Xiaobin Liang

List of Publications by Year
in descending order

48 papers	1,859 citations	304743 22 h-index	254184 43 g-index
48 all docs	48 docs citations	48 times ranked	3271 citing authors

#	Article	IF	Citations
1	Dielectrophoretically Aligned Carbon Nanotubes to Control Electrical and Mechanical Properties of Hydrogels to Fabricate Contractile Muscle Myofibers. Advanced Materials, 2013, 25, 4028-4034.	21.0	236
2	Hybrid hydrogels containing vertically aligned carbon nanotubes with anisotropic electrical conductivity for muscle myofiber fabrication. Scientific Reports, 2014, 4, 4271.	3.3	213
3	Hybrid hydrogel-aligned carbon nanotube scaffolds to enhance cardiac differentiation of embryoid bodies. Acta Biomaterialia, 2016, 31, 134-143.	8.3	145
4	Microfluidic Spinning of Cellâ€Responsive Grooved Microfibers. Advanced Functional Materials, 2015, 25, 2250-2259.	14.9	130
5	Facile and green production of aqueous graphene dispersions for biomedical applications. Nanoscale, 2015, 7, 6436-6443.	5.6	114
6	Myotube formation on gelatin nanofibers â€“ Multi-walled carbon nanotubes hybrid scaffolds. Biomaterials, 2014, 35, 6268-6277.	11.4	109
7	Multiscale Energy Dissipation Mechanism in Tough and Self-Healing Hydrogels. Physical Review Letters, 2018, 121, 185501.	7.8	104
8	Nano-palpation AFM and its quantitative mechanical property mapping. Microscopy (Oxford, England), 2014, 63, 193-208.	1.5	67
9	Electrically regulated differentiation of skeletal muscle cells on ultrathin graphene-based films. RSC Advances, 2014, 4, 9534.	3.6	57
10	New Insights into Morphology of High Performance BHJ Photovoltaics Revealed by High Resolution AFM. Nano Letters, 2014, 14, 5727-5732.	9.1	45
11	Characterization of Surface Viscoelasticity and Energy Dissipation in a Polymer Film by Atomic Force Microscopy. Macromolecules, 2011, 44, 8693-8697.	4.8	44
12	Spatial coordination of cell orientation directed by nanoribbon sheets. Biomaterials, 2015, 53, 86-94.	11.4	39
13	Graphene induces spontaneous cardiac differentiation in embryoid bodies. Nanoscale, 2016, 8, 7075-7084.	5.6	39
14	Visualization and Quantification of the Chemical and Physical Properties at a Diffusion-Induced Interface Using AFM Nanomechanical Mapping. Macromolecules, 2014, 47, 3761-3765.	4.8	38
15	Two-dimensional electron gas at the Ti-diffused BiFeO3/SrTiO3 interface. Applied Physics Letters, 2015, 107, .	3.3	38
16	Direct Mapping of Nanoscale Viscoelastic Dynamics at Nanofiller/Polymer Interfaces. Macromolecules, 2018, 51, 6085-6091.	4.8	37
17	Carbon nanotubes embedded in embryoid bodies direct cardiac differentiation. Biomedical Microdevices, 2017, 19, 57.	2.8	30
18	Dynamic Moduli Mapping of Silica-Filled Styreneâ€“Butadiene Rubber Vulcanizate by Nanorheological Atomic Force Microscopy. Macromolecules, 2019, 52, 311-319.	4.8	29

