

Sanat K Kumar

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253
papers

14,743
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64
h-index

113
g-index

273
ext. papers

16,206
ext. citations

7.1
avg, IF

6.73
L-index

#	Paper	IF	Citations
253	Anisotropic self-assembly of spherical polymer-grafted nanoparticles. <i>Nature Materials</i> , 2009 , 8, 354-9	27	820
252	Quantitative equivalence between polymer nanocomposites and thin polymer films. <i>Nature Materials</i> , 2005 , 4, 693-8	27	599
251	Nanocomposites with Polymer Grafted Nanoparticles. <i>Macromolecules</i> , 2013 , 46, 3199-3214	5.5	570
250	50th Anniversary Perspective: Are Polymer Nanocomposites Practical for Applications?. <i>Macromolecules</i> , 2017 , 50, 714-731	5.5	375
249	Nanocomposites: structure, phase behavior, and properties. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2010 , 1, 37-58	8.9	371
248	Near-surface alignment of polymers in rubbed films. <i>Nature</i> , 1995 , 374, 709-711	50.4	332
247	Modelling the solubility of solids in supercritical fluids with density as the independent variable. <i>Journal of Supercritical Fluids</i> , 1988 , 1, 15-22	4.2	283
246	Chain conformation in ultrathin polymer films. <i>Nature</i> , 1999 , 400, 146-149	50.4	242
245	Immobilized Polymer Layers on Spherical Nanoparticles. <i>Macromolecules</i> , 2010 , 43, 3415-3421	5.5	225
244	Off-lattice Monte Carlo simulations of polymer melts confined between two plates. <i>Journal of Chemical Physics</i> , 1988 , 89, 5206-5215	3.9	217
243	Conformational Transitions of Spherical Polymer Brushes: Synthesis, Characterization, and Theory. <i>Macromolecules</i> , 2010 , 43, 1564-1570	5.5	209
242	Designed Interfaces in Polymer Nanocomposites: A Fundamental Viewpoint. <i>MRS Bulletin</i> , 2007 , 32, 335-340	3.4	207
241	Rational design of all organic polymer dielectrics. <i>Nature Communications</i> , 2014 , 5, 4845	17.4	206
240	The Critical Role of Solvent Evaporation on the Roughness of Spin-Cast Polymer Films. <i>Macromolecules</i> , 2001 , 34, 4669-4672	5.5	202
239	Concentration fluctuation induced dynamic heterogeneities in polymer blends. <i>Journal of Chemical Physics</i> , 1996 , 105, 3777-3788	3.9	200
238	Advanced polymeric dielectrics for high energy density applications. <i>Progress in Materials Science</i> , 2016 , 83, 236-269	42.2	193
237	Fiber-like Mechanical Reinforcement in Polymer Nanocomposite Melts. <i>Macromolecules</i> , 2010 , 43, 1003-1010	5.9	181

