Mark Matsen

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8185925/publications.pdf

Version: 2024-02-01

114 papers	11,654 citations	41323 49 h-index	26591 107 g-index
116 all docs	116 docs citations	116 times ranked	4709 citing authors

#	Article	IF	Citations
1	Universality of Entropic Surface Segregation from Athermal Polymer Blends Due to Conformational Asymmetry. Macromolecules, 2022, 55, 1120-1126.	2.2	10
2	Entropic surface segregation from athermal polymer blends: Polymer flexibility vs bulkiness. Journal of Chemical Physics, 2022, 156, 184901.	1.2	5
3	Entropic Surface Segregation from Athermal Polymer Blends of Slim and Bulky Polymers. Macromolecules, 2022, 55, 6286-6292.	2.2	0
4	Coexistence of Polymeric Microemulsion with Homopolymer-Rich Phases. Macromolecules, 2021, 54, 1329-1337.	2.2	19
5	Fluctuation correction for the orderâ€“disorder transition of diblock copolymer melts. Journal of Chemical Physics, 2021, 154, 124902.	1.2	13
6	Field-Theoretic Simulations for Block Copolymer Melts Using the Partial Saddle-Point Approximation. Polymers, 2021, 13, 2437.	2.0	15
7	Surface Segregation in Athermal Polymer Blends Due to Conformational Asymmetry. Macromolecules, 2021, 54, 10100-10109.	2.2	5
8	Instability of the Microemulsion Channel in Block Copolymer-Homopolymer Blends. Physical Review Letters, 2020, 125, 117801.	2.9	26
9	Field theoretic approach for block polymer melts: SCFT and FTS. Journal of Chemical Physics, 2020, 152, 110901.	1.2	48
10	Simple and Accurate Calibration of the Floryâ€“Huggins Interaction Parameter. Macromolecules, 2020, 53, 9973-9982.	2.2	28
11	Spontaneous Tilting Transition in Liquid-Crystalline Polymer Brushes. Macromolecules, 2019, 52, 6988-6997.	2.2	6
12	Calibration of a lattice model for high-molecular-weight block copolymer melts. Journal of Chemical Physics, 2019, 150, 204906.	1.2	11
13	Calibration of the Flory-Huggins interaction parameter in field-theoretic simulations. Journal of Chemical Physics, 2019, 150, 174902.	1.2	20
14	Computationally Efficient Field-Theoretic Simulations for Block Copolymer Melts. Macromolecules, 2019, 52, 8840-8848.	2.2	21
15	Effect of chain stiffness on the entropic segregation of chain ends to the surface of a polymer melt. Journal of Chemical Physics, 2019, 150, 014904.	1.2	11
16	Testing the Universality of Entropic Segregation at Polymer Surfaces. Macromolecules, 2018, 51, 1242-1247.	2.2	21
17	Detection of Surface Enrichment Driven by Molecular Weight Disparity in Virtually Monodisperse Polymers. ACS Macro Letters, 2018, 7, 487-492.	2.3	29
18	Field-theoretic simulations of bottlebrush copolymers. Journal of Chemical Physics, 2018, 149, 184901.	1.2	24

