Ximin He

List of Publications by Year
in descending order

83 papers	5,655 citations	87888 38 h-index	79698 73 g-index
88 all docs	88 docs citations	88 times ranked	5679 citing authors

#	Article	IF	Citations
1	Strong tough hydrogels via the synergy of freeze-casting and salting out. Nature, 2021, 590, 594-599.	27.8	625
2	Synthetic homeostatic materials with chemo-mechano-chemical self-regulation. Nature, 2012, 487, 214-218.	27.8	418
3	Poly(vinyl alcohol) Hydrogels with Broadâ€Range Tunable Mechanical Properties via the Hofmeister Effect. Advanced Materials, 2021, 33, e2007829.	21.0	292
4	Soft phototactic swimmer based on self-sustained hydrogel oscillator. Science Robotics, 2019, 4, .	17.6	258
5	Formation of Nanopatterned Polymer Blends in Photovoltaic Devices. Nano Letters, 2010, 10, 1302-1307.	9.1	248
6	Superhydrophobic photothermal icephobic surfaces based on candle soot. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 11240-11246.	7.1	220
7	Bioinspired Hydrogel Interferometer for Adaptive Coloration and Chemical Sensing. Advanced Materials, 2018, 30, e1800468.	21.0	209
8	Artificial phototropism for omnidirectional tracking and harvesting of light. Nature Nanotechnology, 2019, 14, 1048-1055.	31.5	191
9	Bioinspired Multifunctional Anti-icing Hydrogel. Matter, 2020, 2, 723-734.	10.0	150
10	Somatosensory actuator based on stretchable conductive photothermally responsive hydrogel. Science Robotics, 2021, 6, .	17.6	144
11	A double droplet trap system for studying mass transport across a droplet-droplet interface. Lab on A Chip, 2010, 10, 1281.	6.0	138
12	An aptamer-functionalized chemomechanically modulated biomolecule catch-and-release system. Nature Chemistry, 2015, 7, 447-454.	13.6	128
13	Bioinspired high-power-density strong contractile hydrogel by programmable elastic recoil. Science Advances, 2020, 6, .	10.3	124
14	Hierarchically Structured Stretchable Conductive Hydrogels for High-Performance Wearable Strain Sensors and Supercapacitors. Matter, 2020, 3, 1196-1210.	10.0	120
15	Highly stretchable self-sensing actuator based on conductive photothermally-responsive hydrogel. Materials Today, 2021, 50, 35-43.	14.2	105
16	Exploiting the superior protein resistance of polymer brushes to control single cell adhesion and polarisation at the micron scale. Biomaterials, 2010, 31, 5030-5041.	11.4	99
17	Cephalopod-Inspired Chromotropic Ionic Skin with Rapid Visual Sensing Capabilities to Multiple Stimuli. ACS Nano, 2021, 15, 3509-3521.	14.6	99
18	Controlling nanoscale morphology in polymer photovoltaic devices. Nano Today, 2010, 5, 231-242.	11.9	97

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19	Tunable Spongeâ€Like Hierarchically Porous Hydrogels with Simultaneously Enhanced Diffusivity and Mechanical Properties. Advanced Materials, 2021, 33, e2008235.	21.0	82
20	Photonic Vitrimer Elastomer with Selfâ€Healing, High Toughness, Mechanochromism, and Excellent Durability based on Dynamic Covalent Bond. Advanced Functional Materials, 2021, 31, 2009017.	14.9	81
21	Quasi-Two-Dimensional Metal Oxide Semiconductors Based Ultrasensitive Potentiometric Biosensors. ACS Nano, 2017, 11, 4710-4718.	14.6	79
22	Hydrogel Interferometry for Ultrasensitive and Highly Selective Chemical Detection. Advanced Materials, 2018, 30, e1804916.	21.0	79
23	Bioinspired structural color sensors based on responsive soft materials. Current Opinion in Solid State and Materials Science, 2019, 23, 13-27.	11.5	79
24	Formation of Wellâ€Ordered Heterojunctions in Polymer:PCBM Photovoltaic Devices. Advanced Functional Materials, 2011, 21, 139-146.	14.9	78
25	4D Printable Tough and Thermoresponsive Hydrogels. ACS Applied Materials & Interfaces, 2021, 13, 12689-12697.	8.0	74
26	Flexible patch with printable and antibacterial conductive hydrogel electrodes for accelerated wound healing. Biomaterials, 2022, 285, 121479.	11.4	68
27	Hydrogel-actuated integrated responsive systems (HAIRS): Moving towards adaptive materials. Current Opinion in Solid State and Materials Science, 2011, 15, 236-245.	11.5	66
28	Interactively Fullâ€Color Changeable Electronic Fiber Sensor with High Stretchability and Rapid Response. Advanced Functional Materials, 2020, 30, 2000356.	14.9	66
29	Solar anti-icing surface with enhanced condensate self-removing at extreme environmental conditions. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	63
30	Toughâ€Hydrogel Reinforced Lowâ€Tortuosity Conductive Networks for Stretchable and Highâ€Performance Supercapacitors. Advanced Materials, 2021, 33, e2100983.	21.0	63
31	Woodâ€Inspired Morphologically Tunable Aligned Hydrogel for Highâ€Performance Flexible Allâ€Solidâ€State Supercapacitors. Advanced Functional Materials, 2020, 30, 1909133.	14.9	62
32	Skin temperature-triggered, debonding-on-demand sticker for a self-powered mechanosensitive communication system. Matter, 2021, 4, 1962-1974.	10.0	54
33	Biomimetic Hydrogel Composites for Soil Stabilization and Contaminant Mitigation. Environmental Science & Technology, 2016, 50, 12401-12410.	10.0	52
34	Hydrocipher: Bioinspired Dynamic Structural Colorâ€Based Cryptographic Surface. Advanced Optical Materials, 2020, 8, 1901259.	7.3	49
35	Polypyrrole Microtubule Actuators for Seizing and Transferring Microparticles. Advanced Functional Materials, 2007, 17, 2911-2917.	14.9	47
36	Hydrogel-Assisted Enzyme-Induced Carbonate Mineral Precipitation. Journal of Materials in Civil Engineering, 2016, 28, .	2.9	47

