

Xuanhe Zhao

List of Publications by Year in descending order

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Version: 2024-02-01

170
papers

34,624
citations

5430

85
h-index

5739

167
g-index

181
all docs

181
docs citations

181
times ranked

29879
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly stretchable and tough hydrogels. <i>Nature</i> , 2012, 489, 133-136.	13.7	4,089
2	Printing ferromagnetic domains for untethered fast-transforming soft materials. <i>Nature</i> , 2018, 558, 274-279.	13.7	1,426
3	Hydrogel bioelectronics. <i>Chemical Society Reviews</i> , 2019, 48, 1642-1667.	18.7	1,267
4	Multi-scale multi-mechanism design of tough hydrogels: building dissipation into stretchy networks. <i>Soft Matter</i> , 2014, 10, 672-687.	1.2	938
5	Tough bonding of hydrogels to diverse non-porous surfaces. <i>Nature Materials</i> , 2016, 15, 190-196.	13.3	807
6	Dry double-sided tape for adhesion of wet tissues and devices. <i>Nature</i> , 2019, 575, 169-174.	13.7	798
7	A theory of coupled diffusion and large deformation in polymeric gels. <i>Journal of the Mechanics and Physics of Solids</i> , 2008, 56, 1779-1793.	2.3	790
8	Hydraulic hydrogel actuators and robots optically and sonically camouflaged in water. <i>Nature Communications</i> , 2017, 8, 14230.	5.8	760
9	Multifunctionality and control of the crumpling and unfolding of large-area graphene. <i>Nature Materials</i> , 2013, 12, 321-325.	13.3	735
10	3D Printing of Highly Stretchable and Tough Hydrogels into Complex, Cellularized Structures. <i>Advanced Materials</i> , 2015, 27, 4035-4040.	11.1	720
11	Ferromagnetic soft continuum robots. <i>Science Robotics</i> , 2019, 4, .	9.9	698
12	Skin-inspired hydrogel-elastomer hybrids with robust interfaces and functional microstructures. <i>Nature Communications</i> , 2016, 7, 12028.	5.8	696
13	Active scaffolds for on-demand drug and cell delivery. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 67-72.	3.3	630
14	Hydrogel machines. <i>Materials Today</i> , 2020, 36, 102-124.	8.3	625
15	3D printing of conducting polymers. <i>Nature Communications</i> , 2020, 11, 1604.	5.8	568
16	Stretchable Hydrogel Electronics and Devices. <i>Advanced Materials</i> , 2016, 28, 4497-4505.	11.1	550
17	Pure PEDOT:PSS hydrogels. <i>Nature Communications</i> , 2019, 10, 1043.	5.8	528
18	Soft Materials by Design: Unconventional Polymer Networks Give Extreme Properties. <i>Chemical Reviews</i> , 2021, 121, 4309-4372.	23.0	472

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19	A nonlinear field theory of deformable dielectrics. <i>Journal of the Mechanics and Physics of Solids</i> , 2008, 56, 467-486.	2.3	465
20	Graded intrafillable architecture-based iontronic pressure sensor with ultra-broad-range high sensitivity. <i>Nature Communications</i> , 2020, 11, 209.	5.8	426
21	Soft wall-climbing robots. <i>Science Robotics</i> , 2018, 3, .	9.9	419
22	Method to analyze electromechanical stability of dielectric elastomers. <i>Applied Physics Letters</i> , 2007, 91, .	1.5	395
23	Matrix elasticity of void-forming hydrogels controls transplanted-stem-cell-mediated bone formation. <i>Nature Materials</i> , 2015, 14, 1269-1277.	13.3	390
24	Ultrasound-triggered disruption and self-healing of reversibly cross-linked hydrogels for drug delivery and enhanced chemotherapy. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 9762-9767.	3.3	372
25	Electrical bioadhesive interface for bioelectronics. <i>Nature Materials</i> , 2021, 20, 229-236.	13.3	361
26	Electromechanical hysteresis and coexistent states in dielectric elastomers. <i>Physical Review B</i> , 2007, 76, .	1.1	327
27	Highly Stretchable, Strain Sensing Hydrogel Optical Fibers. <i>Advanced Materials</i> , 2016, 28, 10244-10249.	11.1	327
28	Muscle-like fatigue-resistant hydrogels by mechanical training. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 10244-10249.	3.3	318
29	Mechanochemical Activation of Covalent Bonds in Polymers with Full and Repeatable Macroscopic Shape Recovery. <i>ACS Macro Letters</i> , 2014, 3, 216-219.	2.3	309
30	Mechanics of hard-magnetic soft materials. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 124, 244-263.	2.3	307
31	Anti-fatigue-fracture hydrogels. <i>Science Advances</i> , 2019, 5, eaau8528.	4.7	305
32	Theory of Dielectric Elastomers Capable of Giant Deformation of Actuation. <i>Physical Review Letters</i> , 2010, 104, 178302.	2.9	300
33	A theory of constrained swelling of a pH-sensitive hydrogel. <i>Soft Matter</i> , 2010, 6, 784.	1.2	288
34	Stress-relaxation behavior in gels with ionic and covalent crosslinks. <i>Journal of Applied Physics</i> , 2010, 107, 63509.	1.1	287
35	Maximal energy that can be converted by a dielectric elastomer generator. <i>Applied Physics Letters</i> , 2009, 94, .	1.5	279
36	3D Printing of Living Responsive Materials and Devices. <i>Advanced Materials</i> , 2018, 30, 1704821.	11.1	277

