Sanat K Kumar

List of Publications by Year
in descending order

267 papers	17,655 citations	14124 69 h-index	18944 123 g-index
273 all docs	273 docs citations	273 times ranked	13583 citing authors

#	Article	IF	Citations
1	Anisotropic self-assembly of spherical polymer-grafted nanoparticles. Nature Materials, 2009, 8, 354-359.	13.3	925
2	Nanocomposites with Polymer Grafted Nanoparticles. Macromolecules, 2013, 46, 3199-3214.	2.2	660
3	Quantitative equivalence between polymer nanocomposites and thin polymer films. Nature Materials, 2005, 4, 693-698.	13.3	656
4	50th Anniversary Perspective: Are Polymer Nanocomposites Practical for Applications?. Macromolecules, 2017, 50, 714-731.	2.2	491
5	Nanocomposites: Structure, Phase Behavior, and Properties. Annual Review of Chemical and Biomolecular Engineering, 2010, 1, 37-58.	3.3	424
6	Near-surface alignment of polymers in rubbed films. Nature, 1995, 374, 709-711.	13.7	373
7	Modelling the solubility of solids in supercritical fluids with density as the independent variable. Journal of Supercritical Fluids, 1988, 1, 15-22.	1.6	347
8	Advanced polymeric dielectrics for high energy density applications. Progress in Materials Science, 2016, 83, 236-269.	16.0	286
9	Chain conformation in ultrathin polymer films. Nature, 1999, 400, 146-149.	13.7	261
10	Rational design of all organic polymer dielectrics. Nature Communications, 2014, 5, 4845.	5.8	259
11	Immobilized Polymer Layers on Spherical Nanoparticles. Macromolecules, 2010, 43, 3415-3421.	2.2	244
12	Conformational Transitions of Spherical Polymer Brushes: Synthesis, Characterization, and Theory. Macromolecules, 2010, 43, 1564-1570.	2.2	243
13	Offâ€lattice Monte Carlo simulations of polymer melts confined between two plates. Journal of Chemical Physics, 1988, 89, 5206-5215.	1.2	238
14	Designed Interfaces in Polymer Nanocomposites: A Fundamental Viewpoint. MRS Bulletin, 2007, 32, 335-340.	1.7	234
15	The Critical Role of Solvent Evaporation on the Roughness of Spin-Cast Polymer Films. Macromolecules, 2001, 34, 4669-4672.	2.2	230
16	Concentration fluctuation induced dynamic heterogeneities in polymer blends. Journal of Chemical Physics, 1996, 105, 3777-3788.	1.2	211
17	â€œGel-likeâ€•Mechanical Reinforcement in Polymer Nanocomposite Melts. Macromolecules, 2010, 43, 1003-1010.	2.2	209
18	Mechanical Reinforcement of Polymer Nanocomposites from Percolation of a Nanoparticle Network. ACS Macro Letters, 2015, 4, 398-402.	2.3	189

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19	Controlling the thermomechanical properties of polymer nanocomposites by tailoring the polymer-particle interface. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 2944-2950.	2.4	184
20	Mechanical Reinforcement in Polymer Melts Filled with Polymer Grafted Nanoparticles. Macromolecules, 2011, 44, 7473-7477.	2.2	180
21	Network dynamics in nanofilled polymers. Nature Communications, 2016, 7, 11368.	5.8	180
22	Molecular dynamics simulations of polymer transport in nanocomposites. Journal of Chemical Physics, 2005, 122, 134910.	1.2	172
23	Ordered three-dimensional nanomaterials using DNA-prescribed and valence-controlled material voxels. Nature Materials, 2020, 19, 789-796.	13.3	172
24	Nature of the breakdown in the Stokes-Einstein relationship in a hard sphere fluid. Journal of Chemical Physics, 2006, 124, 214501.	1.2	166
