Lynn M Walker

List of Publications by Year
in descending order

105 papers	4,081 citations	81900 39 h-index	123424 61 g-index
106 all docs	106 docs citations	106 times ranked	3923 citing authors

#	Article	IF	Citations
1	Rheology and structure of worm-like micelles. Current Opinion in Colloid and Interface Science, 2001, 6, 451-456.	7.4	202
2	Role of geometry and fluid properties in droplet and thread formation processes in planar flow focusing. Physics of Fluids, 2009, 21, .	4.0	193
3	Surface tension driven jet break up of strain-hardening polymer solutions. Journal of Non-Newtonian Fluid Mechanics, 2001, 100, 9-26.	2.4	166
4	Engineered spatial patterns of FGF-2 immobilized on fibrin direct cell organization. Biomaterials, 2005, 26, 6762-6770.	11.4	141
5	Shake-gels: shear-induced gelation of laponiteâ€"PEO mixtures. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2003, 213, 189-197.	4.7	123
6	Effect of fluid relaxation time of dilute polymer solutions on jet breakup due to a forced disturbance. Journal of Rheology, 2002, 46, 733-748.	2.6	108
7	A Microtensiometer To Probe the Effect of Radius of Curvature on Surfactant Transport to a Spherical Interface. Langmuir, 2010, 26, 13310-13319.	3.5	103
8	Dose-dependent cell growth in response to concentration modulated patterns of FGF-2 printed on fibrin. Biomaterials, 2006, 27, 2213-2221.	11.4	102
9	Interfacial Dynamics and Rheology of Polymer-Grafted Nanoparticles at Airâ€"Water and Xyleneâ€"Water Interfaces. Langmuir, 2012, 28, 8052-8063.	3.5	101
10	Shear-Thickening Dilute Surfactant Solutions: Equilibrium Structure As Studied by Small-Angle Neutron Scattering. Langmuir, 1999, 15, 6755-6763.	3.5	96
11	Rheology of region I flow in a lyotropic liquidâ€crystal polymer: The effects of defect texture. Journal of Rheology, 1994, 38, 1525-1547.	2.6	92
12	Orthogonal versus parallel superposition measurements. Journal of Non-Newtonian Fluid Mechanics, 1998, 79, 173-189.	2.4	87
13	Spatially directed guidance of stem cell population migration by immobilized patterns of growth factors. Biomaterials, 2011, 32, 2775-2785.	11.4	85
14	Diffusion-limited adsorption to a spherical geometry: The impact of curvature and competitive time scales. Physical Review E, 2010, 82, 011604.	2.1	83
15	Flow-structure relationship of shear-thickening surfactant solutions. Europhysics Letters, 1998, 41, 677-682.	2.0	75
16	Nonlinear electrohydrodynamics of slightly deformed oblate drops. Journal of Fluid Mechanics, 2015, 774, 245-266.	3.4	75
17	The rheology of highly concentrated PBLG solutions. Journal of Rheology, 1995, 39, 925-952.	2.6	73
18	Inkjet Printing of Growth Factor Concentration Gradients and Combinatorial Arrays Immobilized on Biologically-Relevant Substrates. Combinatorial Chemistry and High Throughput Screening, 2009, 12, 604-618.	1.1	72

