Haiyi Liang

List of Publications by Year
in descending order

57 papers	3,924 citations	257450 24 h-index	149698 56 g-index
59 all docs	59 docs citations	59 times ranked	5253 citing authors

#	Article	IF	Citations
1	Solvent-responsive strong hydrogel with programmable deformation and reversible shape memory for load-carrying soft robot. Materials Today Communications, 2022, 30, 103067.	1.9	5
2	Stiff and strong hydrogel tube with great mechanical properties and high stability in various solutions. Journal of Materials Chemistry B, 2022, 10, 3126-3137.	5.8	4
3	Bio-Inspired Bianisotropic Magneto-Sensitive Elastomers with Excellent Multimodal Transformation. ACS Applied Materials & Interfaces, 2022, 14, 20101-20112.	8.0	5
4	Dynamics of water conveying zinc oxide through divergent-convergent channels with the effect of nanoparticles shape when Joule dissipation are significant. PLoS ONE, 2021, 16, e0245208.	2.5	9
5	Extremely stretchable and tough hybrid hydrogels based on gelatin, Î¹-carrageenan and polyacrylamide. Soft Matter, 2021, 17, 9708-9715.	2.7	11
6	An extremely tough and ionic conductive natural-polymer-based double network hydrogel. Journal of Materials Chemistry B, 2021, 9, 7751-7759.	5.8	25
7	Study of (Ag and TiO2)/water nanoparticles shape effect on heat transfer and hybrid nanofluid flow toward stretching shrinking horizontal cylinder. Results in Physics, 2021, 21, 103812.	4.1	59
8	Stretchable and Selfâ€Healable Organohydrogel as Electronic Skin with Lowâ€Temperature Tolerance and Multiple Stimuli Responsiveness. Advanced Materials Technologies, 2021, 6, 2001234.	5.8	10
9	Uniaxial Cyclic Stretching Promotes Chromatin Accessibility of Gene Loci Associated With Mesenchymal Stem Cells Morphogenesis and Osteogenesis. Frontiers in Cell and Developmental Biology, 2021, 9, 664545.	3.7	9
10	Seismic Resistance Properties of Improved Dry-Type Beam-Column Joint: An Experimental Research. Shock and Vibration, 2021, 2021, 1-11.	0.6	0
11	Constructing Rigid-Foldable Generalized Miura-Ori Tessellations for Curved Surfaces. Journal of Mechanisms and Robotics, 2021, 13, .	2.2	12
12	Preparation of stretchable and self-healable dual ionically cross-linked hydrogel based on chitosan/polyacrylic acid with anti-freezing property for multi-model flexible sensing and detection. International Journal of Biological Macromolecules, 2021, 193, 629-637.	7.5	32
13	Fully physically cross-linked double network hydrogels with strong mechanical properties, good recovery and self-healing properties. Soft Matter, 2020, 16, 1840-1849.	2.7	23
14	Comprehensive Analysis of lncRNA and miRNA Expression Profiles and ceRNA Network Construction in Osteoporosis. Calcified Tissue International, 2020, 106, 343-354.	3.1	21
15	Magnetic-tunable sound absorber based on micro-perforated magnetorheological elastomer. Smart Materials and Structures, 2020, 29, 015024.	3.5	14
16	3D Printed Multi-Functional Hydrogel Microneedles Based on High-Precision Digital Light Processing. Micromachines, 2020, 11, 17.	2.9	67
17	Tough and Stretchable Dual Ionically Cross-Linked Hydrogel with High Conductivity and Fast Recovery Property for High-Performance Flexible Sensors. ACS Applied Materials & Interfaces, 2020, 12, 1577-1587.	8.0	105
18	Marangoni Boundary Layer Flow and Heat Transfer of Grapheneâ€“Water Nanofluid with Particle Shape Effects. Processes, 2020, 8, 1120.	2.8	17

