

# Sachin Shanbhag

## List of Publications by Year in descending order

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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	Primitive Path Networks Generated by Annealing and Geometrical Methods: Insights into Differences. <i>Macromolecules</i> , 2007, 40, 2897-2903.	4.8	188
2	A hierarchical algorithm for predicting the linear viscoelastic properties of polymer melts with long-chain branching. <i>Rheologica Acta</i> , 2005, 44, 319-330.	2.4	103
3	Spontaneous Transformation of CdTe Nanoparticles into Angled Te Nanocrystals: From Particles and Rods to Checkmarks, X-Marks, and Other Unusual Shapes. <i>Journal of the American Chemical Society</i> , 2006, 128, 6730-6736.	13.7	89
4	Chain Retraction Potential in a Fixed Entanglement Network. <i>Physical Review Letters</i> , 2005, 94, 076001.	7.8	85
5	On the Origin of a Permanent Dipole Moment in Nanocrystals with a Cubic Crystal Lattice: Effects of Truncation, Stabilizers, and Medium for CdS Tetrahedral Homologues. <i>Journal of Physical Chemistry B</i> , 2006, 110, 12211-12217.	2.6	83
6	Inverted colloidal crystals as three-dimensional microenvironments for cellular co-cultures. <i>Journal of Materials Chemistry</i> , 2006, 16, 3558.	6.7	74
7	What Is the Size of a Ring Polymer in a Ring-Linear Blend?. <i>Macromolecules</i> , 2007, 40, 5995-6000.	4.8	65
8	Mesh sensitivity in peridynamic simulations. <i>Computer Physics Communications</i> , 2014, 185, 181-193.	7.5	65
9	Identification of Topological Constraints in Entangled Polymer Melts Using the Bond-Fluctuation Model. <i>Macromolecules</i> , 2006, 39, 2413-2417.	4.8	62
10	Unentangled Vitriimer Melts: Interplay between Chain Relaxation and Cross-link Exchange Controls Linear Rheology. <i>Macromolecules</i> , 2021, 54, 3304-3320.	4.8	59
11	Conformational properties of blends of cyclic and linear polymer melts. <i>Physical Review E</i> , 2008, 77, 011801.	2.1	54
12	A Temperature-Driven Reversible Phase Transfer of 2-(Diethylamino)ethanethiol-Stabilized CdTe Nanoparticles. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 9875-9878.	13.8	52
13	Self-Diffusion in Binary Blends of Cyclic and Linear Polymers. <i>Macromolecules</i> , 2008, 41, 7239-7242.	4.8	52
14	Complex effects of molecular topology on diffusion in entangled biopolymer blends. <i>Soft Matter</i> , 2012, 8, 9177.	2.7	50
15	Diffusion in three-dimensionally ordered scaffolds with inverted colloidal crystal geometry. <i>Biomaterials</i> , 2005, 26, 5581-5585.	11.4	46
16	Spontaneous CdTe Alloy CdS Transition of Stabilizer-Depleted CdTe Nanoparticles Induced by EDTA. <i>Journal of the American Chemical Society</i> , 2006, 128, 7036-7042.	13.7	42
17	Advances in modeling of polymer melt rheology. <i>AIChE Journal</i> , 2007, 53, 542-548.	3.6	36
18	Cell Distribution Profiles in Three-Dimensional Scaffolds with Inverted-Colloidal-Crystal Geometry: Modeling and Experimental Investigations. <i>Small</i> , 2005, 1, 1208-1214.	10.0	27