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19	Reversible shear gelation of polymerâ€“clay dispersions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2004, 240, 187-198.	4.7	71
20	Multisegmented Block Copolymers by 'Click' Coupling of Polymers Prepared by ATRP. Australian Journal of Chemistry, 2007, 60, 400.	0.9	71
21	A non-gradient based algorithm for the determination of surface tension from a pendant drop: Application to low Bond number drop shapes. Journal of Colloid and Interface Science, 2009, 333, 557-562.	9.4	64
22	SANS Analysis of the Molecular Order in Poly(Î³-benzyll-glutamate)/Deuterated Dimethylformamide (PBLG/d-DMF) under Shear and during Relaxation. Macromolecules, 1996, 29, 2298-2301.	4.8	63
23	Macroscopic Response of Wormlike Micelles to Elongational Flow. Langmuir, 1996, 12, 6309-6314.	3.5	62
24	Using bulk convection in a microtensiometer to approach kinetic-limited surfactant dynamics at fluidâ€“fluid interfaces. Journal of Colloid and Interface Science, 2012, 372, 183-191.	9.4	59
25	Bayesian computer-aided experimental design of heterogeneous scaffolds for tissue engineering. CAD Computer Aided Design, 2005, 37, 1127-1139.	2.7	56
26	The influence of inertia and charge relaxation on electrohydrodynamic drop deformation. Physics of Fluids, 2013, 25, .	4.0	53
27	Measurements of Submicron Particle Adsorption and Particle Film Elasticity at Oilâ€“Water Interfaces. Langmuir, 2016, 32, 4125-4133.	3.5	51
28	Small-angle neutron scattering of silica nanoparticles templated in PEOâ€“PPOâ€“PEO cubic crystals. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 294, 117-129.	4.7	49
29	End-group effects on the properties of PEG-co-PGA hydrogels. Acta Biomaterialia, 2009, 5, 1872-1883.	8.3	49
30	Characterization of Rodlike Aggregates Generated from a Cationic Surfactant and a Polymerizable Counterion. Langmuir, 2004, 20, 8510-8516.	3.5	48
31	In SituAnalysis of the Defect Texture in Liquid Crystal Polymer Solutions under Shear. Macromolecules, 1997, 30, 508-514.	4.8	46
32	Competition Between Viscoelasticity and Surfactant Dynamics in Flow Focusing Microfluidics. Macromolecular Materials and Engineering, 2011, 296, 203-213.	3.6	46
33	The importance of experimental design on measurement of dynamic interfacial tension and interfacial rheology in diffusion-limited surfactant systems. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 467, 135-142.	4.7	46
34	Effect of surfactant tail length and ionic strength on the interfacial properties of nanoparticleâ€“surfactant complexes. Soft Matter, 2018, 14, 112-123.	2.7	44
35	Controlling the Shear-Induced Structural Transition of Rodlike Micelles Using Nonionic Polymer. Langmuir, 2000, 16, 7991-7998.	3.5	43
36	Interfacial Tension Dynamics, Interfacial Mechanics, and Response to Rapid Dilution of Bulk Surfactant of a Model Oilâ€“Water-Dispersant System. Langmuir, 2013, 29, 1857-1867.	3.5	43

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37	Decoupling Bulk Mechanics and Mono- and Multivalent Ion Transport in Polymers Based on Metalâ€“Ligand Coordination. Chemistry of Materials, 2018, 30, 5759-5769.	6.7	43
38	Dynamic wetting of shear thinning fluids. Physics of Fluids, 2007, 19, 012103.	4.0	41
39	Quantifying the Importance of Micellar Microstructure and Electrostatic Interactions on the Shear-Induced Structural Transition of Cylindrical Micelles. Langmuir, 2002, 18, 2024-2031.	3.5	39
40	Rheology and phase behavior of copolymer-templated nanocomposite materials. Journal of Rheology, 2005, 49, 759-782.	2.6	39
41	Shear Orientation of Nanoparticle Arrays Templated in a Thermoreversible Block Copolymer Micellar Crystal. Macromolecules, 2007, 40, 5801-5811.	4.8	37
42	Influence of crossâ€linker chemistry on release kinetics of PEGâ€<i>co</i>â€PGA hydrogels. Journal of Biomedical Materials Research - Part A, 2009, 90A, 142-153.	4.0	37
43	Coupling electrokinetics and rheology: Electrophoresis in non-Newtonian fluids. Physical Review E, 2012, 85, 016320.	2.1	37
44	The role of surface charge convection in the electrohydrodynamics and breakup of prolate drops. Journal of Fluid Mechanics, 2017, 833, 29-53.	3.4	37
45	Small-angle light scattering study of droplet break-up in emulsions and polymer blends. Chemical Engineering Science, 1998, 53, 2231-2239.	3.8	36
46	Sequential Adsorption of an Irreversibly Adsorbed Nonionic Surfactant and an Anionic Surfactant at an Oil/Aqueous Interface. Langmuir, 2015, 31, 4063-4071.	3.5	35
47	Controlling Dimensions of Polymerized Micelles:â€‰ Micelle Template versus Reaction Conditions. Langmuir, 2006, 22, 941-948.	3.5	31
48	A pH-Induced Transition of Surfactantâˆ'Polyelectrolyte Aggregates from Cylindrical to String-of-Pearls Structure. Langmuir, 2010, 26, 10489-10496.	3.5	30
49	Solution Behavior of Rod-Like Polyelectrolyte-Surfactant Aggregates Polymerized from Wormlike Micelles. Journal of Physical Chemistry B, 2007, 111, 6417-6424.	2.6	28
50	Predicting conditions for microscale surfactant mediated tipstreaming. Physics of Fluids, 2012, 24, .	4.0	28
51	Wormlike micelles as a template for polymerization. Current Opinion in Colloid and Interface Science, 2007, 12, 101-105.	7.4	27
52	The effect of alkane tail length of C E8 surfactants on transport to the silicone oilâ€“water interface. Journal of Colloid and Interface Science, 2011, 355, 231-236.	9.4	27
53	A criterion to assess the impact of confined volumes on surfactant transport to liquidâ€“fluid interfaces. Soft Matter, 2012, 8, 8917.	2.7	26
54	Coalescence behavior of oil droplets coated in irreversibly-adsorbed surfactant layers. Journal of Colloid and Interface Science, 2015, 449, 480-487.	9.4	26

