124	An atomistic investigation of structural evolution in metallic glass matrix composites. <i>International Journal of Plasticity</i> , 2013 , 44, 147-160	7.6	81
123	A jogged dislocation governed strengthening mechanism in nanotwinned metals. <i>Nano Letters</i> , 2014 , 14, 5075-80	11.5	74
122	3D printing of highly stretchable hydrogel with diverse UV curable polymers. <i>Science Advances</i> , 2021 , 7,	14.3	70
121	Dual pH-Responsive Hydrogel Actuator for Lipophilic Drug Delivery. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 12010-12017	9.5	63
120	Tough and Conductive Hybrid Hydrogels Enabling Facile Patterning. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 13685-13692	9.5	63
119	A Mechanically Robust and Versatile Liquid-Free Ionic Conductive Elastomer. <i>Advanced Materials</i> , 2021 , 33, e2006111	24	62
118	Highly conductive 1D-2D composite film for skin-mountable strain sensor and stretchable triboelectric nanogenerator. <i>Nano Energy</i> , 2019 , 62, 319-328	17.1	61
117	Printable Liquid-Metal@PDMS Stretchable Heater with High Stretchability and Dynamic Stability for Wearable Thermotherapy. <i>Advanced Materials Technologies</i> , 2019 , 4, 1800435	6.8	61
116	Analysis of the twin spacing and grain size effects on mechanical properties in hierarchically nanotwinned face-centered cubic metals based on a mechanism-based plasticity model. <i>Journal of the Mechanics and Physics of Solids</i> , 2015 , 76, 162-179	5	59
115	A general constitutive model of soft elastomers. <i>Journal of the Mechanics and Physics of Solids</i> , 2018 , 117, 110-122	5	56
114	Agile and Resilient Insect-Scale Robot. <i>Soft Robotics</i> , 2019 , 6, 133-141	9.2	56
113	Non-localized deformation in metallic alloys with amorphous structure. <i>Acta Materialia</i> , 2014 , 68, 32-41	8.4	54

112	Energy harvesting of dielectric elastomer generators concerning inhomogeneous fields and viscoelastic deformation. <i>Journal of Applied Physics</i> , 2012 , 112, 034119	2.5	54
111	Adhesive Tough Magnetic Hydrogels with High FeO Content. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 10292-10300	9.5	54
110	Functional hydrogel coatings. <i>National Science Review</i> , 2021 , 8, nwaa254	10.8	51
109	Multiple mechanism based constitutive modeling of gradient nanograined material. <i>International Journal of Plasticity</i> , 2020 , 125, 314-330	7.6	45
108	Polyacrylamide hydrogels. II. elastic dissipater. <i>Journal of the Mechanics and Physics of Solids</i> , 2019 , 133, 103737	5	40
107	Prestretch effect on snap-through instability of short-length tubular elastomeric balloons under inflation. <i>International Journal of Solids and Structures</i> , 2014 , 51, 2109-2115	3.1	40
106	Controllable synthesis of nickel nanowires and its application in high sensitivity, stretchable strain sensor for body motion sensing. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 4737-4745	7.1	38
105	Mechanically Robust and UV-Curable Shape-Memory Polymers for Digital Light Processing Based 4D Printing. <i>Advanced Materials</i> , 2021 , 33, e2101298	24	38
104	A physically based visco-hyperelastic constitutive model for soft materials. <i>Journal of the Mechanics and Physics of Solids</i> , 2019 , 128, 208-218	5	37
103	A finite element method for dielectric elastomer transducers. <i>Acta Mechanica Solida Sinica</i> , 2012 , 25, 459-466	2	37
102	Intrinsically Stretchable Resistive Switching Memory Enabled by Combining a Liquid MetalBased Soft Electrode and a MetalOrganic Framework Insulator. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800655	6.4	35
101	Recent Advances in Stretchable Supercapacitors Enabled by Low-Dimensional Nanomaterials. <i>Small</i> , 2018 , 14, e1803976	11	35
100	Elastic moduli of polycrystalline Li ₁₅ Si ₄ produced in lithium ion batteries. <i>Journal of Power Sources</i> , 2013 , 242, 732-735	8.9	33