236	Controlling the thermomechanical properties of polymer nanocomposites by tailoring the polymer-particle interface. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2006 , 44, 2944-2950	2.6	173
235	Molecular dynamics simulations of polymer transport in nanocomposites. <i>Journal of Chemical Physics</i> , 2005 , 122, 134910	3.9	157
234	Nature of the breakdown in the Stokes-Einstein relationship in a hard sphere fluid. <i>Journal of Chemical Physics</i> , 2006 , 124, 214501	3.9	150
233	Mechanical Reinforcement in Polymer Melts Filled with Polymer Grafted Nanoparticles. <i>Macromolecules</i> , 2011 , 44, 7473-7477	5.5	145
232	Macromolecules at surfaces: Research challenges and opportunities from tribology to biology. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2003 , 41, 2755-2793	2.6	144
231	Mechanical Reinforcement of Polymer Nanocomposites from Percolation of a Nanoparticle Network. <i>ACS Macro Letters</i> , 2015 , 4, 398-402	6.6	142
230	Measurement and model prediction of solubilities of pure fatty acids, pure triglycerides, and mixtures of triglycerides in supercritical carbon dioxide. <i>Journal of Chemical & Engineering Data</i> , 1988 , 33, 327-333	2.8	139
229	Determination of the chemical potentials of polymeric systems from Monte Carlo simulations. <i>Physical Review Letters</i> , 1991 , 66, 2935-2938	7.4	138
228	Off-lattice Monte Carlo simulations of polymer melts confined between two plates. 2. Effects of chain length and plate separation. <i>Macromolecules</i> , 1990 , 23, 2189-2197	5.5	135
227	Network dynamics in nanofilled polymers. <i>Nature Communications</i> , 2016 , 7, 11368	17.4	131
226	Nanoparticle diffusion in polymer nanocomposites. <i>Physical Review Letters</i> , 2014 , 112, 108301	7.4	130
225	Conformational transitions of adsorbed proteins on surfaces of varying polarity. <i>Langmuir</i> , 2010 , 26, 10803-11	4	123
224	Bound Polymer Layer in Nanocomposites.. <i>ACS Macro Letters</i> , 2013 , 2, 371-374	6.6	121
223	Perspective: Outstanding theoretical questions in polymer-nanoparticle hybrids. <i>Journal of Chemical Physics</i> , 2017 , 147, 020901	3.9	118
222	Glass Transitions in Highly Attractive Highly Filled Polymer Nanocomposites. <i>Macromolecules</i> , 2012 , 45, 1131-1135	5.5	116
221	Chain conformations and bound-layer correlations in polymer nanocomposites. <i>Physical Review Letters</i> , 2007 , 98, 128302	7.4	115
220	Segmental Dynamics of Polymer Melts with Spherical Nanoparticles.. <i>ACS Macro Letters</i> , 2014 , 3, 773-776.6		113
219	A lattice model for the surface segregation of polymer chains due to molecular weight effects. <i>Macromolecules</i> , 1990 , 23, 3584-3592	5.5	111

218	Micellization and Phase Separation of Diblock and Triblock Model Surfactants. <i>Langmuir</i> , 2002 , 18, 2940-2948	110
217	Universal viscosity behavior of polymer nanocomposites. <i>Physical Review Letters</i> , 2012 , 109, 198301	7.4 108
216	Mechanical properties of thin glassy polymer films filled with spherical polymer-grafted nanoparticles. <i>Nano Letters</i> , 2012 , 12, 3909-14	11.5 108
215	End grafted polymer nanoparticles in a polymeric matrix: Effect of coverage and curvature. <i>Soft Matter</i> , 2011 , 7, 1418-1425	3.6 102
214	Mean-field theoretical analysis of brush-coated nanoparticle dispersion in polymer matrices. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2008 , 46, 351-358	2.6 102
213	Modeling the anisotropic self-assembly of spherical polymer-grafted nanoparticles. <i>Journal of Chemical Physics</i> , 2009 , 131, 221102	3.9 101
212	Reversal of the isotopic effect in the surface behavior of binary polymer blends. <i>Journal of Chemical Physics</i> , 1993 , 98, 4163-4173	3.9 101
211	Selective transformations between nanoparticle superlattices via the reprogramming of DNA-mediated interactions. <i>Nature Materials</i> , 2015 , 14, 840-7	27 100
210	Monte Carlo calculation of phase equilibria for a bead-spring polymeric model. <i>Macromolecules</i> , 1994 , 27, 400-406	5.5 100
209	Segmental dynamics of miscible polymer blends: Comparison of the predictions of a concentration fluctuation model to experiment. <i>Journal of Chemical Physics</i> , 1999 , 111, 6121-6128	3.9 99
208	Large Lattice Discretization Effects on the Phase Coexistence of Ionic Fluids. <i>Physical Review Letters</i> , 1999 , 83, 2981-2984	7.4 98
207	Effective interactions between grafted nanoparticles in a polymer matrix. <i>Soft Matter</i> , 2012 , 8, 5002	3.6 97
206	Effect of filler loading, geometry, dispersion and temperature on thermal conductivity of polymer nanocomposites. <i>Polymer Testing</i> , 2017 , 57, 101-106	4.5 96
205	Segmental Dynamics in PMMA-Grafted Nanoparticle Composites. <i>Macromolecules</i> , 2010 , 43, 8275-8281	5.5 96
204	Molecular Underpinnings of the Mechanical Reinforcement in Polymer Nanocomposites. <i>Macromolecules</i> , 2007 , 40, 4059-4067	5.5 94
203	Chain Conformation in Ultrathin Polymer Films Using Small-Angle Neutron Scattering. <i>Macromolecules</i> , 2001 , 34, 559-567	5.5 93
202	Lattice Monte Carlo Simulations of Chain Conformations in Polymer Nanocomposites. <i>Macromolecules</i> , 2005 , 38, 4495-4500	5.5 92
201	Surface segregation in binary polymer mixtures: a lattice model. <i>Macromolecules</i> , 1991 , 24, 4909-4917	5.5 90