#	Article	IF	Citations
19	Self-Assembly of ABC Bottlebrush Triblock Terpolymers with Evidence for Looped Backbone Conformations. Macromolecules, 2018, 51, 7178-7185.	2.2	40
20	Fluctuation effects in blends of A + B homopolymers with AB diblock copolymer. Journal of Chemical Physics, 2018, 148, 204907.	1.2	18
21	Self-Assembly of ABC Bottlebrush Triblock Terpolymers with Evidence for Looped Backbone Conformations. Macromolecules, 2018, 51, .	2.2	3
22	Domain Bridging in Thermoplastic Elastomers of Star Block Copolymer. Macromolecules, 2017, 50, 1681-1687.	2.2	41
23	Manipulating the ABCs of self-assembly via low-Ï‡ block polymer design. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 6462-6467.	3.3	53
24	Entropic segregation of short polymers to the surface of a polydisperse melt. European Physical Journal E, 2017, 40, 85.	0.7	35
25	Fluctuation correction for the critical transition of symmetric homopolymer blends. Journal of Chemical Physics, 2017, 147, 044905.	1.2	11
26	Continuous Thermodynamic Integration in Fieldâ€Theoretic Simulations of Structured Polymers. Macromolecular Theory and Simulations, 2017, 26, 1700036.	0.6	15
27	Confinement effects on the miscibility of block copolymer blends. European Physical Journal E, 2016, 39, 43.	0.7	3
28	Segregation of chain ends to the surface of a polymer melt: Effect of surface profile versus chain discreteness. European Physical Journal E, 2016, 39, 78.	0.7	9
29	Critical Point of Symmetric Binary Homopolymer Blends. Macromolecules, 2016, 49, 6116-6125.	2.2	17
30	Universality between Experiment and Simulation of a Diblock Copolymer Melt. Physical Review Letters, 2016, 117, 217801.	2.9	29
31	Structure, Stability, and Reorganization of 0.5 L₀ Topography in Block Copolymer Thin Films. ACS Nano, 2016, 10, 10152-10160.	7.3	38
32	Field-Theoretic Simulation of Block Copolymers at Experimentally Relevant Molecular Weights. Macromolecules, 2015, 48, 9071-9080.	2.2	35
33	Bottlebrush Block Polymers: Quantitative Theory and Experiments. ACS Nano, 2015, 9, 12233-12245.	7.3	141
34	Boundary Tension Between Coexisting Phases of a Block Copolymer Blend. Macromolecules, 2015, 48, 2840-2848.	2.2	3
35	Quantized Contact Angles in the Dewetting of a Structured Liquid. Physical Review Letters, 2014, 112, 068303.	2.9	5
36	Universality of Block Copolymer Melts. Physical Review Letters, 2014, 113, 068302.	2.9	102

#	Article	IF	Citations
37	Segregation of chain ends to the surface of a polymer melt. European Physical Journal E, 2014, 37, 33.	0.7	30
38	Morphology Induced Spinodal Decomposition at the Surface of Symmetric Diblock Copolymer Films. ACS Macro Letters, 2013, 2, 441-445.	2.3	11
39	Monte Carlo Field-Theoretic Simulations for Melts of Symmetric Diblock Copolymer. Macromolecules, 2013, 46, 8037-8045.	2.2	37
40	Comparison of A-block polydispersity effects on BAB triblock and AB diblock copolymer melts. European Physical Journal E, 2013, 36, 9857.	0.7	29
41	Step Edges in Thin Films of Lamellar-Forming Diblock Copolymer. Macromolecules, 2012, 45, 9531-9538.	2.2	21
42	Self-Consistent Field Theory for Melts of Low-Molecular-Weight Diblock Copolymer. Macromolecules, 2012, 45, 8502-8509.	2.2	51
43	Effect of Architecture on the Phase Behavior of AB-Type Block Copolymer Melts. Macromolecules, 2012, 45, 2161-2165.	2.2	382
44	Effect of salt on the compression of polyelectrolyte brushes in a theta solvent. European Physical Journal E, 2012, 35, 13.	0.7	10
45	Self-consistent field theory for diblock copolymers grafted to a sphere. Soft Matter, 2011, 7, 5128.	1.2	41
46	Structure Variation and Evolution in Microphase-Separated Grafted Diblock Copolymer Films. Macromolecules, 2011, 44, 8527-8536.	2.2	17
47	Compression of polyelectrolyte brushes in a salt-free theta solvent. European Physical Journal E, 2011, 34, 45.	0.7	17
48	Efficiency of pseudo-spectral algorithms with Anderson mixing for the SCFT of periodic block-copolymer phases. European Physical Journal E, 2011, 34, 110.	0.7	88
49	Monte Carlo phase diagram for diblock copolymer melts. European Physical Journal E, 2010, 32, 255-264.	0.7	54
50	Strong-segregation limit of the self-consistent field theory for diblock copolymer melts. European Physical Journal E, 2010, 33, 297-306.	0.7	15
51	Lateral Phase Separation in Grafted Diblock Copolymer Films. Macromolecules, 2010, 43, 8177-8184.	2.2	22
52	Architectural Effect on the Surface Tension of an ABA Triblock Copolymer Melt. Macromolecules, 2010, 43, 1671-1674.	2.2	32
53	Finite- N effects for ideal polymer chains near a flat impenetrable wall. European Physical Journal E, 2009, 29, 107-115.	0.7	23
54	Melt brushes of diblock copolymer. European Physical Journal E, 2009, 29, 219-227.	0.7	36

