

Yangyang Wang

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/977678/publications.pdf>

Version: 2024-02-01

100
papers

3,278
citations

136950

32
h-index

161849

54
g-index

101
all docs

101
docs citations

101
times ranked

3325
citing authors

#	ARTICLE	IF	CITATIONS
1	New theoretical considerations in polymer rheology: Elastic breakdown of chain entanglement network. <i>Journal of Chemical Physics</i> , 2007, 127, 064903.	3.0	163
2	Superstretchable, Self-Healing Polymeric Elastomers with Tunable Properties. <i>Advanced Functional Materials</i> , 2018, 28, 1800741.	14.9	162
3	Ion Conduction in Polymerized Ionic Liquids with Different Pendant Groups. <i>Macromolecules</i> , 2015, 48, 4461-4470.	4.8	158
4	Decoupling of Ionic Transport from Segmental Relaxation in Polymer Electrolytes. <i>Physical Review Letters</i> , 2012, 108, 088303.	7.8	139
5	Examination of the fundamental relation between ionic transport and segmental relaxation in polymer electrolytes. <i>Polymer</i> , 2014, 55, 4067-4076.	3.8	136
6	Effect of Molecular Weight on the Ion Transport Mechanism in Polymerized Ionic Liquids. <i>Macromolecules</i> , 2016, 49, 4557-4570.	4.8	121
7	Decoupling of ionic conductivity from structural dynamics in polymerized ionic liquids. <i>Soft Matter</i> , 2014, 10, 3536-3540.	2.7	120
8	Resolving the Grain Boundary and Lattice Impedance of Hot-Pressed $\text{Li}_{7-x}\text{La}_3\text{Zr}_2\text{O}_{12-x}$ Garnet Electrolytes. <i>ChemElectroChem</i> , 2014, 1, 375-378.	3.4	112
9	Chain and Segmental Dynamics of Poly(2-vinylpyridine) Nanocomposites. <i>Macromolecules</i> , 2013, 46, 4168-4173.	4.8	92
10	Examination of methods to determine free-ion diffusivity and number density from analysis of electrode polarization. <i>Physical Review E</i> , 2013, 87, 042308.	2.1	84
11	Elastic Breakup in Uniaxial Extension of Entangled Polymer Melts. <i>Physical Review Letters</i> , 2007, 99, 237801.	7.8	83
12	Porous liquid zeolites: hydrogen bonding-stabilized H-ZSM-5 in branched ionic liquids. <i>Nanoscale</i> , 2019, 11, 1515-1519.	5.6	82
13	New Experiments for Improved Theoretical Description of Nonlinear Rheology of Entangled Polymers. <i>Macromolecules</i> , 2013, 46, 3147-3159.	4.8	70
14	From elastic deformation to terminal flow of a monodisperse entangled melt in uniaxial extension. <i>Journal of Rheology</i> , 2008, 52, 1275-1290.	2.6	66
15	High Pressure as a Key Factor to Identify the Conductivity Mechanism in Protic Ionic Liquids. <i>Physical Review Letters</i> , 2013, 111, 225703.	7.8	65
16	Exploring stress overshoot phenomenon upon startup deformation of entangled linear polymeric liquids. <i>Journal of Rheology</i> , 2009, 53, 1389-1401.	2.6	62
17	Effect of Polar Interactions on Polymer Dynamics. <i>Macromolecules</i> , 2012, 45, 8430-8437.	4.8	59
18	Dielectric Relaxation and Rheological Behavior of Supramolecular Polymeric Liquid. <i>Macromolecules</i> , 2013, 46, 3160-3166.	4.8	56

