Shi-Qing Wang

List of Publications by Year
in descending order

66 papers	2,716 citations	136950 32 h-index	182427 51 g-index
74 all docs	74 docs citations	74 times ranked	1242 citing authors

#	Article	IF	Citations
1	Nanoconfined Crystallization in Poly(lactic acid) (PLA) and Poly(ethylene terephthalate) (PET) Induced by Various Forms of Premeltâ€Deformation. Macromolecular Rapid Communications, 2023, 44, .	3.9	3
2	Inducing nano-confined crystallization in PLLA and PET by elastic melt stretching. Soft Matter, 2021, 17, 1457-1462.	2.7	14
3	Examining an Alternative Molecular Mechanism To Toughen Glassy Polymers. Macromolecules, 2020, 53, 323-333.	4.8	11
4	Double Yielding in Deformation of Semicrystalline Polymers. Macromolecular Chemistry and Physics, 2020, 221, 2000151.	2.2	7
5	Inhomogeneous chain relaxation of entangled polymer melts from stepwise planar extension in absence of free surface. Journal of Rheology, 2020, 64, 1251-1262.	2.6	2
6	Uncommon nonlinear rheological phenomenology in uniaxial extension of polystyrene solutions and melts. Soft Matter, 2020, 16, 3705-3716.	2.7	4
7	Crazing and yielding in glassy polymers of high molecular weight. Polymer, 2020, 197, 122445.	3.8	33
8	Why Is Crystalline Poly(lactic acid) Brittle at Room Temperature?. Macromolecules, 2019, 52, 5429-5441.	4.8	114
9	Exploring rheological responses to uniaxial stretching of various entangled polyisoprene melts. Journal of Rheology, 2019, 63, 763-771.	2.6	6
10	Characterizing effects of fast melt deformation on entangled polymers in their glassy state. Journal of Chemical Physics, 2019, 151, 124906.	3.0	3
11	Brittleâ€ductile transition in uniaxial compression of polymer glasses. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 758-770.	2.1	17
12	From Wall Slip to Bulk Shear Banding in Entangled Polymer Solutions. Macromolecular Chemistry and Physics, 2019, 220, 1800327.	2.2	9
13	Letter to the Editor: Melt rupture unleashed by few chain scission events in fully stretched strands. Journal of Rheology, 2019, 63, 105-107.	2.6	8
14	Chain Network: Key to the Ductile Behavior of Polymer Glasses. Macromolecules, 2018, 51, 1666-1673.	4.8	19
15	Strain localization during squeeze of an entangled polymer melt under constant force. Journal of Rheology, 2018, 62, 491-499.	2.6	7
16	How and Why Polymer Glasses Lose Their Ductility Due to Plasticizers. Macromolecules, 2017, 50, 2024-2032.	4.8	14
17	Effects of Molecular Weight Reduction on Brittleâ€"Ductile Transition and Elastic Yielding Due to Noninvasive Î³ Irradiation on Polymer Glasses. Macromolecules, 2017, 50, 2447-2455.	4.8	4
18	Origin of mechanical stress and rising internal energy during fast uniaxial extension of SBR melts. Polymer, 2017, 124, 68-77.	3.8	7

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19	Watching shear thinning in creep: Entanglement-disentanglement transition. Polymer, 2017, 125, 254-264.	3.8	6
20	Entangled Linear Polymer Solutions at High Shear: From Strain Softening to Hardening. Macromolecules, 2016, 49, 9647-9654.	4.8	11
21	Delineating nature of stress responses during ductile uniaxial extension of polycarbonate glass. Polymer, 2016, 89, 143-153.	3.8	11
22	Experiments-inspired molecular modeling of yielding and failure of polymer glasses under large deformation. , 2016, , 395-424.		7
23	Nonlinear stress relaxation behavior of ductile polymer glasses from large extension and compression. Polymer, 2015, 81, 129-139.	3.8	19
24	Nonlinear rheology of entangled polymers at turning point. Soft Matter, 2015, 11, 1454-1458.	2.7	26
25	Mapping Brittle and Ductile Behaviors of Polymeric Glasses under Large Extension. ACS Macro Letters, 2015, 4, 1110-1113.	4.8	23
26	Polystyrene Glasses under Compression: Ductile and Brittle Responses. ACS Macro Letters, 2015, 4, 1072-1076.	4.8	24
27	Shear banding in entangled polymers in the micron scale gap: a confocal-rheoscopic study. Soft Matter, 2015, 11, 8058-8068.	2.7	38
28	A phenomenological molecular model for yielding and brittle-ductile transition of polymer glasses. Journal of Chemical Physics, 2014, 141, 094905.	3.0	75
29	Rheology of Entangled Polymers Not Far above Glass Transition Temperature: Transient Elasticity and Intersegmental Viscous Stress. Macromolecules, 2014, 47, 5839-5850.	4.8	13
30	Strain Hardening During Uniaxial Compression of Polymer Glasses. ACS Macro Letters, 2014, 3, 784-787.	4.8	19
31	Elastic Yielding after Cold Drawing of Ductile Polymer Glasses. Macromolecules, 2014, 47, 3661-3671.	4.8	25
32	Mechanisms for different failure modes in startup uniaxial extension: Tensile (rupture-like) failure and necking. Journal of Rheology, 2013, 57, 223-248.	2.6	47
33	Crazing and strain localization of polycarbonate glass in creep. Polymer, 2013, 54, 3363-3369.	3.8	25
34	New Experiments for Improved Theoretical Description of Nonlinear Rheology of Entangled Polymers. Macromolecules, 2013, 46, 3147-3159.	4.8	70
35	Elastic Yielding in Cold Drawn Polymer Glasses Well below the Glass Transition Temperature. Physical Review Letters, 2013, 110, 065506.	7.8	26
36	Breakdown of Timeâ€“Temperature Equivalence in Startup Uniaxial Extension of Entangled Polymer Melts. Macromolecules, 2013, 46, 4151-4159.	4.8	13