25	Determination of the chemical potentials of polymeric systems from Monte Carlo simulations. Physical Review Letters, 1991, 66, 2935-2938.	2.9	162
26	Nanoparticle Diffusion in Polymer Nanocomposites. Physical Review Letters, 2014, 112, 108301.	2.9	157
27	Off-lattice Monte Carlo simulations of polymer melts confined between two plates. 2. Effects of chain length and plate separation. Macromolecules, 1990, 23, 2189-2197.	2.2	154
28	Perspective: Outstanding theoretical questions in polymer-nanoparticle hybrids. Journal of Chemical Physics, 2017, 147, 020901.	1.2	154
29	Macromolecules at surfaces: Research challenges and opportunities from tribology to biology. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 2755-2793.	2.4	151
30	Bound Polymer Layer in Nanocomposites. ACS Macro Letters, 2013, 2, 371-374.	2.3	151
31	Measurement and model prediction of solubilities of pure fatty acids, pure triglycerides, and mixtures of triglycerides in supercritical carbon dioxide. Journal of Chemical & Engineering Data, 1988, 33, 327-333.	1.0	148
32	Conformational Transitions of Adsorbed Proteins on Surfaces of Varying Polarity. Langmuir, 2010, 26, 10803-10811.	1.6	139
33	Designing exceptional gas-separation polymer membranes using machine learning. Science Advances, 2020, 6, eaaz4301.	4.7	132
34	Mechanical Properties of Thin Glassy Polymer Films Filled with Spherical Polymer-Grafted Nanoparticles. Nano Letters, 2012, 12, 3909-3914.	4.5	131
35	Chain Conformations and Bound-Layer Correlations in Polymer Nanocomposites. Physical Review Letters, 2007, 98, 128302.	2.9	129
36	Glass Transitions in Highly Attractive Highly Filled Polymer Nanocomposites. Macromolecules, 2012, 45, 1131-1135.	2.2	128

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37	Segmental Dynamics of Polymer Melts with Spherical Nanoparticles. ACS Macro Letters, 2014, 3, 773-777.	2.3	128
38	Selective transformations between nanoparticle superlattices via the reprogramming of DNA-mediated interactions. Nature Materials, 2015, 14, 840-847.	13.3	126
39	Effect of filler loading, geometry, dispersion and temperature on thermal conductivity of polymer nanocomposites. Polymer Testing, 2017, 57, 101-106.	2.3	126
40	A lattice model for the surface segregation of polymer chains due to molecular weight effects. Macromolecules, 1990, 23, 3584-3592.	2.2	125
41	Universal Viscosity Behavior of Polymer Nanocomposites. Physical Review Letters, 2012, 109, 198301.	2.9	123
42	Why is Recycling of Postconsumer Plastics so Challenging?. ACS Applied Polymer Materials, 2021, 3, 4325-4346.	2.0	120
43	Micellization and Phase Separation of Diblock and Triblock Model Surfactants. Langmuir, 2002, 18, 2940-2948.	1.6	116
44	Monte Carlo calculation of phase equilibria for a bead-spring polymeric model. Macromolecules, 1994, 27, 400-406.	2.2	114
45	Reversal of the isotopic effect in the surface behavior of binary polymer blends. Journal of Chemical Physics, 1993, 98, 4163-4173.	1.2	112
46	Modeling the anisotropic self-assembly of spherical polymer-grafted nanoparticles. Journal of Chemical Physics, 2009, 131, 221102.	1.2	111
47	Meanâ€field theoretical analysis of brushâ€coated nanoparticle dispersion in polymer matrices. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 351-358.	2.4	109
