

Matthew E Helgeson

List of Publications by Year in descending order

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74
papers

3,480
citations

126907

33
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144013

57
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78
all docs

78
docs citations

78
times ranked

4917
citing authors

#	ARTICLE	IF	CITATIONS
1	Differential dynamic microscopy for the characterization of polymer systems. Journal of Polymer Science, 2022, 60, 1079-1089.	3.8	18
2	Engineering Gelation Kinetics in Living Silk Hydrogels by Differential Dynamic Microscopy Microrheology and Machine Learning. Advanced Biology, 2022, 6, e2101070.	2.5	9
3	Network structure influences bulk modulus of nearly incompressible filled silicone elastomers. Extreme Mechanics Letters, 2022, 52, 101616.	4.1	5
4	Depinning of Multiphase Fluid Using Light and Photo-Responsive Surfactants. ACS Central Science, 2022, 8, 235-245.	11.3	9
5	High-throughput microscopy to determine morphology, microrheology, and phase boundaries applied to phase separating coacervates. Soft Matter, 2022, 18, 3063-3075.	2.7	8
6	Rational mechanochemical design of Diels–Alder crosslinked biocompatible hydrogels with enhanced properties. Materials Horizons, 2022, 9, 1947-1953.	12.2	13
7	Fingerprinting soft material nanostructure response to complex flow histories. Physical Review Materials, 2022, 6, .	2.4	6
8	Modeling colloidal interactions that predict equilibrium and non-equilibrium states. Journal of Chemical Physics, 2022, 156, .	3.0	3
9	Flow-Induced Concentration Nonuniformity and Shear Banding in Entangled Polymer Solutions. Physical Review Letters, 2021, 126, 207801.	7.8	13
10	Hydrogen Bonding Strength Determines Water Diffusivity in Polymer Ionogels. Journal of Physical Chemistry B, 2021, 125, 5408-5419.	2.6	2
11	Design and characterization of a 3D-printed staggered herringbone mixer. BioTechniques, 2021, 70, 285-289.	1.8	8
12	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
13	Role of Architecture on Thermorheological Properties of Poly(alkyl methacrylate)-Based Polymers. Macromolecules, 2021, 54, 5473-5483.	4.8	7
14	Influence of Polarity Change and Photophysical Effects on Photosurfactant-Driven Wetting. Langmuir, 2021, 37, 9939-9951.	3.5	7
15	Uncertainty quantification and estimation in differential dynamic microscopy. Physical Review E, 2021, 104, 034610.	2.1	8
16	Delivery of Nanoparticles and Macromolecules across the Blood–Brain Barrier. Advanced Therapeutics, 2020, 3, 1900073.	3.2	30
17	Size, shape, and flexibility influence nanoparticle transport across brain endothelium under flow. Bioengineering and Translational Medicine, 2020, 5, e10153.	7.1	99
18	Structural Evolution of Layered Hybrid Lead Iodide Perovskites in Colloidal Dispersions. ACS Nano, 2020, 14, 11294-11308.	14.6	18