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37	Multifunctional "Hydrogel Skins" on Diverse Polymers with Arbitrary Shapes. <i>Advanced Materials</i> , 2019, 31, e1807101.	11.1	258
38	Mechanisms of large actuation strain in dielectric elastomers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2011, 49, 504-515.	2.4	252
39	Magnetic Soft Materials and Robots. <i>Chemical Reviews</i> , 2022, 122, 5317-5364.	23.0	249
40	Electrical breakdown and ultrahigh electrical energy density in poly(vinylidene fluoride)-based ferroelectric elastomers. <i>Journal of Applied Physics</i> , 2015, 118, 044101.	1.5	242
41	Large deformation and electrochemistry of polyelectrolyte gels. <i>Journal of the Mechanics and Physics of Solids</i> , 2010, 58, 558-577.	2.3	237
42	Using indentation to characterize the poroelasticity of gels. <i>Applied Physics Letters</i> , 2010, 96, .	1.5	236
43	Electrostriction in elastic dielectrics undergoing large deformation. <i>Journal of Applied Physics</i> , 2008, 104, .	1.1	222
44	Composite Three-Dimensional Woven Scaffolds with Interpenetrating Network Hydrogels to Create Functional Synthetic Articular Cartilage. <i>Advanced Functional Materials</i> , 2013, 23, 5833-5839.	7.8	218
45	Stretchable living materials and devices with hydrogel-elastomer hybrids hosting programmed cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 2200-2205.	3.3	212
46	Instant tough bioadhesive with triggerable benign detachment. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 15497-15503.	3.3	210
47	Controlled crack propagation for atomic precision handling of wafer-scale two-dimensional materials. <i>Science</i> , 2018, 362, 665-670.	6.0	208
48	Stretchable and High-Performance Supercapacitors with Crumpled Graphene Papers. <i>Scientific Reports</i> , 2014, 4, 6492.	1.6	207
49	A New 3D Printing Strategy by Harnessing Deformation, Instability, and Fracture of Viscoelastic Inks. <i>Advanced Materials</i> , 2018, 30, 1704028.	11.1	207
50	Formation of creases on the surfaces of elastomers and gels. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	205
51	Cephalopod-inspired design of electro-mechano-chemically responsive elastomers for on-demand fluorescent patterning. <i>Nature Communications</i> , 2014, 5, 4899.	5.8	202
52	Fatigue-resistant adhesion of hydrogels. <i>Nature Communications</i> , 2020, 11, 1071.	5.8	187
53	A three-dimensional phase diagram of growth-induced surface instabilities. <i>Scientific Reports</i> , 2015, 5, 8887.	1.6	175
54	Harnessing Localized Ridges for High-Aspect-Ratio Hierarchical Patterns with Dynamic Tunability and Multifunctionality. <i>Advanced Materials</i> , 2014, 26, 1763-1770.	11.1	171