48	End grafted polymernanoparticles in a polymeric matrix: Effect of coverage and curvature. Soft Matter, 2011, 7, 1418-1425.	1.2	109
49	Role of Casting Solvent on Nanoparticle Dispersion in Polymer Nanocomposites. Macromolecules, 2014, 47, 5246-5255.	2.2	109
50	Segmental dynamics of miscible polymer blends: Comparison of the predictions of a concentration fluctuation model to experiment. Journal of Chemical Physics, 1999, 111, 6121-6128.	1.2	105
51	Chain Conformation in Ultrathin Polymer Films Using Small-Angle Neutron Scattering. Macromolecules, 2001, 34, 559-567.	2.2	105
52	Effective interactions between grafted nanoparticles in a polymer matrix. Soft Matter, 2012, 8, 5002.	1.2	104
53	Lattice Monte Carlo Simulations of Chain Conformations in Polymer Nanocomposites. Macromolecules, 2005, 38, 4495-4500.	2.2	103
54	Surface segregation in binary polymer mixtures: a lattice model. Macromolecules, 1991, 24, 4909-4917.	2.2	101

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55	Molecular Underpinnings of the Mechanical Reinforcement in Polymer Nanocomposites. Macromolecules, 2007, 40, 4059-4067.	2.2	101
56	Segmental Dynamics in PMMA-Grafted Nanoparticle Composites. Macromolecules, 2010, 43, 8275-8281.	2.2	100
57	Large Lattice Discretization Effects on the Phase Coexistence of Ionic Fluids. Physical Review Letters, 1999, 83, 2981-2984.	2.9	99
58	Nonequilibrium Accumulation of Surface Species and Triboelectric Charging in Single Component Particulate Systems. Physical Review Letters, 2008, 100, 188305.	2.9	98
59	Rheology of Miscible Blends:Â SAN and PMMAâ€. Macromolecules, 1998, 31, 8988-8997.	2.2	96
60	Role of Filler Shape and Connectivity on the Viscoelastic Behavior in Polymer Nanocomposites. Macromolecules, 2015, 48, 5433-5438.	2.2	96
61	Bound Layers â€œCloakâ€•Nanoparticles in Strongly Interacting Polymer Nanocomposites. ACS Nano, 2016, 10, 10960-10965.	7.3	96
62	Direct determination of phase behavior of square-well fluids. Journal of Chemical Physics, 2005, 123, 174505.	1.2	94
63	What Length Scales Control the Dynamics of Miscible Polymer Blends?. Macromolecules, 2003, 36, 10087-10094.	2.2	89
64	End Group Effects on Surface Properties of Polymers:Â Semiempirical Calculations and Comparison to Experimental Surface Tensions for Î±,Ï‰-Functional Poly(dimethylsiloxanes). Macromolecules, 1997, 30, 4481-4490.	2.2	88
65	Polymer-Grafted Nanoparticle Membranes with Controllable Free Volume. Macromolecules, 2017, 50, 7111-7120.	2.2	88
66	Focusing Nanocrystal Size Distributions via Production Control. Nano Letters, 2011, 11, 1976-1980.	4.5	86
67	Viscoelastic Properties of Polymer Melts from Equilibrium Molecular Dynamics Simulations. Macromolecules, 2005, 38, 650-653.	2.2	76
68	Surface segregation in polymer blends due to stiffness disparity. Journal of Chemical Physics, 1994, 100, 4691-4694.	1.2	72
69	Self-assembly of polymer-grafted nanoparticles in thin films. Soft Matter, 2014, 10, 786-794.	1.2	72
70	Rouse mode analysis of chain relaxation in polymer nanocomposites. Soft Matter, 2015, 11, 4123-4132.	1.2	72
71	Polymer Crystallization in Nanocomposites: Spatial Reorganization of Nanoparticles. Macromolecules, 2009, 42, 5741-5744.	2.2	70
72	A statistical mechanics based lattice model equation of state. Industrial & Engineering Chemistry Research, 1987, 26, 2532-2542.	1.8	68