200	Direct determination of phase behavior of square-well fluids. <i>Journal of Chemical Physics</i> , 2005 , 123, 174505	3.9	89
199	What Length Scales Control the Dynamics of Miscible Polymer Blends?. <i>Macromolecules</i> , 2003 , 36, 10087-10094	5.5	87
198	Rheology of Miscible Blends: SAN and PMMA. <i>Macromolecules</i> , 1998 , 31, 8988-8997	5.5	86
197	End Group Effects on Surface Properties of Polymers: Semiempirical Calculations and Comparison to Experimental Surface Tensions for Functional Poly(dimethylsiloxanes). <i>Macromolecules</i> , 1997 , 30, 4481-4490	5.5	84
196	Focusing nanocrystal size distributions via production control. <i>Nano Letters</i> , 2011 , 11, 1976-80	11.5	83
195	Ordered three-dimensional nanomaterials using DNA-prescribed and valence-controlled material voxels. <i>Nature Materials</i> , 2020 , 19, 789-796	27	82
194	Role of Casting Solvent on Nanoparticle Dispersion in Polymer Nanocomposites. <i>Macromolecules</i> , 2014 , 47, 5246-5255	5.5	82
193	Nonequilibrium accumulation of surface species and triboelectric charging in single component particulate systems. <i>Physical Review Letters</i> , 2008 , 100, 188305	7.4	79
192	Bound Layers "Cloak" Nanoparticles in Strongly Interacting Polymer Nanocomposites. <i>ACS Nano</i> , 2016 , 10, 10960-10965	16.7	79
191	Role of Filler Shape and Connectivity on the Viscoelastic Behavior in Polymer Nanocomposites. <i>Macromolecules</i> , 2015 , 48, 5433-5438	5.5	67
190	Polymer Crystallization in Nanocomposites: Spatial Reorganization of Nanoparticles. <i>Macromolecules</i> , 2009 , 42, 5741-5744	5.5	65
189	Polymer-Grafted Nanoparticle Membranes with Controllable Free Volume. <i>Macromolecules</i> , 2017 , 50, 7111-7120	5.5	64
188	Rouse mode analysis of chain relaxation in polymer nanocomposites. <i>Soft Matter</i> , 2015 , 11, 4123-32	3.6	63
187	Viscoelastic Properties of Polymer Melts from Equilibrium Molecular Dynamics Simulations. <i>Macromolecules</i> , 2005 , 38, 650-653	5.5	63
186	Surface segregation in polymer blends due to stiffness disparity. <i>Journal of Chemical Physics</i> , 1994 , 100, 4691-4694	3.9	63
185	Polymer-grafted-nanoparticle surfactants. <i>Nano Letters</i> , 2011 , 11, 4569-73	11.5	62
184	Self-assembly of polymer-grafted nanoparticles in thin films. <i>Soft Matter</i> , 2014 , 10, 786-94	3.6	61
183	Amorphous solidification in polymer-platelet nanocomposites. <i>Physical Review Letters</i> , 2002 , 89, 258301	7.4	61

