Peter D Olmsted

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Probing the nonequilibrium dynamics of stress, orientation, and entanglements in polymer melts with orthogonal interrupted shear simulations. Journal of Rheology, 2022, 66, 619-637.	1.3	6
2	Cooperative Intramolecular Dynamics Control the Chain-Length-Dependent Glass Transition in Polymers. Physical Review X, 2022, 12, .	2.8	6
3	Microscopic interactions and emerging elasticity in model soft particulate gels. Journal of Physics Condensed Matter, 2021, 33, 414001.	0.7	9
4	Fluctuating viscoelasticity based on a finite number of dumbbells. European Physical Journal E, 2020, 43, 71.	0.7	4
5	Particle Formation Mechanisms in the Nanoprecipitation of Polystyrene. Langmuir, 2020, 36, 13210-13217.	1.6	14
6	Non-local Effects in Shear Banding of Polymeric Flows. Frontiers in Physics, 2020, 7, .	1.0	22
7	Scission of flexible polymers in contraction flow: Predicting the effects of multiple passages. Journal of Rheology, 2020, 64, 601-614.	1.3	14
8	Frustration and thermalization in an artificial magnetic quasicrystal. Nature Physics, 2018, 14, 309-314.	6.5	62
9	Effects of Passive Phospholipid Flip-Flop and Asymmetric External Fields on Bilayer Phase Equilibria. Biophysical Journal, 2018, 115, 1956-1965.	0.2	3
10	Deformation of an amorphous polymer during the fused-filament-fabrication method for additive manufacturing. Journal of Rheology, 2017, 61, 379-397.	1.3	143
11	Disentanglement effects on welding behaviour of polymer melts during the fused-filament-fabrication method for additive manufacturing. Polymer, 2017, 123, 376-391.	1.8	213
12	Kinetics of Registration, Antiregistration, and Flip-Flop in Phase-Separating Bilayers. Biophysical Journal, 2016, 110, 16a.	0.2	0
13	Roles of Interleaflet Coupling and Hydrophobic Mismatch in Lipid Membrane Phase-Separation Kinetics. Journal of the American Chemical Society, 2016, 138, 11633-11642.	6.6	51
14	Comment on "Elastic Membrane Deformations Govern Interleaflet Coupling of Lipid-Ordered Domains― Physical Review Letters, 2016, 116, 079801.	2.9	5
15	The physics of stratum corneum lipid membranes. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2016, 374, 20150126.	1.6	49
16	Kinetics of symmetry and asymmetry in a phase-separating bilayer membrane. Physical Review E, 2015, 92, 052721.	0.8	9
17	Cholesterol Flip-Flop and Lack of Swelling in Stratum Corneum Lipid Bilayers. Biophysical Journal, 2015, 108, 413a.	0.2	0
18	Perspectives on the viscoelasticity and flow behavior of entangled linear and branched polymers. Journal of Physics Condensed Matter, 2015, 27, 473002.	0.7	46

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19	Nucleation of symmetric domains in the coupled leaflets of a bilayer. Soft Matter, 2015, 11, 8948-8959.	1.2	15
20	Registered and Antiregistered Phase Separation of Mixed Amphiphilic Bilayers. Biophysical Journal, 2015, 108, 1963-1976.	0.2	43
21	Dynamics of an asymmetric bilayer lipid membrane in a viscous solvent. Europhysics Letters, 2015, 111, 18004.	0.7	26
22	Adsorption at Liquid Interfaces Induces Amyloid Fibril Bending and Ring Formation. ACS Nano, 2014, 8, 11071-11079.	7.3	44
23	Fast cholesterol flip-flop and lack of swelling in skin lipid multilayers. Soft Matter, 2014, 10, 7346-7352.	1.2	17
24	Lamellar and Inverse Micellar Structures of Skin Lipids: Effect of Templating. Physical Review Letters, 2013, 111, 148101.	2.9	38
25	Comment on "New Experiments for Improved Theoretical Description of Nonlinear Rheology of Entangled Polymers― Macromolecules, 2013, 46, 9849-9854.	2.2	26
26	Actin Assembly at Model-Supported Lipid Bilayers. Biophysical Journal, 2013, 105, 2355-2365.	0.2	14
27	Critical point fluctuations in supported lipid membranes. Faraday Discussions, 2013, 161, 91-111.	1.6	61
28	Apparent Fracture in Polymeric Fluids Under Step Shear. Physical Review Letters, 2013, 110, 204503.	2.9	25
29	Manipulation and sorting of membrane proteins using patterned diffusion-aided ratchets with AC fields in supported lipid bilayers. Soft Matter, 2012, 8, 5459.	1.2	19
30	Quantification of the Plasma Clearance Kinetics of a Gadolinium-Based Contrast Agent by Photoinduced Triplet Harvesting. Analytical Chemistry, 2012, 84, 8106-8109.	3.2	2
31	Concentrating Membrane Proteins Using Asymmetric Traps and AC Electric Fields. Journal of the American Chemical Society, 2011, 133, 6521-6524.	6.6	36
32	Loss of solutions in shear banding fluids driven by second normal stress differences. Journal of Rheology, 2011, 55, 1219-1246.	1.3	15
33	Transient shear banding in entangled polymers: A study using the Rolie-Poly model. Journal of Rheology, 2011, 55, 1007-1032.	1.3	80
34	Influence of boundary conditions and confinement on nonlocal effects in flows of wormlike micellar systems. Physical Review E, 2010, 81, 021502.	0.8	34
35	Undulation instability in a bilayer lipid membrane due to electric field interaction with lipid dipoles. Physical Review E, 2010, 81, 051909.	0.8	21
36	Nanoscale mechanical probing of supported lipid bilayers with atomic force microscopy. Physical Review E, 2010, 82, 041920.	0.8	46