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73	Polymer-Grafted-Nanoparticle Surfactants. Nano Letters, 2011, 11, 4569-4573.	4.5	68
74	Thermodynamics of Reversibly Associating Polymer Solutions. Physical Review Letters, 1999, 82, 5060-5063.	2.9	65
75	Structure of Polymer-Grafted Nanoparticle Melts. ACS Nano, 2020, 14, 15505-15516.	7.3	65
76	Amorphous Solidification in Polymer-Platelet Nanocomposites. Physical Review Letters, 2002, 89, 258301.	2.9	64
77	The effect of finite film thickness on the surface segregation in symmetric binary polymer mixtures. Journal of Chemical Physics, 1993, 99, 656-663.	1.2	63
78	Monte Carlo simulations of phase equilibria for a lattice homopolymer model. Journal of Chemical Physics, 1995, 102, 1014-1023.	1.2	63
79	Polymer Chain Behavior in Polymer Nanocomposites with Attractive Interactions. ACS Macro Letters, 2016, 5, 523-527.	2.3	63
80	Role of Grafting Mechanism on the Polymer Coverage and Self-Assembly of Hairy Nanoparticles. ACS Nano, 2017, 11, 7028-7035.	7.3	61
81	Mesoscale model of polymer melt structure: Self-consistent mapping of molecular correlations to coarse-grained potentials. Journal of Chemical Physics, 2005, 122, 104908.	1.2	60
82	Tunable Multiscale Nanoparticle Ordering by Polymer Crystallization. ACS Central Science, 2017, 3, 751-758.	5.3	60
83	Liquid Structure, Thermodynamics, and Mixing Behavior of Saturated Hydrocarbon Polymers. 1. Cohesive Energy Density and Internal Pressure. Macromolecules, 1998, 31, 6991-6997.	2.2	59
84	Segmental Dynamics of Head-to-Head Polypropylene and Polyisobutylene in Their Blend and Pure Components. Macromolecules, 2005, 38, 7721-7729.	2.2	58
85	Fluctuation-Driven Anisotropic Assembly in Nanoscale Systems. Nano Letters, 2013, 13, 2732-2737.	4.5	57
86	Tuning Selectivities in Gas Separation Membranes Based on Polymer-Grafted Nanoparticles. ACS Nano, 2020, 14, 17174-17183.	7.3	55
87	Self-Assembled Superstructures of Polymer-Grafted Nanoparticles: Effects of Particle Shape and Matrix Polymer. Journal of Physical Chemistry C, 2011, 115, 5566-5577.	1.5	54
88	Rouse Mode Analysis of Chain Relaxation in Homopolymer Melts. Macromolecules, 2014, 47, 6925-6931.	2.2	54
89	Enhanced Glassy State Mechanical Properties of Polymer Nanocomposites via Supramolecular Interactions. Nano Letters, 2015, 15, 5465-5471.	4.5	54
90	Diminishing Interfacial Effects with Decreasing Nanoparticle Size in Polymer-Nanoparticle Composites. Physical Review Letters, 2018, 121, 207801.	2.9	53

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91	Reversibility of the Adsorption of Lysozyme on Silica. Langmuir, 2011, 27, 11873-11882.	1.6	52
92	Designing DNA-grafted particles that self-assemble into desired crystalline structures using the genetic algorithm. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 18431-18435.	3.3	52
93	Optimal Chain Architectures for the Molecular Design of Functional Polymer Surfaces. Macromolecules, 2003, 36, 771-781.	2.2	50
94	Stabilizing colloidal crystals by leveraging void distributions. Nature Communications, 2014, 5, 4472.	5.8	50
95	Exchange Lifetimes of the Bound Polymer Layer on Silica Nanoparticles. ACS Macro Letters, 2019, 8, 166-171.	2.3	50
96	Unusual packing of soft-shelled nanocubes. Science Advances, 2019, 5, eaaw2399.	4.7	50