#	Article	IF	Citations
55	Fast and accurate SCFT calculations for periodic block-copolymer morphologies using the spectral method with Anderson mixing. European Physical Journal E, 2009, 30, 361-9.	0.7	117
56	Positioning Janus Nanoparticles in Block Copolymer Scaffolds. Physical Review Letters, 2009, 102, 078303.	2.9	56
57	Droplets of structured fluid on a flat substrate. Soft Matter, 2009, 5, 2889.	1.2	40
58	Compression of Polymer Brushes: Quantitative Comparison of Self-Consistent Field Theory with Experiment. Macromolecules, 2009, 42, 3430-3432.	2.2	15
59	Effects of polydispersity on the order-disorder transition of diblock copolymer melts. European Physical Journal E, 2008, 27, 323-333.	0.7	33
60	Kinetics of layer hopping in a diblock copolymer lamellar phase. European Physical Journal E, 2008, 27, 407-411.	0.7	13
61	Repulsion Exerted on a Spherical Particle by a Polymer Brush. Macromolecules, 2008, 41, 246-252.	2.2	69
62	Particle Distributions in a Block Copolymer Nanocomposite. Macromolecules, 2008, 41, 1853-1860.	2.2	94
63	Theory of Polydisperse Block Copolymer Melts: Beyond the Schulzâ˜Zimm Distribution. Macromolecules, 2008, 41, 4531-4533.	2.2	71
64	Interaction between Polymer-Grafted Particles. Macromolecules, 2008, 41, 4435-4443.	2.2	87
65	Polydispersity-Induced Macrophase Separation in Diblock Copolymer Melts. Physical Review Letters, 2007, 99, 148304.	2.9	129
66	Finite-stretching corrections to the Milner-Witten-Cates theory for polymer brushes. European Physical Journal E, 2007, 23, 135-144.	0.7	30
67	Converting the nanodomains of a diblock-copolymer thin film from spheres to cylinders with an external electric field. Journal of Chemical Physics, 2006, 124, 074906.	1.2	31
68	Droplet Shape of an Anisotropic Liquid. Physical Review Letters, 2006, 97, 204502.	2.9	36
69	Undulation instability in block-copolymer lamellae subjected to a perpendicular electric field. Soft Matter, 2006, 2, 1048.	1.2	33
70	Monte Carlo phase diagram for diblock copolymer melts. Journal of Chemical Physics, 2006, 124, 024904.	1.2	52
71	Electric Field Alignment in Thin Films of Cylinder-Forming Diblock Copolymer. Macromolecules, 2006, 39, 5512-5520.	2.2	65
72	Effect of large degrees of polydispersity on strongly segregated block copolymers. European Physical Journal E, 2006, 21, 199-207.	0.7	76

#	Article	IF	Citations
73	Stability of a Block-Copolymer Lamella in a Strong Electric Field. Physical Review Letters, 2005, 95, 258302.	2.9	45
74	Comment on â€œAttraction between Nanoparticles Induced by End-Grafted Homopolymers in Good Solventâ€• Physical Review Letters, 2005, 95, 069801.	2.9	9
75	Scaling behavior of a brushâ€“homopolymer interface in the limit of high grafting density. Journal of Chemical Physics, 2005, 122, 144904.	1.2	17
76	Effect of Chain Tilt on the Interaction between Brush-Coated Colloids. Macromolecules, 2005, 38, 4525-4530.	2.2	16
77	Investigating the dominant corrections to the strong-stretching theory for dry polymeric brushes. Journal of Chemical Physics, 2004, 121, 1938-1948.	1.2	33
78	New Fast SCFT Algorithm Applied to Binary Diblock Copolymer/Homopolymer Blends. Macromolecules, 2003, 36, 9647-9657.	2.2	51
79	Fluctuation effects in block copolymer melts. Journal of Chemical Physics, 2003, 118, 7700.	1.2	62
80	Block Copolymer-Directed Assembly of Nanoparticles:Â Forming Mesoscopically Ordered Hybrid Materials. Macromolecules, 2002, 35, 1060-1071.	2.2	279
81	The standard Gaussian model for block copolymer melts. Journal of Physics Condensed Matter, 2002, 14, R21-R47.	0.7	554
82	Predicting the Mesophases of Copolymer-Nanoparticle Composites. Science, 2001, 292, 2469-2472.	6.0	701
83	Testing strong-segregation theory against self-consistent-field theory for block copolymer melts. Journal of Chemical Physics, 2001, 114, 10528-10530.	1.2	16
84	Crystallization in block copolymer melts: Small soft structures that template larger hard structures. Journal of Chemical Physics, 2001, 114, 5425-5431.	1.2	53
85	Cylinderâ†”sphere epitaxial transitions in block copolymer melts. Journal of Chemical Physics, 2001, 114, 8165-8173.	1.2	66
86	Autophobic dewetting of homopolymer on a brush and entropic attraction between opposing brushes in a homopolymer matrix. Journal of Chemical Physics, 2001, 115, 2794-2804.	1.2	130
87	Microphase separation in oxyethylene/oxybutylene copolymers with diblock and triblock architectures. Macromolecular Rapid Communications, 2000, 21, 964-967.	2.0	10
88	Improving Polymeric Microemulsions with Block Copolymer Polydispersity. Physical Review Letters, 2000, 85, 670-673.	2.9	51
89	Effective interaction between monolayers of block copolymer compatiblizer in a polymer blend. Journal of Chemical Physics, 2000, 112, 6863-6872.	1.2	59
90	Microphase-Separation Behavior of Triblock Copolymer Melts. Comparison with Diblock Copolymer Melts. Macromolecules, 2000, 33, 5124-5130.	2.2	87

