Jin Qian

List of Publications by Year
in descending order

79 papers	2,724 citations	201674 27 h-index	189892 50 g-index
79 all docs	79 docs citations	79 times ranked	3245 citing authors

#	Article	IF	Citations
1	Solventâ€Castâ€Assisted Printing of Biomimetic Morphing Hydrogel Structures with Solvent Evaporationâ€Induced Swelling Mismatch. Advanced Functional Materials, 2022, 32, 2108548.	14.9	17
2	3D printing of tough hydrogels based on metal coordination with a two-step crosslinking strategy. Journal of Materials Chemistry B, 2022, 10, 2126-2134.	5.8	7
3	3D printing of a tough double-network hydrogel and its use as a scaffold to construct a tissue-like hydrogel composite. Journal of Materials Chemistry B, 2022, 10, 468-476.	5.8	22
4	Blood Viscosity in Subjects With Type 2 Diabetes Mellitus: Roles of Hyperglycemia and Elevated Plasma Fibrinogen. Frontiers in Physiology, 2022, 13, 827428.	2.8	13
5	Programming Soft Shape-Morphing Systems by Harnessing Strain Mismatch and Snap-Through Bistability: A Review. Materials, 2022, 15, 2397.	2.9	3
6	3D printing topographic cues for cell contact guidance: a review. Materials and Design, 2022, , 110663.	7.0	9
7	Modeling the rate-dependent ductile-brittle transition in amorphous polymers. Acta Mechanica Sinica/Lixue Xuebao, 2022, 38, .	3.4	3
8	Effects of domain unfolding and catch-like dissociation on the collective behavior of integrinâ€“fibronectin bond clusters. Acta Mechanica Sinica/Lixue Xuebao, 2021, 37, 229-243.	3.4	5
9	Multi-responsive PNIPAMâ€“PEGDA hydrogel composite. Soft Matter, 2021, 17, 10421-10427.	2.7	17
10	Viscoelasticity of 3D actin networks dictated by the mechanochemical characteristics of cross-linkers. Soft Matter, 2021, 17, 10177-10185.	2.7	3
11	Time-dependent response of bio-polymer networks regulated by catch and slip bond-like kinetics of cross-linkers. Journal of the Mechanics and Physics of Solids, 2021, 147, 104267.	4.8	4
12	The Plasticity of Nanofibrous Matrix Regulates Fibroblast Activation in Fibrosis. Advanced Healthcare Materials, 2021, 10, e2001856.	7.6	12
13	Effect of Electrical and Electromechanical Stimulation on PC12 Cell Proliferation and Axon Outgrowth. Frontiers in Bioengineering and Biotechnology, 2021, 9, 757906.	4.1	10
14	Preface to the Special Issue on the Dynamic Behaviors and Energy Absorption of Materials and Structures. Acta Mechanica Solida Sinica, 2021, 34, 781-782.	1.9	0
15	Accelerating solar desalination in brine through ion activated hierarchically porous polyion complex hydrogels. Materials Horizons, 2020, 7, 3187-3195.	12.2	99
16	Physical understanding of axonal growth patterns on grooved substrates: groove ridge crossing versus longitudinal alignment. Bio-Design and Manufacturing, 2020, 3, 348-360.	7.7	17
17	Effect of Cyclic Stretch on Neuron Reorientation and Axon Outgrowth. Frontiers in Bioengineering and Biotechnology, 2020, 8, 597867.	4.1	16
18	Programmable Deformations of Biomimetic Composite Hydrogels Embedded with Printed Fibers. ACS Applied Materials & Interfaces, 2020, 12, 57497-57504.	8.0	11