99	Electromechanical Bistable Behavior of a Novel Dielectric Elastomer Actuator. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2014 , 81,	2.7	33
98	Soft Display Using Photonic Crystals on Dielectric Elastomers. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 24758-24766	9.5	32
97	Effect of structural relaxation on plastic flow in a NiNb metallic glassy film. <i>Acta Materialia</i> , 2012 , 60, 3667-3676	8.4	32
96	Strain localization and fatigue cracking behaviors of Cu bicrystal with an inclined twin boundary. <i>Acta Materialia</i> , 2014 , 73, 167-176	8.4	31
95	Stress-state-dependent deformation behavior in NiNb metallic glassy film. <i>Acta Materialia</i> , 2012 , 60, 4136-4143	8.4	31

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| 94 | A physically-based damage model for soft elastomeric materials with anisotropic Mullins effect. <i>International Journal of Solids and Structures</i> , 2019 , 176-177, 121-134 | 3.1 | 30 |
| 93 | A quantitative analysis for the stress field around an elastoplastic indentation/contact. <i>Journal of Materials Research</i> , 2009 , 24, 704-718 | 2.5 | 30 |
| 92 | Two-dimensional electron gas at the PbTiO ₃ /SrTiO ₃ interface: An ab initio study. <i>Physical Review B</i> , 2015 , 92, | 3.3 | 29 |
| 91 | A cohesive zone model incorporating a Coulomb friction law for fiber-reinforced composites. <i>Composites Science and Technology</i> , 2018 , 157, 195-201 | 8.6 | 28 |
| 90 | Ambiently and Mechanically Stable Ionogels for Soft Ionotronics. <i>Advanced Functional Materials</i> , 2021 , 31, 2102773 | 15.6 | 27 |
| 89 | Dielectric elastomer peristaltic pump module with finite deformation. <i>Smart Materials and Structures</i> , 2015 , 24, 075026 | 3.4 | 26 |
| 88 | Hardening by twin boundary during nanoindentation in nanocrystals. <i>Nanotechnology</i> , 2010 , 21, 335704 | 3.4 | 26 |
| 87 | Nucleation and propagation of voltage-driven wrinkles in an inflated dielectric elastomer balloon. <i>Soft Matter</i> , 2015 , 11, 6569-75 | 3.6 | 23 |
| 86 | Enhanced Compressive Sensing of Dielectric Elastomer Sensor Using a Novel Structure. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2015 , 82, | 2.7 | 23 |
| 85 | Phase transitions in metastable phases of silicon. <i>Journal of Applied Physics</i> , 2014 , 115, 103514 | 2.5 | 23 |
| 84 | Integrated multifunctional flexible electronics based on tough supramolecular hydrogels with patterned silver nanowires. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 7688-7697 | 7.1 | 22 |
| 83 | Toward Highly Thermal Stable Perovskite Solar Cells by Rational Design of Interfacial Layer. <i>IScience</i> , 2019 , 22, 534-543 | 6.1 | 22 |
| 82 | Rate dependent stress-stretch relation of dielectric elastomers subjected to pure shear like loading and electric field. <i>Acta Mechanica Solida Sinica</i> , 2012 , 25, 542-549 | 2 | 22 |
| 81 | Time-dependent shear transformation zone in thin film metallic glasses revealed by nanoindentation creep. <i>Journal of Alloys and Compounds</i> , 2017 , 696, 239-245 | 5.7 | 20 |
| 80 | 3D Printing Method for Tough Multifunctional Particle-Based Double-Network Hydrogels. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 13714-13723 | 9.5 | 20 |
| 79 | Failure analysis of syntactic foams: A computational model with cohesive law and XFEM. <i>Composites Part B: Engineering</i> , 2016 , 89, 18-26 | 10 | 20 |
| 78 | Morphology of Voltage-Triggered Ordered Wrinkles of a Dielectric Elastomer Sheet. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2017 , 84, | 2.7 | 19 |
| 77 | Pneumatically Actuated Soft Robotic Arm for Adaptable Grasping. <i>Acta Mechanica Solida Sinica</i> , 2018 , 31, 608-622 | 2 | 19 |

76	Magnetic-Assisted Transparent and Flexible Percolative Composite for Highly Sensitive Piezoresistive Sensor via Hot Embossing Technology. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 48331-48340	9.5	18