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19	Fully physically cross-linked hydrogel as highly stretchable, tough, self-healing and sensitive strain sensors. Polymer, 2020, 210, 123039.	3.8	36
20	Investigation of nanoparticles shape effects on MHD nanofluid flow and heat transfer over a rotating stretching disk through porous medium. International Journal of Numerical Methods for Heat and Fluid Flow, 2020, 30, 5169-5189.	2.8	19
21	Folding simulation of rigid origami with Lagrange multiplier method. International Journal of Solids and Structures, 2020, 202, 552-561.	2.7	8
22	The Shape Effect of Gold Nanoparticles on Squeezing Nanofluid Flow and Heat Transfer between Parallel Plates. Mathematical Problems in Engineering, 2020, 2020, 1-12.	1.1	27
23	Mechanics and kinetics of dynamic instability. ELife, 2020, 9, .	6.0	19
24	Design of Cylindrical and Axisymmetric Origami Structures Based on Generalized Miura-Ori Cell. Journal of Mechanisms and Robotics, 2019, 11, .	2.2	20
25	An automated 3D visible light stereolithography platform for hydrogel-based micron-sized structures. AIP Advances, 2019, 9, 065204.	1.3	9
26	A novel sequence variant in COL10A1 causing spondylometaphyseal dysplasia accompanied with coxa valga. Medicine (United States), 2019, 98, e16485.	1.0	3
27	Dynamic electro-regulation of the stiffness gradient hydrogels. RSC Advances, 2018, 8, 6675-6679.	3.6	15
28	Topology, Geometry, and Mechanics of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Z</mml:mi></mml:math> -Plasty. Physical Review Letters, 2018, 120, 068101.	7.8	5
29	Mechanical metamaterials associated with stiffness, rigidity and compressibility: A brief review. Progress in Materials Science, 2018, 94, 114-173.	32.8	629
30	Transparent and flexible force sensor based on microextrusion 3D printing. Micro and Nano Letters, 2018, 13, 1460-1464.	1.3	15
31	Entropic elasticity based coarse-grained model of lipid membranes. Journal of Chemical Physics, 2018, 148, 164705.	3.0	3
32	Simulation of fracture behaviour of hydrogel by discrete element method. Micro and Nano Letters, 2018, 13, 743-746.	1.3	5
33	Interface failure modes explain non-monotonic size-dependent mechanical properties in bioinspired nanolaminates. Scientific Reports, 2016, 6, 23724.	3.3	29
34	Theoretical and experimental study on a compliant flipper-leg during terrestrial locomotion. Bioinspiration and Biomimetics, 2016, 11, 056005.	2.9	11
35	A Highly Efficient Metalâ€Free Oxygen Reduction Electrocatalyst Assembled from Carbon Nanotubes and Graphene. Advanced Materials, 2016, 28, 4606-4613.	21.0	216
36	Boundaryâ€dominant flower blooming simulation. Computer Animation and Virtual Worlds, 2015, 26, 433-443.	1.2	10

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37	Laser printing hierarchical structures with the aid of controlled capillary-driven self-assembly. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6876-6881.	7.1	87
38	Toughening mystery of natural rubber deciphered by double network incorporating hierarchical structures. Scientific Reports, 2014, 4, 7502.	3.3	24
39	Geometric Mechanics of Periodic Pleated Origami. Physical Review Letters, 2013, 110, 215501.	7.8	302
40	A coarse grain model of microtubules. Theoretical and Applied Mechanics Letters, 2012, 2, 014006.	2.8	10
41	Large-area graphene realizing ultrasensitive photothermal actuator with high transparency: new prototype robotic motions under infrared-light stimuli. Journal of Materials Chemistry, 2011, 21, 18584.	6.7	111
42	On the growth and form of the gut. Nature, 2011, 476, 57-62.	27.8	430
43	Growth, geometry, and mechanics of a blooming lily. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 5516-5521.	7.1	185
44	Controllable buckling of an elastic disc with actuation strain. Europhysics Letters, 2010, 92, 16003.	2.0	4
45	Why subduction zones are curved. Tectonics, 2010, 29, n/a-n/a.	2.8	46
46	Geometry, Mechanics, and Electronics of Singular Structures and Wrinkles in Graphene. Physical Review Letters, 2010, 105, 156603.	7.8	177
47	Stressed swelling clay. Geophysics, 2009, 74, A47-A52.	2.6	44
48	The shape of a long leaf. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 22049-22054.	7.1	201
49	Elasticity of Floppy and Stiff Random Networks. Physical Review Letters, 2008, 101, 215501.	7.8	182
50	Strain-dependent twistâ€“stretch elasticity in chiral filaments. Journal of the Royal Society Interface, 2008, 5, 303-310.	3.4	24
51	How kelp produce blade shapes suited to different flow regimes: A new wrinkle. Integrative and Comparative Biology, 2008, 48, 834-851.	2.0	125
52	Molecular Dynamics Simulation and Analysis on the Stress Induced Crystallization Behavior of Metallic Glass Cu. Solid State Phenomena, 2007, 121-123, 1011-1016.	0.3	1
53	Axial-Strain-Induced Torsion in Single-Walled Carbon Nanotubes. Physical Review Letters, 2006, 96, 165501.	7.8	58
54	Size dependent intrinsic bulk twisting of carbon nanotube ropes. Carbon, 2005, 43, 3189-3194.	10.3	9

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55	Size-dependent elasticity of nanowires: Nonlinear effects. Physical Review B, 2005, 71, .	3.2	323
56	Elastic Self-Healing during Shear Accommodation in Crystalline Nanotube Ropes. Physical Review Letters, 2005, 94, 065502.	7.8	13
57	Dislocation nucleation in the initial stage during nanoindentation. Philosophical Magazine, 2003, 83, 3609-3622.	1.6	61