

Matthew E Helgeson

List of Publications by Year in descending order

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74
papers

3,480
citations

145106

33
h-index

162838

57
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78
all docs

78
docs citations

78
times ranked

5625
citing authors

#	ARTICLE	IF	CITATIONS
1	Differential dynamic microscopy for the characterization of polymer systems. <i>Journal of Polymer Science</i> , 2022, 60, 1079-1089.	2.0	18
2	Engineering Gelation Kinetics in Living Silk Hydrogels by Differential Dynamic Microscopy Microrheology and Machine Learning. <i>Advanced Biology</i> , 2022, 6, e2101070.	1.4	9
3	Network structure influences bulk modulus of nearly incompressible filled silicone elastomers. <i>Extreme Mechanics Letters</i> , 2022, 52, 101616.	2.0	5
4	Depinning of Multiphase Fluid Using Light and Photo-Responsive Surfactants. <i>ACS Central Science</i> , 2022, 8, 235-245.	5.3	9
5	High-throughput microscopy to determine morphology, microrheology, and phase boundaries applied to phase separating coacervates. <i>Soft Matter</i> , 2022, 18, 3063-3075.	1.2	8
6	Rational mechanochemical design of Diels-Alder crosslinked biocompatible hydrogels with enhanced properties. <i>Materials Horizons</i> , 2022, 9, 1947-1953.	6.4	13
7	Fingerprinting soft material nanostructure response to complex flow histories. <i>Physical Review Materials</i> , 2022, 6, .	0.9	6
8	Modeling colloidal interactions that predict equilibrium and non-equilibrium states. <i>Journal of Chemical Physics</i> , 2022, 156, .	1.2	3
9	Flow-Induced Concentration Nonuniformity and Shear Banding in Entangled Polymer Solutions. <i>Physical Review Letters</i> , 2021, 126, 207801.	2.9	13
10	Hydrogen Bonding Strength Determines Water Diffusivity in Polymer Ionogels. <i>Journal of Physical Chemistry B</i> , 2021, 125, 5408-5419.	1.2	2
11	Design and characterization of a 3D-printed staggered herringbone mixer. <i>BioTechniques</i> , 2021, 70, 285-289.	0.8	8
12	Bayesian estimations of orientation distribution functions from small-angle scattering enable direct prediction of mechanical stress in anisotropic materials. <i>Physical Review Materials</i> , 2021, 5, .	0.9	8
13	Role of Architecture on Thermorheological Properties of Poly(alkyl methacrylate)-Based Polymers. <i>Macromolecules</i> , 2021, 54, 5473-5483.	2.2	7
14	Influence of Polarity Change and Photophysical Effects on Photosurfactant-Driven Wetting. <i>Langmuir</i> , 2021, 37, 9939-9951.	1.6	7
15	Uncertainty quantification and estimation in differential dynamic microscopy. <i>Physical Review E</i> , 2021, 104, 034610.	0.8	8
16	Delivery of Nanoparticles and Macromolecules across the Blood-Brain Barrier. <i>Advanced Therapeutics</i> , 2020, 3, 1900073.	1.6	30
17	Size, shape, and flexibility influence nanoparticle transport across brain endothelium under flow. <i>Bioengineering and Translational Medicine</i> , 2020, 5, e10153.	3.9	99
18	Structural Evolution of Layered Hybrid Lead Iodide Perovskites in Colloidal Dispersions. <i>ACS Nano</i> , 2020, 14, 11294-11308.	7.3	18