97	Solubility of polystyrene in supercritical fluids. Macromolecules, 1987, 20, 2550-2557.	2.2	49
98	Computer Simulations of Local Concentration Variations in Miscible Polymer Blends. Macromolecules, 2002, 35, 9211-9218.	2.2	49
99	Blockâ€Copolymerâ€Mediated Nanoparticle Dispersion and Assembly in Polymer Nanocomposites. Advanced Materials, 2014, 26, 4031-4036.	11.1	49
100	Lattice model for interphases in binary semicrystalline/amorphous polymer blends. Macromolecules, 1989, 22, 4098-4101.	2.2	48
101	Crystal-amorphous interphases in binary polymer blends. Macromolecules, 1991, 24, 3466-3468.	2.2	48
102	Do Inverse Monte Carlo Algorithms Yield Thermodynamically Consistent Interaction Potentials?. Industrial & Engineering Chemistry Research, 2006, 45, 5614-5618.	1.8	48
103	Dynamics of Miscible Polymer Blends:â€‰ Predicting the Dielectric Response. Macromolecules, 2007, 40, 5767-5775.	2.2	48
104	Dynamic Tuning of DNA-Nanoparticle Superlattices by Molecular Intercalation of Double Helix. Journal of the American Chemical Society, 2015, 137, 4030-4033.	6.6	48
105	Modeling Diffusion of Adsorbed Polymer with Explicit Solvent. Physical Review Letters, 2007, 98, 218301.	2.9	46
106	Simulating the miscibility of nanoparticles and polymer melts. Soft Matter, 2013, 9, 5417.	1.2	46
107	Behavior of isotopic, binary polymer blends in the vicinity of neutral surfaces: the effects of chain-length disparity. Macromolecules, 1991, 24, 3816-3820.	2.2	45
108	Free surfaces of polymer blends. II. Effects of molecular weight and applications to asymmetric polymer blends. Journal of Chemical Physics, 1993, 99, 4041-4050.	1.2	44

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109	Controlling the Thermomechanical Behavior of Nanoparticle/Polymer Films. ACS Nano, 2014, 8, 8163-8173.	7.3	44
110	Engineering Organization of DNA Nano-Chambers through Dimensionally Controlled and Multi-Sequence Encoded Differentiated Bonds. Journal of the American Chemical Society, 2020, 142, 17531-17542.	6.6	44
111	Enhanced Polymeric Dielectrics through Incorporation of Hydroxyl Groups. Macromolecules, 2014, 47, 1122-1129.	2.2	43
112	Miscible Polymer Blend Dynamics:Â Double Reptation Predictions of Linear Viscoelasticity in Model Blends of Polyisoprene and Poly(vinyl ethylene). Macromolecules, 2004, 37, 6994-7000.	2.2	42
113	Stoichiometric control of DNA-grafted colloid self-assembly. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4982-4987.	3.3	42
114	Lattice model for crystal-amorphous interphases in lamellar semicrystalline polymers: effects of tight-fold energy and chain incidence density. Macromolecules, 1989, 22, 3458-3465.	2.2	41
115	Self-Assembly of Monodisperse versus Bidisperse Polymer-Grafted Nanoparticles. ACS Macro Letters, 2016, 5, 790-795.	2.3	40
116	Liquid Structure, Thermodynamics, and Mixing Behavior of Saturated Hydrocarbon Polymers. 2. Pair Distribution Functions and the Regularity of Mixing. Macromolecules, 1998, 31, 6998-7002.	2.2	38
117	Network Effects on the Nonlinear Rheology of Polymer Nanocomposites. Macromolecules, 2008, 41, 5988-5991.	2.2	37
118	Quantitative analogy between polymer-grafted nanoparticles and patchy particles. Soft Matter, 2015, 11, 793-797.	1.2	36
119	Polyethylene Grafted Silica Nanoparticles Prepared via Surface-Initiated ROMP. ACS Macro Letters, 2019, 8, 228-232.	2.3	36