182	Monte Carlo simulations of phase equilibria for a lattice homopolymer model. <i>Journal of Chemical Physics</i> , 1995 , 102, 1014-1023	3.9	60
181	A statistical mechanics based lattice model equation of state. <i>Industrial & Engineering Chemistry Research</i> , 1987 , 26, 2532-2542	3.9	60
180	Mesoscale model of polymer melt structure: self-consistent mapping of molecular correlations to coarse-grained potentials. <i>Journal of Chemical Physics</i> , 2005 , 122, 104908	3.9	59
179	Thermodynamics of Reversibly Associating Polymer Solutions. <i>Physical Review Letters</i> , 1999 , 82, 5060-5063	3.3	59
178	The effect of finite film thickness on the surface segregation in symmetric binary polymer mixtures. <i>Journal of Chemical Physics</i> , 1993 , 99, 656-663	3.9	59
177	Liquid Structure, Thermodynamics, and Mixing Behavior of Saturated Hydrocarbon Polymers. 1. Cohesive Energy Density and Internal Pressure. <i>Macromolecules</i> , 1998 , 31, 6991-6997	5.5	58
176	Polymer Chain Behavior in Polymer Nanocomposites with Attractive Interactions. <i>ACS Macro Letters</i> , 2016 , 5, 523-527	6.6	55
175	Self-Assembled Superstructures of Polymer-Grafted Nanoparticles: Effects of Particle Shape and Matrix Polymer. <i>Journal of Physical Chemistry C</i> , 2011 , 115, 5566-5577	3.8	53
174	Segmental Dynamics of Head-to-Head Polypropylene and Polyisobutylene in Their Blend and Pure Components. <i>Macromolecules</i> , 2005 , 38, 7721-7729	5.5	52
173	Role of Grafting Mechanism on the Polymer Coverage and Self-Assembly of Hairy Nanoparticles. <i>ACS Nano</i> , 2017 , 11, 7028-7035	16.7	51
172	Fluctuation-driven anisotropic assembly in nanoscale systems. <i>Nano Letters</i> , 2013 , 13, 2732-7	11.5	50
171	Enhanced Glassy State Mechanical Properties of Polymer Nanocomposites via Supramolecular Interactions. <i>Nano Letters</i> , 2015 , 15, 5465-71	11.5	46
170	Optimal Chain Architectures for the Molecular Design of Functional Polymer Surfaces. <i>Macromolecules</i> , 2003 , 36, 771-781	5.5	46
169	Designing DNA-grafted particles that self-assemble into desired crystalline structures using the genetic algorithm. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 18431-5	11.5	45
168	Modeling diffusion of adsorbed polymer with explicit solvent. <i>Physical Review Letters</i> , 2007 , 98, 218301	7.4	45
167	Do Inverse Monte Carlo Algorithms Yield Thermodynamically Consistent Interaction Potentials?. <i>Industrial & Engineering Chemistry Research</i> , 2006 , 45, 5614-5618	3.9	45
166	Tunable Multiscale Nanoparticle Ordering by Polymer Crystallization. <i>ACS Central Science</i> , 2017 , 3, 751-758	5.8	44
165	Reversibility of the adsorption of lysozyme on silica. <i>Langmuir</i> , 2011 , 27, 11873-82	4	44

164	Computer Simulations of Local Concentration Variations in Miscible Polymer Blends. <i>Macromolecules</i> , 2002 , 35, 9211-9218	5.5	44
163	Designing exceptional gas-separation polymer membranes using machine learning. <i>Science Advances</i> , 2020 , 6, eaaz4301	14.3	43
162	Block-copolymer-mediated nanoparticle dispersion and assembly in polymer nanocomposites. <i>Advanced Materials</i> , 2014 , 26, 4031-6	24	43
161	Solubility of polystyrene in supercritical fluids. <i>Macromolecules</i> , 1987 , 20, 2550-2557	5.5	43
160	Dynamic tuning of DNA-nanoparticle superlattices by molecular intercalation of double helix. <i>Journal of the American Chemical Society</i> , 2015 , 137, 4030-3	16.4	42
159	Stabilizing colloidal crystals by leveraging void distributions. <i>Nature Communications</i> , 2014 , 5, 4472	17.4	42
158	Dynamics of Miscible Polymer Blends: Predicting the Dielectric Response. <i>Macromolecules</i> , 2007 , 40, 5767-5775	5.5	42
157	Behavior of isotopic, binary polymer blends in the vicinity of neutral surfaces: the effects of chain-length disparity. <i>Macromolecules</i> , 1991 , 24, 3816-3820	5.5	42
156	Lattice model for interphases in binary semicrystalline/amorphous polymer blends. <i>Macromolecules</i> , 1989 , 22, 4098-4101	5.5	41
155	Simulating the miscibility of nanoparticles and polymer melts. <i>Soft Matter</i> , 2013 , 9, 5417	3.6	40
154	Rouse Mode Analysis of Chain Relaxation in Homopolymer Melts. <i>Macromolecules</i> , 2014 , 47, 6925-6931	5.5	39
153	Miscible Polymer Blend Dynamics: Double Reptation Predictions of Linear Viscoelasticity in Model Blends of Polyisoprene and Poly(vinyl ethylene). <i>Macromolecules</i> , 2004 , 37, 6994-7000	5.5	39
152	Free surfaces of polymer blends. II. Effects of molecular weight and applications to asymmetric polymer blends. <i>Journal of Chemical Physics</i> , 1993 , 99, 4041-4050	3.9	39
151	Crystal-amorphous interphases in binary polymer blends. <i>Macromolecules</i> , 1991 , 24, 3466-3468	5.5	39
150	Controlling the thermomechanical behavior of nanoparticle/polymer films. <i>ACS Nano</i> , 2014 , 8, 8163-73	16.7	38
149	Lattice model for crystal-amorphous interphases in lamellar semicrystalline polymers: effects of tight-fold energy and chain incidence density. <i>Macromolecules</i> , 1989 , 22, 3458-3465	5.5	38
148	Liquid Structure, Thermodynamics, and Mixing Behavior of Saturated Hydrocarbon Polymers. 2. Pair Distribution Functions and the Regularity of Mixing. <i>Macromolecules</i> , 1998 , 31, 6998-7002	5.5	37
147	Self-Assembly of Monodisperse versus Bidisperse Polymer-Grafted Nanoparticles. <i>ACS Macro Letters</i> , 2016 , 5, 790-795	6.6	36