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19	Integrated multifunctional flexible electronics based on tough supramolecular hydrogels with patterned silver nanowires. Journal of Materials Chemistry C, 2020, 8, 7688-7697.	5.5	32
20	Fundamental Characteristics of Neuron Adhesion Revealed by Forced Peeling and Time-Dependent Healing. Biophysical Journal, 2020, 118, 1811-1819.	0.5	10
21	Lightâ€Coded Digital Crystallinity Patterns Toward Bioinspired 4D Transformation of Shapeâ€Memory Polymers. Advanced Functional Materials, 2020, 30, 2000522.	14.9	55
22	Constitutive behaviors of tough physical hydrogels with dynamic metal-coordinated bonds. Journal of the Mechanics and Physics of Solids, 2020, 139, 103935.	4.8	56
23	Fracture of tough and stiff metallosupramolecular hydrogels. Materials Today Physics, 2020, 13, 100202.	6.0	18
24	Light-triggered topological programmability in a dynamic covalent polymer network. Science Advances, 2020, 6, eaaz2362.	10.3	75
25	A Network Evolution Model for Recovery of the Mullins Effect in Filled Rubbers. International Journal of Applied Mechanics, 2020, 12, 2050108.	2.2	17
26	Preface to the â€œSoft Matter Mechanicsâ€•Special Issue of Acta Mechanica Solida Sinica. Acta Mechanica Solida Sinica, 2019, 32, 533-534.	1.9	1
27	Chiral geometry regulates stem cell fate and activity. Biomaterials, 2019, 222, 119456.	11.4	26
28	Slide-Ring Cross-Links Mediated Tough Metallosupramolecular Hydrogels with Superior Self-Recoverability. Macromolecules, 2019, 52, 6748-6755.	4.8	68
29	Modeling Gel Swelling in Binary Solvents: A Thermodynamic Approach to Explaining Cosolvency and Cononsolvency Effects. International Journal of Applied Mechanics, 2019, 11, 1950050.	2.2	14
30	Modeling and Simulations of the Dynamic Behaviors of Actin-Based Cytoskeletal Networks. ACS Biomaterials Science and Engineering, 2019, 5, 3720-3734.	5.2	18
31	Controllable Bending of Bi-hydrogel Strips with Differential Swelling. Acta Mechanica Solida Sinica, 2019, 32, 652-662.	1.9	15
32	Buckling of filamentous actin bundles in filopodial protrusions. Acta Mechanica Sinica/Lixue Xuebao, 2019, 35, 365-375.	3.4	8
33	Cross-linked biopolymer networks with active motors: Mechanical response and intra-network transport. Journal of the Mechanics and Physics of Solids, 2019, 127, 80-93.	4.8	13
34	Direct 3D printing of a tough hydrogel incorporated with carbon nanotubes for bone regeneration. Journal of Materials Chemistry B, 2019, 7, 7207-7217.	5.8	62
35	Sequentially Controlled Deformations of Patterned Hydrogels into 3D Configurations with Multilevel Structures. Macromolecular Rapid Communications, 2019, 40, e1800681.	3.9	13
36	Nanoclay-Based Self-Supporting Responsive Nanocomposite Hydrogels for Printing Applications. ACS Applied Materials & Interfaces, 2018, 10, 10461-10470.	8.0	79

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37	Ultrathin Î¹-Carrageenan/Chitosan Hydrogel Films with High Toughness and Antiadhesion Property. ACS Applied Materials & Interfaces, 2018, 10, 9002-9009.	8.0	82
38	Mechanical characterization and modeling of sponge-reinforced hydrogel composites under compression. Soft Matter, 2018, 14, 4355-4363.	2.7	9
39	Tough and Conductive Hybrid Hydrogels Enabling Facile Patterning. ACS Applied Materials & Interfaces, 2018, 10, 13685-13692.	8.0	82
40	Interaction and fusion dynamics between cellular blebs. Journal of Biomechanics, 2018, 81, 113-121.	2.1	2
41	Programmed Deformations of 3Dâ€Printed Tough Physical Hydrogels with High Response Speed and Large Output Force. Advanced Functional Materials, 2018, 28, 1803366.	14.9	172
42	Interpenetrating polymer network hydrogels composed of chitosan and photocrosslinkable gelatin with enhanced mechanical properties for tissue engineering. Materials Science and Engineering C, 2018, 92, 612-620.	7.3	120
43	Thermally assisted peeling of an elastic strip in adhesion with a substrate via molecular bonds. Journal of the Mechanics and Physics of Solids, 2017, 101, 197-208.	4.8	36
44	Growing actin networks regulated by obstacle size and shape. Acta Mechanica Sinica/Lixue Xuebao, 2017, 33, 222-233.	3.4	6
45	Interpretations of Receptorâ€“Ligand Dissociation Kinetics from Single-Molecule Pulling Experiments. International Journal of Applied Mechanics, 2017, 09, 1750042.	2.2	3
46	3D-Printed Ultratough Hydrogel Structures with Titin-like Domains. ACS Applied Materials & Interfaces, 2017, 9, 11363-11367.	8.0	39
47	Tuning interfacial patterns of molecular bonds via surface morphology. Soft Matter, 2017, 13, 5970-5976.	2.7	10
48	Tough polyion complex hydrogel films of natural polysaccharides. Chinese Journal of Polymer Science (English Edition), 2017, 35, 1276-1285.	3.8	18
49	Concurrent Rupture of Two Molecular Bonds in Series: Implications for Dynamic Force Spectroscopy. Journal of Applied Mechanics, Transactions ASME, 2017, 84, .	2.2	1
50	Ultrastiff Hydrogels Prepared by Schiff's Base Reaction of Bis(pâ€Formylphenyl) Sebacate and Pillar[5]arene Appended with Multiple Hydrazides. Macromolecular Rapid Communications, 2017, 38, 1700232.	3.9	31
51	Metal-Coordination Complexes Mediated Physical Hydrogels with High Toughness, Stickâ€“Slip Tearing Behavior, and Good Processability. Macromolecules, 2016, 49, 9637-9646.	4.8	320
52	The glycocalyx promotes cooperative binding and clustering of adhesion receptors. Soft Matter, 2016, 12, 4572-4583.	2.7	31
53	Biointerfaces Mediated by Molecular Bonds: Cohesive Behaviors. International Journal of Applied Mechanics, 2016, 08, 1650040.	2.2	4
54	Processing tough supramolecular hydrogels with tunable strength of polyion complex. Polymer, 2016, 95, 9-17.	3.8	43

