Zhao-Yan Sun

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/5438145/publications.pdf

Version: 2024-02-01

108 papers	1,705 citations	257450 24 h-index	395702 33 g-index
113 all docs	113 docs citations	113 times ranked	2069 citing authors

#	Article	IF	Citations
1	Lignin doped epoxy acrylate sandwich electromagnetic shielding material synergized with Fe₃O₄ and CNT. Journal of Dispersion Science and Technology, 2022, 43, 2209-2217.	2.4	1
2	Singleâ€Ion Gel Polymer Electrolyte Based on Poly(ether sulfone) for Highâ€Performance Lithiumâ€Ion Batteries. Macromolecular Materials and Engineering, 2022, 307, .	3.6	3
3	The advantages of nanoparticle surfactants over Janus nanoparticles on structuring liquids. Nanoscale, 2022, 14, 3554-3560.	5.6	4
4	A chiral smectic phase induced by an alternating external field. Soft Matter, 2022, 18, 2569-2576.	2.7	2
5	Colloidal cubic diamond photonic crystals through cooperative self-assembly. Soft Matter, 2022, 18, 2654-2662.	2.7	2
6	Multiple 2D crystal structures in bilayered lamellae from the direct self-assembly of 3D systems of soft Janus particles. Physical Chemistry Chemical Physics, 2022, 24, 7874-7881.	2.8	1
7	Aggregation behavior of the strong amphiphilic cationic diblock polyelectrolytes at the air/water interface. Journal of Applied Polymer Science, 2022, 139, .	2.6	3
8	High-performance polyethylene separators for lithium-ion batteries modified by phenolic resin. Journal of Power Sources, 2021, 483, 229155.	7.8	41
9	Lignin Based Flexible Electromagnetic Shielding PU Synergized with Graphite. Fibers and Polymers, 2021, 22, 1-8.	2.1	19
10	Effects of Ionic Strength and Ion Specificity on the Interface Behavior of Poly(dimethylaminoethyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	3.5	3
11	Polymer Glass Formation: Role of Activation Free Energy, Configurational Entropy, and Collective Motion. Macromolecules, 2021, 54, 3001-3033.	4.8	38
12	Resinâ€silica composite nanoparticle grafted polyethylene membranes for lithium ion batteries. Journal of Applied Polymer Science, 2021, 138, 50713.	2.6	3
13	Mechanism of periodic field driven self-assembly process. Journal of Chemical Physics, 2021, 154, 144904.	3.0	4
14	Sulfophenylated Poly (Ether Ether Ketone Ketone) Nanofiber Composite Separator with Excellent Electrochemical Performance and Dimensional Thermal Stability for Lithiumâ€Ion Battery via Electrospinning. Macromolecular Materials and Engineering, 2021, 306, 2100118.	3.6	5
15	Synergism between lignin, functionalized carbon nanotubes and Fe3O4 nanoparticles for electromagnetic shielding effectiveness of tough lignin-based polyurethane. Composites Communications, 2021, 24, 100616.	6.3	22
16	Decoupled Polymer Dynamics in Weakly Attractive Poly(methyl methacrylate)/Silica Nanocomposites. Macromolecules, 2021, 54, 5484-5497.	4.8	23
17	The Enhanced Performance of Polyethylene Composite Separators by the Modification of Lithium Salt@SiO₂ Nanoparticles. Macromolecular Materials and Engineering, 2021, 306, 2100257.	3.6	2
18	Softness-Enhanced Self-Assembly of Pyrochlore- and Perovskite-like Colloidal Photonic Crystals from Triblock Janus Particles. Journal of Physical Chemistry Letters, 2021, 12, 7159-7165.	4.6	9