146	Stoichiometric control of DNA-grafted colloid self-assembly. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 4982-7	11.5	35
145	Diminishing Interfacial Effects with Decreasing Nanoparticle Size in Polymer-Nanoparticle Composites. <i>Physical Review Letters</i> , 2018 , 121, 207801	7.4	35
144	Dynamics of Miscible Polymer Blends: Role of Concentration Fluctuations on Characteristic Segmental Relaxation Times. <i>Macromolecules</i> , 2007 , 40, 5759-5766	5.5	34
143	Enhanced Polymeric Dielectrics through Incorporation of Hydroxyl Groups. <i>Macromolecules</i> , 2014 , 47, 1122-1129	5.5	33
142	Network Effects on the Nonlinear Rheology of Polymer Nanocomposites. <i>Macromolecules</i> , 2008 , 41, 5988-5991	5.5	33
141	Interfacial roughening induced by phase separation. <i>Physical Review Letters</i> , 1996 , 76, 1106-1109	7.4	33
140	Exchange Lifetimes of the Bound Polymer Layer on Silica Nanoparticles. <i>ACS Macro Letters</i> , 2019 , 8, 166-171	6.71	32
139	Quantitative analogy between polymer-grafted nanoparticles and patchy particles. <i>Soft Matter</i> , 2015 , 11, 793-7	3.6	31
138	Computer Simulations of Ionomer Self-Assembly and Dynamics. <i>Macromolecules</i> , 2007 , 40, 4113-4118	5.5	31
137	Dynamic Heterogeneity in Miscible Polymer Blends with Stiffness Disparity: Computer Simulations Using the Bond Fluctuation Model. <i>Macromolecules</i> , 2003 , 36, 8567-8573	5.5	31
136	Phase transitions in thin films of symmetric binary polymer mixtures. <i>Molecular Physics</i> , 1994 , 81, 867-872	7	31
135	Dispersing Grafted Nanoparticle Assemblies into Polymer Melts through Flow Fields. <i>ACS Macro Letters</i> , 2013 , 2, 1051-1055	6.6	30
134	Monte Carlo simulations of end-grafted polymer matrices under poor solvent conditions. <i>Journal of Chemical Physics</i> , 1994 , 101, 4312-4323	3.9	30
133	A lattice model for interphases in binary semicrystalline/amorphous polymer blends. 2. Effects of tight fold energy. <i>Macromolecules</i> , 1991 , 24, 5414-5420	5.5	30
132	Structure of Polymer-Grafted Nanoparticle Melts. <i>ACS Nano</i> , 2020 , 14, 15505-15516	16.7	30
131	Universal two-step crystallization of DNA-functionalized nanoparticles. <i>Soft Matter</i> , 2010 , 6, 6130	3.6	29
130	The effects of local stiffness disparity on the surface segregation from binary polymer blends. <i>Journal of Chemical Physics</i> , 1995 , 103, 10332-10346	3.9	29
129	Critical temperature shifts in thin polymer blend films. <i>Journal of Chemical Physics</i> , 1994 , 100, 5367-5371	3.9	29