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19	Engineered Ovalbumin Nanoparticles for Cancer Immunotherapy. <i>Advanced Therapeutics</i> , 2020, 3, 2000100.	3.2	25
20	Multiple nanoemulsions. <i>Nature Reviews Materials</i> , 2020, 5, 214-228.	48.7	140
21	Self-regulating photochemical Rayleigh-BÃ©nard convection using a highly-absorbing organic photoswitch. <i>Nature Communications</i> , 2020, 11, 2599.	12.8	26
22	Coupled nonhomogeneous flows and flow-enhanced concentration fluctuations during startup shear of entangled polymer solutions. <i>Physical Review Fluids</i> , 2020, 5, .	2.5	6
23	Anomalous Solute Diffusivity in Ionic Liquids: Label-Free Visualization and Physical Origins. <i>Physical Review X</i> , 2019, 9, .	8.9	6
24	A microfluidic model of human brain (1/4HuB) for assessment of blood brain barrier. <i>Bioengineering and Translational Medicine</i> , 2019, 4, e10126.	7.1	76
25	Tuning the Potential of Electron Extraction from Microbes with Ferrocene-Containing Conjugated Oligoelectrolytes. <i>Advanced Biology</i> , 2019, 3, 1800303.	3.0	9
26	Triple Function Lubricant Additives Based on Organic-Inorganic Hybrid Star Polymers: Friction Reduction, Wear Protection, and Viscosity Modification. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 1363-1375.	8.0	31
27	Minimizing Star-Star Coupling in Cu(0)-Mediated Controlled Radical Polymerizations. <i>Macromolecules</i> , 2019, 52, 601-609.	4.8	9
28	Ion Transport in Dynamic Polymer Networks Based on Metal-Ligand Coordination: Effect of Cross-Linker Concentration. <i>Macromolecules</i> , 2018, 51, 2017-2026.	4.8	45
29	Controlling Complex Nanoemulsion Morphology Using Asymmetric Cosurfactants for the Preparation of Polymer Nanocapsules. <i>Langmuir</i> , 2018, 34, 978-990.	3.5	20
30	Probing flow-induced nanostructure of complex fluids in arbitrary 2D flows using a fluidic four-roll mill (FFoRM). <i>Scientific Reports</i> , 2018, 8, 15559.	3.3	24
31	Photocrosslinking polymeric ionic liquids <i>via</i> anthracene cycloaddition for organic electronics. <i>Journal of Materials Chemistry C</i> , 2018, 6, 8762-8769.	5.5	13
32	Decoupling Bulk Mechanics and Mono- and Multivalent Ion Transport in Polymers Based on Metal-Ligand Coordination. <i>Chemistry of Materials</i> , 2018, 30, 5759-5769.	6.7	43
33	Synthesis of Oil-Laden Poly(ethylene glycol) Diacrylate Hydrogel Nanocapsules from Double Nanoemulsions. <i>Langmuir</i> , 2017, 33, 6116-6126.	3.5	18
34	A hyaluronic acid conjugate engineered to synergistically and sequentially deliver gemcitabine and doxorubicin to treat triple negative breast cancer. <i>Journal of Controlled Release</i> , 2017, 267, 191-202.	9.9	70
35	Probe microrheology without particle tracking by differential dynamic microscopy. <i>Rheologica Acta</i> , 2017, 56, 863-869.	2.4	35
36	Decoupling Mechanical and Conductive Dynamics of Polymeric Ionic Liquids via a Trivalent Anion Additive. <i>Macromolecules</i> , 2017, 50, 8979-8987.	4.8	18

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37	Distinguishing shear banding from shear thinning in flows with a shear stress gradient. <i>Rheologica Acta</i> , 2017, 56, 1007-1032.	2.4	17
38	Solute-inertial phenomena: Designing long-range, long-lasting, surface-specific interactions in suspensions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 8612-8617.	7.1	80
39	The 8th American Conference on Neutron Scattering. <i>Neutron News</i> , 2016, 27, 4-10.	0.2	0
40	Oil-in-Water-in-Oil Multinanoemulsions for Templating Complex Nanoparticles. <i>Nano Letters</i> , 2016, 16, 7325-7332.	9.1	23
41	Colloidal behavior of nanoemulsions: Interactions, structure, and rheology. <i>Current Opinion in Colloid and Interface Science</i> , 2016, 25, 39-50.	7.4	102
42	Dark-field differential dynamic microscopy. <i>Soft Matter</i> , 2016, 12, 2440-2452.	2.7	56
43	Synthesis and Characterization of a Self-Fluorescent Hyaluronic Acid-Based Gel for Dermal Applications. <i>Advanced Healthcare Materials</i> , 2015, 4, 2297-2305.	7.6	14
44	The microscopic network structure of mussel (<i>Mytilus</i>) adhesive plaques. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20150827.	3.4	36
45	Elasticity of Nanoparticles Influences Their Blood Circulation, Phagocytosis, Endocytosis, and Targeting. <i>ACS Nano</i> , 2015, 9, 3169-3177.	14.6	470
46	Heterogeneity and its Influence on the Properties of Difunctional Poly(ethylene glycol) Hydrogels: Structure and Mechanics. <i>Macromolecules</i> , 2015, 48, 5402-5411.	4.8	54
47	Microdynamics and arrest of coarsening during spinodal decomposition in thermoreversible colloidal gels. <i>Soft Matter</i> , 2015, 11, 6360-6370.	2.7	87
48	Texture analysis microscopy: quantifying structure in low-fidelity images of dense fluids. <i>Optics Express</i> , 2014, 22, 10046.	3.4	14
49	Homogeneous percolation versus arrested phase separation in attractively-driven nanoemulsion colloidal gels. <i>Soft Matter</i> , 2014, 10, 3122.	2.7	70
50	Microstructure and nonlinear signatures of yielding in a heterogeneous colloidal gel under large amplitude oscillatory shear. <i>Journal of Rheology</i> , 2014, 58, 1359-1390.	2.6	80
51	Rapid viscoelastic switching of an ambient temperature range photo-responsive azobenzene side chain liquid crystal polymer. <i>Polymer</i> , 2013, 54, 2850-2856.	3.8	19
52	Polymer-surfactant complexation as a generic route to responsive viscoelastic nanoemulsions. <i>Soft Matter</i> , 2013, 9, 6897.	2.7	41
53	Nucleation under Soft Confinement: Role of Polymer-Solute Interactions. <i>Crystal Growth and Design</i> , 2012, 12, 508-517.	3.0	51
54	Gel-Induced Selective Crystallization of Polymorphs. <i>Journal of the American Chemical Society</i> , 2012, 134, 673-684.	13.7	129