#	Article	IF	Citations
19	NANOMECHANICS OF THE RUBBERâ€“FILLER INTERFACE. Rubber Chemistry and Technology, 2017, 90, 272-284.	1.2	28
20	Microfluidic Generation of Polydopamine Gradients on Hydrophobic Surfaces. Langmuir, 2014, 30, 832-838.	3.5	27
21	Hydrogels containing metallic glass sub-micron wires for regulating skeletal muscle cell behaviour. Biomaterials Science, 2015, 3, 1449-1458.	5.4	27
22	Fabrication of poly(ethylene glycol) hydrogels containing vertically and horizontally aligned graphene using dielectrophoresis: An experimental and modeling study. Carbon, 2017, 123, 460-470.	10.3	24
23	Probing stem cell differentiation using atomic force microscopy. Applied Surface Science, 2016, 366, 254-259.	6.1	18
24	Nanofishing of a Single Polymer Chain: Temperatureâ€Induced Coilâ€“Globule Transition of Poly(<i>N</i>â€isopropylacrylamide) Chain in Water. Macromolecular Chemistry and Physics, 2018, 219, 1700394.	2.2	18
25	Direct visualization of a strain-induced dynamic stress network in a SEBS thermoplastic elastomer with in situ AFM nanomechanics. Japanese Journal of Applied Physics, 2020, 59, SN1013.	1.5	16
26	Local Mechanical Properties of Heterogeneous Nanostructures Developed in a Cured Epoxy Network: Implications for Innovative Adhesion Technology. ACS Applied Nano Materials, 2021, 4, 12188-12196.	5.0	16
27	Periodic Surface Undulation in Cholesteric Liquid Crystal Elastomers. Macromolecules, 2016, 49, 9561-9567.	4.8	15
28	Development of Flexible Cell-Loaded Ultrathin Ribbons for Minimally Invasive Delivery of Skeletal Muscle Cells. ACS Biomaterials Science and Engineering, 2017, 3, 579-589.	5.2	15
29	Nanodiamond Glass with Rubber Bond in Natural Rubber. Advanced Functional Materials, 2020, 30, 1909791.	14.9	15
30	Adhesion properties of polyacrylic block copolymer pressureâ€sensitive adhesives and analysis by pulse NMR and AFM force curve. Journal of Applied Polymer Science, 2019, 136, 47791.	2.6	14
31	Silica Nanoparticle Reinforced Composites as Transparent Elastomeric Damping Materials. ACS Applied Nano Materials, 2021, 4, 4140-4152.	5.0	12
32	A supramolecular network derived by rotaxane tethering three ureido pyrimidinone groups. Chemical Communications, 2019, 55, 5231-5234.	4.1	11
33	Investigating the Dynamic Viscoelasticity of Single Polymer Chains using Atomic Force Microscopy. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 1736-1743.	2.1	10
34	Topology-transformable block copolymers based on a rotaxane structure: change in bulk properties with same composition. Nature Communications, 2021, 12, 6175.	12.8	10
35	Reinforcement Mechanism of Carbon Black-Filled Rubber Nanocomposite as Revealed by Atomic Force Microscopy Nanomechanics. Polymers, 2021, 13, 3922.	4.5	10
36	Study of the Mullins Effect in Carbon Black-Filled Styreneâ€“Butadiene Rubber by Atomic Force Microscopy Nanomechanics. Macromolecules, 2022, 55, 6023-6030.	4.8	10

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37	Copolymerization of 1â€oxoâ€2,6,7â€trioxaâ€1â€phorsphabicyclo[2,2,2]octâ€4â€yl methyl acrylate and (10â€oxoâ€10â€hydroâ€9â€oxaâ€10â€phosphaphenanthreneâ€10â€yl) methyl acrylate with styrene and their thermal degradation characteristics. Journal of Applied Polymer Science, 2010, 115, 1032-1038.	2.6	9
38	Twoâ€Dimensional Skyrmion Lattice Formation in a Nematic Liquid Crystal Consisting of Highly Bent Banana Molecules. Angewandte Chemie - International Edition, 2016, 55, 11552-11556.	13.8	9
39	Mechanical property and structure of a butadiene rubber composite filled with syndiotactic polybutadiene resin. Journal of Applied Polymer Science, 2019, 136, 47934.	2.6	9
40	Viscoelastic maps obtained by nanorheological atomic force microscopy with two different driving systems. Japanese Journal of Applied Physics, 2018, 57, 08NB08.	1.5	7
41	Direct Visualization of Interfacial Regions between Fillers and Matrix in Rubber Composites Observed by Atomic Force Microscopy-Based Nanomechanics Assisted by Electron Tomography. Langmuir, 2022, 38, 777-785.	3.5	7
42	Sequential Selective Solvent On-Film Annealing: Fabrication of Monolayers of Ordered Anisotropic Polymer Particles. ACS Applied Materials & Interfaces, 2020, 12, 35731-35739.	8.0	3
43	INFLUENCE OF MASTICATION ON THE MICROSTRUCTURE AND PHYSICAL PROPERTIES OF RUBBER. Rubber Chemistry and Technology, 2021, 94, 533-548.	1.2	3
44	Static and Dynamic Mechanical Properties of Single Polymer Chains. Nihon Reoroji Gakkaishi, 2022, 50, 107-111.	1.0	2
45	Metallic glass nanofibers in future hydrogel-based scaffolds. , 2014, 2014, 5276-9.		0
46	Heterogeneous Viscoelasticity under Uniaxial Elongation of Isoprene Rubber Vulcanizate Investigated by Nanorheological Atomic Force Microscope and Dynamic Mechanical Analysis. Nihon Reoroji Gakkaishi, 2020, 48, 85-90.	1.0	0
47	Mullins Effect in Filler-reinforced Rubbers Investigated by Nano-palpation Atomic Force Microscopy. Seikei-Kakou, 2018, 30, 146-149.	0.0	0
48	Nanomechanics Using Atomic Force Microscopy and Its Practical Examples. Journal of Fiber Science and Technology, 2022, 78, 83-89.	0.0	0