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55	Harnessing the hygroscopic and biofluorescent behaviors of genetically tractable microbial cells to design biohybrid wearables. <i>Science Advances</i> , 2017, 3, e1601984.	4.7	170
56	A soft neuroprosthetic hand providing simultaneous myoelectric control and tactile feedback. <i>Nature Biomedical Engineering</i> , 2023, 7, 589-598.	11.6	169
57	Ingestible hydrogel device. <i>Nature Communications</i> , 2019, 10, 493.	5.8	168
58	Averting cracks caused by insertion reaction in lithium-ion batteries. <i>Journal of Materials Research</i> , 2010, 25, 1007-1010.	1.2	161
59	Design of stiff, tough and stretchy hydrogel composites via nanoscale hybrid crosslinking and macroscale fiber reinforcement. <i>Soft Matter</i> , 2014, 10, 7519-7527.	1.2	155
60	Rapid and coagulation-independent haemostatic sealing by a paste inspired by barnacle glue. <i>Nature Biomedical Engineering</i> , 2021, 5, 1131-1142.	11.6	146
61	Harnessing large deformation and instabilities of soft dielectrics: Theory, experiment, and application. <i>Applied Physics Reviews</i> , 2014, 1, 021304.	5.5	144
62	Designing complex architected materials with generative adversarial networks. <i>Science Advances</i> , 2020, 6, eaaz4169.	4.7	144
63	Propagation of instability in dielectric elastomers. <i>International Journal of Solids and Structures</i> , 2008, 45, 3739-3750.	1.3	143
64	NONEQUILIBRIUM THERMODYNAMICS OF DIELECTRIC ELASTOMERS. <i>International Journal of Applied Mechanics</i> , 2011, 03, 203-217.	1.3	143
65	A theory for large deformation and damage of interpenetrating polymer networks. <i>Journal of the Mechanics and Physics of Solids</i> , 2012, 60, 319-332.	2.3	143
66	Simulation of polycrystalline structure with Voronoi diagram in Laguerre geometry based on random closed packing of spheres. <i>Computational Materials Science</i> , 2004, 29, 301-308.	1.4	142
67	Strong adhesion of wet conducting polymers on diverse substrates. <i>Science Advances</i> , 2020, 6, eaay5394.	4.7	141
68	Bioinspired Surfaces with Dynamic Topography for Active Control of Biofouling. <i>Advanced Materials</i> , 2013, 25, 1430-1434.	11.1	140
69	Localized ridge wrinkling of stiff films on compliant substrates. <i>Journal of the Mechanics and Physics of Solids</i> , 2012, 60, 1265-1279.	2.3	138
70	Strong, Tough, Stretchable, and Self-Adhesive Hydrogels from Intrinsically Unstructured Proteins. <i>Advanced Materials</i> , 2017, 29, 1604743.	11.1	130
71	Adaptive and multifunctional hydrogel hybrid probes for long-term sensing and modulation of neural activity. <i>Nature Communications</i> , 2021, 12, 3435.	5.8	130
72	Method to analyze programmable deformation of dielectric elastomer layers. <i>Applied Physics Letters</i> , 2008, 93, .	1.5	127

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73	A large deformation viscoelastic model for double-network hydrogels. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 100, 103-130.	2.3	127
74	Designing toughness and strength for soft materials. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 8138-8140.	3.3	123
75	Hard-magnetic elastica. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 142, 104045.	2.3	123
76	Predicting fracture energies and crack-tip fields of soft tough materials. <i>Extreme Mechanics Letters</i> , 2015, 4, 1-8.	2.0	116
77	Telerobotic neurovascular interventions with magnetic manipulation. <i>Science Robotics</i> , 2022, 7, eabg9907.	9.9	114
78	Evaluation of Mixing Rules for Dielectric Constants of Composite Dielectrics by MC-FEM Calculation on 3D Cubic Lattice. , 2003, 11, 227-239.		112
79	Beyond wrinkles: Multimodal surface instabilities for multifunctional patterning. <i>MRS Bulletin</i> , 2016, 41, 115-122.	1.7	111
80	A finite element method for transient analysis of concurrent large deformation and mass transport in gels. <i>Journal of Applied Physics</i> , 2009, 105, .	1.1	110
81	Hydrogel-based biocontainment of bacteria for continuous sensing and computation. <i>Nature Chemical Biology</i> , 2021, 17, 724-731.	3.9	110
82	Creasing to Cratering Instability in Polymers under Ultrahigh Electric Fields. <i>Physical Review Letters</i> , 2011, 106, 118301.	2.9	104
83	Ideal reversible polymer networks. <i>Soft Matter</i> , 2018, 14, 5186-5196.	1.2	103
84	High stretchability, strength, and toughness of living cells enabled by hyperelastic vimentin intermediate filaments. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 17175-17180.	3.3	103
85	Phase Diagrams of Instabilities in Compressed Film-Substrate Systems. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2014, 81, 0510041-5100410.	1.1	92
86	Dielectric elastomer membranes undergoing inhomogeneous deformation. <i>Journal of Applied Physics</i> , 2009, 106, .	1.1	91
87	Separating viscoelasticity and poroelasticity of gels with different length and time scales. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2014, 30, 20-27.	1.5	90
88	Increasing the Maximum Achievable Strain of a Covalent Polymer Gel Through the Addition of Mechanically Invisible Cross-links. <i>Advanced Materials</i> , 2014, 26, 6013-6018.	11.1	88
89	On designing dielectric elastomer actuators. <i>Journal of Applied Physics</i> , 2008, 104, .	1.1	86
90	Evolutionary design of magnetic soft continuum robots. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	85