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37	Statistical mechanics far from equilibrium: Prediction and test for a sheared system. Physical Review E, 2010, 81, 051109.	0.8	7
38	Kinetic Monte Carlo simulations of flow-induced nucleation in polymer melts. Faraday Discussions, 2010, 144, 71-92.	1.6	42
39	Nonmonotonic Models are Not Necessary to Obtain Shear Banding Phenomena in Entangled Polymer Solutions. Physical Review Letters, 2009, 102, 067801.	2.9	100
40	Coarse-Grained Simulations of Flow-Induced Nucleation in Semicrystalline Polymers. Physical Review Letters, 2009, 103, 115702.	2.9	105
41	Adams and Olmsted Reply:. Physical Review Letters, 2009, 103, .	2.9	27
42	Two-dimensional perturbations in a scalar model for shear banding. European Physical Journal E, 2009, 29, 363-378.	0.7	0
43	Manipulation and charge determination of proteins in photopatterned solid supported bilayers. Integrative Biology (United Kingdom), 2009, 1, 205-211.	0.6	37
44	Simulation Studies of Stratum Corneum Lipid Mixtures. Biophysical Journal, 2009, 97, 1941-1951.	0.2	136
45	Mechanically unfolding proteins: The effect of unfolding history and the supramolecular scaffold. Protein Science, 2009, 11, 2759-2765.	3.1	75
46	Experimental observations and matching viscoelastic specific work predictions of flow-induced crystallization for molten polyethylene within two flow geometries. Journal of Rheology, 2009, 53, 859-876.	1.3	19
47	Water permeation through stratum corneum lipid bilayers from atomistic simulations. Soft Matter, 2009, 5, 4549.	1.2	61
48	Perspectives on shear banding in complex fluids. Rheologica Acta, 2008, 47, 283-300.	1.1	383
49	The interplay between boundary conditions and flow geometries in shear banding: Hysteresis, band configurations, and surface transitions. Journal of Non-Newtonian Fluid Mechanics, 2008, 151, 101-118.	1.0	63
50	The Specific Work of Flow as a Criterion for Orientation in Polymer Crystallization. Macromolecules, 2008, 41, 1901-1904.	2.2	185
51	The Specific Work of Flow as a Universal Parameter to Control the Formation of Shish-Kebab Morphology in Polymers. AIP Conference Proceedings, 2008, , .	0.3	2
52	Kinetic Monte Carlo Simulations of Anisotropic Nucleation in Polymer Melts Under Strong Flow AlP Conference Proceedings, 2008, , .	0.3	0
53	Mechanical unfolding revisited through a simple but realistic model. Journal of Chemical Physics, 2006, 124, 154909.	1.2	55
54	Internal protein dynamics shifts the distance to the mechanical transition state. Physical Review E, 2006, 74, 061912.	0.8	15

