Zexin Zhang

List of Publications by Year
in descending order

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78 papers	2,824 citations	186209 28 h-index	175177 52 g-index
78 all docs	78 docs citations	78 times ranked	3265 citing authors

#	Article	IF	Citations
1	Two-step nucleation mechanism in solidâ€“solid phase transitions. Nature Materials, 2015, 14, 101-108.	13.3	256
2	Thermal vestige of the zero-temperature jamming transition. Nature, 2009, 459, 230-233.	13.7	232
3	Microfluidic Rheology of Soft Colloids above and below Jamming. Physical Review Letters, 2010, 105, 175701.	2.9	162
4	Low-Frequency Vibrations of Soft Colloidal Glasses. Physical Review Letters, 2010, 105, 025501.	2.9	147
5	Cooperative Rearrangement Regions and Dynamical Heterogeneities in Colloidal Glasses with Attractive Versus Repulsive Interactions. Physical Review Letters, 2011, 107, 208303.	2.9	114
6	A tale of two forces: simultaneous chemical and acoustic propulsion of bimetallic micromotors. Chemical Communications, 2015, 51, 1020-1023.	2.2	110
7	Non-equilibrium behaviour in coacervate-based protocells under electric-field-induced excitation. Nature Communications, 2016, 7, 10658.	5.8	109
8	Phototactic Flocking of Photochemical Micromotors. IScience, 2019, 19, 415-424.	1.9	108
9	Measurement of Correlations between Low-Frequency Vibrational Modes and Particle Rearrangements in Quasi-Two-Dimensional Colloidal Glasses. Physical Review Letters, 2011, 107, 108301.	2.9	98
10	Irreversible Rearrangements, Correlated Domains, and Local Structure in Aging Glasses. Physical Review Letters, 2009, 103, 115701.	2.9	90
11	Isotropic-nematic phase transition of nonaqueous suspensions of natural clay rods. Journal of Chemical Physics, 2006, 124, 154910.	1.2	80
12	Patterning thin polymer films by surface-directed dewetting and pattern transfer. Polymer, 2003, 44, 3737-3743.	1.8	78
13	Artificial Channels in an Infectious Biofilm Created by Magnetic Nanoparticles Enhanced Bacterial Killing by Antibiotics. Small, 2019, 15, e1902313.	5.2	70
14	Observation of the Disorder-Induced Crystal-to-Glass Transition. Physical Review Letters, 2010, 104, 015701.	2.9	69
15	Ordered droplet formation by thin polymer film dewetting on a stripe-patterned substrate. Journal of Colloid and Interface Science, 2004, 269, 158-163.	5.0	58
16	Rheology of soft colloids across the onset of rigidity: scaling behavior, thermal, and non-thermal responses. Soft Matter, 2014, 10, 3027.	1.2	57
17	How to form regular polymer microstructures by surface-pattern-directed dewetting. Surface Science, 2003, 539, 129-136.	0.8	54
18	Motor and Rotor in One: Light-Active ZnO/Au Twinned Rods of Tunable Motion Modes. Journal of the American Chemical Society, 2020, 142, 2213-2217.	6.6	52

