

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.

90
papers

14,626
citations

49
h-index

96
g-index

96
ext. papers

18,650
ext. citations

16.1
avg, IF

7.36
L-index

#	Paper	IF	Citations
90	Highly stretchable and tough hydrogels. <i>Nature</i> , 2012 , 489, 133-6	50.4	3109
89	Printing ferromagnetic domains for untethered fast-transforming soft materials. <i>Nature</i> , 2018 , 558, 274-279	50.4	842
88	Multi-scale multi-mechanism design of tough hydrogels: building dissipation into stretchy networks. <i>Soft Matter</i> , 2014 , 10, 672-87	3.6	749
87	3D Printing of Highly Stretchable and Tough Hydrogels into Complex, Cellularized Structures. <i>Advanced Materials</i> , 2015 , 27, 4035-40	24	577
86	Tough bonding of hydrogels to diverse non-porous surfaces. <i>Nature Materials</i> , 2016 , 15, 190-6	27	546
85	Hydraulic hydrogel actuators and robots optically and sonically camouflaged in water. <i>Nature Communications</i> , 2017 , 8, 14230	17.4	519
84	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	11.5	505
83	Skin-inspired hydrogel-elastomer hybrids with robust interfaces and functional microstructures. <i>Nature Communications</i> , 2016 , 7, 12028	17.4	486
82	Stretchable Hydrogel Electronics and Devices. <i>Advanced Materials</i> , 2016 , 28, 4497-505	24	418
81	Dry double-sided tape for adhesion of wet tissues and devices. <i>Nature</i> , 2019 , 575, 169-174	50.4	375
80	Ferromagnetic soft continuum robots. <i>Science Robotics</i> , 2019 , 4,	18.6	334
79	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, 9762-7	11.5	282
78	Pure PEDOT:PSS hydrogels. <i>Nature Communications</i> , 2019 , 10, 1043	17.4	271
77	Hydrogel machines. <i>Materials Today</i> , 2020 , 36, 102-124	21.8	268
76	3D printing of conducting polymers. <i>Nature Communications</i> , 2020 , 11, 1604	17.4	263
75	Mechanochemical Activation of Covalent Bonds in Polymers with Full and Repeatable Macroscopic Shape Recovery.. <i>ACS Macro Letters</i> , 2014 , 3, 216-219	6.6	252
74	Highly Stretchable, Strain Sensing Hydrogel Optical Fibers. <i>Advanced Materials</i> , 2016 , 28, 10244-10249	24	236

73	Soft wall-climbing robots. <i>Science Robotics</i> , 2018 , 3,	18.6	230
72	Mechanisms of large actuation strain in dielectric elastomers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2011 , 49, 504-515	2.6	215
71	Stretchable and high-performance supercapacitors with crumpled graphene papers. <i>Scientific Reports</i> , 2014 , 4, 6492	4.9	189
70	3D Printing of Living Responsive Materials and Devices. <i>Advanced Materials</i> , 2018 , 30, 1704821	24	182
69	Graded intrafillable architecture-based iontronic pressure sensor with ultra-broad-range high sensitivity. <i>Nature Communications</i> , 2020 , 11, 209	17.4	177
68	Cephalopod-inspired design of electro-mechano-chemically responsive elastomers for on-demand fluorescent patterning. <i>Nature Communications</i> , 2014 , 5, 4899	17.4	176
67	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	11.5	157
66	Anti-fatigue-fracture hydrogels. <i>Science Advances</i> , 2019 , 5, eaau8528	14.3	155
65	Multifunctional "Hydrogel Skins" on Diverse Polymers with Arbitrary Shapes. <i>Advanced Materials</i> , 2019 , 31, e1807101	24	146
64	Soft Materials by Design: Unconventional Polymer Networks Give Extreme Properties. <i>Chemical Reviews</i> , 2021 , 121, 4309-4372	68.1	145
63	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	11.5	144
62	A New 3D Printing Strategy by Harnessing Deformation, Instability, and Fracture of Viscoelastic Inks. <i>Advanced Materials</i> , 2018 , 30, 1704028	24	137
61	Electrical bioadhesive interface for bioelectronics. <i>Nature Materials</i> , 2021 , 20, 229-236	27	136
60	A three-dimensional phase diagram of growth-induced surface instabilities. <i>Scientific Reports</i> , 2015 , 5, 8887	4.9	134
59	Controlled crack propagation for atomic precision handling of wafer-scale two-dimensional materials. <i>Science</i> , 2018 , 362, 665-670	33.3	133
58	Harnessing large deformation and instabilities of soft dielectrics: Theory, experiment, and application. <i>Applied Physics Reviews</i> , 2014 , 1, 021304	17.3	127
57	NONEQUILIBRIUM THERMODYNAMICS OF DIELECTRIC ELASTOMERS. <i>International Journal of Applied Mechanics</i> , 2011 , 03, 203-217	2.4	120
56	Harnessing the hygroscopic and biofluorescent behaviors of genetically tractable microbial cells to design biohybrid wearables. <i>Science Advances</i> , 2017 , 3, e1601984	14.3	99

