Scott T Milner

List of Publications by Year
in descending order

78 papers	2,466 citations	185998 28 h-index	223531 46 g-index
78 all docs	78 docs citations	78 times ranked	2444 citing authors

#	Article	IF	Citations
1	Microscopic theory of linear, entangled polymer chains under rapid deformation including chain stretch and convective constraint release. Journal of Rheology, 2003, 47, 1171-1200.	1.3	430
2	Entangled Dynamics and Melt Flow of Branched Polymers. , 1999, , 195-256.		138
3	Relating the shearâ€thinning curve to the molecular weight distribution in linear polymer melts. Journal of Rheology, 1996, 40, 303-315.	1.3	94
4	Predicting Chain Dimensions of Semiflexible Polymers from Dihedral Potentials. Macromolecules, 2014, 47, 6453-6461.	2.2	78
5	Anisotropic Growth of Silver Nanoparticles Is Kinetically Controlled by Polyvinylpyrrolidone Binding. Journal of the American Chemical Society, 2019, 141, 4328-4337.	6.6	77
6	Crystal and rotator phases of n-alkanes: A molecular dynamics study. Journal of Chemical Physics, 2010, 132, 044901.	1.2	75
7	Onset of Flow-Induced Crystallization Kinetics of Highly Isotactic Polypropylene. Macromolecules, 2015, 48, 3725-3738.	2.2	74
8	Stress Relaxation in Entangled Melts of Unlinked Ring Polymers. Physical Review Letters, 2010, 105, 208302.	2.9	62
9	Local and Average Glass Transitions in Polymer Thin Films. Macromolecules, 2010, 43, 9874-9880.	2.2	60
10	Finding the Tube with Isoconfigurational Averaging. Macromolecules, 2011, 44, 8972-8980.	2.2	58
11	Lifetime of Flow-Induced Precursors in Isotactic Polypropylene. Macromolecules, 2015, 48, 7286-7299.	2.2	57
12	Predicting the Flory-Huggins Ï‡ Parameter for Polymers with Stiffness Mismatch from Molecular Dynamics Simulations. Polymers, 2016, 8, 241.	2.0	57
13	Lattice model of mobility at interfaces: free surfaces, substrates, and bilayers. Soft Matter, 2013, 9, 9403.	1.2	53
14	Why Ï‡ Is Seldom Zero for Polymerâ^'Solvent Mixtures. Macromolecules, 2009, 42, 876-886.	2.2	46
15	Short-Time Dynamics Reveals T_g Suppression in Simulated Polystyrene Thin Films. Macromolecules, 2017, 50, 5599-5610.	2.2	46
16	Polymer crystalâ€“melt interfaces and nucleation in polyethylene. Soft Matter, 2011, 7, 2909.	1.2	44
17	Tubes, Topology, and Polymer Entanglement. Macromolecules, 2014, 47, 6077-6085.	2.2	44
18	Predicting Flory-Huggins <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>Ï‡</mml:mi></mml:mrow></mml:math> from Simulations. Physical Review Letters, 2017, 119, 017801.	2.9	44