120	Interfacial Roughening Induced by Phase Separation. Physical Review Letters, 1996, 76, 1106-1109.	2.9	35
121	Dynamic Heterogeneity in Miscible Polymer Blends with Stiffness Disparity:Â Computer Simulations Using the Bond Fluctuation Model. Macromolecules, 2003, 36, 8567-8573.	2.2	35
122	Dynamics of Miscible Polymer Blends:â€‰ Role of Concentration Fluctuations on Characteristic Segmental Relaxation Times. Macromolecules, 2007, 40, 5759-5766.	2.2	35
123	Chemical potentials of polymer blends from Monte Carlo simulations: consequences on SANS-determined .chi. parameters. Macromolecules, 1994, 27, 260-271.	2.2	34
124	The effects of local stiffness disparity on the surface segregation from binary polymer blends. Journal of Chemical Physics, 1995, 103, 10332-10346.	1.2	34
125	Computer Simulations of Ionomer Self-Assembly and Dynamics. Macromolecules, 2007, 40, 4113-4118.	2.2	34
126	A lattice model for interphases in binary semicrystalline/amorphous polymer blends. 2. Effects of tight fold energy. Macromolecules, 1991, 24, 5414-5420.	2.2	33

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127	Phase transitions in thin films of symmetric binary polymer mixtures. Molecular Physics, 1994, 81, 867-872.	0.8	33
128	Design and discovery of materials guided by theory and computation. Npj Computational Materials, 2015, 1, .	3.5	33
129	Thermal and Structural Stability of Adsorbed Proteins. Biophysical Journal, 2010, 99, 1157-1165.	0.2	32
130	Universal two-step crystallization of DNA-functionalized nanoparticles. Soft Matter, 2010, 6, 6130.	1.2	32
131	Dispersing Grafted Nanoparticle Assemblies into Polymer Melts through Flow Fields. ACS Macro Letters, 2013, 2, 1051-1055.	2.3	32
132	Compatibilizing Immiscible Polymer Blends with Sparsely Grafted Nanoparticles. Macromolecules, 2020, 53, 10330-10338.	2.2	32
133	Fractionation of polymers with supercritical fluids. Fluid Phase Equilibria, 1986, 29, 373-382.	1.4	31
134	Monte Carlo simulations of endâ€grafted polymer matrices under poor solvent conditions. Journal of Chemical Physics, 1994, 101, 4312-4323.	1.2	31
135	Critical temperature shifts in thin polymer blend films. Journal of Chemical Physics, 1994, 100, 5367-5371.	1.2	31
136	Effect of the Hydrophilic Size on the Structural Phases of Aqueous Nonionic Gemini Surfactant Solutions. Langmuir, 2004, 20, 9061-9068.	1.6	31
137	Impact of the Distributions of Core Size and Grafting Density on the Self-Assembly of Polymer Grafted Nanoparticles. Macromolecules, 2017, 50, 7730-7738.	2.2	31
138	Coarse-grained molecular dynamics simulation of activated penetrant transport in glassy polymers. Soft Matter, 2018, 14, 440-447.	1.2	31
139	Athermal stiffness blends: A comparison of Monte Carlo simulations and integral equation theory. Journal of Chemical Physics, 1995, 103, 9460-9474.	1.2	30
140	Reinforcement of polychloroprene by grafted silica nanoparticles. Polymer, 2019, 171, 96-105.	1.8	30
141	Competing Ranges of Attractive and Repulsive Interactions in the Micellization of Model Surfactants. Langmuir, 2003, 19, 5164-5168.	1.6	27
142	Stability of Proteins Inside a Hydrophobic Cavity. Langmuir, 2013, 29, 8922-8928.	1.6	27
143	Structure and Dynamics of Octamethyl-POSS Nanoparticles. Journal of Physical Chemistry C, 2014, 118, 5579-5592.	1.5	27
144	Crazing of nanocomposites with polymer-tethered nanoparticles. Journal of Chemical Physics, 2016, 145, 094902.	1.2	27