55	Strong, Tough, Stretchable, and Self-Adhesive Hydrogels from Intrinsically Unstructured Proteins. <i>Advanced Materials</i> , 2017 , 29, 1604743	24	97
54	Ingestible hydrogel device. <i>Nature Communications</i> , 2019 , 10, 493	17.4	97
53	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	11.5	91
52	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	11.5	83
51	Fatigue-resistant adhesion of hydrogels. <i>Nature Communications</i> , 2020 , 11, 1071	17.4	80
50	Phase Diagrams of Instabilities in Compressed Film-Substrate Systems. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2014 , 81, 0510041-5100410	2.7	76
49	Designing complex architected materials with generative adversarial networks. <i>Science Advances</i> , 2020 , 6, eaaz4169	14.3	67
48	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	11.5	64
47	Strong adhesion of wet conducting polymers on diverse substrates. <i>Science Advances</i> , 2020 , 6, eaay5394	14.3	63
46	3D Printing: 3D Printing of Highly Stretchable and Tough Hydrogels into Complex, Cellularized Structures. <i>Advanced Materials</i> , 2015 , 27, 4034	24	63
45	Separating poroviscoelastic deformation mechanisms in hydrogels. <i>Applied Physics Letters</i> , 2013 , 102, 031913	3.4	63
44	Poroelasticity of a covalently crosslinked alginate hydrogel under compression. <i>Journal of Applied Physics</i> , 2010 , 108, 113514	2.5	57
43	Metamaterials with amplitude gaps for elastic solitons. <i>Nature Communications</i> , 2018 , 9, 3410	17.4	55
42	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	9.5	52
41	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	11.5	49
40	Impermeable Robust Hydrogels via Hybrid Lamination. <i>Advanced Healthcare Materials</i> , 2017 , 6, 1700520	10.1	47
39	Bioinspired Reversibly Cross-linked Hydrogels Comprising Polypeptide Micelles Exhibit Enhanced Mechanical Properties. <i>Advanced Functional Materials</i> , 2015 , 25, 3122-3130	15.6	46
38	Tough and tunable adhesion of hydrogels: experiments and models. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2017 , 33, 543-554	2	44

37	Electro-creasing instability in deformed polymers: experiment and theory. <i>Soft Matter</i> , 2011 , 7, 6583	3.6	39
36	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	3.6	38
35	Hydrogel-based biocontainment of bacteria for continuous sensing and computation. <i>Nature Chemical Biology</i> , 2021 , 17, 724-731	11.7	36
34	Adaptive and multifunctional hydrogel hybrid probes for long-term sensing and modulation of neural activity. <i>Nature Communications</i> , 2021 , 12, 3435	17.4	36
33	Rapid and coagulation-independent haemostatic sealing by a paste inspired by barnacle glue. <i>Nature Biomedical Engineering</i> , 2021 , 5, 1131-1142	19	33
32	A Multifunctional Origami Patch for Minimally Invasive Tissue Sealing. <i>Advanced Materials</i> , 2021 , 33, e2007667	17.6	30
31	A soft neuroprosthetic hand providing simultaneous myoelectric control and tactile feedback. <i>Nature Biomedical Engineering</i> , 2021 ,	19	26
30	Tunable stiffness of electrorheological elastomers by designing mesostructures. <i>Applied Physics Letters</i> , 2013 , 103, 041901	3.4	25
29	Urinary catheter capable of repeated on-demand removal of infectious biofilms via active deformation. <i>Biomaterials</i> , 2016 , 77, 77-86	15.6	24
28	Magnetic Soft Materials and Robots.. <i>Chemical Reviews</i> , 2022 ,	68.1	23
27	Magnetoactive sponges for dynamic control of microfluidic flow patterns in microphysiological systems. <i>Lab on A Chip</i> , 2014 , 14, 514-521	7.2	22
26	Magnetic Living Hydrogels for Intestinal Localization, Retention, and Diagnosis. <i>Advanced Functional Materials</i> , 2021 , 31, 2010918	15.6	22
25	Evolutionary design of magnetic soft continuum robots. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	21
24	Ultrathin and Robust Hydrogel Coatings on Cardiovascular Medical Devices to Mitigate Thromboembolic and Infectious Complications. <i>Advanced Healthcare Materials</i> , 2020 , 9, e2001116	10.1	19
23	Incorporation of silicone oil into elastomers enhances barnacle detachment by active surface strain. <i>Biofouling</i> , 2016 , 32, 1017-28	3.3	17
22	Shaping the future of robotics through materials innovation. <i>Nature Materials</i> , 2021 , 20, 1582-1587	27	17
21	Fracture of polymer networks with diverse topological defects. <i>Physical Review E</i> , 2020 , 102, 052503	2.4	16
20	Fringe instability in constrained soft elastic layers. <i>Soft Matter</i> , 2016 , 12, 8899-8906	3.6	16

