Sachin Shanbhag

List of Publications by Year
in descending order

57 papers	1,623 citations	331670 21 h-index	302126 39 g-index
59 all docs	59 docs citations	59 times ranked	1580 citing authors

#	Article	IF	Citations
1	Phenomenological model of viscoelasticity for systems undergoing solâ€"gel transition. Physics of Fluids, 2021, 33, .	4.0	14
2	Unentangled Vitrimer Melts: Interplay between Chain Relaxation and Cross-link Exchange Controls Linear Rheology. Macromolecules, 2021, 54, 3304-3320.	4.8	59
3	Probing nonmonotonic variation of terminal relaxation in star-linear blends with a fast slip link model. Journal of Rheology, 2021, 65, 943-957.	2.6	2
4	Spectral method for time-strain separable integral constitutive models in oscillatory shear. Physics of Fluids, 2021, 33, .	4.0	7
5	Stable and contactâ€free time stepping for dense rigid particle suspensions. International Journal for Numerical Methods in Fluids, 2020, 92, 94-113.	1.6	4
6	Analysis of linear viscoelasticity of aging soft glasses. Journal of Rheology, 2020, 64, 1197-1207.	2.6	10
7	Molecular Simulation of Tracer Diffusion and Self-Diffusion in Entangled Polymers. Macromolecules, 2020, 53, 4649-4658.	4.8	3
8	How Many Monodisperse Fractions are Required to Discretize Polydisperse Polymers?. Macromolecular Theory and Simulations, 2020, 29, 2000020.	1.4	4
9	Relaxation spectra using nonlinear Tikhonov regularization with a Bayesian criterion. Rheologica Acta, 2020, 59, 509-520.	2.4	16
10	Repulsion of Polar Gels From Water: Hydrationâ€Triggered Actuation, Selfâ€Folding, and 3D Fabrication. Advanced Materials Interfaces, 2020, 7, 2000509.	3.7	3
11	Temporal Coarse-Graining in a Slip Link Model for Polydisperse Polymer Melts. Frontiers in Physics, 2020, 8, .	2.1	1
12	Mathematical foundations of an ultra coarse-grained slip link model. Journal of Chemical Physics, 2019, 151, 044903.	3.0	7
13	Fast Slip Link Model for Bidisperse Linear Polymer Melts. Macromolecules, 2019, 52, 3092-3103.	4.8	14
14	pyReSpect: A Computer Program to Extract Discrete and Continuous Spectra from Stress Relaxation Experiments. Macromolecular Theory and Simulations, 2019, 28, 1900005.	1.4	25
15	Reliable estimates of error in self-diffusivity from molecular simulations using statistical bootstrap. Journal of Computational Methods in Sciences and Engineering, 2019, 19, 387-405.	0.2	0
16	Unusual dynamics of ring probes in linear matrices. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 169-177.	2.1	16
17	The electroneutrality constraint in nonlocal models. Journal of Chemical Physics, 2017, 147, 124102.	3.0	5
18	What Happens When Threading is Suppressed in Blends of Ring and Linear Polymers?. Polymers, 2016, 8, 409.	4.5	9

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19	Estimating self-diffusion in polymer melts: how long is a long enough molecular simulation?. Molecular Simulation, 2016, 42, 162-172.	2.0	6
20	Size of a polymer chain in an environment of quenched chains. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 1611-1619.	2.1	1
21	Micromechanics predictions for two-phased nanocomposites and three-phased multiscale composites: A review. Journal of Reinforced Plastics and Composites, 2015, 34, 605-623.	3.1	12
22	Inferring Comonomer Content Using Crystaf: Uncertainty Analysis. Macromolecular Theory and Simulations, 2014, 23, 464-472.	1.4	0
23	Self-diffusion in asymmetric ring-linear blends. Reactive and Functional Polymers, 2014, 80, 57-60.	4.1	17
24	Self-entanglement of a single polymer chain confined in a cubic box. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 1283-1290.	2.1	5
25	Mesh sensitivity in peridynamic simulations. Computer Physics Communications, 2014, 185, 181-193.	7.5	65
26	Extraction of self-diffusivity in systems with nondiffusive short-time behavior. Physical Review E, 2013, 88, 042816.	2.1	10
27	Inference of polymer structure by simultaneous analysis of chromatographic and rheological measurements. Rheologica Acta, 2013, 52, 973-988.	2.4	1
28	Analytical Rheology of Polymer Melts: State of the Art. ISRN Materials Science, 2012, 2012, 1-24.	1.0	17
29	Complex effects of molecular topology on diffusion in entangled biopolymer blends. Soft Matter, 2012, 8, 9177.	2.7	50
30	Superensembles of linear viscoelastic models of polymer melts. Journal of Rheology, 2012, 56, 279-303.	2.6	5
31	Analytical Rheology of Metallocene-Catalyzed Polyethylenes. Macromolecules, 2011, 44, 3656-3665.	4.8	23
32	Analytical rheology of branched polymer melts: Identifying and resolving degenerate structures. Journal of Rheology, 2011, 55, 177-194.	2.6	13
33	Percolation of Trace Amounts of Linear Polymers in Melts of Cyclic Polymers. Macromolecular Theory and Simulations, 2011, 20, 205-211.	1.4	14
34	Analytical rheology of blends of linear and star polymers using a Bayesian formulation. Rheologica Acta, 2010, 49, 411-422.	2.4	15
35	Conformational free energy of melts of ring-linear polymer blends. Physical Review E, 2009, 80, 041806.	2.1	14
36	On the thermodynamic driving force for nucleation at large undercoolings. Polymer, 2008, 49, 2515-2519.	3.8	3

