Yangyang Wang

List of Publications by Year
in descending order

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100	3,278	136740	161609
papers	citations	32 h-index	54 g-index

101	101	101	3325
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	New theoretical considerations in polymer rheology: Elastic breakdown of chain entanglement network. Journal of Chemical Physics, 2007, 127, 064903.	1.2	163
2	Superstretchable, Selfâ€Healing Polymeric Elastomers with Tunable Properties. Advanced Functional Materials, 2018, 28, 1800741.	7.8	162
3	Ion Conduction in Polymerized Ionic Liquids with Different Pendant Groups. Macromolecules, 2015, 48, 4461-4470.	2.2	158
4	Decoupling of Ionic Transport from Segmental Relaxation in Polymer Electrolytes. Physical Review Letters, 2012, 108, 088303.	2.9	139
5	Examination of the fundamental relation between ionic transport and segmental relaxation in polymer electrolytes. Polymer, 2014, 55, 4067-4076.	1.8	136
6	Effect of Molecular Weight on the Ion Transport Mechanism in Polymerized Ionic Liquids. Macromolecules, 2016, 49, 4557-4570.	2.2	121
7	Decoupling of ionic conductivity from structural dynamics in polymerized ionic liquids. Soft Matter, 2014, 10, 3536-3540.	1.2	120
8	Resolving the Grain Boundary and Lattice Impedance of Hotâ€Pressed Li₇La₃Zr₂O₁₂ Garnet Electrolytes. ChemElectroChem, 2014, 1, 375-378.	1.7	112
9	Chain and Segmental Dynamics of Poly(2-vinylpyridine) Nanocomposites. Macromolecules, 2013, 46, 4168-4173.	2.2	92
10	Examination of methods to determine free-ion diffusivity and number density from analysis of electrode polarization. Physical Review E, 2013, 87, 042308.	0.8	84
11	Elastic Breakup in Uniaxial Extension of Entangled Polymer Melts. Physical Review Letters, 2007, 99, 237801.	2.9	83
12	Porous liquid zeolites: hydrogen bonding-stabilized H-ZSM-5 in branched ionic liquids. Nanoscale, 2019, 11, 1515-1519.	2.8	82
13	New Experiments for Improved Theoretical Description of Nonlinear Rheology of Entangled Polymers. Macromolecules, 2013, 46, 3147-3159.	2.2	70
14	From elastic deformation to terminal flow of a monodisperse entangled melt in uniaxial extension. Journal of Rheology, 2008, 52, 1275-1290.	1.3	66
15	High Pressure as a Key Factor to Identify the Conductivity Mechanism in Protic Ionic Liquids. Physical Review Letters, 2013, 111, 225703.	2.9	65
16	Exploring stress overshoot phenomenon upon startup deformation of entangled linear polymeric liquids. Journal of Rheology, 2009, 53, 1389-1401.	1.3	62
17	Effect of Polar Interactions on Polymer Dynamics. Macromolecules, 2012, 45, 8430-8437.	2.2	59
18	Dielectric Relaxation and Rheological Behavior of Supramolecular Polymeric Liquid. Macromolecules, 2013, 46, 3160-3166.	2.2	56