128	Impact of the Distributions of Core Size and Grafting Density on the Self-Assembly of Polymer Grafted Nanoparticles. <i>Macromolecules</i> , 2017 , 50, 7730-7738	5.5	27
127	Thermal and structural stability of adsorbed proteins. <i>Biophysical Journal</i> , 2010 , 99, 1157-65	2.9	27
126	Effect of the hydrophilic size on the structural phases of aqueous nonionic gemini surfactant solutions. <i>Langmuir</i> , 2004 , 20, 9061-8	4	27
125	Athermal stiffness blends: A comparison of Monte Carlo simulations and integral equation theory. <i>Journal of Chemical Physics</i> , 1995 , 103, 9460-9474	3.9	27
124	Competing Ranges of Attractive and Repulsive Interactions in the Micellization of Model Surfactants. <i>Langmuir</i> , 2003 , 19, 5164-5168	4	26
123	Chemical potentials of polymer blends from Monte Carlo simulations: consequences on SANS-determined χ parameters. <i>Macromolecules</i> , 1994 , 27, 260-271	5.5	26
122	Fractionation of polymers with supercritical fluids. <i>Fluid Phase Equilibria</i> , 1986 , 29, 373-382	2.5	26
121	Why is Recycling of Postconsumer Plastics so Challenging?. <i>ACS Applied Polymer Materials</i> , 2021 , 3, 4325-4346	4.3	26
120	Unusual packing of soft-shelled nanocubes. <i>Science Advances</i> , 2019 , 5, eaaw2399	14.3	25
119	Stability of proteins inside a hydrophobic cavity. <i>Langmuir</i> , 2013 , 29, 8922-8	4	25
118	Coarse-grained molecular dynamics simulation of activated penetrant transport in glassy polymers. <i>Soft Matter</i> , 2018 , 14, 440-447	3.6	25
117	Structure and Dynamics of Octamethyl-POSS Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 5579-5592	3.8	24
116	Tuning Selectivities in Gas Separation Membranes Based on Polymer-Grafted Nanoparticles. <i>ACS Nano</i> , 2020 ,	16.7	24
115	Polyethylene Grafted Silica Nanoparticles Prepared via Surface-Initiated ROMP. <i>ACS Macro Letters</i> , 2019 , 8, 228-232	6.6	23
114	Phase Separation in Nearly Symmetric Polymer Mixtures. <i>Physical Review Letters</i> , 1996 , 77, 1512-1515	7.4	23
113	Monte Carlo simulations of the free surface of polymer melts. <i>Chemical Engineering Science</i> , 1994 , 49, 2899-2906	4.4	23
112	Fluctuation-driven anisotropy in effective pair interactions between nanoparticles: thiolated gold nanoparticles in ethane. <i>Journal of Chemical Physics</i> , 2014 , 141, 154904	3.9	22
111	Enhancing protein stability by adsorption onto raftlike lipid domains. <i>Journal of the American Chemical Society</i> , 2009 , 131, 7107-11	16.4	21