75	Design and Characterization of a Soft Dielectric Elastomer Peristaltic Pump Driven by Electromechanical Load. <i>IEEE/ASME Transactions on Mechatronics</i> , 2018 , 23, 2132-2143	5.5	18
74	Dependence of room-temperature nanoindentation creep behavior and shear transformation zone on the glass transition temperature in bulk metallic glasses. <i>Journal of Non-Crystalline Solids</i> , 2016 , 445-446, 19-29	3.9	17
73	Constitutive models of artificial muscles: a review. <i>Journal of Zhejiang University: Science A</i> , 2016 , 17, 22-36	2.1	16
72	A Review of Physically Based and Thermodynamically Based Constitutive Models for Soft Materials. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2020 , 87,	2.7	16
71	Ultrastretchable and conductive core/sheath hydrogel fibers with multifunctionality. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2019 , 57, 272-280	2.6	15
70	Analysis of ductile fracture by extended unified strength theory. <i>International Journal of Plasticity</i> , 2018 , 104, 196-213	7.6	15
69	On the grain size dependent working hardening behaviors of severe plastic deformation processed metals. <i>Scripta Materialia</i> , 2020 , 178, 171-175	5.6	15
68	Prescribing patterns in growing tubular soft matter by initial residual stress. <i>Soft Matter</i> , 2019 , 15, 8468-8474	3.4	15
67	X-Mechanics: An endless frontier. <i>Science China: Physics, Mechanics and Astronomy</i> , 2019 , 62, 1	3.6	15
66	Micromechanical modeling of the multi-axial deformation behavior in double network hydrogels. <i>International Journal of Plasticity</i> , 2021 , 137, 102901	7.6	15
65	A Wearable Capacitive Sensor Based on Ring/Disk-Shaped Electrode and Porous Dielectric for Noncontact Healthcare Monitoring. <i>Global Challenges</i> , 2020 , 4, 1900079	4.3	14
64	Puncture mechanics of soft elastomeric membrane with large deformation by rigid cylindrical indenter. <i>Journal of the Mechanics and Physics of Solids</i> , 2018 , 112, 458-471	5	14
63	Stretch tuning of the Debye ring for 2D photonic crystals on a dielectric elastomer membrane. <i>Soft Matter</i> , 2018 , 14, 1120-1129	3.6	13
62	Controlling wrinkles on the surface of a dielectric elastomer balloon. <i>Extreme Mechanics Letters</i> , 2016 , 9, 139-146	3.9	13
61	Irreversible deformation of metal matrix composites: A study via the mechanism-based cohesive zone model. <i>Mechanics of Materials</i> , 2015 , 89, 72-84	3.3	12
60	A Thermochromic Hydrogel for Camouflage and Soft Display. <i>Advanced Optical Materials</i> , 2020 , 8, 2000081	3.1	12
59	Enhanced plasticity in Zr ₄₀ Ti ₄₀ Al ₁₀ Be bulk metallic glasses. <i>Journal of Non-Crystalline Solids</i> , 2015 , 412, 35-44	3.9	12

58	Can nanoscale twin boundaries serve as dislocation sources in single crystals?. <i>Computational Materials Science</i> , 2011 , 50, 1567-1570	3.2	12
57	A constitutive model for multi network elastomers pre-stretched by swelling. <i>Extreme Mechanics Letters</i> , 2020 , 40, 100926	3.9	11
56	Effects of load configuration on partial slip contact between an elastic?plastic sphere and a rigid flat. <i>Tribology International</i> , 2013 , 61, 120-128	4.9	10
55	Indentation size effects of mechanical behavior and shear transformation zone in thin film metallic glasses. <i>Thin Solid Films</i> , 2018 , 646, 36-43	2.2	10
54	Numerical Study on Mechanical Properties of Discontinuously Reinforced Titanium Matrix Composite with Network Reinforcement Architecture. <i>International Journal of Applied Mechanics</i> , 2017 , 09, 1750073	2.4	9
53	Stretchable tactile sensor with high sensitivity and dynamic stability based on vertically aligned urchin-shaped nanoparticles. <i>Materials Today Physics</i> , 2020 , 14, 100219	8	9
52	Mechanical characterization and modeling of sponge-reinforced hydrogel composites under compression. <i>Soft Matter</i> , 2018 , 14, 4355-4363	3.6	8
51	Voltage-controlled radial wrinkles of a trumpet-like dielectric elastomer structure. <i>AIP Advances</i> , 2018 , 8, 035314	1.5	8