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91	Mechanics of mechanochemically responsive elastomers. <i>Journal of the Mechanics and Physics of Solids</i> , 2015, 82, 320-344.	2.3	82
92	A strain-programmed patch for the healing of diabetic wounds. <i>Nature Biomedical Engineering</i> , 2022, 6, 1118-1133.	11.6	82
93	Separating poroviscoelastic deformation mechanisms in hydrogels. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	80
94	3D Printing: 3D Printing of Highly Stretchable and Tough Hydrogels into Complex, Cellularized Structures (<i>Adv. Mater.</i> 27/2015). <i>Advanced Materials</i> , 2015, 27, 4034-4034.	11.1	77
95	A Multifunctional Origami Patch for Minimally Invasive Tissue Sealing. <i>Advanced Materials</i> , 2021, 33, e2007667.	11.1	77
96	Magnetic Living Hydrogels for Intestinal Localization, Retention, and Diagnosis. <i>Advanced Functional Materials</i> , 2021, 31, 2010918.	7.8	77
97	A One-Step Method of Hydrogel Modification by Single-Walled Carbon Nanotubes for Highly Stretchable and Transparent Electronics. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 28069-28075.	4.0	75
98	Engineered Living Hydrogels. <i>Advanced Materials</i> , 2022, 34, e2201326.	11.1	75
99	Kirigami enhances film adhesion. <i>Soft Matter</i> , 2018, 14, 2515-2525.	1.2	74
100	Reversible Sliding in Networks of Nanowires. <i>Nano Letters</i> , 2013, 13, 2381-2386.	4.5	71
101	Poroelasticity of a covalently crosslinked alginate hydrogel under compression. <i>Journal of Applied Physics</i> , 2010, 108, .	1.1	69
102	An off-the-shelf bioadhesive patch for sutureless repair of gastrointestinal defects. <i>Science Translational Medicine</i> , 2022, 14, eabh2857.	5.8	67
103	Shaping the future of robotics through materials innovation. <i>Nature Materials</i> , 2021, 20, 1582-1587.	13.3	65
104	Electromechanical instability in semicrystalline polymers. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	62
105	Tough and tunable adhesion of hydrogels: experiments and models. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2017, 33, 543-554.	1.5	62
106	Bursting drops in solid dielectrics caused by high voltages. <i>Nature Communications</i> , 2012, 3, 1157.	5.8	60
107	Folding artificial mucosa with cell-laden hydrogels guided by mechanics models. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 7503-7508.	3.3	60
108	Bioinspired Reversibly Cross-Linked Hydrogels Comprising Polypeptide Micelles Exhibit Enhanced Mechanical Properties. <i>Advanced Functional Materials</i> , 2015, 25, 3122-3130.	7.8	59

