Qi He

List of Publications by Year in descending order

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93 papers	23,508 citations	25423 59 h-index	45040 94 g-index
96 all docs	96 docs citations	96 times ranked	23326 citing authors

#	Article	IF	Citations
1	Highly stretchable and tough hydrogels. Nature, 2012, 489, 133-136.	13.7	4,089
2	Printing ferromagnetic domains for untethered fast-transforming soft materials. Nature, 2018, 558, 274-279.	13.7	1,426
3	Multi-scale multi-mechanism design of tough hydrogels: building dissipation into stretchy networks. Soft Matter, 2014, 10, 672-687.	1.2	938
4	Tough bonding of hydrogels to diverse non-porousÂsurfaces. Nature Materials, 2016, 15, 190-196.	13.3	807
5	Dry double-sided tape for adhesion of wet tissues and devices. Nature, 2019, 575, 169-174.	13.7	798
6	Hydraulic hydrogel actuators and robots optically and sonically camouflaged in water. Nature Communications, 2017, 8, 14230.	5.8	760
7	3D Printing of Highly Stretchable and Tough Hydrogels into Complex, Cellularized Structures. Advanced Materials, 2015, 27, 4035-4040.	11.1	720
8	Ferromagnetic soft continuum robots. Science Robotics, 2019, 4, .	9.9	698
9	Skin-inspired hydrogelâ€“elastomer hybrids with robust interfaces and functional microstructures. Nature Communications, 2016, 7, 12028.	5.8	696
10	Active scaffolds for on-demand drug and cell delivery. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 67-72.	3.3	630
11	Hydrogel machines. Materials Today, 2020, 36, 102-124.	8.3	625
12	3D printing of conducting polymers. Nature Communications, 2020, 11, 1604.	5.8	568
13	Stretchable Hydrogel Electronics and Devices. Advanced Materials, 2016, 28, 4497-4505.	11.1	550
14	Pure PEDOT:PSS hydrogels. Nature Communications, 2019, 10, 1043.	5.8	528
15	Soft Materials by Design: Unconventional Polymer Networks Give Extreme Properties. Chemical Reviews, 2021, 121, 4309-4372.	23.0	472
16	Graded intrafillable architecture-based iontronic pressure sensor with ultra-broad-range high sensitivity. Nature Communications, 2020, 11, 209.	5.8	426
17	Soft wall-climbing robots. Science Robotics, 2018, 3, .	9.9	419
18	Ultrasound-triggered disruption and self-healing of reversibly cross-linked hydrogels for drug delivery and enhanced chemotherapy. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 9762-9767.	3.3	372

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19	Electrical bioadhesive interface for bioelectronics. Nature Materials, 2021, 20, 229-236.	13.3	361
20	Highly Stretchable, Strain Sensing Hydrogel Optical Fibers. Advanced Materials, 2016, 28, 10244-10249.	11.1	327
21	Muscle-like fatigue-resistant hydrogels by mechanical training. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10244-10249.	3.3	318
22	Mechanochemical Activation of Covalent Bonds in Polymers with Full and Repeatable Macroscopic Shape Recovery. ACS Macro Letters, 2014, 3, 216-219.	2.3	309
23	Anti-fatigue-fracture hydrogels. Science Advances, 2019, 5, eaau8528.	4.7	305
24	3D Printing of Living Responsive Materials and Devices. Advanced Materials, 2018, 30, 1704821.	11.1	277
25	Multifunctional â€œHydrogel Skinsâ€•on Diverse Polymers with Arbitrary Shapes. Advanced Materials, 2019, 31, e1807101.	11.1	258
26	Mechanisms of large actuation strain in dielectric elastomers. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 504-515.	2.4	252
27	Magnetic Soft Materials and Robots. Chemical Reviews, 2022, 122, 5317-5364.	23.0	249
28	Stretchable living materials and devices with hydrogelâ€“elastomer hybrids hosting programmed cells. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 2200-2205.	3.3	212
29	Instant tough bioadhesive with triggerable benign detachment. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 15497-15503.	3.3	210
30	Controlled crack propagation for atomic precision handling of wafer-scale two-dimensional materials. Science, 2018, 362, 665-670.	6.0	208
31	Stretchable and High-Performance Supercapacitors with Crumpled Graphene Papers. Scientific Reports, 2014, 4, 6492.	1.6	207
32	A New 3D Printing Strategy by Harnessing Deformation, Instability, and Fracture of Viscoelastic Inks. Advanced Materials, 2018, 30, 1704028.	11.1	207
33	Cephalopod-inspired design of electro-mechano-chemically responsive elastomers for on-demand fluorescent patterning. Nature Communications, 2014, 5, 4899.	5.8	202
34	Fatigue-resistant adhesion of hydrogels. Nature Communications, 2020, 11, 1071.	5.8	187
35	A three-dimensional phase diagram of growth-induced surface instabilities. Scientific Reports, 2015, 5, 8887.	1.6	175
36	Harnessing the hygroscopic and biofluorescent behaviors of genetically tractable microbial cells to design biohybrid wearables. Science Advances, 2017, 3, e1601984.	4.7	170