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55	Effect of Hydrophobic Mismatch on Phase Behavior of Lipid Membranes. Biophysical Journal, 2006, 90, 4104-4118.	0.2	23
56	Mechanical Resistance of Proteins Explained Using Simple Molecular Models. Biophysical Journal, 2006, 90, 287-297.	0.2	106
57	Shear-Induced Crystallization in Blends of Model Linear and Long-Chain Branched Hydrogenated Polybutadienes. Macromolecules, 2006, 39, 5058-5071.	2.2	90
58	Lipid organization and the morphology of solid-like domains in phase-separating binary lipid membranes. Journal of Physics Condensed Matter, 2006, 18, L415-L420.	0.7	26
59	Vorticity banding during the lamellar-to-onion transition in a lyotropic surfactant solution in shear flow. European Physical Journal E, 2006, 21, 133-43.	0.7	30
60	Validation of the Jarzynski relation for a system with strong thermal coupling: An isothermal ideal gas model. Physical Review E, 2006, 74, 061117.	0.8	8
61	Nonlinear Dynamics of an Interface between Shear Bands. Physical Review Letters, 2006, 96, 104502.	2.9	65
62	Free energy for protein folding from nonequilibrium simulations using the Jarzynski equality. Journal of Chemical Physics, 2006, 125, 204910.	1.2	44
63	Self-assembly and properties of lipid membranes. Scottish Graduate Series, 2006, , 63-74.	0.1	1
64	Phase behaviour of three-component lipid mixtures. Journal of Physics Condensed Matter, 2005, 17, S2951-S2956.	0.7	13
65	Budding and domain shape transformations in mixed lipid films and bilayer membranes. Physical Review E, 2005, 72, 011903.	0.8	64
66	The Kinetics of Phase Separation in Asymmetric Membranes. Biophysical Journal, 2005, 88, 4072-4083.	0.2	32
67	Mechanically Unfolding the Small, Topologically Simple Protein L. Biophysical Journal, 2005, 89, 506-519.	0.2	154
68	Lateral phase separation in mixtures of lipids and cholesterol. Europhysics Letters, 2004, 67, 321-327.	0.7	68
69	Phenomenological models of raft structure. AIP Conference Proceedings, 2004, , .	0.3	0
70	Synthesis and characterization of hydrophobically modified polyacrylamides and some observations on rheological properties. European Polymer Journal, 2004, 40, 47-56.	2.6	99
71	Birefringence Banding in a Micellar Solution or the Complexity of Heterogeneous Flows. Langmuir, 2004, 20, 11355-11365.	1.6	47
72	Spatiotemporal Oscillations and Rheochaos in a Simple Model of Shear Banding. Physical Review Letters, 2004, 92, 084502.	2.9	122

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73	Rheological and Structural Characterization of Hydrophobically Modified Polyacrylamide Solutions in the Semidilute Regime. Macromolecules, 2004, 37, 1492-1501.	2.2	56
74	Flow phase diagrams for concentration-coupled shear banding. European Physical Journal E, 2003, 11, 65-83.	0.7	129
75	Pulling geometry defines the mechanical resistance of a β-sheet protein. Nature Structural and Molecular Biology, 2003, 10, 731-737.	3.6	356
76	Early Stages of Crystallization in Isotactic Polypropylene. Macromolecules, 2003, 36, 3656-3665.	2.2	94
77	Are metastable, precrystallisation, density-fluctuations a universal phenomena?. Faraday Discussions, 2003, 122, 343-361.	1.6	46
78	Kinetics of the shear banding instability in startup flows. Physical Review E, 2003, 68, 036313.	0.8	72
79	Early Stage Kinetics in a Unified Model of Shear-Induced Demixing and Mechanical Shear Banding Instabilities. Physical Review Letters, 2003, 90, 224501.	2.9	64
80	Time scales in shear banding of wormlike micelles. Europhysics Letters, 2003, 62, 230-236.	0.7	67
81	Unfolding dynamics of proteins under applied force. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2003, 361, 713-730.	1.6	25
82	Dynamical coarse-graining of highly fluctuating membranes under shear flow. Physical Review E, 2002, 66, 061706.	0.8	11
83	Transient and stationary flow behaviour of side chain liquid-crystalline polymers: Evidence of a shear-induced isotropic-to-nematic phase transition. Europhysics Letters, 2002, 59, 364-369.	0.7	26
84	The Effect of Core Destabilization on the Mechanical Resistance of I27. Biophysical Journal, 2002, 83, 458-472.	0.2	132
85	The effect of shear flow on the Helfrich interaction in lyotropic lamellar systems. European Physical Journal E, 2002, 8, 485-497.	0.7	48
86	Cell dynamics simulations of shear-induced alignment and defect annihilation in stripe patterns formed by block copolymers. Physical Review E, 2001, 63, 041503.	0.8	41
87	A minimal model for vorticity and gradient banding in complex fluids. European Physical Journal E, 2001, 6, 79-89.	0.7	33
88	Shear modulus of polyelectrolyte gels under electric field. Journal of Physics Condensed Matter, 2001, 13, 1381-1393.	0.7	19
89	Micro- vs. macro-phase separation in binary blends of poly(styrene)-poly(isoprene) and poly(isoprene)-poly(ethylene oxide) diblock copolymers. Europhysics Letters, 2001, 53, 680-686.	0.7	49
90	Instability of myelin tubes under dehydration: Deswelling of layered cylindrical structures. Physical Review E, 2001, 64, 050903.	0.8	6