#	Article	IF	Citations
19	Solvent-Evaporation Induced and Mechanistic Entropy-Enthalpy-Balance Controlled Polymer Patch Formation on Nanoparticle Surfaces. Journal of Physical Chemistry Letters, 2021, 12, 7100-7105.	4.6	7
20	Intercluster Exchange-Stabilized Novel Complex Colloidal Ï‡c Phase. Journal of Physical Chemistry Letters, 2021, 12, 8872-8881.	4.6	2
21	Flow-driven competition between two capsules passing through a narrow pore. Soft Matter, 2021, 17, 9154-9161.	2.7	3
22	Transition kinetics of defect patterns in confined two-dimensional smectic liquid crystals. Physical Review E, 2021, 104, 044704.	2.1	3
23	Probing Intermittent Motion of Polymer Chains in Weakly Attractive Nanocomposites. Chinese Journal of Polymer Science (English Edition), 2020, 38, 620-628.	3.8	3
24	Building Block Design for Minimizing Defects in the Construction of Two-Dimensional Covalent Organic Frameworks. Journal of Physical Chemistry Letters, 2020, 11, 179-183.	4.6	13
25	Influence of the coexistence of thin and thick lamellae on the transformation from crystalline form II to form I in isotactic polybutylene-1. Polymer, 2020, 188, 122137.	3.8	5
26	A controlling parameter of topological defects in two-dimensional covalent organic frameworks. Nanoscale, 2020, 12, 22107-22115.	5.6	8
27	Brownian Diffusion of Individual Janus Nanoparticles at Water/Oil Interfaces. ACS Nano, 2020, 14, 10095-10103.	14.6	22
28	Mechanisms of Defect Correction by Reversible Chemistries in Covalent Organic Frameworks. Journal of Physical Chemistry Letters, 2020, 11, 9952-9956.	4.6	17
29	Emergent tetratic order in crowded systems of rotationally asymmetric hard kite particles. Nature Communications, 2020, 11, 2064.	12.8	19
30	A novel phosphorus-containing lignin-based flame retardant and its application in polyurethane. Composites Communications, 2020, 21, 100382.	6.3	39
31	Novel Nanocomposite PEM Membranes with Continuous Proton Transportation Channel and Reinforcing Network Formed by Electrospinning Solution Casting Method. Macromolecular Materials and Engineering, 2020, 305, 1900388.	3.6	6
32	Improved Mechanical Properties and Flame Retardancy of Wood/PLA Allâ€Degradable Biocomposites with Novel Ligninâ€Based Flame Retardant and TGIC. Macromolecular Materials and Engineering, 2020, 305, 1900840.	3.6	43
33	Kinetics-controlled design principles for two-dimensional open lattices using atom-mimicking patchy particles. Nanoscale, 2020, 12, 4544-4551.	5.6	8
34	Effects of Copolymer Composition and Subphase pH/Temperature on the Interfacial Aggregation Behavior of Poly(2-(dimethylamino)ethyl methacrylate)-block-poly(lauryl methacrylate). Journal of Physical Chemistry C, 2020, 124, 4563-4570.	3.1	15
35	Influence of lamellar thickness on the transformation of isotactic polybutylene-1/carbon nanotube nanocomposites. CrystEngComm, 2020, 22, 2990-2997.	2.6	5
36	Free energy for inclusion of nanoparticles in solvated polymer brushes from molecular dynamics simulations. Journal of Chemical Physics, 2020, 152, 094905.	3.0	8