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19	Predicting Nematic Phases of Semiflexible Polymers. Macromolecules, 2015, 48, 1454-1462.	2.2	43
20	Counting polymer knots to find the entanglement length. Soft Matter, 2011, 7, 10676.	1.2	41
21	Molecular dynamics study of correlations between <scp>IR</scp> peak position and bond parameters of silica and silicate glasses: Effects of temperature and stress. Journal of the American Ceramic Society, 2018, 101, 178-188.	1.9	41
22	Delayed Glassification Model for Free-Surface Suppression of T_g in Polymer Glasses. Macromolecules, 2010, 43, 9865-9873.	2.2	40
23	Lattice model of dynamic heterogeneity and kinetic arrest in glass-forming liquids. Soft Matter, 2013, 9, 3173.	1.2	35
24	Scaling behavior and local structure of ion aggregates in single-ion conductors. Soft Matter, 2014, 10, 978-989.	1.2	33
25	Polaron formation mechanisms in conjugated polymers. Physical Chemistry Chemical Physics, 2018, 20, 317-331.	1.3	33
26	Side chain length affects backbone dynamics in poly(3â€alkylthiophene)s. Journal of Polymer Science, Part B: Polymer Physics, 2018, 56, 1193-1202.	2.4	31
27	Transition in Crystal Morphology for Flow-Induced Crystallization of Isotactic Polypropylene. Macromolecules, 2016, 49, 5561-5575.	2.2	30
28	Tube Diameter of Oriented and Stretched Polymer Melts. Macromolecules, 2013, 46, 1659-1672.	2.2	29
29	Surface-Induced Chain Alignment of Semiflexible Polymers. Macromolecules, 2016, 49, 963-971.	2.2	29
30	Self-Assembly of Lamellar Microphases in Linear Gradient Copolymer Melts. Macromolecules, 2010, 43, 10612-10620.	2.2	28
31	Tight binding model of conformational disorder effects on the optical absorption spectrum of polythiophenes. Physical Chemistry Chemical Physics, 2016, 18, 12521-12533.	1.3	27
32	Two Distinct Morphologies for Semicrystalline Isotactic Polypropylene Crystallized after Shear Flow. Macromolecules, 2018, 51, 4750-4761.	2.2	27
33	Unified Entanglement Scaling for Flexible, Semiflexible, and Stiff Polymer Melts and Solutions. Macromolecules, 2020, 53, 1314-1325.	2.2	24
34	Atomistic Molecular Dynamics Simulations of Charged Latex Particle Surfaces in Aqueous Solution. Langmuir, 2016, 32, 428-441.	1.6	23
35	Strain-Induced Nematic Phase Separation in Polymer Melts and Gels. Macromolecules, 1994, 27, 6648-6660.	2.2	21
36	Twist solitons in ordered phases of n-alkanes. Soft Matter, 2011, 7, 7477.	1.2	21

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37	Ion-mediated charge transport in ionomeric electrolytes. Soft Matter, 2016, 12, 3943-3954.	1.2	21
38	Simulating Local T_g Reporting Layers in Glassy Thin Films. Macromolecules, 2016, 49, 1822-1833.	2.2	21
39	Molecular View of Polymer/Water Interfaces in Latex Paint. Macromolecules, 2014, 47, 6441-6452.	2.2	18
40	Average and Local T_g Shifts of Plasticized PVC from Simulations. Macromolecules, 2018, 51, 3865-3873.	2.2	18
41	Finding Entanglement Points in Simulated Polymer Melts. Macromolecules, 2015, 48, 99-110.	2.2	17
42	Tube Dynamics Works for Randomly Entangled Rings. Physical Review Letters, 2016, 116, 068307.	2.9	17
43	Nematic Order Imposes Molecular Weight Effect on Charge Transport in Conjugated Polymers. ACS Central Science, 2018, 4, 413-421.	5.3	16
44	Using surface-induced ordering to probe the isotropic-to-nematic transition for semiflexible polymers. Soft Matter, 2016, 12, 6141-6147.	1.2	15
45	Chain tension reduces monomer friction in simulated polymer melts. Journal of Rheology, 2020, 64, 1373-1378.	1.3	15
46	Simulation Study of Entanglement in Semiflexible Polymer Melts and Solutions. Macromolecules, 2020, 53, 3861-3872.	2.2	15
47	Free Surfaces Overcome Superheating in Simulated Melting of Isotactic Polypropylene. Macromolecules, 2015, 48, 8885-8896.	2.2	13
48	Extended Ensemble Approach to Transferable Potentials for Low-Resolution Coarse-Grained Models of Ionomers. Journal of Chemical Theory and Computation, 2017, 13, 2185-2201.	2.3	13
49	T1 process and dynamics in glass-forming hard-sphere liquids. Soft Matter, 2015, 11, 2700-2705.	1.2	12
50	Surfactant Binding to Polymerâ€“Water Interfaces in Atomistic Simulations. Langmuir, 2016, 32, 7519-7529.	1.6	12
51	Molecular dynamics simulation based design of biomimetic membrane with artificial water channels. Journal of Membrane Science, 2021, 630, 119279.	4.1	11
52	Using osmotic pressure simulations to test potentials for ions. Soft Matter, 2020, 16, 9816-9821.	1.2	10
53	A Simple Model for Heterogeneous Nucleation of Isotactic Polypropylene. Macromolecules, 2013, 46, 6593-6599.	2.2	8
54	Thermal Fluctuations Lead to Cumulative Disorder and Enhance Charge Transport in Conjugated Polymers. Macromolecular Rapid Communications, 2019, 40, e1900134.	2.0	8

