Matthew E Helgeson

List of Publications by Year
in descending order

74 papers	3,480 citations	126907 33 h-index	144013 57 g-index
78 all docs	78 docs citations	78 times ranked	4917 citing authors

#	Article	IF	Citations
1	Elasticity of Nanoparticles Influences Their Blood Circulation, Phagocytosis, Endocytosis, and Targeting. ACS Nano, 2015, 9, 3169-3177.	14.6	470
2	Multiple nanoemulsions. Nature Reviews Materials, 2020, 5, 214-228.	48.7	140
3	Mesoporous organohydrogels from thermogelling photocrosslinkable nanoemulsions. Nature Materials, 2012, 11, 344-352.	27.5	138
4	Hydrogel microparticles from lithographic processes: Novel materials for fundamental and applied colloid science. Current Opinion in Colloid and Interface Science, 2011, 16, 106-117.	7.4	134
5	Gel-Induced Selective Crystallization of Polymorphs. Journal of the American Chemical Society, 2012, 134, 673-684.	13.7	129
6	Rheology and spatially resolved structure of cetyltrimethylammonium bromide wormlike micelles through the shear banding transition. Journal of Rheology, 2009, 53, 727-756.	2.6	127
7	Formation and Rheology of Viscoelastic â€œDouble Networksâ€•in Wormlike Micelleâ^'Nanoparticle Mixtures. Langmuir, 2010, 26, 8049-8060.	3.5	119
8	Colloidal behavior of nanoemulsions: Interactions, structure, and rheology. Current Opinion in Colloid and Interface Science, 2016, 25, 39-50.	7.4	102
9	Size, shape, and flexibility influence nanoparticle transport across brain endothelium under flow. Bioengineering and Translational Medicine, 2020, 5, e10153.	7.1	99
10	Theory and kinematic measurements of the mechanics of stable electrospun polymer jets. Polymer, 2008, 49, 2924-2936.	3.8	98
11	Controlled Nucleation from Solution Using Polymer Microgels. Journal of the American Chemical Society, 2011, 133, 3756-3759.	13.7	87
12	Microdynamics and arrest of coarsening during spinodal decomposition in thermoreversible colloidal gels. Soft Matter, 2015, 11, 6360-6370.	2.7	87
13	Relating shear banding, structure, and phase behavior in wormlike micellar solutions. Soft Matter, 2009, 5, 3858.	2.7	86
14	Microstructure and nonlinear signatures of yielding in a heterogeneous colloidal gel under large amplitude oscillatory shear. Journal of Rheology, 2014, 58, 1359-1390.	2.6	80
15	Soluto-inertial phenomena: Designing long-range, long-lasting, surface-specific interactions in suspensions. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8612-8617.	7.1	80
16	A microfluidic model of human brain (Î¼HuB) for assessment of blood brain barrier. Bioengineering and Translational Medicine, 2019, 4, e10126.	7.1	76
17	Homogeneous percolation versus arrested phase separation in attractively-driven nanoemulsion colloidal gels. Soft Matter, 2014, 10, 3122.	2.7	70
18	A hyaluronic acid conjugate engineered to synergistically and sequentially deliver gemcitabine and doxorubicin to treat triple negative breast cancer. Journal of Controlled Release, 2017, 267, 191-202.	9.9	70