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19	Subsurface colloids in groundwater contamination: a mathematical model. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2004, 232, 29-38.	4.7	25
20	pyReSpect: A Computer Program to Extract Discrete and Continuous Spectra from Stress Relaxation Experiments. <i>Macromolecular Theory and Simulations</i> , 2019, 28, 1900005.	1.4	25
21	Analytical Rheology of Metallocene-Catalyzed Polyethylenes. <i>Macromolecules</i> , 2011, 44, 3656-3665.	4.8	23
22	Self-Organization of Te Nanorods into V-Shaped Assemblies: A Brownian Dynamics Study and Experimental Insights. <i>ACS Nano</i> , 2007, 1, 126-132.	14.6	20
23	Self-diffusion coefficient of ring polymers in semidilute solution. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2008, 46, 2370-2379.	2.1	20
24	On the relationship between two popular lattice models for polymer melts. <i>Journal of Chemical Physics</i> , 2008, 129, 144904.	3.0	17
25	Analytical Rheology of Polymer Melts: State of the Art. <i>ISRN Materials Science</i> , 2012, 2012, 1-24.	1.0	17
26	Self-diffusion in asymmetric ring-linear blends. <i>Reactive and Functional Polymers</i> , 2014, 80, 57-60.	4.1	17
27	Unusual dynamics of ring probes in linear matrices. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2017, 55, 169-177.	2.1	16
28	Relaxation spectra using nonlinear Tikhonov regularization with a Bayesian criterion. <i>Rheologica Acta</i> , 2020, 59, 509-520.	2.4	16
29	Analytical rheology of blends of linear and star polymers using a Bayesian formulation. <i>Rheologica Acta</i> , 2010, 49, 411-422.	2.4	15
30	Conformational free energy of melts of ring-linear polymer blends. <i>Physical Review E</i> , 2009, 80, 041806.	2.1	14
31	Percolation of Trace Amounts of Linear Polymers in Melts of Cyclic Polymers. <i>Macromolecular Theory and Simulations</i> , 2011, 20, 205-211.	1.4	14
32	Fast Slip Link Model for Bidisperse Linear Polymer Melts. <i>Macromolecules</i> , 2019, 52, 3092-3103.	4.8	14
33	Phenomenological model of viscoelasticity for systems undergoing sol-gel transition. <i>Physics of Fluids</i> , 2021, 33, .	4.0	14
34	Analytical rheology of branched polymer melts: Identifying and resolving degenerate structures. <i>Journal of Rheology</i> , 2011, 55, 177-194.	2.6	13
35	Micromechanics predictions for two-phased nanocomposites and three-phased multiscale composites: A review. <i>Journal of Reinforced Plastics and Composites</i> , 2015, 34, 605-623.	3.1	12
36	Implications of microscopic simulations of polymer melts for mean-field tube theories. <i>Molecular Physics</i> , 2007, 105, 249-260.	1.7	11

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37	Extraction of self-diffusivity in systems with nondiffusive short-time behavior. <i>Physical Review E</i> , 2013, 88, 042816.	2.1	10
38	Analysis of linear viscoelasticity of aging soft glasses. <i>Journal of Rheology</i> , 2020, 64, 1197-1207.	2.6	10
39	What Happens When Threading is Suppressed in Blends of Ring and Linear Polymers?. <i>Polymers</i> , 2016, 8, 409.	4.5	9
40	Mathematical foundations of an ultra coarse-grained slip link model. <i>Journal of Chemical Physics</i> , 2019, 151, 044903.	3.0	7
41	Spectral method for time-strain separable integral constitutive models in oscillatory shear. <i>Physics of Fluids</i> , 2021, 33, .	4.0	7
42	Estimating self-diffusion in polymer melts: how long is a long enough molecular simulation?. <i>Molecular Simulation</i> , 2016, 42, 162-172.	2.0	6
43	Superensembles of linear viscoelastic models of polymer melts. <i>Journal of Rheology</i> , 2012, 56, 279-303.	2.6	5
44	Self-entanglement of a single polymer chain confined in a cubic box. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2014, 52, 1283-1290.	2.1	5
45	The electroneutrality constraint in nonlocal models. <i>Journal of Chemical Physics</i> , 2017, 147, 124102.	3.0	5
46	Stable and contact-free time stepping for dense rigid particle suspensions. <i>International Journal for Numerical Methods in Fluids</i> , 2020, 92, 94-113.	1.6	4
47	How Many Monodisperse Fractions are Required to Discretize Polydisperse Polymers?. <i>Macromolecular Theory and Simulations</i> , 2020, 29, 2000020.	1.4	4
48	On the thermodynamic driving force for nucleation at large undercoolings. <i>Polymer</i> , 2008, 49, 2515-2519.	3.8	3
49	Molecular Simulation of Tracer Diffusion and Self-Diffusion in Entangled Polymers. <i>Macromolecules</i> , 2020, 53, 4649-4658.	4.8	3
50	Repulsion of Polar Gels From Water: Hydration-triggered Actuation, Self-folding, and 3D Fabrication. <i>Advanced Materials Interfaces</i> , 2020, 7, 2000509.	3.7	3
51	Probing nonmonotonic variation of terminal relaxation in star-linear blends with a fast slip link model. <i>Journal of Rheology</i> , 2021, 65, 943-957.	2.6	2
52	Cell Scaffolds with Three-Dimensional Order: The Role of Modelling in Establishing Design Guidelines. <i>Australian Journal of Chemistry</i> , 2005, 58, 713.	0.9	2
53	Inference of polymer structure by simultaneous analysis of chromatographic and rheological measurements. <i>Rheologica Acta</i> , 2013, 52, 973-988.	2.4	1
54	Size of a polymer chain in an environment of quenched chains. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2015, 53, 1611-1619.	2.1	1

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55	Temporal Coarse-Graining in a Slip Link Model for Polydisperse Polymer Melts. <i>Frontiers in Physics</i> , 2020, 8, .	2.1	1
56	Inferring Comonomer Content Using Crystaf: Uncertainty Analysis. <i>Macromolecular Theory and Simulations</i> , 2014, 23, 464-472.	1.4	0
57	Reliable estimates of error in self-diffusivity from molecular simulations using statistical bootstrap. <i>Journal of Computational Methods in Sciences and Engineering</i> , 2019, 19, 387-405.	0.2	0