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55	Macroscopic alignment of nanoparticle arrays in soft crystals of cubic and cylindrical polymer micelles. European Physical Journal E, 2008, 26, 183-189.	1.6	25
56	Orthogonal and parallel superposition measurements on lyotropic liquid crystalline polymers. Rheologica Acta, 2000, 39, 26-37.	2.4	23
57	Dynamic wetting of Boger fluids. Journal of Colloid and Interface Science, 2007, 313, 274-280.	9.4	23
58	Dynamic wetting with viscous Newtonian and non-Newtonian fluids. Journal of Physics Condensed Matter, 2009, 21, 464126.	1.8	23
59	Concentration effects on the rheology and texture of PBG/mâ€cresol solutions. Journal of Rheology, 1996, 40, 967-981.	2.6	22
60	Scattering from polymer-like micelles. Current Opinion in Colloid and Interface Science, 2009, 14, 451-454.	7.4	22
61	Controlling thread formation during tipstreaming through an active feedback control loop. Lab on A Chip, 2013, 13, 4534.	6.0	22
62	Formation of a Rigid Hydrophobin Film and Disruption by an Anionic Surfactant at an Air/Water Interface. Langmuir, 2016, 32, 5542-5551.	3.5	20
63	Nematic phases observed in amphiphilic polyelectrolyteâ€"surfactant aggregate solutions. Soft Matter, 2008, 4, 286-293.	2.7	18
64	Determination of the Texture Viscosity and Elasticity of a Nematic PBLG/d-DMF Solution through Magnetic Field Alignment. Macromolecules, 1994, 27, 5979-5986.	4.8	17
65	The Formation of an Irreversibly Adsorbed and Organized Micelle Layer at the Solidâ^'Liquid Interface. Nano Letters, 2002, 2, 1409-1412.	9.1	17
66	Three-Dimensional Nanoparticle Arrays Templated by Self-Assembled Block-Copolymer Gels. Macromolecular Symposia, 2005, 227, 203-210.	0.7	17
67	Structural and Mechanical Hysteresis at the Order-Order Transition of Block Copolymer Micellar Crystals. Polymers, 2011, 3, 281-298.	4.5	17
68	Inflammation product effects on dilatational mechanics can trigger the Laplace instability and acute respiratory distress syndrome. Soft Matter, 2020, 16, 6890-6901.	2.7	17
69	Structure of Isotropic Solutions of Rigid Macromolecules via Small-Angle Neutron Scattering: Poly(.gamma.-benzyl L-glutamate)/Deuterated Dimethylformamide. Macromolecules, 1995, 28, 5075-5081.	4.8	15
70	The Adsorption of Polymerized Rodlike Micelles at the Solidâ^'Liquid Interface. Langmuir, 2004, 20, 1085-1094.	3.5	15
71	Numerical and asymptotic analysis of the three-dimensional electrohydrodynamic interactions of drop pairs. Journal of Fluid Mechanics, 2021, 914, .	3.4	15
72	Polymerized Rodlike Micelle Adsorption at the Solidâ^'Liquid Interface. Langmuir, 2007, 23, 8094-8102.	3.5	14

