

Randy Ewoldt

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

109
papers

4,749
citations

32
h-index

67
g-index

120
ext. papers

5,562
ext. citations

5.8
avg. IF

6.04
L-index

#	Paper	IF	Citations
109	Particle contact dynamics as the origin for noninteger power expansion rheology in attractive suspension networks. <i>Journal of Rheology</i> , 2022 , 66, 17-30	4.1	2
108	Designing Complex Fluids. <i>Annual Review of Fluid Mechanics</i> , 2022 , 54,	22	6
107	Do-it-yourself rheometry. <i>Physics of Fluids</i> , 2022 , 34, 053105	4.4	1
106	Dual function organic active materials for nonaqueous redox flow batteries. <i>Materials Advances</i> , 2021 , 2, 1390-1401	3.3	12
105	Crowded electrolytes containing redoxmers in different states of charge: Solution structure, properties, and fundamental limits on energy density. <i>Journal of Molecular Liquids</i> , 2021 , 334, 116533	6	8
104	Linear and nonlinear viscoelasticity of concentrated thermoresponsive microgel suspensions. <i>Journal of Colloid and Interface Science</i> , 2021 , 601, 886-898	9.3	4
103	TEMPO allegro: liquid catholyte redoxmers for nonaqueous redox flow batteries. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 16769-16775	13	3
102	Questioning a fundamental assumption of rheology: Observation of noninteger power expansions. <i>Journal of Rheology</i> , 2020 , 64, 625-635	4.1	6
101	Viscoplastic drop impact on thin films. <i>Journal of Fluid Mechanics</i> , 2020 , 891,	3.7	5
100	Base-triggered self-amplifying degradable polyurethanes with the ability to translate local stimulation to continuous long-range degradation. <i>Chemical Science</i> , 2020 , 11, 3326-3331	9.4	9
99	The weakly nonlinear response and nonaffine interpretation of the Johnson-Begelman/Gordon-Schowalter model. <i>Journal of Rheology</i> , 2020 , 64, 1409-1424	4.1	6
98	Operating windows for oscillatory interfacial shear rheology. <i>Journal of Rheology</i> , 2020 , 64, 141-160	4.1	25
97	Self-Assembled Solute Networks in Crowded Electrolyte Solutions and Nanoconfinement of Charged Redoxmer Molecules. <i>Journal of Physical Chemistry B</i> , 2020 , 124, 10226-10236	3.4	8
96	Exploiting Nonlinear Elasticity for Anomalous Magneto-responsive Stiffening. <i>ACS Macro Letters</i> , 2020 , 9, 1632-1637	6.6	1
95	Viscous flow properties and hydrodynamic diameter of phenothiazine-based redox-active molecules in different supporting salt environments. <i>Physics of Fluids</i> , 2020 , 32, 083108	4.4	8
94	Uncertainty propagation in simulation predictions of generalized Newtonian fluid flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2019 , 271, 104138	2.7	2
93	Designing and transforming yield-stress fluids. <i>Current Opinion in Solid State and Materials Science</i> , 2019 , 23, 100758	12	32

92	Simultaneous design of non-Newtonian lubricant and surface texture using surrogate-based multiobjective optimization. <i>Structural and Multidisciplinary Optimization</i> , 2019 , 60, 99-116	3.6	4
91	Linear and nonlinear rheology and structural relaxation in dense glassy and jammed soft repulsive pNIPAM microgel suspensions. <i>Soft Matter</i> , 2019 , 15, 1038-1052	3.6	29
90	Acid-Triggered, Acid-Generating, and Self-Amplifying Degradable Polymers. <i>Journal of the American Chemical Society</i> , 2019 , 141, 2838-2842	16.4	25
89	Time-strain separability in medium-amplitude oscillatory shear. <i>Physics of Fluids</i> , 2019 , 31, 021213	4.4	14
88	Modulating Noncovalent Cross-links with Molecular Switches. <i>Journal of the American Chemical Society</i> , 2019 , 141, 3597-3604	16.4	24
87	On fitting data for parameter estimates: residual weighting and data representation. <i>Rheologica Acta</i> , 2019 , 58, 341-359	2.3	8
86	Thermoresponsive Stiffening with Microgel Particles in a Semiflexible Fibrin Network. <i>Macromolecules</i> , 2019 , 52, 3029-3041	5.5	6
85	Unravelling hagfish slime. <i>Journal of the Royal Society Interface</i> , 2019 , 16, 20180710	4.1	7
84	Low Reynolds number friction reduction with polymers and textures. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2019 , 273, 104167	2.7	2
83	Mapping linear viscoelasticity for design and tactile intuition. <i>Applied Rheology</i> , 2019 , 29, 141-161	1.2	3
82	Vibration of fresh concrete understood through the paradigm of granular physics. <i>Cement and Concrete Research</i> , 2019 , 115, 31-42	10.3	15
81	Field sensitivity of flow predictions to rheological parameters. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2018 , 257, 71-82	2.7	4
80	Particle-Free Emulsions for 3D Printing Elastomers. <i>Advanced Functional Materials</i> , 2018 , 28, 1707032	15.6	26
79	Solution Properties and Practical Limits of Concentrated Electrolytes for Nonaqueous Redox Flow Batteries. <i>Journal of Physical Chemistry C</i> , 2018 , 122, 8159-8172	3.8	42
78	Nonlinear viscoelasticity of fat crystal networks. <i>Rheologica Acta</i> , 2018 , 57, 251-266	2.3	10
77	Simultaneous Design of Non-Newtonian Lubricant and Surface Texture Using Surrogate-Based Optimization 2018 ,		1
76	Modulation of the Electrochemical Reactivity of Solubilized Redox Active Polymers via Polyelectrolyte Dynamics. <i>Journal of the American Chemical Society</i> , 2018 , 140, 2093-2104	16.4	18
75	Extending yield-stress fluid paradigms. <i>Journal of Rheology</i> , 2018 , 62, 357-369	4.1	23