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109	Three-dimensional simulations of the complex dielectric properties of random composites by finite element method. <i>Journal of Applied Physics</i> , 2004, 95, 8110-8117.	1.1	58
110	Impermeable Robust Hydrogels via Hybrid Lamination. <i>Advanced Healthcare Materials</i> , 2017, 6, 1700520.	3.9	58
111	Inhomogeneous and anisotropic equilibrium state of a swollen hydrogel containing a hard core. <i>Applied Physics Letters</i> , 2008, 92, .	1.5	56
112	Strong fatigue-resistant nanofibrous hydrogels inspired by lobster underbelly. <i>Matter</i> , 2021, 4, 1919-1934.	5.0	56
113	Avoiding the pull-in instability of a dielectric elastomer film and the potential for increased actuation and energy harvesting. <i>Soft Matter</i> , 2017, 13, 4552-4558.	1.2	53
114	Ultrathin and Robust Hydrogel Coatings on Cardiovascular Medical Devices to Mitigate Thromboembolic and Infectious Complications. <i>Advanced Healthcare Materials</i> , 2020, 9, e2001116.	3.9	53
115	Creasing-wrinkling transition in elastomer films under electric fields. <i>Physical Review E</i> , 2013, 88, 042403.	0.8	51
116	Soft Robotic Concepts in Catheter Design: an Onâ€Demand Foulingâ€Release Urinary Catheter. <i>Advanced Healthcare Materials</i> , 2014, 3, 1588-1596.	3.9	50
117	Hydration and swelling of dry polymers for wet adhesion. <i>Journal of the Mechanics and Physics of Solids</i> , 2020, 137, 103863.	2.3	50
118	Dynamic Electrostatic Lithography: Multiscale Onâ€Demand Patterning on Largeâ€Area Curved Surfaces. <i>Advanced Materials</i> , 2012, 24, 1947-1951.	11.1	49
119	Electro-creasing instability in deformed polymers: experiment and theory. <i>Soft Matter</i> , 2011, 7, 6583.	1.2	44
120	Multimodal Surface Instabilities in Curved Filmâ€Substrate Structures. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2017, 84, .	1.1	39
121	Electromechanical instability on dielectric polymer surface: Modeling and experiment. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2013, 260, 40-49.	3.4	38
122	Instabilities in confined elastic layers under tension: Fringe, fingering and cavitation. <i>Journal of the Mechanics and Physics of Solids</i> , 2017, 106, 229-256.	2.3	37
123	Tunable stiffness of electrorheological elastomers by designing mesostructures. <i>Applied Physics Letters</i> , 2013, 103, .	1.5	36
124	Soft microbots programmed by nanomagnets. <i>Nature</i> , 2019, 575, 58-59.	18.7	36
125	Revisiting the Instability and Bifurcation Behavior of Soft Dielectrics. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2017, 84, .	1.1	35
126	Designing extremely resilient and tough hydrogels via delayed dissipation. <i>Extreme Mechanics Letters</i> , 2014, 1, 70-75.	2.0	34

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127	Tunable lotus-leaf and rose-petal effects via graphene paper origami. <i>Extreme Mechanics Letters</i> , 2015, 4, 18-25.	2.0	34
128	Fracture of polymer networks with diverse topological defects. <i>Physical Review E</i> , 2020, 102, 052503.	0.8	33
129	Dynamic intermolecular interactions through hydrogen bonding of water promote heat conduction in hydrogels. <i>Materials Horizons</i> , 2020, 7, 2936-2943.	6.4	33
130	Microbristle in gels: Toward all-polymer reconfigurable hybrid surfaces. <i>Soft Matter</i> , 2010, 6, 750.	1.2	32
131	Dynamic surface deformation of silicone elastomers for management of marine biofouling: laboratory and field studies using pneumatic actuation. <i>Biofouling</i> , 2015, 31, 265-274.	0.8	32
132	Metagel with Broadband Tunable Acoustic Properties Over Air-Water-Solid Ranges. <i>Advanced Functional Materials</i> , 2019, 29, 1903699.	7.8	31
133	Bioinspired metagel with broadband tunable impedance matching. <i>Science Advances</i> , 2020, 6, .	4.7	31
134	Drying-induced bifurcation in a hydrogel-actuated nanostructure. <i>Journal of Applied Physics</i> , 2008, 104, .	1.1	30
135	An organosynthetic dynamic heart model with enhanced biomimicry guided by cardiac diffusion tensor imaging. <i>Science Robotics</i> , 2020, 5, .	9.9	30
136	Cell mediated contraction in 3D cell-matrix constructs leads to spatially regulated osteogenic differentiation. <i>Integrative Biology (United Kingdom)</i> , 2013, 5, 1174.	0.6	29
137	Fracture and fatigue of entangled and unentangled polymer networks. <i>Extreme Mechanics Letters</i> , 2022, 51, 101608.	2.0	29
138	Urinary catheter capable of repeated on-demand removal of infectious biofilms via active deformation. <i>Biomaterials</i> , 2016, 77, 77-86.	5.7	28
139	Magnetoactive sponges for dynamic control of microfluidic flow patterns in microphysiological systems. <i>Lab on A Chip</i> , 2014, 14, 514-521.	3.1	27
140	Design considerations for an integrated microphysiological muscle tissue for drug and tissue toxicity testing. <i>Stem Cell Research and Therapy</i> , 2013, 4, S10.	2.4	25
141	Probing Surface Hydration and Molecular Structure of Zwitterionic and Polyacrylamide Hydrogels. <i>Langmuir</i> , 2019, 35, 13292-13300.	1.6	25
142	Stretchable Anti-Fogging Tapes for Diverse Transparent Materials. <i>Advanced Functional Materials</i> , 2021, 31, 2103551.	7.8	25
143	Fracture and fatigue of ideal polymer networks. <i>Extreme Mechanics Letters</i> , 2021, 48, 101399.	2.0	24
144	Mechanical constraints enhance electrical energy densities of soft dielectrics. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	22