50	A versatile hydrogel network-repairing strategy achieved by the covalent-like hydrogen bond interaction.. <i>Science Advances</i> , 2022 , 8, eabl5066	14.3	8
49	Effects of hollow particle shape and distribution on the elastic properties of syntactic foams: 3D computational modeling. <i>Computational Materials Science</i> , 2014 , 95, 106-112	3.2	7
48	Electromechanical coupling properties and stability analysis of ferroelectrets. <i>Journal of Applied Physics</i> , 2011 , 110, 043525	2.5	7
47	An electro-mechanically coupled visco-hyperelastic-plastic constitutive model for cyclic deformation of dielectric elastomers. <i>Mechanics of Materials</i> , 2020 , 150, 103575	3.3	7
46	Effect of pre-stress on the onset of yielding in bulk metallic glasses. <i>Journal of Non-Crystalline Solids</i> , 2019 , 503-504, 44-51	3.9	7
45	Effect of Partition on the Mechanical Behaviors of Soft Adhesive Layers. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2019 , 86,	2.7	6
44	Bistable rotating mechanism based on dielectric elastomer actuator. <i>Smart Materials and Structures</i> , 2020 , 29, 015008	3.4	6
43	Size-dependent inertial cavitation of soft materials. <i>Journal of the Mechanics and Physics of Solids</i> , 2020 , 137, 103859	5	6
42	Inclusion Size Effect on Mechanical Properties of Particle Hydrogel Composite. <i>Acta Mechanica Solida Sinica</i> , 2019 , 32, 643-651	2	5
41	A chemo-mechanical model for fully-coupled lithiation reaction and stress generation in viscoplastic lithiated silicon. <i>Science China Technological Sciences</i> , 2019 , 62, 1365-1374	3.5	5

40	Experimental investigation on electro-mechanically coupled cyclic deformation of laterally constrained dielectric elastomer. <i>Polymer Testing</i> , 2020 , 81, 106220	4.5	5
39	Acarid Suction Cup-Inspired Rapid and Tunable Magnetic Adhesion. <i>Advanced Materials Technologies</i> , 2021 , 6, 2100004	6.8	5
38	Numerical investigation on the loading-delamination-unloading behavior of adhesive joints. <i>Composites Part A: Applied Science and Manufacturing</i> , 2016 , 90, 45-50	8.4	5
37	Electrically tunable fast and reversible structural coloration of two-dimensional photonic crystals. <i>Smart Materials and Structures</i> , 2019 , 28, 115019	3.4	5
36	Strength Analysis of Syntactic Foams Using a Three-Dimensional Continuum Damage Finite Element Model. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2015 , 82,	2.7	4
35	EFFECTS OF STRETCHING RATE AND SIZE ON THE RUPTURE OF ACRYLIC DIELECTRIC ELASTOMER. <i>International Journal of Applied Mechanics</i> , 2014 , 06, 1450026	2.4	4
34	Photoinitiator-grafted polymer chains for integrating hydrogels with various materials. <i>Cell Reports Physical Science</i> , 2021 , 2, 100463	6.1	4
33	Modeling the mechanical behaviors of multiple network elastomers. <i>Mechanics of Materials</i> , 2021 , 161, 103992	3.3	4
32	Synthesis and controlled morphology of Ni@Ag core shell nanowires with excellent catalytic efficiency and recyclability. <i>Nanotechnology</i> , 2019 , 30, 385603	3.4	3
31	Size Effect on Microbond Testing Interfacial Shear Strength of Fiber-Reinforced Composites. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2019 , 86,	2.7	3
30	Multiscale Simulation of Damage Progression in 5-Harness Satin Weave Composites. <i>Jom</i> , 2015 , 67, 1491-1498	3	3
29	Numerical study of millimeter-scale magnetorheological elastomer robot for undulatory swimming. <i>Journal Physics D: Applied Physics</i> , 2020 , 53, 235402	3	3
28	In Situ and Intraoperative Detection of the Ureter Injury Using a Highly Sensitive Piezoresistive Sensor with a Tunable Porous Structure. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 21669-21679	9.5	3
27	Highly stretchable and transparent dielectric gels for high sensitivity tactile sensors. <i>Smart Materials and Structures</i> , 2019 , 28, 024003	3.4	3