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19	Design of superionic polymersâ€"New insights from Walden plot analysis. Solid State Ionics, 2014, 262, 782-784.	1.3	54
20	Linear Viscoelastic and Uniaxial Extensional Rheology of Alkali Metal Neutralized Sulfonated Oligostyrene Ionomer Melts. Macromolecules, 2012, 45, 481-490.	2.2	53
21	Interplay Between Hydrophobic Aggregation and Charge Transport in the Ionic Liquid Methyltrioctylammonium Bis(trifluoromethylsulfonyl)imide. Journal of Physical Chemistry B, 2014, 118, 783-790.	1.2	47
22	Design of superionic polymer electrolytes. Current Opinion in Chemical Engineering, 2015, 7, 113-119.	3.8	46
23	Salient Features in Uniaxial Extension of Polymer Melts and Solutions: Progressive Loss of Entanglements, Yielding, Non-Gaussian Stretching, and Rupture. Macromolecules, 2011, 44, 5427-5435.	2.2	43
24	Fingerprinting Molecular Relaxation in Deformed Polymers. Physical Review X, 2017, 7, .	2.8	41
25	Surpassing the stiffness-extensibility trade-off of elastomers via mastering the hydrogen-bonding clusters. Matter, 2022, 5, 237-252.	5.0	40
26	Molecular Dynamics Investigation of the Relaxation Mechanism of Entangled Polymers after a Large Step Deformation. ACS Macro Letters, 2018, 7, 190-195.	2.3	39
27	Basic characteristics of uniaxial extension rheology: Comparing monodisperse and bidisperse polymer melts. Journal of Rheology, 2011, 55, 1247-1270.	1.3	37
28	Observation of highly decoupled conductivity in protic ionic conductors. Physical Chemistry Chemical Physics, 2014, 16, 9123-9127.	1.3	37
29	Fluorinated bottlebrush polymers based on poly(trifluoroethyl methacrylate): synthesis and characterization. Polymer Chemistry, 2016, 7, 680-688.	1.9	37
30	Letter to the Editor: Sufficiently entangled polymers do show shear strain localization at high enough Weissenberg numbers. Journal of Rheology, 2014, 58, 1059-1069.	1.3	36
31	Observation of the slow, Debye-like relaxation in hydrogen-bonded liquids by dynamic light scattering. Journal of Chemical Physics, 2014, 140, 104510.	1.2	35
32	Ionic Conductivity and Glass Transition of Phosphoric Acids. Journal of Physical Chemistry B, 2013, 117, 8003-8009.	1.2	34
33	All acrylic-based thermoplastic elastomers with high upper service temperature and superior mechanical properties. Polymer Chemistry, 2017, 8, 5741-5748.	1.9	34
34	Dynamic-Mechanical and Dielectric Evidence of Long-Lived Mesoscale Organization in Ionic Liquids. Journal of Physical Chemistry Letters, 2017, 8, 3544-3548.	2.1	33
35	Rupture in rapid uniaxial extension of linear entangled melts. Rheologica Acta, 2010, 49, 1179-1185.	1.1	31
36	Ionic Transport, Microphase Separation, and Polymer Relaxation in Poly(propylene glycol) and Lithium Perchlorate Mixtures. Macromolecules, 2013, 46, 9380-9389.	2.2	31

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37	Study of segmental dynamics and ion transport in polymerâ€“ceramic composite electrolytes by quasi-elastic neutron scattering. Molecular Systems Design and Engineering, 2019, 4, 379-385.	1.7	31
38	Synthesis and Characterization of Ureidopyrimidone Telechelics by CuAAC â€œClickâ€•Reaction: Effect of T_g and Polarity. Macromolecules, 2014, 47, 5040-5050.	2.2	30
39	Polymerâ€“Ceramic Composite Electrolytes for Lithium Batteries: A Comparison between the Single-Ion-Conducting Polymer Matrix and Its Counterpart. ACS Applied Energy Materials, 2020, 3, 8871-8881.	2.5	30
40	All-Acrylic Multigraft Copolymers: Effect of Side Chain Molecular Weight and Volume Fraction on Mechanical Behavior. Industrial & Engineering Chemistry Research, 2015, 54, 9566-9576.	1.8	24
41	Heterogeneous Nature of Relaxation Dynamics of Room-Temperature Ionic Liquids (EMIm)₂[Co(NCS)₄] and (BMIm)₂[Co(NCS)₄]. Journal of Physical Chemistry C, 2015, 119, 20363-20368.	1.5	24
42	Graphene Oxide as a Radical Initiator: Free Radical and Controlled Radical Polymerization of Sodium 4-Vinylbenzenesulfonate with Graphene Oxide. ACS Macro Letters, 2016, 5, 199-202.	2.3	24
43	Fabrication and characterization of poly(l-lactic acid) gels induced by fibrous complex crystallization with solvents. Polymer, 2014, 55, 4369-4378.	1.8	23
44	Helical Poly(5-alkyl-2,3-thiophene)s: Controlled Synthesis and Structure Characterization. Macromolecules, 2016, 49, 4691-4698.	2.2	23
45	Molecular View on Mechanical Reinforcement in Polymer Nanocomposites. Physical Review Letters, 2021, 126, 117801.	2.9	23
46	Proton Transport in Imidazoles: Unraveling the Role of Supramolecular Structure. Journal of Physical Chemistry Letters, 2015, 6, 3961-3965.	2.1	21
47	Structural properties of the evolution of CTAB/NaSal micelles investigated by SANS and rheometry. Physical Chemistry Chemical Physics, 2019, 21, 18346-18351.	1.3	21
48	Addition of Short Polymer Chains Mechanically Reinforces Glassy Poly(2-vinylpyridine)â€“Silica Nanoparticle Nanocomposites. ACS Applied Nano Materials, 2020, 3, 3427-3438.	2.4	21
49	Characterizing State of Chain Entanglement in Entangled Polymer Solutions during and after Large Shear Deformation. Macromolecules, 2012, 45, 2514-2521.	2.2	20
50	Polymerized ionic liquids: Effects of counterâ€anions on ion conduction and polymerization kinetics. Journal of Polymer Science Part A, 2018, 56, 1346-1357.	2.5	20
51	Characterization of microscopic deformation through two-point spatial correlation functions. Physical Review E, 2018, 97, 012605.	0.8	18
52	All-acrylic superelastomers: facile synthesis and exceptional mechanical behavior. Polymer Chemistry, 2018, 9, 160-168.	1.9	18
53	Dynamic crossover and the Debyeâ€“Stokesâ€“Einstein relation in liquid N,N-diethyl-3-methylbenzamide (DEET). Soft Matter, 2013, 9, 10373.	1.2	17
54	Chain flexibility and glass transition temperatures of poly(n-alkyl (meth)acrylate)s: Implications of tacticity and chain dynamics. Polymer, 2021, 213, 123207.	1.8	17