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145	Magnetic soft continuum robots with contact forces. <i>Extreme Mechanics Letters</i> , 2022, 51, 101604.	2.0	22
146	Fringe instability in constrained soft elastic layers. <i>Soft Matter</i> , 2016, 12, 8899-8906.	1.2	21
147	Composite Cellularized Structures Created from an Interpenetrating Polymer Network Hydrogel Reinforced by a 3D Woven Scaffold. <i>Macromolecular Bioscience</i> , 2018, 18, e1800140.	2.1	21
148	Incorporation of silicone oil into elastomers enhances barnacle detachment by active surface strain. <i>Biofouling</i> , 2016, 32, 1017-1028.	0.8	19
149	Stretching and polarizing a dielectric gel immersed in a solvent. <i>International Journal of Solids and Structures</i> , 2008, 45, 4021-4031.	1.3	16
150	Electromechanical instabilities of thermoplastics: Theory and in situ observation. <i>Applied Physics Letters</i> , 2012, 101, 141911.	1.5	16
151	Superior environmentally friendly stretchable supercapacitor based on nitrogen-doped graphene/hydrogel and single-walled carbon nanotubes. <i>Journal of Energy Storage</i> , 2020, 30, 101505.	3.9	15
152	An extreme toughening mechanism for soft materials. <i>Soft Matter</i> , 2022, 18, 5742-5749.	1.2	15
153	The Determination of the Location of Contact Electrification-Induced Discharge Events. <i>Journal of Physical Chemistry C</i> , 2010, 114, 20885-20895.	1.5	14
154	Ultrasound-Responsive Aqueous Two-Phase Microcapsules for On-Demand Drug Release. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	14
155	Deformation-induced cleaning of organically fouled membranes: Fundamentals and techno-economic assessment for spiral-wound membranes. <i>Journal of Membrane Science</i> , 2021, 626, 119169.	4.1	13
156	Material-stiffening suppresses elastic fingering and fringe instabilities. <i>International Journal of Solids and Structures</i> , 2018, 139-140, 96-104.	1.3	12
157	Designing Ferromagnetic Soft Robots (FerroSoRo) with Level-Set-Based Multiphysics Topology Optimization. , 2020, , .		12
158	Mechanochemically Responsive Viscoelastic Elastomers. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2016, 83, .	1.1	10
159	Modular Integration of Hydrogel Neural Interfaces. <i>ACS Central Science</i> , 2021, 7, 1516-1523.	5.3	9
160	EML webinar overview: Extreme mechanics of soft materials for merging human-machine intelligence. <i>Extreme Mechanics Letters</i> , 2020, 39, 100784.	2.0	9
161	Thermodynamic analysis and material design to enhance chemo-mechanical coupling in hydrogels for energy harvesting from salinity gradients. <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	8
162	On-demand hierarchical patterning with electric fields. <i>Applied Physics Letters</i> , 2014, 104, 231605.	1.5	7

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163	A path-following simulation-based study of elastic instabilities in nearly-incompressible confined cylinders under tension. <i>Journal of the Mechanics and Physics of Solids</i> , 2019, 131, 252-275.	2.3	4
164	Ultrasound-Responsive Aqueous Two-Phase Microcapsules for On-Demand Drug Release. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	4
165	A theory of large deformation in soft active materials. , 2008, , .		2
166	Magneto-rheological foams capable of tunable energy absorption. , 2013, , .		2
167	Nanostructured artificial-muscle fibres. <i>Nature Nanotechnology</i> , 2022, 17, 677-678.	15.6	2
168	Telerobotically Controlled Magnetic Soft Continuum Robots for Neurovascular Interventions. , 2022, , .		2
169	Reply from the authors: Deformation-induced cleaning of organically fouled membranes. <i>Journal of Membrane Science</i> , 2022, 642, 119961.	4.1	0
170	Abstract TMP61: Telerobotic Neurovascular Interventions With Magnetic Manipulation. <i>Stroke</i> , 2022, 53, .	1.0	0