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73	QUANTIFYING AIR ATOMIZATION OF VISCOELASTIC FLUIDS THROUGH FLUID RELAXATION TIMES. , 2006, 16, 777-790.		14
74	Microfluidic Droplet-Based Tool To Determine Phase Behavior of a Fluid System with High Composition Resolution. Journal of Physical Chemistry B, 2018, 122, 4067-4076.	2.6	13
75	Complex Adsorption Behavior of Rodlike Polyelectrolyteâˆ'Surfactant Aggregates. Langmuir, 2009, 25, 4484-4489.	3.5	12
76	Wetting by simple room-temperature polymer melts: deviations from Newtonian behavior. Journal of Colloid and Interface Science, 2005, 284, 265-270.	9.4	11
77	Formation and elasticity of membranes of the class II hydrophobin Cerato-ulmin at oil-water interfaces. Colloids and Surfaces B: Biointerfaces, 2018, 164, 98-106.	5.0	11
78	Rheology of transient networks containing hydrophobically modified cellulose, anionic surfactant and colloidal silica: role of selective adsorption. Rheologica Acta, 2004, 43, 50-61.	2.4	9
79	Small angle light scattering analysis of morphology development of a model immiscible polymer blend in transient slit-contraction flows. Journal of Rheology, 2001, 45, 383-402.	2.6	8
80	Stabilizing Biomacromolecules in Nontoxic Nano-Structured Materials. Journal of the Association for Laboratory Automation, 2010, 15, 136-144.	2.8	8
81	Droplet-based characterization of surfactant efficacy in colloidal stabilization of carbon black in nonpolar solvents. Journal of Colloid and Interface Science, 2017, 493, 265-274.	9.4	8
82	Colloidal stability dictates drop breakup under electric fields. Soft Matter, 2018, 14, 9351-9360.	2.7	8
83	Insensitivity of Sterically Defined Helical Chain Conformations to Solvent Quality in Dilute Solution. ACS Macro Letters, 2020, 9, 849-854.	4.8	8
84	Coalescence analysis through small-angle light scattering. AICHE Journal, 2001, 47, 2644-2652.	3.6	7
85	Impact of dispersed particles on the structure and shear alignment of block copolymer soft solids. Journal of Rheology, 2017, 61, 237-252.	2.6	7
86	Dynamic interfacial tension measurement under electric fields allows detection of charge carriers in nonpolar liquids. Journal of Colloid and Interface Science, 2020, 567, 18-27.	9.4	7
87	Droplet-Based Microfluidic Tool to Quantify Viscosity of Concentrating Protein Solutions. Pharmaceutical Research, 2021, 38, 1765-1775.	3.5	7
88	Adsorption Studies of a Polymerizable Surfactant by Optical Reflectivity and Quartz Crystal Microbalance. Langmuir, 2009, 25, 11503-11508.	3.5	6
89	Interfacial Properties of Polyelectrolyteâ€"Surfactant Aggregates at Air/Water Interfaces. Langmuir, 2018, 34, 12906-12913.	3.5	6
90	Effective viscosity of a dilute emulsion of spherical drops containing soluble surfactant. Rheologica Acta, 2018, 57, 481-491.	2.4	6

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91	Characterization of Surfactant Partitioning in Polyelectrolyteâ˘'Surfactant Nanorod Aggregates Observed with a Surfactant-Specific Electrode. Industrial & Engineering Chemistry Research, 2009, 48, 2430-2435.	3.7	5
92	Prediction and measurement of leaky dielectric drop interactions. Physical Review Fluids, 2022, 7, .	2.5	5
93	Transport of nanoparticulate material in self-assembled block copolymer micelle solutions and crystals. Faraday Discussions, 2016, 186, 435-454.	3.2	4
94	Electric fields enable tunable surfactant transport to microscale fluid interfaces. Physical Review E, 2019, 100, 023114.	2.1	4
95	Relaxation or breakup of a low-conductivity drop upon removal of a uniform dc electric field. Physical Review Fluids, 2016, 1, .	2.5	4
96	Impact of fluid memory on wetting approaching the air entrainment limit. Journal of Colloid and Interface Science, 2009, 337, 619-621.	9.4	3
97	Rheological characterization of BCC and FCC structures in aqueous diblock copolymer liquid crystals. Korea Australia Rheology Journal, 2019, 31, 249-254.	1.7	3
98	Impact of Viscosity Ratio on the Dynamics of Droplet Breakup in a Microfluidic Flow Focusing Device. AIP Conference Proceedings, 2008, , .	0.4	2
99	Transport of Flexible, Oil-Soluble Diblock and BAB Triblock Copolymers to Oil/Water Interfaces. Langmuir, 2020, 36, 7227-7235.	3.5	2
100	Shear-Modulated Rates of Phase Transitions in Sphere-Forming Diblock Oligomer Lyotropic Liquid Crystals. ACS Macro Letters, 2021, 10, 538-544.	4.8	2
101	Modeling and Theory: general discussion. Faraday Discussions, 2016, 186, 371-398.	3.2	1
102	Applications to Soft Matter: general discussion. Faraday Discussions, 2016, 186, 503-527.	3.2	1
103	Special issue devoted to novel trends in rheology. Rheologica Acta, 2019, 58, 419-420.	2.4	1
104	Deformation of a conducting drop in a randomly fluctuating electric field. Physical Review Fluids, 2020, 5, .	2.5	1
105	Welcoming Philippe Coussot as the next European editor. Rheologica Acta, 2021, 60, 291.	2.4	0