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37	A soft neuroprosthetic hand providing simultaneous myoelectric control and tactile feedback. Nature Biomedical Engineering, 2023, 7, 589-598.	11.6	169
38	Ingestible hydrogel device. Nature Communications, 2019, 10, 493.	5.8	168
39	Rapid and coagulation-independent haemostatic sealing by a paste inspired by barnacle glue. Nature Biomedical Engineering, 2021, 5, 1131-1142.	11.6	146
40	Harnessing large deformation and instabilities of soft dielectrics: Theory, experiment, and application. Applied Physics Reviews, 2014, 1, 021304.	5.5	144
41	Designing complex architectured materials with generative adversarial networks. Science Advances, 2020, 6, eaaz4169.	4.7	144
42	NONEQUILIBRIUM THERMODYNAMICS OF DIELECTRIC ELASTOMERS. International Journal of Applied Mechanics, 2011, 03, 203-217.	1.3	143
43	Strong adhesion of wet conducting polymers on diverse substrates. Science Advances, 2020, 6, eaay5394.	4.7	141
44	Strong, Tough, Stretchable, and Selfâ€Adhesive Hydrogels from Intrinsically Unstructured Proteins. Advanced Materials, 2017, 29, 1604743.	11.1	130
45	Adaptive and multifunctional hydrogel hybrid probes for long-term sensing and modulation of neural activity. Nature Communications, 2021, 12, 3435.	5.8	130
46	Designing toughness and strength for soft materials. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8138-8140.	3.3	123
47	Telerobotic neurovascular interventions with magnetic manipulation. Science Robotics, 2022, 7, eabg9907.	9.9	114
48	Hydrogel-based biocontainment of bacteria for continuous sensing and computation. Nature Chemical Biology, 2021, 17, 724-731.	3.9	110
49	High stretchability, strength, and toughness of living cells enabled by hyperelastic vimentin intermediate filaments. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 17175-17180.	3.3	103
50	Metamaterials with amplitude gaps for elastic solitons. Nature Communications, 2018, 9, 3410.	5.8	94
51	Phase Diagrams of Instabilities in Compressed Film-Substrate Systems. Journal of Applied Mechanics, Transactions ASME, 2014, 81, 0510041-5100410.	1.1	92
52	Evolutionary design of magnetic soft continuum robots. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	85
53	Separating poroviscoelastic deformation mechanisms in hydrogels. Applied Physics Letters, 2013, 102, .	1.5	80
54	3D Printing: 3D Printing of Highly Stretchable and Tough Hydrogels into Complex, Cellularized Structures (Adv. Mater. 27/2015). Advanced Materials, 2015, 27, 4034-4034.	11.1	77

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55	A Multifunctional Origami Patch for Minimally Invasive Tissue Sealing. Advanced Materials, 2021, 33, e2007667.	11.1	77
56	Magnetic Living Hydrogels for Intestinal Localization, Retention, and Diagnosis. Advanced Functional Materials, 2021, 31, 2010918.	7.8	77
57	A One-Step Method of Hydrogel Modification by Single-Walled Carbon Nanotubes for Highly Stretchable and Transparent Electronics. ACS Applied Materials & Interfaces, 2018, 10, 28069-28075.	4.0	75
58	Engineered Living Hydrogels. Advanced Materials, 2022, 34, e2201326.	11.1	75
59	Poroelasticity of a covalently crosslinked alginate hydrogel under compression. Journal of Applied Physics, 2010, 108, .	1.1	69
60	An off-the-shelf bioadhesive patch for sutureless repair of gastrointestinal defects. Science Translational Medicine, 2022, 14, eabh2857.	5.8	67
61	Shaping the future of robotics through materials innovation. Nature Materials, 2021, 20, 1582-1587.	13.3	65
62	Tough and tunable adhesion of hydrogels: experiments and models. Acta Mechanica Sinica/Lixue Xuebao, 2017, 33, 543-554.	1.5	62
63	Folding artificial mucosa with cell-laden hydrogels guided by mechanics models. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7503-7508.	3.3	60
64	Bioinspired Reversibly Crossâ€linked Hydrogels Comprising Polypeptide Micelles Exhibit Enhanced Mechanical Properties. Advanced Functional Materials, 2015, 25, 3122-3130.	7.8	59
65	Impermeable Robust Hydrogels via Hybrid Lamination. Advanced Healthcare Materials, 2017, 6, 1700520.	3.9	58
66	Avoiding the pull-in instability of a dielectric elastomer film and the potential for increased actuation and energy harvesting. Soft Matter, 2017, 13, 4552-4558.	1.2	53
67	Ultrathin and Robust Hydrogel Coatings on Cardiovascular Medical Devices to Mitigate Thromboembolic and Infectious Complications. Advanced Healthcare Materials, 2020, 9, e2001116.	3.9	53
68	Electro-creasing instability in deformed polymers: experiment and theory. Soft Matter, 2011, 7, 6583.	1.2	44
69	Tunable stiffness of electrorheological elastomers by designing mesostructures. Applied Physics Letters, 2013, 103, .	1.5	36
70	Fracture of polymer networks with diverse topological defects. Physical Review E, 2020, 102, 052503.	0.8	33
71	Dynamic intermolecular interactions through hydrogen bonding of water promote heat conduction in hydrogels. Materials Horizons, 2020, 7, 2936-2943.	6.4	33
72	Metagel with Broadband Tunable Acoustic Properties Over Airâ€“Waterâ€“Solid Ranges. Advanced Functional Materials, 2019, 29, 1903699.	7.8	31