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145	High-Frequency Mechanical Behavior of Pure Polymer-Grafted Nanoparticle Constructs. ACS Macro Letters, 2019, 8, 294-298.	2.3	27
146	Effects of Hairy Nanoparticles on Polymer Crystallization Kinetics. Macromolecules, 2019, 52, 9186-9198.	2.2	27
147	The chain length dependence of the chemical potentials of macromolecular systems at zero density: Exact calculations and Monte Carlo simulations. Journal of Chemical Physics, 1992, 96, 1490-1497.	1.2	26
148	Fluctuation-driven anisotropy in effective pair interactions between nanoparticles: Thiolated gold nanoparticles in ethane. Journal of Chemical Physics, 2014, 141, 154904.	1.2	26
149	Monte Carlo simulations of the free surface of polymer melts. Chemical Engineering Science, 1994, 49, 2899-2906.	1.9	25
150	Phase Separation in Nearly Symmetric Polymer Mixtures. Physical Review Letters, 1996, 77, 1512-1515.	2.9	24
151	Accelerated Local Dynamics in Matrix-Free Polymer Grafted Nanoparticles. Physical Review Letters, 2019, 123, 158003.	2.9	24
152	The one that got away. Nature, 1997, 386, 771-772.	13.7	23
153	Stability of Proteins on Hydrophilic Surfaces. Langmuir, 2015, 31, 1005-1010.	1.6	23
154	Nanoparticle Organization by Growing Polyethylene Crystal Fronts. ACS Macro Letters, 2019, 8, 1341-1346.	2.3	23
155	Universal Polymeric-to-Colloidal Transition in Melts of Hairy Nanoparticles. ACS Nano, 2021, 15, 16697-16708.	7.3	23
156	Free surfaces of polymer blends. I. Theoretical framework and application to symmetric polymer blends. Journal of Chemical Physics, 1993, 98, 6516-6525.	1.2	22
157	Pressure Effects on the Thermodynamics of Polymer Blends. Macromolecules, 2000, 33, 5285-5291.	2.2	22
158	Thermodynamic signature of the onset of caged dynamics in glass-forming liquids. Journal of Chemical Physics, 2002, 116, 865-868.	1.2	22
159	Relative stability of the FCC and HCP polymorphs with interacting polymers. Soft Matter, 2015, 11, 280-289.	1.2	22
160	Linear rheology of polymer nanocomposites with polymer-grafted nanoparticles. Polymer, 2017, 131, 104-110.	1.8	22
161	Size-dependent penetrant diffusion in polymer glasses. Soft Matter, 2018, 14, 4226-4230.	1.2	22
162	Modeling gas transport in polymer-grafted nanoparticle membranes. Soft Matter, 2019, 15, 424-432.	1.2	22

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163	Polymer Crystallization under Confinement by Well-Dispersed Nanoparticles. Macromolecules, 2020, 53, 10256-10266.	2.2	22
164	A modified real particle method for the calculation of the chemical potentials of molecular systems. Journal of Chemical Physics, 1992, 97, 3550-3556.	1.2	21
165	Compressibility Effects in the Analysis and Interpretation of Neutron Scattering Data from Polymer Blends. Macromolecules, 1996, 29, 764-773.	2.2	21
166	Enhancing Protein Stability by Adsorption onto Raftlike Lipid Domains. Journal of the American Chemical Society, 2009, 131, 7107-7111.	6.6	21
167	Pattern-Directed Phase Separation of Polymer-Grafted Nanoparticles in a Homopolymer Matrix. Macromolecules, 2016, 49, 3965-3974.	2.2	21
168	Molecular Simulations of Solute Transport in Polymer Melts. ACS Macro Letters, 2017, 6, 864-868.	2.3	21
169	Do Very Small POSS Nanoparticles Perturb s-PMMA Chain Conformations?. Macromolecules, 2018, 51, 5278-5293.	2.2	21