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37	Is shear banding a metastable property of well-entangled polymer solutions?. Journal of Rheology, 2012, 56, 1413-1428.	2.6	34
38	How Melt-Stretching Affects Mechanical Behavior of Polymer Glasses. Macromolecules, 2012, 45, 6719-6732.	4.8	70
39	Basic characteristics of uniaxial extension rheology: Comparing monodisperse and bidisperse polymer melts. Journal of Rheology, 2011, 55, 1247-1270.	2.6	37
40	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.	4.8	43
41	Homogeneous Shear, Wall Slip, and Shear Banding of Entangled Polymeric Liquids in Simple-Shear Rheometry: A Roadmap of Nonlinear Rheology. Macromolecules, 2011, 44, 183-190.	4.8	113
42	How polymeric solvents control shear inhomogeneity in large deformations of entangled polymer mixtures. Rheologica Acta, 2011, 50, 97-105.	2.4	27
43	Elastic yielding after step shear and during LAOS in the absence of meniscus failure. Rheologica Acta, 2010, 49, 985-991.	2.4	17
44	Rupture in rapid uniaxial extension of linear entangled melts. Rheologica Acta, 2010, 49, 1179-1185.	2.4	31
45	Step Shear of Entangled Linear Polymer Melts: New Experimental Evidence for Elastic Yielding. Macromolecules, 2009, 42, 6261-6269.	4.8	69
46	Exploring Origins of Interfacial Yielding and Wall Slip in Entangled Linear Melts during Shear or after Shear Cessation. Macromolecules, 2009, 42, 2222-2228.	4.8	46
47	Universal scaling behavior in startup shear of entangled linear polymer melts. Journal of Rheology, 2009, 53, 617-629.	2.6	51
48	Exploring stress overshoot phenomenon upon startup deformation of entangled linear polymeric liquids. Journal of Rheology, 2009, 53, 1389-1401.	2.6	62
49	Shear banding or not in entangled DNA solutions depending on the level of entanglement. Journal of Rheology, 2009, 53, 73-83.	2.6	69
50	Exploring the transition from wall slip to bulk shearing banding in well-entangled DNA solutions. Soft Matter, 2009, 5, 780-789.	2.7	48
51	Large amplitude oscillatory shear behavior of entangled polymer solutions: Particle tracking velocimetric investigation. Journal of Rheology, 2008, 52, 341-358.	2.6	46
52	Universal scaling characteristics of stress overshoot in startup shear of entangled polymer solutions. Journal of Rheology, 2008, 52, 681-695.	2.6	56
53	Steady state measurements in stress plateau region of entangled polymer solutions: Controlled-rate and controlled-stress modes. Journal of Rheology, 2008, 52, 957-980.	2.6	77
54	Observations of Wall Slip and Shear Banding in an Entangled DNA Solution. Macromolecules, 2008, 41, 2644-2650.	4.8	67

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55	Banding in Simple Steady Shear of Entangled Polymer Solutions. Macromolecules, 2008, 41, 2663-2670.	4.8	111
56	Use of Particle-Tracking Velocimetry and Flow Birefringence To Study Nonlinear Flow Behavior of Entangled Wormlike Micellar Solution:â€‰ From Wall Slip, Bulk Disentanglement to Chain Scission. Macromolecules, 2008, 41, 1455-1464.	4.8	83
57	Elastic Breakup in Uniaxial Extension of Entangled Polymer Melts. Physical Review Letters, 2007, 99, 237801.	7.8	83
58	New theoretical considerations in polymer rheology: Elastic breakdown of chain entanglement network. Journal of Chemical Physics, 2007, 127, 064903.	3.0	163
59	On Chain Statistics and Entanglement of Flexible Linear Polymer Melts. Macromolecules, 2007, 40, 8684-8694.	4.8	38
60	What Are the Origins of Stress Relaxation Behaviors in Step Shear of Entangled Polymer Solutions?. Macromolecules, 2007, 40, 8031-8039.	4.8	60
61	A Coherent Description of Nonlinear Flow Behavior of Entangled Polymers as Related to Processing and Numerical Simulations. Macromolecular Materials and Engineering, 2007, 292, 15-22.	3.6	35
62	Interfacial stick-slip transition in simple shear of entangled melts. Journal of Rheology, 2006, 50, 641-654.	2.6	38
63	Direct Visualization of Continuous Simple Shear in Non-Newtonian Polymeric Fluids. Physical Review Letters, 2006, 96, 016001.	7.8	132
64	Nonlinear Flow Behavior of Entangled Polymer Solutions:Â Yieldlike Entanglementâ˜'Disentanglement Transition. Macromolecules, 2004, 37, 9083-9095.	4.8	89
65	Relaxation Dynamics in Mixtures of Long and Short Chains:Â Tube Dilation and Impeded Curvilinear Diffusion. Macromolecules, 2003, 36, 5355-5371.	4.8	92
66	Fast flow behavior of highly entangled monodisperse polymers. Rheologica Acta, 1998, 37, 415-423.	2.4	55