#	ARTICLE	IF	CITATIONS
19	Design of superionic polymers—New insights from Walden plot analysis. <i>Solid State Ionics</i> , 2014, 262, 782-784.	2.7	54
20	Linear Viscoelastic and Uniaxial Extensional Rheology of Alkali Metal Neutralized Sulfonated Oligostyrene Ionomer Melts. <i>Macromolecules</i> , 2012, 45, 481-490.	4.8	53
21	Interplay Between Hydrophobic Aggregation and Charge Transport in the Ionic Liquid Methyltrioctylammonium Bis(trifluoromethylsulfonyl)imide. <i>Journal of Physical Chemistry B</i> , 2014, 118, 783-790.	2.6	47
22	Design of superionic polymer electrolytes. <i>Current Opinion in Chemical Engineering</i> , 2015, 7, 113-119.	7.8	46
23	Salient Features in Uniaxial Extension of Polymer Melts and Solutions: Progressive Loss of Entanglements, Yielding, Non-Gaussian Stretching, and Rupture. <i>Macromolecules</i> , 2011, 44, 5427-5435.	4.8	43
24	Fingerprinting Molecular Relaxation in Deformed Polymers. <i>Physical Review X</i> , 2017, 7, .	8.9	41
25	Surpassing the stiffness-extensibility trade-off of elastomers via mastering the hydrogen-bonding clusters. <i>Matter</i> , 2022, 5, 237-252.	10.0	40
26	Molecular Dynamics Investigation of the Relaxation Mechanism of Entangled Polymers after a Large Step Deformation. <i>ACS Macro Letters</i> , 2018, 7, 190-195.	4.8	39
27	Basic characteristics of uniaxial extension rheology: Comparing monodisperse and bidisperse polymer melts. <i>Journal of Rheology</i> , 2011, 55, 1247-1270.	2.6	37
28	Observation of highly decoupled conductivity in protic ionic conductors. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 9123-9127.	2.8	37
29	Fluorinated bottlebrush polymers based on poly(trifluoroethyl methacrylate): synthesis and characterization. <i>Polymer Chemistry</i> , 2016, 7, 680-688.	3.9	37
30	Letter to the Editor: Sufficiently entangled polymers do show shear strain localization at high enough Weissenberg numbers. <i>Journal of Rheology</i> , 2014, 58, 1059-1069.	2.6	36
31	Observation of the slow, Debye-like relaxation in hydrogen-bonded liquids by dynamic light scattering. <i>Journal of Chemical Physics</i> , 2014, 140, 104510.	3.0	35
32	Ionic Conductivity and Glass Transition of Phosphoric Acids. <i>Journal of Physical Chemistry B</i> , 2013, 117, 8003-8009.	2.6	34
33	All acrylic-based thermoplastic elastomers with high upper service temperature and superior mechanical properties. <i>Polymer Chemistry</i> , 2017, 8, 5741-5748.	3.9	34
34	Dynamic-Mechanical and Dielectric Evidence of Long-Lived Mesoscale Organization in Ionic Liquids. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 3544-3548.	4.6	33
35	Rupture in rapid uniaxial extension of linear entangled melts. <i>Rheologica Acta</i> , 2010, 49, 1179-1185.	2.4	31
36	Ionic Transport, Microphase Separation, and Polymer Relaxation in Poly(propylene glycol) and Lithium Perchlorate Mixtures. <i>Macromolecules</i> , 2013, 46, 9380-9389.	4.8	31

#	ARTICLE	IF	CITATIONS
37	Study of segmental dynamics and ion transport in polymer-ceramic composite electrolytes by quasi-elastic neutron scattering. <i>Molecular Systems Design and Engineering</i> , 2019, 4, 379-385.	3.4	31
38	Synthesis and Characterization of Ureidopyrimidone Telechelics by CuAAC "Click" Reaction: Effect of T_g and Polarity. <i>Macromolecules</i> , 2014, 47, 5040-5050.	4.8	30
39	Polymer-Ceramic Composite Electrolytes for Lithium Batteries: A Comparison between the Single-Ion-Conducting Polymer Matrix and Its Counterpart. <i>ACS Applied Energy Materials</i> , 2020, 3, 8871-8881.	5.1	30
40	All-Acrylic Multigraft Copolymers: Effect of Side Chain Molecular Weight and Volume Fraction on Mechanical Behavior. <i>Industrial & Engineering Chemistry Research</i> , 2015, 54, 9566-9576.	3.7	24
41	Heterogeneous Nature of Relaxation Dynamics of Room-Temperature Ionic Liquids (EMIm) ₂ [Co(NCS) ₄] and (BMIm) ₂ [Co(NCS) ₄]. <i>Journal of Physical Chemistry C</i> , 2015, 119, 20363-20368.	3.1	24
42	Graphene Oxide as a Radical Initiator: Free Radical and Controlled Radical Polymerization of Sodium 4-Vinylbenzenesulfonate with Graphene Oxide. <i>ACS Macro Letters</i> , 2016, 5, 199-202.	4.8	24
43	Fabrication and characterization of poly(L-lactic acid) gels induced by fibrous complex crystallization with solvents. <i>Polymer</i> , 2014, 55, 4369-4378.	3.8	23
44	Helical Poly(5-alkyl-2,3-thiophene)s: Controlled Synthesis and Structure Characterization. <i>Macromolecules</i> , 2016, 49, 4691-4698.	4.8	23
45	Molecular View on Mechanical Reinforcement in Polymer Nanocomposites. <i>Physical Review Letters</i> , 2021, 126, 117801.	7.8	23
46	Proton Transport in Imidazoles: Unraveling the Role of Supramolecular Structure. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 3961-3965.	4.6	21
47	Structural properties of the evolution of CTAB/NaSal micelles investigated by SANS and rheometry. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 18346-18351.	2.8	21
48	Addition of Short Polymer Chains Mechanically Reinforces Glassy Poly(2-vinylpyridine)-Silica Nanoparticle Nanocomposites. <i>ACS Applied Nano Materials</i> , 2020, 3, 3427-3438.	5.0	21
49	Characterizing State of Chain Entanglement in Entangled Polymer Solutions during and after Large Shear Deformation. <i>Macromolecules</i> , 2012, 45, 2514-2521.	4.8	20
50	Polymerized ionic liquids: Effects of counteranions on ion conduction and polymerization kinetics. <i>Journal of Polymer Science Part A</i> , 2018, 56, 1346-1357.	2.3	20
51	Characterization of microscopic deformation through two-point spatial correlation functions. <i>Physical Review E</i> , 2018, 97, 012605.	2.1	18
52	All-acrylic superelastomers: facile synthesis and exceptional mechanical behavior. <i>Polymer Chemistry</i> , 2018, 9, 160-168.	3.9	18
53	Dynamic crossover and the Debye-Stokes-Einstein relation in liquid N,N-diethyl-3-methylbenzamide (DEET). <i>Soft Matter</i> , 2013, 9, 10373.	2.7	17
54	Chain flexibility and glass transition temperatures of poly(n-alkyl (meth)acrylate)s: Implications of tacticity and chain dynamics. <i>Polymer</i> , 2021, 213, 123207.	3.8	17