#	Article	IF	Citations
37	Heterogeneous dynamics of unentangled chains in polymer nanocomposites. Journal of Chemical Physics, 2019, 150, 184903.	3.0	6
38	Property improvement of nanocelluloseâ€reinforced proton exchange nanocomposite membrane coated with tetraethyl orthosilicate. Journal of Polymer Science Part A, 2019, 57, 2190-2200.	2.3	1
39	Long-wavelength fluctuations and anomalous dynamics in 2-dimensional liquids. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 22977-22982.	7.1	18
40	Enthalpy-driven self-assembly of amphiphilic Janus dendrimers into onion-like vesicles: a Janus particle model. Nanoscale, 2019, 11, 17350-17356.	5.6	18
41	Effect of the Self-Assembled Structures of Hydrated Polyzwitterionic and Polyanionic Brushes on Their Self-Cleaning Capabilities. Langmuir, 2019, 35, 6669-6675.	3.5	6
42	Ozone oxidized lignin-based polyurethane with improved properties. European Polymer Journal, 2019, 117, 114-122.	5.4	37
43	Carboxyl-functionalized Nanocellulose Reinforced Nanocomposite Proton Exchange Membrane. Chemical Research in Chinese Universities, 2019, 35, 735-741.	2.6	1
44	Competitive growth of crystalline form II and form I in isotactic Polybutene-1. Polymer, 2019, 171, 133-139.	3.8	5
45	Coupling and decoupling between translational and rotational dynamics in supercooled monodisperse soft Janus particles. Soft Matter, 2019, 15, 3343-3352.	2.7	9
46	Effects of Subphase pH and Temperature on the Aggregation Behavior of Poly(lauryl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 387 Td (acryl Physical Chemistry C, 2019, 123, 10435-10442.	3.1	14
47	An unexpected N-dependence in the viscosity reduction in all-polymer nanocomposite. Nature Communications, 2019, 10, 5552.	12.8	39
48	Effect of aminated nanocrystal cellulose on proton conductivity and dimensional stability of proton exchange membranes. Applied Surface Science, 2019, 466, 691-702.	6.1	46
49	Dynamics in two-dimensional glassy systems of crowded Penrose kites. Physical Review Materials, 2019, 3, .	2.4	7
50	Employing multi-GPU power for molecular dynamics simulation: an extension of GALAMOST. Molecular Physics, 2018, 116, 1065-1077.	1.7	38
51	Performance of UV curable lignin based epoxy acrylate coatings. Progress in Organic Coatings, 2018, 116, 83-89.	3.9	44
52	Diffusion and Relaxation Dynamics of Supercooled Polymer Melts. Chinese Journal of Polymer Science (English Edition), 2018, 36, 1187-1194.	3.8	18
53	Improving the productivity of monodisperse polyhedral cages by the rational design of kinetic self-assembly pathways. Physical Chemistry Chemical Physics, 2018, 20, 10030-10037.	2.8	5
54	Influence of chain stiffness on the dynamical heterogeneity and fragility of polymer melts. Journal of Chemical Physics, 2018, 149, 234904.	3.0	15

#	Article	IF	Citations
55	Improving Performance of Allâ€Polymer Solar Cells Through Backbone Engineering of Both Donors and Acceptors. Solar Rrl, 2018, 2, 1800247.	5.8	17
56	Improved performance of dual-cured organosolv lignin-based epoxy acrylate coatings. Composites Communications, 2018, 10, 52-56.	6.3	24
57	Acceleration of crystal transformation from crystal form II to form I in Polybutene-1 induced by nanoparticles. Polymer, 2018, 150, 119-129.	3.8	35
58	Distribution of the Number of Polymer Chains Grafted on Nanoparticles Fabricated by Grafting-to and Grafting-from Procedures. Macromolecules, 2018, 51, 3758-3766.	4.8	25
59	General patchy ellipsoidal particle model for the aggregation behaviors of shape- and/or surface-anisotropic building blocks. Soft Matter, 2018, 14, 7625-7633.	2.7	32
60	Synthesis of yolkâ€“shell mesoporous silica nanoparticles via a facile one-pot approach. Chemical Communications, 2017, 53, 3761-3764.	4.1	19
61	Novel wide band gap copolymers featuring excellent comprehensive performance towards the practical application for organic solar cells. Polymer Chemistry, 2017, 8, 4332-4338.	3.9	11
62	Chiral Assemblies from an Achiral Pyridiniumâ€Tailored Anthracene. Chemistry - A European Journal, 2017, 23, 1422-1426.	3.3	12
63	GPU-Accelerated Molecular Dynamics Simulation to Study Liquid Crystal Phase Transition Using Coarse-Grained Gay-Berne Anisotropic Potential. PLoS ONE, 2016, 11, e0151704.	2.5	9
64	The mechanism of the emergence of distinct overstretched DNA states. Journal of Chemical Physics, 2016, 144, 024901.	3.0	6
65	Probing heterogeneous dynamics from spatial density correlation in glass-forming liquids. Physical Review E, 2016, 94, 062601.	2.1	4
66	Template-Free Bottom-Up Method for Fabricating Diblock Copolymer Patchy Particles. ACS Nano, 2016, 10, 5199-5203.	14.6	28
67	A simple and effective boundary model in nonequilibrium molecular dynamics method. Chinese Journal of Polymer Science (English Edition), 2016, 34, 1150-1157.	3.8	1
68	Supracolloidal fullerene-like cages: design principles and formation mechanisms. Physical Chemistry Chemical Physics, 2016, 18, 32534-32540.	2.8	4
69	Supracolloidal helices from soft Janus particles by tuning the particle softness. Nanoscale, 2016, 8, 4070-4076.	5.6	22
70	The scaling behavior of the second virial coefficient of linear and ring polymer. Science China Chemistry, 2016, 59, 619-623.	8.2	10
71	A versatile model for soft patchy particles with various patch arrangements. Soft Matter, 2016, 12, 741-749.	2.7	37
72	Effects of topology on the adsorption of singly tethered ring polymers to attractive surfaces. Journal of Chemical Physics, 2015, 143, 024908.	3.0	5