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37	Swaying gel: chemo-mechanical self-oscillation based on dynamic buckling. Matter, 2021, 4, 1029-1041.	10.0	44
38	Multiresponse Shape-Memory Nanocomposite with a Reversible Cycle for Powerful Artificial Muscles. Chemistry of Materials, 2021, 33, 987-997.	6.7	42
39	Electrochemical actuator based on monolithic polypyrroleâ€“TiO2 nanoparticle composite film. Sensors and Actuators B: Chemical, 2006, 115, 488-493.	7.8	41
40	Homogeneous Freestanding Luminescent Perovskite Organogel with Superior Water Stability. Advanced Materials, 2019, 31, e1902928.	21.0	40
41	Heterogeneous Hydrogel Structures with Spatiotemporal Reconfigurability using Addressable and Tunable Voxels. Advanced Materials, 2021, 33, e2005906.	21.0	37
42	Formation of Hierarchically Structured Thin Films. Advanced Functional Materials, 2009, 19, 2236-2243.	14.9	35
43	Microscale Silicon Origami. Small, 2016, 12, 5401-5406.	10.0	34
44	Hydrogel Ionotronics with Ultraâ€Low Impedance and High Signal Fidelity across Broad Frequency and Temperature Ranges. Advanced Functional Materials, 2022, 32, 2109506.	14.9	34
45	Continuously growing multi-layered hydrogel structures with seamless interlocked interface. Matter, 2022, 5, 634-653.	10.0	32
46	Durable and ductile double-network material for dust control. Geoderma, 2020, 361, 114090.	5.1	30
47	Kinematic Modeling and Trajectory Tracking Control of an Octopus-Inspired Hyper-Redundant Robot. IEEE Robotics and Automation Letters, 2020, 5, 3460-3467.	5.1	30
48	Synthesis and characterization of low bandgap conjugated donorâ€“acceptor polymers for polymer:PCBM solar cells. Journal of Materials Chemistry, 2010, 20, 9231.	6.7	28
49	Rapid and scalable fabrication of ultraâ€stretchable, antiâ€freezing conductive gels by cononsolvency effect. EcoMat, 2021, 3, e12085.	11.9	26
50	A Roomâ€Temperature Highâ€Conductivity Metal Printing Paradigm with Visibleâ€Light Projection Lithography. Advanced Functional Materials, 2019, 29, 1807615.	14.9	25
51	Flexible and Transparent High-Dielectric-Constant Polymer Films Based on Molecular Ferroelectric-Modified Poly(Vinyl Alcohol). , 2020, 2, 453-460.		21
52	Stimuli-Responsive Polymers for Soft Robotics. Annual Review of Control, Robotics, and Autonomous Systems, 2022, 5, 515-545.	11.8	21
53	Visualizing Morphogenesis through Instability Formation in 4-D Printing. ACS Applied Materials & Interfaces, 2019, 11, 47468-47475.	8.0	20
54	Bioinspired Anisotropic Slippery Cilia for Stiffness-Controllable Bubble Transport. ACS Nano, 2022, 16, 9348-9358.	14.6	19