110	Thermodynamic signature of the onset of caged dynamics in glass-forming liquids. <i>Journal of Chemical Physics</i> , 2002 , 116, 865-868	3.9	21
109	Compressibility Effects in the Analysis and Interpretation of Neutron Scattering Data from Polymer Blends. <i>Macromolecules</i> , 1996 , 29, 764-773	5.5	21
108	The chain length dependence of the chemical potentials of macromolecular systems at zero density: Exact calculations and Monte Carlo simulations. <i>Journal of Chemical Physics</i> , 1992 , 96, 1490-1497	3.9	21
107	Crazing of nanocomposites with polymer-tethered nanoparticles. <i>Journal of Chemical Physics</i> , 2016 , 145, 094902	3.9	21
106	High-Frequency Mechanical Behavior of Pure Polymer-Grafted Nanoparticle Constructs. <i>ACS Macro Letters</i> , 2019 , 8, 294-298	6.6	20
105	Stability of proteins on hydrophilic surfaces. <i>Langmuir</i> , 2015 , 31, 1005-10	4	20
104	Engineering Organization of DNA Nano-Chambers through Dimensionally Controlled and Multi-Sequence Encoded Differentiated Bonds. <i>Journal of the American Chemical Society</i> , 2020 , 142, 17531-17542	16.4	20
103	Nanoparticle Organization by Growing Polyethylene Crystal Fronts. <i>ACS Macro Letters</i> , 2019 , 8, 1341-1346	6.6	19
102	Increase in the Chemical Potential of Syndiotactic Polypropylene upon Mixing with Atactic or Isotactic Polypropylene in the Melt. <i>Macromolecules</i> , 2002 , 35, 3309-3311	5.5	19
101	Surface Transitions for Confined Associating Mixtures. <i>Physical Review Letters</i> , 1998 , 80, 1252-1255	7.4	19
100	Free surfaces of polymer blends. I. Theoretical framework and application to symmetric polymer blends. <i>Journal of Chemical Physics</i> , 1993 , 98, 6516-6525	3.9	19
99	Effects of Hairy Nanoparticles on Polymer Crystallization Kinetics. <i>Macromolecules</i> , 2019 , 52, 9186-9198	5.5	19
98	Reinforcement of polychloroprene by grafted silica nanoparticles. <i>Polymer</i> , 2019 , 171, 96-105	3.9	18
97	Computer simulations of the conformations of strongly adsorbed chains at the solid-liquid interface. <i>Polymer</i> , 2006 , 47, 722-727	3.9	18
96	Directionally Interacting Spheres and Rods Form Ordered Phases. <i>ACS Nano</i> , 2017 , 11, 4950-4959	16.7	17
95	Role of block copolymer adsorption versus bimodal grafting on nanoparticle self-assembly in polymer nanocomposites. <i>Soft Matter</i> , 2016 , 12, 7241-7	3.6	17
94	A modified real particle method for the calculation of the chemical potentials of molecular systems. <i>Journal of Chemical Physics</i> , 1992 , 97, 3550-3556	3.9	17
93	Confined Pattern-Directed Assembly of Polymer-Grafted Nanoparticles in a Phase Separating Blend with a Homopolymer Matrix. <i>Macromolecules</i> , 2016 , 49, 3965-3974	5.5	17

92	Multiscale modeling of the surfactant mediated synthesis and supramolecular assembly of cobalt nanodots. <i>Physical Review Letters</i> , 2004 , 93, 188301	7.4	16
91	Linear rheology of polymer nanocomposites with polymer-grafted nanoparticles. <i>Polymer</i> , 2017 , 131, 104-110	3.9	15
90	Relative stability of the FCC and HCP polymorphs with interacting polymers. <i>Soft Matter</i> , 2015 , 11, 280-93.6	3.6	15
89	Size-dependent penetrant diffusion in polymer glasses. <i>Soft Matter</i> , 2018 , 14, 4226-4230	3.6	15
88	Molecular Simulations of Solute Transport in Polymer Melts. <i>ACS Macro Letters</i> , 2017 , 6, 864-868	6.6	15
87	The one that got away. <i>Nature</i> , 1997 , 386, 771-772	50.4	15
86	Quantitatively modeling the equilibrium properties of thiol-decorated gold nanoparticles. <i>Langmuir</i> , 2008 , 24, 8448-51	4	15
85	Pressure Effects on the Thermodynamics of Polymer Blends. <i>Macromolecules</i> , 2000 , 33, 5285-5291	5.5	15
84	Surface Fluctuations Dominate the Slow Glassy Dynamics of Polymer-Grafted Colloid Assemblies. <i>ACS Central Science</i> , 2018 , 4, 1179-1184	16.8	15
83	Do Very Small POSS Nanoparticles Perturb s-PMMA Chain Conformations?. <i>Macromolecules</i> , 2018 , 51, 5278-5293	5.5	14
82	Accelerated Local Dynamics in Matrix-Free Polymer Grafted Nanoparticles. <i>Physical Review Letters</i> , 2019 , 123, 158003	7.4	14
81	Solvent-mediated pathways to gelation and phase separation in suspensions of grafted nanoparticles. <i>Soft Matter</i> , 2009 , 5, 4256	3.6	14
80	Phase behavior of associating liquid mixtures. <i>Physical Review E</i> , 1998 , 58, R12-R15	2.4	14
79	Phase behavior of semiflexible polymer chains. <i>Journal of Chemical Physics</i> , 2008 , 128, 124908	3.9	14
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