19	Composite Cellularized Structures Created from an Interpenetrating Polymer Network Hydrogel Reinforced by a 3D Woven Scaffold. <i>Macromolecular Bioscience</i> , 2018 , 18, e1800140	5.5	15
18	Metagel with Broadband Tunable Acoustic Properties Over Air/Water/Solid Ranges. <i>Advanced Functional Materials</i> , 2019 , 29, 1903699	15.6	15
17	Dynamic intermolecular interactions through hydrogen bonding of water promote heat conduction in hydrogels. <i>Materials Horizons</i> , 2020 , 7, 2936-2943	14.4	14
16	Telerobotic neurovascular interventions with magnetic manipulation.. <i>Science Robotics</i> , 2022 , 7, eabg99078	17.6	13
15	An organosynthetic dynamic heart model with enhanced biomimicry guided by cardiac diffusion tensor imaging. <i>Science Robotics</i> , 2020 , 5,	18.6	10
14	An off-the-shelf bioadhesive patch for sutureless repair of gastrointestinal defects.. <i>Science Translational Medicine</i> , 2022 , 14, eabh2857	17.5	10
13	Propagation of elastic solitons in chains of pre-deformed beams. <i>New Journal of Physics</i> , 2019 , 21, 0730089	18.9	8
12	3D Printing: A New 3D Printing Strategy by Harnessing Deformation, Instability, and Fracture of Viscoelastic Inks (Adv. Mater. 6/2018). <i>Advanced Materials</i> , 2018 , 30, 1870037	24	5
11	EML webinar overview: Extreme mechanics of soft materials for merging human-machine intelligence. <i>Extreme Mechanics Letters</i> , 2020 , 39, 100784	3.9	5
10	Bioinspired metagel with broadband tunable impedance matching. <i>Science Advances</i> , 2020 , 6,	14.3	5
9	Engineered Living Hydrogels.. <i>Advanced Materials</i> , 2022 , e2201326	24	5
8	Stretchable Anti-Fogging Tapes for Diverse Transparent Materials. <i>Advanced Functional Materials</i> , 2021 , 31, 2103551	15.6	4
7	Modular Integration of Hydrogel Neural Interfaces. <i>ACS Central Science</i> , 2021 , 7, 1516-1523	16.8	3
6	Ultrasound-Responsive Aqueous Two-Phase Microcapsules for On-Demand Drug Release.. <i>Angewandte Chemie - International Edition</i> , 2022 ,	16.4	2
5	Dynamic Electrostatic Lithography: Multiscale On-Demand Patterning on Large-Area Curved Surfaces (Adv. Mater. 15/2012). <i>Advanced Materials</i> , 2012 , 24, 1946-1946	24	1
4	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, 044701	2.5	1
3	Ultrasound-Responsive Aqueous Two-Phase Microcapsules for On-Demand Drug Release. <i>Angewandte Chemie</i> ,	3.6	1
2	Hydrogels: Metagel with Broadband Tunable Acoustic Properties Over Air/Water/Solid Ranges (Adv. Funct. Mater. 38/2019). <i>Advanced Functional Materials</i> , 2019 , 29, 1970264	15.6	0

- 1 Bioadhesives: A Multifunctional Origami Patch for Minimally Invasive Tissue Sealing (Adv. Mater. 11/2021). *Advanced Materials*, **2021**, 33, 2170083 24