#	Article	IF	Citations
73	Decoupling of relaxation and diffusion in random pinning glass-forming liquids. Journal of Chemical Physics, 2015, 142, 124507.	3.0	22
74	Controllable synthesis of hollow mesoporous silica particles by a facile one-pot solâ€“gel method. Chemical Communications, 2015, 51, 10517-10520.	4.1	35
75	The effect of particle shape on the structure and rheological properties of carbon-based particle suspensions. Chinese Journal of Polymer Science (English Edition), 2015, 33, 1550-1561.	3.8	13
76	Development of phenylboronic acid-functionalized nanoparticles for emodin delivery. Journal of Materials Chemistry B, 2015, 3, 3840-3847.	5.8	25
77	Impact of particle surface chemistry on the structure and rheological properties of graphene-based particle/polydimethylsiloxane composites. RSC Advances, 2015, 5, 34885-34893.	3.6	7
78	Glass formation in a mixture of hard disks and hard ellipses. Journal of Chemical Physics, 2015, 142, 224506.	3.0	7
79	Influence of Topology on the Free Energy and Metric Properties of an Ideal Ring Polymer Confined in a Slit. Macromolecules, 2015, 48, 8675-8680.	4.8	10
80	Synergistic effect of carbon fibers and carbon nanotubes on improving thermal stability and flame retardancy of polypropylene: a combination of a physical network and chemical crosslinking. RSC Advances, 2015, 5, 5484-5493.	3.6	12
81	Flow-induced structure and rheological properties of multiwall carbon nanotube/polydimethylsiloxane composites. RSC Advances, 2014, 4, 62759-62768.	3.6	13
82	Orientation and surface activity of Janus particles at fluid-fluid interfaces. Journal of Chemical Physics, 2014, 141, 134907.	3.0	49
83	Growing point-to-set length scales in Lennard-Jones glass-forming liquids. Journal of Chemical Physics, 2014, 140, 124502.	3.0	10
84	Studies on droplet size distributions during coalescence in immiscible polymer blends filled with silica nanoparticles. Chinese Journal of Polymer Science (English Edition), 2014, 32, 255-267.	3.8	8
85	Effect of fumed silica nanoparticles on the morphology and rheology of immiscible polymer blends. Rheologica Acta, 2014, 53, 43-53.	2.4	26
86	Simultaneously improving the thermal stability, flame retardancy and mechanical properties of polyethylene by the combination of graphene with carbon black. RSC Advances, 2014, 4, 33776-33784.	3.6	28
87	Soft Janus particles: ideal building blocks for template-free fabrication of two-dimensional exotic nanostructures. Soft Matter, 2014, 10, 5472.	2.7	19
88	A facile method of synthesizing uniform resin colloidal and microporous carbon spheres with high nitrogen content. Journal of Colloid and Interface Science, 2014, 431, 132-138.	9.4	19
89	A simulation model for soft triblock Janus particles and their ordered packing. RSC Advances, 2013, 3, 813-822.	3.6	33
90	Effects of Poly(Propylene Oxide)â€“Poly(Ethylene Oxide)â€“Poly(Propylene Oxide) Triblock Copolymer on the Gelation of Poly(Ethylene Oxide)â€“Poly(Propylene Oxide)â€“Poly(Ethylene Oxide) Aqueous Solutions. Journal of Macromolecular Science - Physics, 2013, 52, 1183-1197.	1.0	9