#	Article	IF	Citations
19	A systematic study of equilibrium structure, thermodynamics, and rheology of aqueous CTAB/NaNO3 wormlike micelles. Journal of Colloid and Interface Science, 2010, 349, 1-12.	9.4	67
20	Microstructure and shear rheology of entangled wormlike micelles in solution. Journal of Rheology, 2009, 53, 441-458.	2.6	63
21	Dark-field differential dynamic microscopy. Soft Matter, 2016, 12, 2440-2452.	2.7	56
22	Heterogeneity and its Influence on the Properties of Difunctional Poly(ethylene glycol) Hydrogels: Structure and Mechanics. Macromolecules, 2015, 48, 5402-5411.	4.8	54
23	Nucleation under Soft Confinement: Role of Polymerâ€“Solute Interactions. Crystal Growth and Design, 2012, 12, 508-517.	3.0	51
24	Direct Observation of Flow-Concentration Coupling in a Shear-Banding Fluid. Physical Review Letters, 2010, 105, 084501.	7.8	50
25	Nanoemulsion Composite Microgels for Orthogonal Encapsulation and Release. Advanced Materials, 2012, 24, 3838-3844.	21.0	50
26	Ion Transport in Dynamic Polymer Networks Based on Metalâ€“Ligand Coordination: Effect of Cross-Linker Concentration. Macromolecules, 2018, 51, 2017-2026.	4.8	45
27	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
28	Toward Rational Design of Protein Detergent Complexes: Determinants of Mixed Micelles That Are Critical for the InÂVitro Stabilization of a G-Protein Coupled Receptor. Biophysical Journal, 2011, 101, 1938-1948.	0.5	41
29	Polymerâ€“surfactant complexation as a generic route to responsive viscoelastic nanoemulsions. Soft Matter, 2013, 9, 6897.	2.7	41
30	A correlation for the diameter of electrospun polymer nanofibers. AICHE Journal, 2007, 53, 51-55.	3.6	40
31	The Morphology and Composition of Cholesterol-Rich Micellar Nanostructures Determine Transmembrane Protein (GPCR) Activity. Biophysical Journal, 2011, 100, L11-L13.	0.5	39
32	The microscopic network structure of mussel (Mytilus) adhesive plaques. Journal of the Royal Society Interface, 2015, 12, 20150827.	3.4	36
33	Probe microrheology without particle tracking by differential dynamic microscopy. Rheologica Acta, 2017, 56, 863-869.	2.4	35
34	Electrospinning of neat and laponite-filled aqueous poly(ethylene oxide) solutions. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 1608-1617.	2.1	33
35	Role of Zeta (Î¶) Potential in the Optimization of Water Treatment Facility Operations. Industrial & Engineering Chemistry Research, 2009, 48, 2305-2308.	3.7	33
36	Triple Function Lubricant Additives Based on Organicâ€“Inorganic Hybrid Star Polymers: Friction Reduction, Wear Protection, and Viscosity Modification. ACS Applied Materials & Interfaces, 2019, 11, 1363-1375.	8.0	31

#	Article	IF	Citations
37	Delivery of Nanoparticles and Macromolecules across the Bloodâ€“Brain Barrier. Advanced Therapeutics, 2020, 3, 1900073.	3.2	30
38	Self-regulating photochemical Rayleigh-BÃ©nard convection using a highly-absorbing organic photoswitch. Nature Communications, 2020, 11, 2599.	12.8	26
39	Shear-induced phase separation (SIPS) with shear banding in solutions of cationic surfactant and salt. Journal of Rheology, 2011, 55, 1375-1397.	2.6	25
40	Engineered Ovalbumin Nanoparticles for Cancer Immunotherapy. Advanced Therapeutics, 2020, 3, 2000100.	3.2	25
41	Probing flow-induced nanostructure of complex fluids in arbitrary 2D flows using a fluidic four-roll mill (FFoRM). Scientific Reports, 2018, 8, 15559.	3.3	24
42	Oil-in-Water-in-Oil Multinanoemulsions for Templating Complex Nanoparticles. Nano Letters, 2016, 16, 7325-7332.	9.1	23
43	Colloidal interactions mediated by end-adsorbing polymer-like micelles. Journal of Chemical Physics, 2011, 135, 084901.	3.0	20
44	Controlling Complex Nanoemulsion Morphology Using Asymmetric Cosurfactants for the Preparation of Polymer Nanocapsules. Langmuir, 2018, 34, 978-990.	3.5	20
45	Rapid viscoelastic switching of an ambient temperature range photo-responsive azobenzene side chain liquid crystal polymer. Polymer, 2013, 54, 2850-2856.	3.8	19
46	Synthesis of Oil-Laden Poly(ethylene glycol) Diacrylate Hydrogel Nanocapsules from Double Nanoemulsions. Langmuir, 2017, 33, 6116-6126.	3.5	18
47	Decoupling Mechanical and Conductive Dynamics of Polymeric Ionic Liquids via a Trivalent Anion Additive. Macromolecules, 2017, 50, 8979-8987.	4.8	18
48	Structural Evolution of Layered Hybrid Lead Iodide Perovskites in Colloidal Dispersions. ACS Nano, 2020, 14, 11294-11308.	14.6	18
49	Differential dynamic microscopy for the characterization of polymer systems. Journal of Polymer Science, 2022, 60, 1079-1089.	3.8	18
50	Distinguishing shear banding from shear thinning in flows with a shear stress gradient. Rheologica Acta, 2017, 56, 1007-1032.	2.4	17
51	Texture analysis microscopy: quantifying structure in low-fidelity images of dense fluids. Optics Express, 2014, 22, 10046.	3.4	14
52	Synthesis and Characterization of a Selfâ€Fluorescent Hyaluronic Acidâ€“Based Gel for Dermal Applications. Advanced Healthcare Materials, 2015, 4, 2297-2305.	7.6	14
53	Photocrosslinking polymeric ionic liquids via anthracene cycloaddition for organic electronics. Journal of Materials Chemistry C, 2018, 6, 8762-8769.	5.5	13
54	Flow-Induced Concentration Nonuniformity and Shear Banding in Entangled Polymer Solutions. Physical Review Letters, 2021, 126, 207801.	7.8	13