170	Polymer-Grafted Nanoparticles. Journal of Applied Physics, 2020, 128, .	1.1	21
171	Crystallization kinetics and nanoparticle ordering in semicrystalline polymer nanocomposites. Progress in Polymer Science, 2022, 128, 101527.	11.8	21
172	Surface Transitions for Confined Associating Mixtures. Physical Review Letters, 1998, 80, 1252-1255.	2.9	20
173	Surface Fluctuations Dominate the Slow Glassy Dynamics of Polymer-Grafted Colloid Assemblies. ACS Central Science, 2018, 4, 1179-1184.	5.3	20
174	Synthesis of polyisoprene, polybutadiene and Styrene Butadiene Rubber grafted silica nanoparticles by nitroxide-mediated polymerization. Polymer, 2020, 190, 122190.	1.8	20
175	On the Immobilized Polymer Fraction in Attractive Nanocomposites: T_g Gradient versus Interfacial Layer. Macromolecules, 2021, 54, 10289-10299.	2.2	20
176	Increase in the Chemical Potential of Syndiotactic Polypropylene upon Mixing with Atactic or Isotactic Polypropylene in the Melt. Macromolecules, 2002, 35, 3309-3311.	2.2	19
177	Multiscale Modeling of the Surfactant Mediated Synthesis and Supramolecular Assembly of Cobalt Nanodots. Physical Review Letters, 2004, 93, 188301.	2.9	19
178	Computer simulations of the conformations of strongly adsorbed chains at the solidâ€“liquid interface. Polymer, 2006, 47, 722-727.	1.8	19
179	Role of block copolymer adsorption versus bimodal grafting on nanoparticle self-assembly in polymer nanocomposites. Soft Matter, 2016, 12, 7241-7247.	1.2	19
180	Directionally Interacting Spheres and Rods Form Ordered Phases. ACS Nano, 2017, 11, 4950-4959.	7.3	19

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181	Morphologies of Polyisoprene-Grafted Silica Nanoparticles in Model Elastomers. Macromolecules, 2019, 52, 7638-7645.	2.2	19
182	Structural Properties of Bound Layer in Polymerâ€“Nanoparticle Composites. Macromolecules, 2020, 53, 7845-7850.	2.2	19
183	Hydration Effects on the Permselectivity-Conductivity Trade-Off in Polymer Electrolytes. Macromolecules, 2020, 53, 1014-1023.	2.2	19
184	Nanostructural features in silicaâ€“polyvinyl acetate nanocomposites characterized by small-angle scattering. Polymer, 2007, 48, 5734-5741.	1.8	17
185	Polymer Spherulitic Growth Kinetics Mediated by Nanoparticle Assemblies. Macromolecules, 2021, 54, 1063-1072.	2.2	17
186	Phase behavior of associating liquid mixtures. Physical Review E, 1998, 58, R12-R15.	0.8	16
187	Dominance of density variations in determining the molecular weight dependence of surface tensions of polymer melts. Advances in Colloid and Interface Science, 2001, 94, 33-38.	7.0	16
188	Solvent-mediated pathways to gelation and phase separation in suspensions of grafted nanoparticles. Soft Matter, 2009, 5, 4256.	1.2	16
189	Unexpected thermal annealing effects on the viscosity of polymer nanocomposites. Soft Matter, 2017, 13, 5341-5354.	1.2	16
190	Assembly of Polymer-Grafted Nanoparticles in Polymer Matrices. ACS Nano, 2020, 14, 13491-13499.	7.3	16
191	Direct Relationship between Dispersion and Crystallization Behavior in Poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 3	2.2	16
192	Quantitatively Modeling the Equilibrium Properties of Thiol-Decorated Gold Nanoparticles. Langmuir, 2008, 24, 8448-8451.	1.6	15
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