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19	Helical packings and phase transformations of soft spheres in cylinders. Physical Review E, 2010, 81, 040401.	0.8	50
20	Universal Antibacterial Surfaces Fabricated from Quaternary Ammonium Salt-Based PNIPAM Microgels. ACS Applied Materials & Interfaces, 2020, 12, 19268-19276.	4.0	48
21	Water in bacterial biofilms: pores and channels, storage and transport functions. Critical Reviews in Microbiology, 2022, 48, 283-302.	2.7	38
22	Water-induced morphology evolution of block copolymer micellar thin films. Polymer, 2005, 46, 5377-5384.	1.8	37
23	Syntheses and applications of concave and convex colloids with precisely controlled shapes. Soft Matter, 2013, 9, 11392.	1.2	37
24	Promoting the activation of T cells with glycopolymer-modified dendritic cells by enhancing cell interactions. Science Advances, 2020, 6, .	4.7	35
25	Tunable dual-stimuli response of a microgel composite consisting of reduced graphene oxide nanoparticles and poly(N-isopropylacrylamide) hydrogel microspheres. Journal of Materials Chemistry B, 2014, 2, 3791-3798.	2.9	34
26	Self-assembly of multilayered functional films based on graphene oxide sheets for controlled release. Journal of Materials Chemistry, 2011, 21, 3471.	6.7	33
27	Homogeneous Distribution of Magnetic, Antimicrobial-Carrying Nanoparticles through an Infectious Biofilm Enhances Biofilm-Killing Efficacy. ACS Biomaterials Science and Engineering, 2020, 6, 205-212.	2.6	31
28	Experimental Phase Diagram of a Model Colloidâ"Polymer Mixture in the Protein Limit. Langmuir, 2006, 22, 63-66.	1.6	28
29	Synthesis of Biofunctional Janus Particles. Macromolecular Rapid Communications, 2015, 36, 1200-1204.	2.0	28
30	Rotational and translational phonon modes in glasses composed of ellipsoidal particles. Physical Review E, 2011, 83, 011403.	0.8	26
31	Revisit to phase diagram of poly(N-isopropylacrylamide) microgel suspensions by mechanical spectroscopy. Journal of Chemical Physics, 2014, 140, 024908.	1.2	24
32	Effect of suspended clay particles on isotropicâ€"nematic phase transition of liquid crystal. Soft Matter, 2007, 3, 596-604.	1.2	23
33	Fabrication of Large Two-Dimensional Colloidal Crystals via Self-Assembly in an Attractive Force Gradient. Langmuir, 2013, 29, 7216-7220.	1.6	23
34	Direct observation of melting in a two-dimensional driven granular system. Scientific Reports, 2016, 6, 24056.	1.6	19
35	Possibilities and impossibilities of magnetic nanoparticle use in the control of infectious biofilms. Journal of Materials Science and Technology, 2021, 69, 69-78.	5.6	19
36	Phonon Spectra, Nearest Neighbors, and Mechanical Stability of Disordered Colloidal Clusters with Attractive Interactions. Physical Review Letters, 2011, 106, 225503.	2.9	18

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37	Observation and characterization of the vestige of the jamming transition in a thermal three-dimensional system. Physical Review E, 2013, 87, 012303.	0.8	17
38	Electric field-induced circulation and vacuolization regulate enzyme reactions in coacervate-based protocells. Soft Matter, 2018, 14, 6514-6520.	1.2	16
39	Polymerization in Shear Flow: From Bowl-Shaped Glyco-Microcarriers to Self-Propelled Micromotors. ACS Macro Letters, 2021, 10, 9-13.	2.3	16
40	Influence of interaction between surface-modified magnetic nanoparticles with infectious biofilm components in artificial channel digging and biofilm eradication by antibiotics in vitro and in vivo. Nanoscale, 2021, 13, 4644-4653.	2.8	16
41	Shape-Tunable Janus Micromotors via Surfactant-Induced Dewetting. Langmuir, 2021, 37, 4964-4970.	1.6	16
42	Encapsulation of Hydrophobic Phthalocyanine with Poly(N-isopropylacrylamide)/Lipid Composite Microspheres for Thermo-Responsive Release and Photodynamic Therapy. Materials, 2014, 7, 3481-3493.	1.3	15
43	Magnetic matchstick micromotors with switchable motion modes. Chemical Communications, 2021, 57, 3797-3800.	2.2	15
44	Fabrication of arrays of silver nanoparticle aggregates by microcontact printing and block copolymer nanoreactors. Journal of Applied Polymer Science, 2006, 100, 2737-2743.	1.3	13
45	Stimuliâ€Responsive Shape Switching of Polymer Colloids by Temperatureâ€Sensitive Absorption of Solvent. Angewandte Chemie - International Edition, 2016, 55, 9952-9955.	7.2	13
46	Synthesis of Polystyrene Particles with Precisely Controlled Degree of Concaveness. Polymers, 2018, 10, 458.	2.0	13
47	Surface-induced Phase Separation of Binary Polymer Blends on the Chemically Patterned Substrate. Polymer Bulletin, 2005, 55, 131-140.	1.7	12
48	Single Nanoparticle Tracking Reveals Efficient Long-Distance Undercurrent Transport in Upper Fluid of Bacterial Swarms. IScience, 2019, 22, 123-132.	1.9	12
49	Mechanism of two-dimensional crystal formation from soft microgel particles. Soft Matter, 2013, 9, 9924.	1.2	11
50	Relationship between particle elasticity, glass fragility, and structural relaxation in dense microgel suspensions. Soft Matter, 2015, 11, 5485-5491.	1.2	11
51	Reconfiguring Self-Assembly of Photoresponsive Hybrid Colloids. Journal of the American Chemical Society, 2022, 144, 4754-4758.	6.6	11
52	2D Colloidal Crystals with Anisotropic Impurities. Physical Review Letters, 2021, 127, 018004.	2.9	10
53	Highly Branched Gradient Glycopolymer: Enzyme-Assisted Synthesis and Enhanced Bacteria-Binding Ability. Biomacromolecules, 2020, 21, 5233-5240.	2.6	9
54	Largeâ€scale Synthesis of Uniform and Shapeâ€tunable ZnO/Polysiloxane Janus Micromotors Powered by Visible Light and Pure Water. ChemNanoMat, 2020, 6, 1749-1753.	1.5	9