#	ARTICLE	IF	CITATIONS
55	Communication: Influence of nanophase segregation on ion transport in room temperature ionic liquids. <i>Journal of Chemical Physics</i> , 2016, 144, 151104.	3.0	16
56	Proton Conductivity in Phosphoric Acid: The Role of Quantum Effects. <i>Physical Review Letters</i> , 2016, 117, 156001.	7.8	16
57	Reconstruction of three-dimensional anisotropic structure from small-angle scattering experiments. <i>Physical Review E</i> , 2017, 96, 022612.	2.1	16
58	Ionic Conductivity Enhancement of Polymer Electrolytes by Directed Crystallization. <i>ACS Macro Letters</i> , 2022, 11, 595-602.	4.8	16
59	Influence of side chain isomerism on the rigidity of poly(3-alkylthiophenes) in solutions revealed by neutron scattering. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 7745-7749.	2.8	15
60	Phosphonium-Based Polyzwitterions: Influence of Ionic Structure and Association on Mechanical Properties. <i>Macromolecules</i> , 2020, 53, 11009-11018.	4.8	15
61	Polymer-Grafted Porous Silica Nanoparticles with Enhanced CO ₂ Permeability and Mechanical Performance. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 27411-27418.	8.0	14
62	Decoupling of ion conductivity from segmental dynamics in oligomeric ethylene oxide functionalized oxanorbornene dicarboximide homopolymers. <i>Polymer</i> , 2017, 116, 218-225.	3.8	13
63	Scaling Behavior of Anisotropy Relaxation in Deformed Polymers. <i>Physical Review Letters</i> , 2018, 121, 117801.	7.8	13
64	Charge Transport in Imidazolium-Based Homo- and Triblock Poly(ionic liquid)s. <i>Macromolecules</i> , 2019, 52, 620-628.	4.8	13
65	Enhanced Rotation by Ground State Destabilization in Amphidynamic Crystals of a Dipolar 2,3-Difluorophenylene Rotator as Established by Solid State ² H NMR and Dielectric Spectroscopy. <i>Journal of Physical Chemistry C</i> , 2020, 124, 15391-15398.	3.1	12
66	Determining Gyration Tensor of Orienting Macromolecules through Their Scattering Signature. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 3978-3984.	4.6	11
67	Enzyme Induced Formation of Monodisperse Hydrogel Nanoparticles Tunable in Size. <i>Chemistry of Materials</i> , 2015, 27, 2557-2565.	6.7	10
68	Chain conformation of polymer melts with associating groups. <i>Journal of Physics Communications</i> , 2019, 3, 035007.	1.2	10
69	Upcycling of semicrystalline polymers by compatibilization: mechanism and location of compatibilizers. <i>RSC Advances</i> , 2022, 12, 10886-10894.	3.6	10
70	Letter to the editor: Cone partitioned plate (CPP) vs circular couette. <i>Journal of Rheology</i> , 2012, 56, 675-681.	2.6	9
71	Orientalional Distribution Function of Aligned Elongated Molecules and Particulates Determined from Their Scattering Signature. <i>ACS Macro Letters</i> , 2019, 8, 1257-1262.	4.8	9
72	CENTAUR™ The small- and wide-angle neutron scattering diffractometer/spectrometer for the Second Target Station of the Spallation Neutron Source. <i>Review of Scientific Instruments</i> , 2022, 93, .	1.3	9