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19	Engineered Ovalbumin Nanoparticles for Cancer Immunotherapy. <i>Advanced Therapeutics</i> , 2020, 3, 2000100.	1.6	25
20	Multiple nanoemulsions. <i>Nature Reviews Materials</i> , 2020, 5, 214-228.	23.3	140
21	Self-regulating photochemical Rayleigh-Bénard convection using a highly-absorbing organic photoswitch. <i>Nature Communications</i> , 2020, 11, 2599.	5.8	26
22	Coupled nonhomogeneous flows and flow-enhanced concentration fluctuations during startup shear of entangled polymer solutions. <i>Physical Review Fluids</i> , 2020, 5, .	1.0	6
23	Anomalous Solute Diffusivity in Ionic Liquids: Label-Free Visualization and Physical Origins. <i>Physical Review X</i> , 2019, 9, .	2.8	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.	3.9	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.	4.0	31
27	Minimizing Star-Star Coupling in Cu(0)-Mediated Controlled Radical Polymerizations. <i>Macromolecules</i> , 2019, 52, 601-609.	2.2	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.	2.2	45
29	Controlling Complex Nanoemulsion Morphology Using Asymmetric Cosurfactants for the Preparation of Polymer Nanocapsules. <i>Langmuir</i> , 2018, 34, 978-990.	1.6	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.	1.6	24
31	Photocrosslinking polymeric ionic liquids via anthracene cycloaddition for organic electronics. <i>Journal of Materials Chemistry C</i> , 2018, 6, 8762-8769.	2.7	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.	3.2	43
33	Synthesis of Oil-Laden Poly(ethylene glycol) Diacrylate Hydrogel Nanocapsules from Double Nanoemulsions. <i>Langmuir</i> , 2017, 33, 6116-6126.	1.6	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.	4.8	70
35	Probe microrheology without particle tracking by differential dynamic microscopy. <i>Rheologica Acta</i> , 2017, 56, 863-869.	1.1	35
36	Decoupling Mechanical and Conductive Dynamics of Polymeric Ionic Liquids via a Trivalent Anion Additive. <i>Macromolecules</i> , 2017, 50, 8979-8987.	2.2	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.	1.1	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.	3.3	80
39	The 8th American Conference on Neutron Scattering. <i>Neutron News</i> , 2016, 27, 4-10.	0.1	0
40	Oil-in-Water-in-Oil Multinanoemulsions for Templating Complex Nanoparticles. <i>Nano Letters</i> , 2016, 16, 7325-7332.	4.5	23
41	Colloidal behavior of nanoemulsions: Interactions, structure, and rheology. <i>Current Opinion in Colloid and Interface Science</i> , 2016, 25, 39-50.	3.4	102
42	Dark-field differential dynamic microscopy. <i>Soft Matter</i> , 2016, 12, 2440-2452.	1.2	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.	3.9	14
44	The microscopic network structure of mussel (<i>Mytilus</i>) adhesive plaques. <i>Journal of the Royal Society Interface</i> , 2015, 12, 20150827.	1.5	36
45	Elasticity of Nanoparticles Influences Their Blood Circulation, Phagocytosis, Endocytosis, and Targeting. <i>ACS Nano</i> , 2015, 9, 3169-3177.	7.3	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.	2.2	54
47	Microdynamics and arrest of coarsening during spinodal decomposition in thermoreversible colloidal gels. <i>Soft Matter</i> , 2015, 11, 6360-6370.	1.2	87
48	Texture analysis microscopy: quantifying structure in low-fidelity images of dense fluids. <i>Optics Express</i> , 2014, 22, 10046.	1.7	14
49	Homogeneous percolation versus arrested phase separation in attractively-driven nanoemulsion colloidal gels. <i>Soft Matter</i> , 2014, 10, 3122.	1.2	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.	1.3	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.	1.8	19
52	Polymer-surfactant complexation as a generic route to responsive viscoelastic nanoemulsions. <i>Soft Matter</i> , 2013, 9, 6897.	1.2	41
53	Nucleation under Soft Confinement: Role of Polymer-Solute Interactions. <i>Crystal Growth and Design</i> , 2012, 12, 508-517.	1.4	51
54	Gel-Induced Selective Crystallization of Polymorphs. <i>Journal of the American Chemical Society</i> , 2012, 134, 673-684.	6.6	129

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55	Mesoporous organohydrogels from thermogelling photocrosslinkable nanoemulsions. <i>Nature Materials</i> , 2012, 11, 344-352.	13.3	138
56	Nanoemulsion Composite Microgels for Orthogonal Encapsulation and Release. <i>Advanced Materials</i> , 2012, 24, 3838-3844.	11.1	50
57	Microgels: Nanoemulsion Composite Microgels for Orthogonal Encapsulation and Release (Adv.) <i>Tj ETQq1 1 0.784314 rgBT /Overlock</i>	11.1	0
58	The Morphology and Composition of Cholesterol-Rich Micellar Nanostructures Determine Transmembrane Protein (GPCR) Activity. <i>Biophysical Journal</i> , 2011, 100, L11-L13.	0.2	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. <i>Biophysical Journal</i> , 2011, 101, 1938-1948.	0.2	41
60	Colloidal interactions mediated by end-adsorbing polymer-like micelles. <i>Journal of Chemical Physics</i> , 2011, 135, 084901.	1.2	20
61	Controlled Nucleation from Solution Using Polymer Microgels. <i>Journal of the American Chemical Society</i> , 2011, 133, 3756-3759.	6.6	87
62	Shear-induced phase separation (SIPS) with shear banding in solutions of cationic surfactant and salt. <i>Journal of Rheology</i> , 2011, 55, 1375-1397.	1.3	25
63	Hydrogel microparticles from lithographic processes: Novel materials for fundamental and applied colloid science. <i>Current Opinion in Colloid and Interface Science</i> , 2011, 16, 106-117.	3.4	134
64	A systematic study of equilibrium structure, thermodynamics, and rheology of aqueous CTAB/NaNO ₃ wormlike micelles. <i>Journal of Colloid and Interface Science</i> , 2010, 349, 1-12.	5.0	67
65	Direct Observation of Flow-Concentration Coupling in a Shear-Banding Fluid. <i>Physical Review Letters</i> , 2010, 105, 084501.	2.9	50
66	Formation and Rheology of Viscoelastic "Double Networks" in Wormlike Micelle-Nanoparticle Mixtures. <i>Langmuir</i> , 2010, 26, 8049-8060.	1.6	119
67	Role of Zeta (ζ) Potential in the Optimization of Water Treatment Facility Operations. <i>Industrial & Engineering Chemistry Research</i> , 2009, 48, 2305-2308.	1.8	33
68	Relating shear banding, structure, and phase behavior in wormlike micellar solutions. <i>Soft Matter</i> , 2009, 5, 3858.	1.2	86
69	Microstructure and shear rheology of entangled wormlike micelles in solution. <i>Journal of Rheology</i> , 2009, 53, 441-458.	1.3	63
70	Rheology and spatially resolved structure of cetyltrimethylammonium bromide wormlike micelles through the shear banding transition. <i>Journal of Rheology</i> , 2009, 53, 727-756.	1.3	127
71	Theory and kinematic measurements of the mechanics of stable electrospun polymer jets. <i>Polymer</i> , 2008, 49, 2924-2936.	1.8	98
72	A correlation for the diameter of electrospun polymer nanofibers. <i>AIChE Journal</i> , 2007, 53, 51-55.	1.8	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.	2.4	33
74	Strength of fluid-filled soft composites across the elastofracture length. Soft Matter, 0, , .	1.2	0