26	Tunable piezoresistivity of low percolation threshold micro-nickel wires/PDMS conductive composite regulated by magnetic field. <i>Journal of Materials Chemistry C</i> , 2021 , 9, 5908-5919	7.1	3
25	3D Printing of Conductive Hydrogel-Elastomer Hybrids for Stretchable Electronics. <i>ACS Applied Materials & Interfaces</i> , 2021 ,	9.5	2
24	A Numerical Approach Based on Finite Element Method for the Wrinkling Analysis of Dielectric Elastomer Membranes. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2021 , 88,	2.7	2
23	Peel of elastomers of various thicknesses and widths. <i>Extreme Mechanics Letters</i> , 2021 , 46, 101325	3.9	2

22	Essential work of fracture of soft elastomers. <i>Journal of the Mechanics and Physics of Solids</i> , 2021 , 156, 104616	5	2
21	Study of non-uniform axial magnetic field induced deformation of a soft cylindrical magneto-active actuator. <i>Soft Matter</i> , 2021 , 17, 7498-7505	3.6	2
20	Preface to the Soft Matter Mechanics Special Issue of Acta Mechanica Solida Sinica. <i>Acta Mechanica Solida Sinica</i> , 2019 , 32, 533-534	2	1
19	BioARS: Designing Adaptive and Reconfigurable Bionic Assembly Robotic System with Inchworm Modules 2020 ,		1
18	A hyperelastic-damage model based on the strain invariants. <i>Extreme Mechanics Letters</i> , 2022 , 52, 101643	4.9	1
17	Magnetomechanical behavior of soft magnetoactive membranes. <i>International Journal of Solids and Structures</i> , 2022 , 234-235, 111310	3.1	1
16	Hydrogel Coating Enabling Mechanically Friendly, Step-Index, Functionalized Optical Fiber. <i>Advanced Optical Materials</i> , 2021 , 9, 2101036	8.1	1
15	An anisotropic constitutive model for 3D printed hydrogel-fiber composites. <i>Journal of the Mechanics and Physics of Solids</i> , 2021 , 156, 104611	5	1
14	Effects of hole arrangement and trenched hole on multirow film cooling. <i>AIP Advances</i> , 2022 , 12, 045205	1.5	1
13	Highly Stretchable Bilayer Lattice Structures That Elongate via In-Plane Deformation. <i>Advanced Functional Materials</i> , 2020 , 30, 1909473	15.6	0
12	Fatigue life assessment and damage evolution in Z-pinned laminates. <i>Composites Science and Technology</i> , 2022 , 221, 109328	8.6	0
11	Impact-induced bubble interactions and coalescence in soft materials. <i>International Journal of Solids and Structures</i> , 2022 , 238, 111387	3.1	0
10	Stretch induced thermal conduction anisotropy of hydrogel. <i>International Journal of Heat and Mass Transfer</i> , 2022 , 185, 122445	4.9	0
9	Intelligent Soft Actuators and Flexible Devices. <i>Advanced Intelligent Systems</i> , 2021 , 3, 2100173	6	0
8	Intergrated Shape Memory Alloys Soft Actuators with Periodic and Inhomogeneous Deformations by Modulating Elastic Tendon Structures. <i>Advanced Engineering Materials</i> , 2020 , 22, 2000640	3.5	0
7	Preface: Mechanics of soft materials and flexible structures. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2021 , 37, 746-747	2	0
6	Low-cycle electro-mechanical fatigue of dielectric elastomers: Pure-shear experiments and life-prediction model. <i>International Journal of Fatigue</i> , 2021 , 148, 106220	5	0
5	S2worm: A Fast-Moving Untethered Insect-Scale Robot With 2-DoF Transmission Mechanism. <i>IEEE Robotics and Automation Letters</i> , 2022 , 7, 6758-6765	4.2	0

4	Failure of soft dielectric membrane with a hole subjected to mechanical and electric loads. <i>International Journal of Non-Linear Mechanics</i> , 2019 , 117, 103243	2.8
3	MECHANICS OF SOFT ACTIVE MATERIALS AND STRUCTURES 2015 , 85-86	
2	Experimental study on the magnetic permeability of inclusion filled soft polymeric composite for soft-core transformer applications. <i>Polymer Testing</i> , 2022 , 106, 107430	4.5
1	Shape-Memory Polymers: Mechanically Robust and UV-Curable Shape-Memory Polymers for Digital Light Processing Based 4D Printing (Adv. Mater. 27/2021). <i>Advanced Materials</i> , 2021 , 33, 2170210	24