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91	Matched asymptotic solutions for the steady banded flow of the diffusive Johnson–Segalman model in various geometries. Journal of Non-Newtonian Fluid Mechanics, 2000, 91, 143-164.	1.0	59
92	Effects of Nonlocal Stress on the Determination of Shear Banding Flow. Physical Review Letters, 2000, 84, 642-645.	2.9	175
93	Johnson–Segalman model with a diffusion term in cylindrical Couette flow. Journal of Rheology, 2000, 44, 257-275.	1.3	169
94	Lifshitz points in blends of AB and BC diblock copolymers. Europhysics Letters, 1999, 45, 83-89.	0.7	24
95	Phase separation of rigid-rod suspensions in shear flow. Physical Review E, 1999, 60, 4397-4415.	0.8	102
96	Dynamics and flow-induced phase separation in polymeric fluids. Current Opinion in Colloid and Interface Science, 1999, 4, 95-100.	3.4	49
97	Shear banding in reaction-diffusion models. Rheologica Acta, 1999, 38, 606-613.	1.1	49
98	Phase coexistence of complex fluids in shear flow. Faraday Discussions, 1999, 112, 183-194.	1.6	41
99	A scattering study of nucleation phenomena in polymer crystallisation. Faraday Discussions, 1999, 112, 13-29.	1.6	88
100	Two-state shear diagrams for complex fluids in shear flow. Europhysics Letters, 1999, 48, 339-345.	0.7	77
101	Anomalous Difference in the Orderâ^'Disorder Transition Temperature Comparing a Symmetric Diblock Copolymer AB with Its Hetero-Four-Arm Star Analog A2B2. Macromolecules, 1999, 32, 7483-7495.	2.2	31
102	Strong Segregation Theory of Bicontinuous Phases in Block Copolymers. Macromolecules, 1998, 31, 4011-4022.	2.2	116
103	Spinodal-Assisted Crystallization in Polymer Melts. Physical Review Letters, 1998, 81, 373-376.	2.9	367
104	Worm-like micelles stir up a storm. Physics World, 1998, 11, 22-23.	0.0	0
105	Coexistence and phase separation in sheared complex fluids. Physical Review E, 1997, 56, R55-R58.	0.8	121
106	Microscopic Viscoelasticity: Shear Moduli of Soft Materials Determined from Thermal Fluctuations. Physical Review Letters, 1997, 79, 3286-3289.	2.9	476
107	Instability and Front Propagation in Laser-Tweezed Lipid Bilayer Tubules. Journal De Physique II, 1997, 7, 139-156.	0.9	9
108	Analytical Weak-Segregation Theory of Bicontinuous Phases in Diblock Copolymers. Journal De Physique II, 1997, 7, 249-255.	0.9	22

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109	Front propagation in laser-tweezed lipid bilayer tubules. Materials Research Society Symposia Proceedings, 1996, 463, 173.	0.1	0
110	Mean-field nematic–smectic-Atransition in a random polymer network. Physical Review E, 1996, 53, 2444-2453.	0.8	26
111	Some Properties of Membranes in Nematic Solvents. Journal De Physique II, 1996, 6, 49-56.	0.9	2
112	Strong-Segregation Theory of Bicontinuous Phases in Block Copolymers. Physical Review Letters, 1995, 74, 829-829.	2.9	25
113	Rotational invariance and Goldstone modes in nematic elastomers and gels. Journal De Physique II, 1994, 4, 2215-2230.	0.9	88
114	Strong-segregation theory of bicontinuous phases in block copolymers. Physical Review Letters, 1994, 72, 936-939.	2.9	87
115	Strain-Induced Nematic Phase Separation in Polymer Melts and Gels. Macromolecules, 1994, 27, 6648-6660.	2.2	21
116	Fluctuation Corrections to Mean-Field Theory for Homopolymer-Copolymer Phase Separation: Sequence Distribution Effects. Macromolecules, 1994, 27, 1964-1967.	2.2	11
117	Nematogenic fluids in shear flow: A laboratory for nonequilibrium physics. Lecture Notes in Physics, 1993, , 381-389.	0.3	0
118	lsotropic-nematic transition in shear flow: State selection, coexistence, phase transitions, and critical behavior. Physical Review A, 1992, 46, 4966-4993.	1.0	164
119	Light Scattering Near the Shear-Induced Critical Point in Nematic Liquid Crystalsâ€. Materials Research Society Symposia Proceedings, 1991, 248, 179.	0.1	0
120	Non-Equilibrium Phase Transitions in Nematic Liquid Crystals under Shear Flowâ€. Molecular Crystals and Liquid Crystals, 1991, 198, 265-271.	0.7	6
121	Theory of the nonequilibrium phase transition for nematic liquid crystals under shear flow. Physical Review A, 1990, 41, 4578-4581.	1.0	141
122	Estimation of material parameters from the observation of paraconductivity in Yî—,Baî—,Cuî—,O. Solid State Communications, 1988, 65, 465-468.	0.9	43
123	Emerging themes in polymer rheology. , 0, , 185-197.		0