#	ARTICLE	IF	CITATIONS
73	Rheological Study of Mutarotation of Fructose in Anhydrous State. <i>Journal of Physical Chemistry B</i> , 2013, 117, 1475-1479.	2.6	8
74	Study of the Segmental Dynamics and Ion Transport of Solid Polymer Electrolytes in the Semi-crystalline State. <i>Frontiers in Chemistry</i> , 2020, 8, 592604.	3.6	8
75	Glassy dynamics of hydrogen-bonded heteroditopic molecules. <i>Polymer</i> , 2012, 53, 4455-4460.	3.8	7
76	Local elasticity in nonlinear rheology of interacting colloidal glasses revealed by neutron scattering and rheometry. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 38-45.	2.8	7
77	Quantitative examination of a fundamental assumption in small-angle neutron scattering studies of deformed polymer melts. <i>Polymer</i> , 2020, 204, 122698.	3.8	7
78	Synthesis of Poly(ionic Liquid)- <i>block</i> -poly(methyl Methacrylate) Copolymer-Grafted Silica Particle Brushes with Enhanced CO ₂ Permeability and Mechanical Performance. <i>Langmuir</i> , 2021, 37, 10875-10881.	3.5	7
79	Spatiotemporal mapping of mesoscopic liquid dynamics. <i>Physical Review E</i> , 2021, 103, 022609.	2.1	6
80	Conduction below 100 Å°C in nominal Li ₆ ZnNb ₄ O ₁₄ . <i>Journal of Materials Science</i> , 2016, 51, 854-860.	3.7	5
81	Rotational Dynamics of an Amphidynamic Zirconium Metal-Organic Framework Determined by Dielectric Spectroscopy. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 5644-5648.	4.6	5
82	Spatial correlations of entangled polymer dynamics. <i>Physical Review E</i> , 2021, 104, 024503.	2.1	5
83	Design, synthesis, and characterization of lightly sulfonated multigraft acrylate-based copolymer superelastomers. <i>RSC Advances</i> , 2018, 8, 5090-5098.	3.6	4
84	Polyamidoxime chain length drives emergent metal-binding phenomena. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 554-560.	2.8	4
85	Uncommon nonlinear rheological phenomenology in uniaxial extension of polystyrene solutions and melts. <i>Soft Matter</i> , 2020, 16, 3705-3716.	2.7	4
86	An exact inversion method for extracting orientation ordering by small-angle scattering. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 4120-4132.	2.8	4
87	EXPANSE: A time-of-flight EXPanded Angle Neutron Spin Echo spectrometer at the Second Target Station of the Spallation Neutron Source. <i>Review of Scientific Instruments</i> , 2022, 93, .	1.3	4
88	Rheological studies of tautomerization kinetics in supercooled glibenclamide drug. <i>Physical Review E</i> , 2012, 86, 067104.	2.1	3
89	Ionic Transport and Dielectric Relaxation in Polymer Electrolytes. <i>Advances in Dielectrics</i> , 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). <i>European Physical Journal E</i> , 2019, 42, 137.	1.6	3

#	ARTICLE	IF	CITATIONS
91	Determining population densities in bimodal micellar solutions using contrast-variation small angle neutron scattering. <i>Journal of Chemical Physics</i> , 2020, 153, 184902.	3.0	3
92	Quantification of Deformation-Induced Concentration Fluctuations in Polymeric Liquids by Small-Angle Neutron Scattering. <i>Macromolecules</i> , 2021, 54, 3531-3542.	4.8	3
93	Small angle scattering of diblock copolymers profiled by machine learning. <i>Journal of Chemical Physics</i> , 2022, 156, 131101.	3.0	3
94	Comment on "Relating Chain Conformations to Extensional Stress in Entangled Polymer Melts". <i>Physical Review Letters</i> , 2019, 122, 059803.	7.8	1
95	Modular Approach for the Synthesis of Bottlebrush Diblock Copolymers from Poly(Glycidyl) Ether. <i>Macromolecules</i> , 2019, 52, 488-497.	4.8	1
96	Low-frequency dynamics in ionic liquids: Comparison of experiments and the random barrier model. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 1055-1061.	2.8	1
97	Strain heterogeneity in sheared colloids revealed by neutron scattering. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 6050-6054.	2.8	0
98	Spatial correlation functions of paracrystals with radial symmetry. <i>Physical Review E</i> , 2020, 102, 032110.	2.1	0
99	Ion Atmosphere of Wormlike Micelles Profiled by Contrast Variation Small-Angle Neutron Scattering. <i>ACS Macro Letters</i> , 2022, 11, 66-71.	4.8	0
100	Decoding polymer self-dynamics using a two-step approach. <i>Physical Review E</i> , 2022, 106, .	2.1	0