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55	Tight binding models accurately predict band structures for copolymer semiconductors. Physical Chemistry Chemical Physics, 2020, 22, 19659-19671.	1.3	8
56	Calculated Interfacial Free Energies and Hetrogeneous Nucleation of Isotactic Polypropylene. Macromolecules, 2013, 46, 6600-6612.	2.2	7
57	â€œPlungerâ€•Method for Simulating Crystalâ€“Melt Interfacial Free Energies. Macromolecules, 2017, 50, 4797-4806.	2.2	7
58	Energetics of exciton binding and dissociation in polythiophenes: a tight binding approach. Physical Chemistry Chemical Physics, 2019, 21, 11999-12011.	1.3	7
59	Morphing Simulations Reveal Architecture Effects on Polymer Miscibility. Macromolecules, 2020, 53, 9386-9396.	2.2	7
60	Polaron hopping barriers and rates in semiconducting polymers. Physical Chemistry Chemical Physics, 2020, 22, 4032-4042.	1.3	7
61	Predicting Ï‡ of Polymer Blends Using Atomistic Morphing Simulations. Macromolecules, 2021, 54, 10447-10455.	2.2	7
62	Hydration shell stripping governs ion rejection in PAP[5] water channels. Molecular Systems Design and Engineering, 2022, 7, 809-819.	1.7	7
63	Static lengths in glass-forming monodisperse hard-sphere fluids from periodic array pinning. Soft Matter, 2016, 12, 402-407.	1.2	6
64	A simple simulation model for complex coacervates. Soft Matter, 2021, 17, 9181-9188.	1.2	6
65	Simulated Osmotic Equation of State for Poly(ethylene Oxide) Solutions Predicts Tension-Induced Phase Separation. Macromolecules, 2021, 54, 3613-3619.	2.2	6
66	Ball-of-Yarn Conformation of a Linear Gradient Copolymer in a Homopolymer Melt. Macromolecules, 2012, 45, 7607-7620.	2.2	5
67	A geometrical criterion for glass transition in soft-sphere fluids. Soft Matter, 2018, 14, 7075-7082.	1.2	5
68	Closed-Loop Phase Behavior of Nonstoichiometric Coacervates in Coarse-Grained Simulations. Macromolecules, 2022, 55, 511-516.	2.2	5
69	Nematic Coupling in Polybutadiene from MD Simulations. Macromolecules, 2019, 52, 528-534.	2.2	4
70	Insertion free energy of PAP[5] water channels into block copolymer membranes. Molecular Systems Design and Engineering, 2022, 7, 273-284.	1.7	4
71	Structural entropy of glassy systems from graph isomorphism. Soft Matter, 2016, 12, 7281-7288.	1.2	3
72	Depletion attraction of sheet-like ion aggregates in low-dielectric ionomer melts. Journal of Chemical Physics, 2017, 146, 064901.	1.2	3

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73	Measuring packing length in simulations for different polymer architectures. Journal of Rheology, 2021, 65, 1245-1253.	1.3	3
74	Lattice model of correlated forces in granular solids near jamming. Physical Review E, 2013, 87, 052203.	0.8	2
75	Predicting Raman Spectra of Condensed Polymer Phases from MD Simulations. Macromolecules, 2017, 50, 9773-9787.	2.2	2
76	Chiral elasticity of DNA. Soft Matter, 2012, 8, 10090.	1.2	1
77	Effects of Anisotropy and Disorder on Crystalâ€“Melt Tensions in Polyolefins. Macromolecules, 2018, 51, 7121-7133.	2.2	1
78	Dynamics of correlated forces in lattice model of granular solids near jamming. Soft Matter, 2014, 10, 96-108.	1.2	0