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55	Combined dry and wet adhesion between a particle and an elastic substrate. Journal of Colloid and Interface Science, 2016, 483, 321-333.	9.4	7
56	Shape Transformation of the Nuclear Envelope during Closed Mitosis. Biophysical Journal, 2016, 111, 2309-2316.	0.5	13
57	3D Printing of Ultratough Polyion Complex Hydrogels. ACS Applied Materials & Interfaces, 2016, 8, 31304-31310.	8.0	105
58	Mechanics of dielectric elastomers: materials, structures, and devices. Journal of Zhejiang University: Science A, 2016, 17, 1-21.	2.4	24
59	Response of biopolymer networks governed by the physical properties of cross-linking molecules. Soft Matter, 2016, 12, 2537-2541.	2.7	24
60	CELLULAR DYNAMICS IN RESPONSE TO MECHANICAL STIMULI. , 2015, , 81-82.		0
61	Transport Regulation of Two-Dimensional Receptor-Ligand Association. Biophysical Journal, 2015, 108, 1773-1784.	0.5	17
62	Aggregation dynamics of molecular bonds between compliant materials. Soft Matter, 2015, 11, 2812-2820.	2.7	22
63	A combined finite element-Langevin dynamics (FEM-LD) approach for analyzing the mechanical response of bio-polymer networks. Journal of the Mechanics and Physics of Solids, 2014, 62, 2-18.	4.8	22
64	Statistical Pull Off of Nanoparticles Adhering to Compliant Substrates. Langmuir, 2014, 30, 6089-6094.	3.5	13
65	Volumetric Deformation of Live Cells Induced by Pressure-Activated Cross-Membrane Ion Transport. Physical Review Letters, 2014, 113, 118101.	7.8	47
66	Tuning Molecular Adhesion via Material Anisotropy. Advanced Functional Materials, 2013, 23, 4729-4738.	14.9	11
67	Bond formation of surface-tethered receptor-ligand pairs in relative separation. Applied Physics Letters, 2013, 103, 223702.	3.3	8
68	A Mechanochemical Model of Cell Reorientation on Substrates under Cyclic Stretch. PLoS ONE, 2013, 8, e65864.	2.5	37
69	Effects of functionally graded materials on dynamics of molecular bond clusters. Science China: Physics, Mechanics and Astronomy, 2012, 55, 980-988.	5.1	8
70	Effects of contact surface shape on lifetime of cellular focal adhesion. Journal of Mechanics of Materials and Structures, 2011, 6, 495-510.	0.6	7
71	Probing mechanical principles of focal contacts in cellâ€“matrix adhesion with a coupled stochasticâ€“elastic modelling framework. Journal of the Royal Society Interface, 2011, 8, 1217-1232.	3.4	85
72	Regulation of Catch Bonds by Rate of Force Application. Journal of Biological Chemistry, 2011, 286, 32749-32761.	3.4	46

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73	Soft Matrices Suppress Cooperative Behaviors among Receptor-Ligand Bonds in Cell Adhesion. PLoS ONE, 2010, 5, e12342.	2.5	43
74	Lifetime and Strength of Periodic Bond Clusters between Elastic Media under Inclined Loading. Biophysical Journal, 2009, 97, 2438-2445.	0.5	81
75	Effects of Capillary Condensation in Adhesion between Rough Surfaces. Langmuir, 2009, 25, 11727-11731.	3.5	32
76	Lifetime and Strength of Adhesive Molecular Bond Clusters between Elastic Media. Langmuir, 2008, 24, 1262-1270.	3.5	101
77	Scaling effects of wet adhesion in biological attachment systems. Acta Biomaterialia, 2006, 2, 51-58.	8.3	103
78	Coarse-grained modeling and mechanical behaviors of actin-spectrin-microtubule complex in axonal cytoskeleton. International Journal of Applied Mechanics, 0, , .	2.2	1
79	Tough complex hydrogels transformed from highly swollen polyelectrolyte hydrogels based on Cu2+ coordination with anti-bacterial property. Journal of Materials Chemistry B, 0, , .	5.8	10