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37	Selfâ€diffusion coefficient of ring polymers in semidilute solution. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 2370-2379.	2.1	20
38	A Temperatureâ€Driven Reversible Phase Transfer of 2â€(Diethylamino)ethanethiolâ€Stabilized CdTe Nanoparticles. Angewandte Chemie - International Edition, 2008, 47, 9875-9878.	13.8	52
39	Self-Diffusion in Binary Blends of Cyclic and Linear Polymers. Macromolecules, 2008, 41, 7239-7242.	4.8	52
40	On the relationship between two popular lattice models for polymer melts. Journal of Chemical Physics, 2008, 129, 144904.	3.0	17
41	Conformational properties of blends of cyclic and linear polymer melts. Physical Review E, 2008, 77, 011801.	2.1	54
42	Implications of microscopic simulations of polymer melts for mean-field tube theories. Molecular Physics, 2007, 105, 249-260.	1.7	11
43	Primitive Path Networks Generated by Annealing and Geometrical Methods:Â Insights into Differences. Macromolecules, 2007, 40, 2897-2903.	4.8	188
44	What Is the Size of a Ring Polymer in a Ringâ"Linear Blend?. Macromolecules, 2007, 40, 5995-6000.	4.8	65
45	Self-Organization of Te Nanorods into V-Shaped Assemblies: A Brownian Dynamics Study and Experimental Insights. ACS Nano, 2007, 1, 126-132.	14.6	20
46	Advances in modeling of polymer melt rheology. AICHE Journal, 2007, 53, 542-548.	3.6	36
47	Inverted colloidal crystals as three-dimensional microenvironments for cellular co-cultures. Journal of Materials Chemistry, 2006, 16, 3558.	6.7	74
48	Spontaneous CdTe â†' Alloy â†' CdS Transition of Stabilizer-Depleted CdTe Nanoparticles Induced by EDTA. Journal of the American Chemical Society, 2006, 128, 7036-7042.	13.7	42
49	On the Origin of a Permanent Dipole Moment in Nanocrystals with a Cubic Crystal Lattice:Â Effects of Truncation, Stabilizers, and Medium for CdS Tetrahedral Homologues. Journal of Physical Chemistry B, 2006, 110, 12211-12217.	2.6	83
50	Spontaneous Transformation of CdTe Nanoparticles into Angled Te Nanocrystals:Â From Particles and Rods to Checkmarks, X-Marks, and Other Unusual Shapes. Journal of the American Chemical Society, 2006, 128, 6730-6736.	13.7	89
51	Identification of Topological Constraints in Entangled Polymer Melts Using the Bond-Fluctuation Model. Macromolecules, 2006, 39, 2413-2417.	4.8	62
52	Diffusion in three-dimensionally ordered scaffolds with inverted colloidal crystal geometry. Biomaterials, 2005, 26, 5581-5585.	11.4	46
53	A hierarchical algorithm for predicting the linear viscoelastic properties of polymer melts with long-chain branching. Rheologica Acta, 2005, 44, 319-330.	2.4	103
54	Cell Distribution Profiles in Three-Dimensional Scaffolds with Inverted-Colloidal-Crystal Geometry: Modeling and Experimental Investigations. Small, 2005, 1, 1208-1214.	10.0	27

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55	Chain Retraction Potential in a Fixed Entanglement Network. Physical Review Letters, 2005, 94, 076001.	7.8	85
56	Cell Scaffolds with Three-Dimensional Order: The Role of Modelling in Establishing Design Guidelines. Australian Journal of Chemistry, 2005, 58, 713.	0.9	2
57	Subsurface colloids in groundwater contamination: a mathematical model. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2004, 232, 29-38.	4.7	25