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55	Chemo-Mechanically Regulated Oscillation of an Enzymatic Reaction. Chemistry of Materials, 2013, 25, 521-523.	6.7	17
56	Ultrastretchable Polyaniline-Based Conductive Organogel with High Strain Sensitivity. , 2021, 3, 1477-1483.		16
57	Tendon-inspired anti-freezing tough gels. IScience, 2021, 24, 102989.	4.1	15
58	Oblique Colloidal Lithography for the Fabrication of Nonconcentric Features. ACS Nano, 2017, 11, 6594-6604.	14.6	14
59	Transparent, Photothermal, and Icephobic Surfaces via Layerâ€byâ€Layer Assembly. Advanced Science, 2022, 9, e2105986.	11.2	14
60	Nanopatterning via Pressureâ€Induced Instabilities in Thin Polymer Films. Advanced Materials, 2009, 21, 2083-2087.	21.0	13
61	Soft-fiber-reinforced tough and fatigue resistant hydrogels. Matter, 2021, 4, 1755-1757.	10.0	13
62	Multifunctional actuation systems responding to chemical gradients. Soft Matter, 2012, 8, 8289.	2.7	12
63	Computational modeling of oscillating fins that â€œcatch and releaseâ€•targeted nanoparticles in bilayer flows. Soft Matter, 2016, 12, 1374-1384.	2.7	11
64	Surfactant-free fabrication of pNIPAAm microgels in microfluidic devices. Journal of Materials Research, 2019, 34, 206-213.	2.6	11
65	New Insights on the Control and Function of Octopus Suckers. Advanced Intelligent Systems, 2020, 2, 1900154.	6.1	11
66	Inorganic Photonic Microspheres with Localized Concentric Ordering for Deep Pattern Encoding and Triple Sensory Microsensor. Small, 2020, 16, e2003638.	10.0	10
67	Esophagusâ€Inspired Actuator for Solid Transportation via the Synergy of Lubrication and Contractile Deformation. Advanced Science, 2021, 8, e2102800.	11.2	10
68	Roomâ€Temperature Annealingâ€Free Gold Printing via Anionâ€Assisted Photochemical Deposition. Advanced Materials, 2022, 34, .	21.0	10
69	Decentralized Control of Distributed Actuation in a Segmented Soft Robot Arm. , 2018, , .		9
70	Toward Rapid Detection of Trace Lead and Cadmium by Anodic Stripping Voltammetry in Complex Wastewater Streams. ACS ES&T Engineering, 2021, 1, 1509-1516.	7.6	9
71	Harnessing Cooperative Interactions between Thermoresponsive Aptamers and Gels To Trap and Release Nanoparticles. ACS Applied Materials & Interfaces, 2016, 8, 30475-30483.	8.0	8
72	Artificial Phototropic Systems for Enhanced Light Harvesting Based on a Liquid Crystal Elastomer. Advanced Intelligent Systems, 2021, 3, 2000234.	6.1	7

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73	Tuning structural and mechanical anisotropy of PVA hydrogels. Mechanics of Materials, 2022, 172, 104411.	3.2	6
74	Photodriven Self-Excited Hydrogel Oscillators. Physical Review Applied, 2022, 17, .	3.8	5
75	Hydrogels: Hydrogel Interferometry for Ultrasensitive and Highly Selective Chemical Detection (Adv.) Tj ETQq1 1 0.784314 rgBT /Over	21.0	3
76	Effects of hydrolysis degree on the formation of ferroelectric-core fillers and the electric performance of polyvinyl alcohol composites. Composites Science and Technology, 2021, 218, 109147.	7.8	3
77	Simultaneous topographic and chemical patterning via imprinting defined nano-reactors. RSC Advances, 2016, 6, 96538-96544.	3.6	2
78	A â€˜smartâ€™ aptamer-functionalized continuous label-free cell catchâ€“transportâ€“release system. Journal of Materials Chemistry B, 2021, 9, 7196-7204.	5.8	2
79	Artificial Phototropic Systems for Enhanced Light Harvesting Based on a Liquid Crystal Elastomer. Advanced Intelligent Systems, 2021, 3, 2170070.	6.1	2
80	Bioinspired Sensors and Actuators Based on Stimuli-Responsive Hydrogels for Underwater Soft Robotics. , 2021, , 99-115.		2
81	A novel paradigm for the fabrication of highly uniform nanowire arrays using residual stress-induced patterning. Journal of Materials Chemistry C, 2016, 4, 5814-5821.	5.5	1
82	Selfâ€Reporting Hydrogel Sensors Based on Surface Instabilityâ€Induced Optical Scattering. Advanced Photonics Research, 2021, 2, 2100058.	3.6	1
83	Artificial Phototropism and Phototaxis: Photo-responsive Materials for Light Tracking and Soft Robotics. , 2020, , .		0