#	Article	IF	Citations
91	Equilibrium behavior of symmetric ABA triblock copolymer melts. Journal of Chemical Physics, 1999, 111, 7139-7146.	1.2	383
92	Non-equilibrium phase behavior of diblock copolymer melts and binary blends in the intermediate segregation regime. , 1999, 37, 2229-2238.		33
93	Coreâ^'Shell Gyroid Morphology in a Poly(isoprene-block-styrene-block-dimethylsiloxane) Triblock Copolymer. Journal of the American Chemical Society, 1999, 121, 8457-8465.	6.6	194
94	Self-assembly of block copolymers in thin films. Current Opinion in Colloid and Interface Science, 1998, 3, 40-47.	3.4	95
95	Ordering in Blends of Diblock Copolymers. Macromolecules, 1998, 31, 3498-3508.	2.2	51
96	Microphase Separation in Poly(oxyethylene)â^'Poly(oxybutylene) Diblock Copolymers. Macromolecules, 1998, 31, 8110-8116.	2.2	63
97	Cylinderâ†"GyroidEpitaxial Transitions in Complex Polymeric Liquids. Physical Review Letters, 1998, 80, 4470-4473.	2.9	113
98	Block copolymer microstructures in the intermediate-segregation regime. Journal of Chemical Physics, 1997, 106, 2436-2448.	1.2	440
99	Thin films of block copolymer. Journal of Chemical Physics, 1997, 106, 7781-7791.	1.2	400
100	Conformationally asymmetric block copolymers. Journal of Polymer Science, Part B: Polymer Physics, 1997, 35, 945-952.	2.4	207
101	Unifying Weak- and Strong-Segregation Block Copolymer Theories. Macromolecules, 1996, 29, 1091-1098.	2.2	1,636
102	Orderâ^'Disorder Transition in Poly(oxyethylene)â^'Poly(oxybutylene) Diblock Copolymers. Macromolecules, 1996, 29, 6212-6221.	2.2	58
103	Origins of Complex Self-Assembly in Block Copolymers. Macromolecules, 1996, 29, 7641-7644.	2.2	495
104	Melts of semiflexible diblock copolymer. Journal of Chemical Physics, 1996, 104, 7758-7764.	1.2	98
105	Self-assembly of block copolymers. Current Opinion in Colloid and Interface Science, 1996, 1, 329-336.	3.4	123
106	Isotropic Lifshitz Behavior in Block Copolymer-Homopolymer Blends. Physical Review Letters, 1995, 75, 4429-4432.	2.9	112
107	Immiscibility of large and small symmetric diblock copolymers. Journal of Chemical Physics, 1995, 103, 3268-3271.	1.2	76
108	Bridging and looping in multiblock copolymer melts. Journal of Chemical Physics, 1995, 102, 3884-3887.	1.2	92

#	Article	IF	Citations
109	Stabilizing New Morphologies by Blending Homopolymer with Block Copolymer. Physical Review Letters, 1995, 74, 4225-4228.	2.9	258
110	One-Component Approximation for Binary Diblock Copolymer Blends. Macromolecules, 1995, 28, 7298-7300.	2.2	76
111	Microphase Separation in Starblock Copolymer Melts. Macromolecules, 1994, 27, 6761-6767.	2.2	145
112	Stable and unstable phases of a diblock copolymer melt. Physical Review Letters, 1994, 72, 2660-2663.	2.9	1,236
113	Lamellar phase of a symmetric triblock copolymer. Macromolecules, 1994, 27, 187-192.	2.2	136
114	Self-Consistent Field Theory and Its Applications. , 0, , 87-178.		17