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55	Mesoporous organohydrogels from thermogelling photocrosslinkable nanoemulsions. Nature Materials, 2012, 11, 344-352.	27.5	138
56	Nanoemulsion Composite Microgels for Orthogonal Encapsulation and Release. Advanced Materials, 2012, 24, 3838-3844.	21.0	50
57	Microgels: Nanoemulsion Composite Microgels for Orthogonal Encapsulation and Release (Adv.) Tj ETQq1 1 0.784314 rgBT /Overlock	21.0	0
58	The Morphology and Composition of Cholesterol-Rich Micellar Nanostructures Determine Transmembrane Protein (GPCR) Activity. Biophysical Journal, 2011, 100, L11-L13.	0.5	39
59	Toward Rational Design of Protein Detergent Complexes: Determinants of Mixed Micelles That Are Critical for the In Vitro Stabilization of a G-Protein Coupled Receptor. Biophysical Journal, 2011, 101, 1938-1948.	0.5	41
60	Colloidal interactions mediated by end-adsorbing polymer-like micelles. Journal of Chemical Physics, 2011, 135, 084901.	3.0	20
61	Controlled Nucleation from Solution Using Polymer Microgels. Journal of the American Chemical Society, 2011, 133, 3756-3759.	13.7	87
62	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
63	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
64	A systematic study of equilibrium structure, thermodynamics, and rheology of aqueous CTAB/NaNO ₃ wormlike micelles. Journal of Colloid and Interface Science, 2010, 349, 1-12.	9.4	67
65	Direct Observation of Flow-Concentration Coupling in a Shear-Banding Fluid. Physical Review Letters, 2010, 105, 084501.	7.8	50
66	Formation and Rheology of Viscoelastic "Double Networks" in Wormlike Micelle-Nanoparticle Mixtures. Langmuir, 2010, 26, 8049-8060.	3.5	119
67	Role of Zeta (ζ) Potential in the Optimization of Water Treatment Facility Operations. Industrial & Engineering Chemistry Research, 2009, 48, 2305-2308.	3.7	33
68	Relating shear banding, structure, and phase behavior in wormlike micellar solutions. Soft Matter, 2009, 5, 3858.	2.7	86
69	Microstructure and shear rheology of entangled wormlike micelles in solution. Journal of Rheology, 2009, 53, 441-458.	2.6	63
70	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
71	Theory and kinematic measurements of the mechanics of stable electrospun polymer jets. Polymer, 2008, 49, 2924-2936.	3.8	98
72	A correlation for the diameter of electrospun polymer nanofibers. AIChE Journal, 2007, 53, 51-55.	3.6	40

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73	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
74	Strength of fluid-filled soft composites across the elastofracture length. Soft Matter, 0, , .	2.7	0