#	Article	IF	Citations
91	Self-assembly structures of amphiphilic multiblock copolymer in dilute solution. Soft Matter, 2013, 9, 1947-1954.	2.7	24
92	The properties of a single polymer chain in solvent confined in a slit: A molecular dynamics simulation. Chinese Journal of Polymer Science (English Edition), 2013, 31, 388-398.	3.8	7
93	The structures of thin layer formed by microphase separation of grafted Y-shaped block copolymers in solutions. Journal of Chemical Physics, 2013, 138, 224905.	3.0	17
94	Influence of Grafting Surface Curvature on Chain Polydispersity and Molecular Weight in Concave Surface-Initiated Polymerization. ACS Macro Letters, 2012, 1, 1249-1253.	4.8	38
95	Model, self-assembly structures, and phase diagram of soft Janus particles. Soft Matter, 2012, 8, 6693.	2.7	69
96	Self-assembly of amphiphilic patchy particles with different cross-linking densities. Soft Matter, 2012, 8, 7073.	2.7	10
97	A possible route to fabricate patchy nanoparticles via self-assembly of a multiblock copolymer chain in one step. Soft Matter, 2011, 7, 9944.	2.7	26
98	Effects of Asymmetric Interaction Energies on the Microphase Separation Behavior of Hâ€shaped (AC)B(CA) Ternary Block Copolymer Systems: A Realâ€Space SCF Study. Macromolecular Theory and Simulations, 2010, 19, 100-112.	1.4	1
99	Simulation Model for Hierarchical Self-Assembly of Soft Disklike Particles. Journal of Physical Chemistry B, 2010, 114, 2353-2358.	2.6	15
100	Molecular weight dependence of phase behavior of PEO/P(EOâ€bâ€DMS) blends: Application of Sanchezâ€Lacombe lattice fluid theory. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 452-459.	2.1	4
101	Dewetting and Phase Behaviors for Ultrathin Films of Polymer Blend. Macromolecular Rapid Communications, 2006, 27, 351-355.	3.9	27
102	Effect of Chain-Length Dependence of Interaction Parameter on Spinodals for Polydisperse Polymer Blends. Macromolecular Theory and Simulations, 2006, 15, 440-445.	1.4	2
103	Conformational Study on Thin Films of Symmetric AnB2nAn Triblock Copolymer. Macromolecular Theory and Simulations, 2005, 14, 463-473.	1.4	18
104	The effect of solvent size on physical gelation in triblock copolymer solutions. Journal of Chemical Physics, 2005, 122, 194909.	3.0	11
105	Statistical thermodynamics of polydisperse polymer systems in the framework of lattice fluid model: Effect of molecular weight and its distribution on the spinodal in polymer solution. Journal of Chemical Physics, 2002, 116, 5892-5900.	3.0	8
106	Effects of Pressure and Molecular Weight on the Miscibility of Polystyrene and Cyclohexane. Macromolecular Theory and Simulations, 2001, 10, 692.	1.4	11
107	Mixing Enthalpy and Phase Behavior of PEO/PVAc Blends. Macromolecules, 1999, 32, 5905-5910.	4.8	19
108	Phase-separation behavior of the system pes/phenoxy: An application of the sanchez-lacombe lattice fluid theory. Journal of Macromolecular Science - Physics, 1999, 38, 67-74.	1.0	7