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73	Bioinspired metagel with broadband tunable impedance matching. Science Advances, 2020, 6, .	4.7	31
74	An organosynthetic dynamic heart model with enhanced biomimicry guided by cardiac diffusion tensor imaging. Science Robotics, 2020, 5, .	9.9	30
75	Urinary catheter capable of repeated on-demand removal of infectious biofilms via active deformation. Biomaterials, 2016, 77, 77-86.	5.7	28
76	Magnetoactive sponges for dynamic control of microfluidic flow patterns in microphysiological systems. Lab on A Chip, 2014, 14, 514-521.	3.1	27
77	Stretchable Antiâ€Fogging Tapes for Diverse Transparent Materials. Advanced Functional Materials, 2021, 31, 2103551.	7.8	25
78	Propagation of elastic solitons in chains of pre-deformed beams. New Journal of Physics, 2019, 21, 073008.	1.2	23
79	Fringe instability in constrained soft elastic layers. Soft Matter, 2016, 12, 8899-8906.	1.2	21
80	Composite Cellularized Structures Created from an Interpenetrating Polymer Network Hydrogel Reinforced by a 3D Woven Scaffold. Macromolecular Bioscience, 2018, 18, e1800140.	2.1	21
81	Incorporation of silicone oil into elastomers enhances barnacle detachment by active surface strain. Biofouling, 2016, 32, 1017-1028.	0.8	19
82	An extreme toughening mechanism for soft materials. Soft Matter, 2022, 18, 5742-5749.	1.2	15
83	Ultrasoundâ€Responsive Aqueous Twoâ€Phase Microcapsules for Onâ€Demand Drug Release. Angewandte Chemie - International Edition, 2022, 61, .	7.2	14
84	Modular Integration of Hydrogel Neural Interfaces. ACS Central Science, 2021, 7, 1516-1523.	5.3	9
85	EML webinar overview: Extreme mechanics of soft materials for merging humanâ€“machineâ€‹ intelligence. Extreme Mechanics Letters, 2020, 39, 100784.	2.0	9
86	Thermodynamic analysis and material design to enhance chemo-mechanical coupling in hydrogels for energy harvesting from salinity gradients. Journal of Applied Physics, 2020, 128, .	1.1	8
87	3D Printing: A New 3D Printing Strategy by Harnessing Deformation, Instability, and Fracture of Viscoelastic Inks (Adv. Mater. 6/2018). Advanced Materials, 2018, 30, 1870037.	11.1	7
88	Ultrasoundâ€Responsive Aqueous Twoâ€Phase Microcapsules for Onâ€Demand Drug Release. Angewandte Chemie, 2022, 134, .	1.6	4
89	Hydrogels: Metagel with Broadband Tunable Acoustic Properties Over Airâ€“Waterâ€“Solid Ranges (Adv.) Tj ETQq1 1 0.784314 rgBT	7.8	2
90	Nanostructured artificial-muscle fibres. Nature Nanotechnology, 2022, 17, 677-678.	15.6	2

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91	Telerobotically Controlled Magnetic Soft Continuum Robots for Neurovascular Interventions. , 2022, , .		2
92	Dynamic Electrostatic Lithography: Multiscale On-Demand Patterning on Large-Area Curved Surfaces (Adv. Mater. 15/2012). Advanced Materials, 2012, 24, 1946-1946.	11.1	1
93	Bioadhesives: A Multifunctional Origami Patch for Minimally Invasive Tissue Sealing (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Overlock 1	11.1	0