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55	Communication: Influence of nanophase segregation on ion transport in room temperature ionic liquids. Journal of Chemical Physics, 2016, 144, 151104.	1.2	16
56	Proton Conductivity in Phosphoric Acid: The Role of Quantum Effects. Physical Review Letters, 2016, 117, 156001.	2.9	16
57	Reconstruction of three-dimensional anisotropic structure from small-angle scattering experiments. Physical Review E, 2017, 96, 022612.	0.8	16
58	Ionic Conductivity Enhancement of Polymer Electrolytes by Directed Crystallization. ACS Macro Letters, 2022, 11, 595-602.	2.3	16
59	Influence of side chain isomerism on the rigidity of poly(3-alkylthiophenes) in solutions revealed by neutron scattering. Physical Chemistry Chemical Physics, 2019, 21, 7745-7749.	1.3	15
60	Phosphonium-Based Polyzwitterions: Influence of Ionic Structure and Association on Mechanical Properties. Macromolecules, 2020, 53, 11009-11018.	2.2	15
61	Polymer-Grafted Porous Silica Nanoparticles with Enhanced CO₂ Permeability and Mechanical Performance. ACS Applied Materials & Interfaces, 2021, 13, 27411-27418.	4.0	14
62	Decoupling of ion conductivity from segmental dynamics in oligomeric ethylene oxide functionalized oxanorbornene dicarboximide homopolymers. Polymer, 2017, 116, 218-225.	1.8	13
63	Scaling Behavior of Anisotropy Relaxation in Deformed Polymers. Physical Review Letters, 2018, 121, 117801.	2.9	13
64	Charge Transport in Imidazolium-Based Homo- and Triblock Poly(ionic liquid)s. Macromolecules, 2019, 52, 620-628.	2.2	13
65	Enhanced Rotation by Ground State Destabilization in Amphidynamic Crystals of a Dipolar 2,3-Difluorophenylene Rotator as Established by Solid State ²H NMR and Dielectric Spectroscopy. Journal of Physical Chemistry C, 2020, 124, 15391-15398.	1.5	12
66	Determining Gyration Tensor of Orienting Macromolecules through Their Scattering Signature. Journal of Physical Chemistry Letters, 2019, 10, 3978-3984.	2.1	11
67	Enzyme Induced Formation of Monodisperse Hydrogel Nanoparticles Tunable in Size. Chemistry of Materials, 2015, 27, 2557-2565.	3.2	10
68	Chain conformation of polymer melts with associating groups. Journal of Physics Communications, 2019, 3, 035007.	0.5	10
69	Upcycling of semicrystalline polymers by compatibilization: mechanism and location of compatibilizers. RSC Advances, 2022, 12, 10886-10894.	1.7	10
70	Letter to the editor: Cone partitioned plate (CPP) vs circular couette. Journal of Rheology, 2012, 56, 675-681.	1.3	9
71	Orientational Distribution Function of Aligned Elongated Molecules and Particulates Determined from Their Scattering Signature. ACS Macro Letters, 2019, 8, 1257-1262.	2.3	9
72	CENTAURâ€"The small- and wide-angle neutron scattering diffractometer/spectrometer for the Second Target Station of the Spallation Neutron Source. Review of Scientific Instruments, 2022, 93, .	0.6	9