#	Article	IF	Citations
55	Rational mechanochemical design of Dielsâ€“Alder crosslinked biocompatible hydrogels with enhanced properties. Materials Horizons, 2022, 9, 1947-1953.	12.2	13
56	Tuning the Potential of Electron Extraction from Microbes with Ferroceneâ€Containing Conjugated Oligoelectrolytes. Advanced Biology, 2019, 3, 1800303.	3.0	9
57	Minimizing Starâ€“Star Coupling in Cu(0)-Mediated Controlled Radical Polymerizations. Macromolecules, 2019, 52, 601-609.	4.8	9
58	Engineering Gelation Kinetics in Living Silk Hydrogels by Differential Dynamic Microscopy Microrheology and Machine Learning. Advanced Biology, 2022, 6, e2101070.	2.5	9
59	Depinning of Multiphase Fluid Using Light and Photo-Responsive Surfactants. ACS Central Science, 2022, 8, 235-245.	11.3	9
60	Design and characterization of a 3D-printed staggered herringbone mixer. BioTechniques, 2021, 70, 285-289.	1.8	8
61	Bayesian estimations of orientation distribution functions from small-angle scattering enable direct prediction of mechanical stress in anisotropic materials. Physical Review Materials, 2021, 5, .	2.4	8
62	Uncertainty quantification and estimation in differential dynamic microscopy. Physical Review E, 2021, 104, 034610.	2.1	8
63	High-throughput microscopy to determine morphology, microrheology, and phase boundaries applied to phase separating coacervates. Soft Matter, 2022, 18, 3063-3075.	2.7	8
64	Role of Architecture on Thermorheological Properties of Poly(alkyl methacrylate)-Based Polymers. Macromolecules, 2021, 54, 5473-5483.	4.8	7
65	Influence of Polarity Change and Photophysical Effects on Photosurfactant-Driven Wetting. Langmuir, 2021, 37, 9939-9951.	3.5	7
66	Anomalous Solute Diffusivity in Ionic Liquids: Label-Free Visualization and Physical Origins. Physical Review X, 2019, 9, .	8.9	6
67	Coupled nonhomogeneous flows and flow-enhanced concentration fluctuations during startup shear of entangled polymer solutions. Physical Review Fluids, 2020, 5, .	2.5	6
68	Fingerprinting soft material nanostructure response to complex flow histories. Physical Review Materials, 2022, 6, .	2.4	6
69	Network structure influences bulk modulus of nearly incompressible filled silicone elastomers. Extreme Mechanics Letters, 2022, 52, 101616.	4.1	5
70	Modeling colloidal interactions that predict equilibrium and non-equilibrium states. Journal of Chemical Physics, 2022, 156, .	3.0	3
71	Hydrogen Bonding Strength Determines Water Diffusivity in Polymer Ionogels. Journal of Physical Chemistry B, 2021, 125, 5408-5419.	2.6	2
72	Microgels: Nanoemulsion Composite Microgels for Orthogonal Encapsulation and Release (Adv.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6	21.0	0

#	Article	IF	Citations
73	The 8th American Conference on Neutron Scattering. Neutron News, 2016, 27, 4-10.	0.2	0
74	Strength of fluid-filled soft composites across the elastofracture length. Soft Matter, 0, , .	2.7	0