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55	2D isotropicâ€“nematic transition in colloidal suspensions of ellipsoids. Soft Matter, 2021, 17, 6001-6005.	1.2	9
56	Nature of the glass transition in 2D colloidal suspensions of short rods. New Journal of Physics, 2020, 22, 103066.	1.2	9
57	Graphene oxide monolayers as supporting films for high resolution transmission electron microscopy. Applied Surface Science, 2011, 257, 5754-5758.	3.1	7
58	On-demand pulling-off of magnetic nanoparticles from biomaterial surfaces through implant-associated infectious biofilms for enhanced antibiotic efficacy. Materials Science and Engineering C, 2021, 131, 112526.	3.8	7
59	Relationship between neighbor number and vibrational spectra in disordered colloidal clusters with attractive interactions. Journal of Chemical Physics, 2013, 138, 12A525.	1.2	6
60	Stimuliâ€Responsive Shape Switching of Polymer Colloids by Temperatureâ€Sensitive Absorption of Solvent. Angewandte Chemie, 2016, 128, 10106-10109.	1.6	6
61	Ultralow Self-Cross-Linked Poly(N-isopropylacrylamide) Microgels Prepared by Solvent Exchange. Langmuir, 2019, 35, 13991-13998.	1.6	6
62	Diffusion of Anisotropic Colloids in Periodic Arrays of Obstacles. Langmuir, 2020, 36, 11866-11872.	1.6	6
63	Measurement of expansion factor and distortion for expansion microscopy using isolated renal glomeruli as landmarks. Journal of Biophotonics, 2021, 14, e202100001.	1.1	5
64	Synthesis of Snowmanâ€shaped Photocatalytic Microrotors and Mechanical Micropumps. ChemNanoMat, 2021, 7, 902-905.	1.5	5
65	Glycopolymer Engineering of the Cell Surface Changes the Single Cell Migratory Direction and Inhibits the Collective Migration of Cancer Cells. ACS Applied Materials & Interfaces, 2022, 14, 4921-4930.	4.0	5
66	Preparation of dual-drive hybrid micromotors by swelling and selective surface modification of polymeric colloids. Colloids and Interface Science Communications, 2020, 38, 100300.	2.0	4
67	Colloidal assembly manipulated by light-responsive Ag₃PO₄ nanoparticles. Chemical Communications, 2021, 57, 10347-10350.	2.2	4
68	Cold flow of three-dimensional confined polymer systems. Polymer, 2017, 111, 67-72.	1.8	3
69	Two-dimensional crystallization in finite-sized colloidal systems. Wuli Xuebao/Acta Physica Sinica, 2019, 68, 106401.	0.2	3
70	Synthesis of soft colloids with well-controlled softness. Chemical Communications, 2014, 50, 7535-7537.	2.2	2
71	Synthesis of Rod-Shaped ZnO/Polysiloxane Micromotors with Patch-Dependent Motion Modes. Langmuir, 2022, 38, 4389-4395.	1.6	2
72	A self-cleaning surface based on UV-activatable, AgCl micropumps for bacterial killing and removal. Chemical Communications, 2022, 58, 7030-7033.	2.2	2

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73	Application of video microscopy in probing structures and dynamics of micromotor systems. Chinese Science Bulletin, 2017, 62, 186-193.	0.4	1
74	Glass transition in binary mixture of colloidal ellipsoids and spheres. Wuli Xuebao/Acta Physica Sinica, 2018, 67, 106401.	0.2	1
75	Nonperturbative effects of attraction on dynamical behaviors of glass-forming liquids*. Chinese Physics B, 2020, 29, 126201.	0.7	1
76	Application of video microscopy in experimental soft matter physics. International Journal of Modern Physics B, 2018, 32, 1840012.	1.0	0
77	Facile synthesis of micron-size Janus particles by one-pot suspension polymerization and their functional modification. Polymer Chemistry, 2021, 12, 2722-2730.	1.9	0
78	Observation of the Pinning-Induced Crystal-Hexatic-Glass Transition in Two-Dimensional Colloidal Suspensions. Chinese Physics Letters, 2021, 38, 106101.	1.3	0