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73	Rheological Study of Mutarotation of Fructose in Anhydrous State. Journal of Physical Chemistry B, 2013, 117, 1475-1479.	1.2	8
74	Study of the Segmental Dynamics and Ion Transport of Solid Polymer Electrolytes in the Semi-crystalline State. Frontiers in Chemistry, 2020, 8, 592604.	1.8	8
75	Glassy dynamics of hydrogen-bonded heteroditopic molecules. Polymer, 2012, 53, 4455-4460.	1.8	7
76	Local elasticity in nonlinear rheology of interacting colloidal glasses revealed by neutron scattering and rheometry. Physical Chemistry Chemical Physics, 2019, 21, 38-45.	1.3	7
77	Quantitative examination of a fundamental assumption in small-angle neutron scattering studies of deformed polymer melts. Polymer, 2020, 204, 122698.	1.8	7
78	Synthesis of Poly(ionic Liquid)s-block-poly(methyl Methacrylate) Copolymer-Grafted Silica Particle Brushes with Enhanced CO₂ Permeability and Mechanical Performance. Langmuir, 2021, 37, 10875-10881.	1.6	7
79	Spatiotemporal mapping of mesoscopic liquid dynamics. Physical Review E, 2021, 103, 022609.	0.8	6
80	Conduction below 100ÂÂ°C in nominal Li6ZnNb4O14. Journal of Materials Science, 2016, 51, 854-860.	1.7	5
81	Rotational Dynamics of an Amphidynamic Zirconium Metalâ€“Organic Framework Determined by Dielectric Spectroscopy. Journal of Physical Chemistry Letters, 2021, 12, 5644-5648.	2.1	5
82	Spatial correlations of entangled polymer dynamics. Physical Review E, 2021, 104, 024503.	0.8	5
83	Design, synthesis, and characterization of lightly sulfonated multigraft acrylate-based copolymer superelastomers. RSC Advances, 2018, 8, 5090-5098.	1.7	4
84	Polyamidoxime chain length drives emergent metal-binding phenomena. Physical Chemistry Chemical Physics, 2019, 21, 554-560.	1.3	4
85	Uncommon nonlinear rheological phenomenology in uniaxial extension of polystyrene solutions and melts. Soft Matter, 2020, 16, 3705-3716.	1.2	4
86	An exact inversion method for extracting orientation ordering by small-angle scattering. Physical Chemistry Chemical Physics, 2021, 23, 4120-4132.	1.3	4
87	EXPANSE: A time-of-flight EXPanded Angle Neutron Spin Echo spectrometer at the Second Target Station of the Spallation Neutron Source. Review of Scientific Instruments, 2022, 93, .	0.6	4
88	Rheological studies of tautomerization kinetics in supercooled glibenclamide drug. Physical Review E, 2012, 86, 067104.	0.8	3
89	Ionic Transport and Dielectric Relaxation in Polymer Electrolytes. Advances in Dielectrics, 2016, , 131-156.	1.2	3
90	Elucidating the impact of extreme nanoscale confinement on segmental and chain dynamics of unentangled poly(cis-1,4-isoprene). European Physical Journal E, 2019, 42, 137.	0.7	3

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91	Determining population densities in bimodal micellar solutions using contrast-variation small angle neutron scattering. Journal of Chemical Physics, 2020, 153, 184902.	1.2	3
92	Quantification of Deformation-Induced Concentration Fluctuations in Polymeric Liquids by Small-Angle Neutron Scattering. Macromolecules, 2021, 54, 3531-3542.	2.2	3
93	Small angle scattering of diblock copolymers profiled by machine learning. Journal of Chemical Physics, 2022, 156, 131101.	1.2	3
94	Comment on â€œRelating Chain Conformations to Extensional Stress in Entangled Polymer Meltsâ€• Physical Review Letters, 2019, 122, 059803.	2.9	1
95	Modular Approach for the Synthesis of Bottlebrush Diblock Copolymers from Poly(Glycidyl) Tj ETQq1 1 0.784314 rgBT /Overlock 10 T 5 488-497.	2.2	1
96	Low-frequency dynamics in ionic liquids: Comparison of experiments and the random barrier model. Physical Chemistry Chemical Physics, 0, , .	1.3	1
97	Strain heterogeneity in sheared colloids revealed by neutron scattering. Physical Chemistry Chemical Physics, 2018, 20, 6050-6054.	1.3	0
98	Spatial correlation functions of paracrystals with radial symmetry. Physical Review E, 2020, 102, 032110.	0.8	0
99	Ion Atmosphere of Wormlike Micelles Profiled by Contrast Variation Small-Angle Neutron Scattering. ACS Macro Letters, 2022, 11, 66-71.	2.3	0
100	Decoding polymer self-dynamics using a two-step approach. Physical Review E, 2022, 106, .	0.8	0