74	Optomechanical microrheology of single adherent cancer cells. <i>APL Bioengineering</i> , 2018 , 2, 016108	6.6	1
73	Dynamic Remodeling of Covalent Networks via Ring-Opening Metathesis Polymerization. <i>ACS Macro Letters</i> , 2018 , 7, 933-937	6.6	35
72	First-harmonic nonlinearities can predict unseen third-harmonics in medium-amplitude oscillatory shear (MAOS) 2018 , 30, 1-10		11
71	Emulsions: Particle-Free Emulsions for 3D Printing Elastomers (Adv. Funct. Mater. 21/2018). <i>Advanced Functional Materials</i> , 2018 , 28, 1870141	15.6	1
70	Efficient Optimal Surface Texture Design Using Linearization 2018 , 632-647		4
69	Frequency-sweep medium-amplitude oscillatory shear (MAOS). <i>Journal of Rheology</i> , 2018 , 62, 277-293	4.1	15
68	Concentration-independent mechanics and structure of hagfish slime. <i>Acta Biomaterialia</i> , 2018 , 79, 123-134	13.8	6
67	Inferring the Nonlinear Mechanisms of a Reversible Network. <i>Macromolecules</i> , 2018 , 51, 8772-8789	5.5	21
66	Mechanically active materials in three-dimensional mesostructures. <i>Science Advances</i> , 2018 , 4, eaat8313	14.3	57
65	Continuous relaxation spectra for constitutive models in medium-amplitude oscillatory shear. <i>Journal of Rheology</i> , 2018 , 62, 1271-1298	4.1	8
64	Quantifying compressive forces between living cell layers and within tissues using elastic round microgels. <i>Nature Communications</i> , 2018 , 9, 1878	17.4	60
63	Integration of colloids into a semi-flexible network of fibrin. <i>Soft Matter</i> , 2017 , 13, 1430-1443	3.6	6
62	Design-Driven Modeling of Surface-Textured Full-Film Lubricated Sliding: Validation and Rationale of Nonstandard Thrust Observations. <i>Tribology Letters</i> , 2017 , 65, 1	2.8	7
61	Regulating dynamic signaling between hematopoietic stem cells and niche cells via a hydrogel matrix. <i>Biomaterials</i> , 2017 , 125, 54-64	15.6	36
60	A strain stiffening theory for transient polymer networks under asymptotically nonlinear oscillatory shear. <i>Journal of Rheology</i> , 2017 , 61, 643-665	4.1	24
59	Enhancing Full-Film Lubrication Performance Via Arbitrary Surface Texture Design. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2017 , 139,	3	7
58	Mapping thixo-elasto-visco-plastic behavior. <i>Rheologica Acta</i> , 2017 , 56, 195-210	2.3	60
57	Design of yield-stress fluids: a rheology-to-structure inverse problem. <i>Soft Matter</i> , 2017 , 13, 7578-7594	3.6	56

56	Self-adaptive hydrogels to mineralization. <i>Soft Matter</i> , 2017 , 13, 5469-5480	3.6	7
55	A Multiobjective Adaptive Surrogate Modeling-Based Optimization (MO-ASMO) Framework Using Efficient Sampling Strategies 2017 ,		4
54	Assessing the impact of electrolyte conductivity and viscosity on the reactor cost and pressure drop of redox-active polymer flow batteries. <i>Journal of Power Sources</i> , 2017 , 361, 334-344	8.9	24
53	QUANTITATIVE MEASURES OF YIELD-STRESS FLUID DROP IMPACTS ON COATED SURFACES. <i>Atomization and Sprays</i> , 2017 , 27, 337-343	1.2	2
52	Intrinsic nonlinearities in the mechanics of hard sphere suspensions. <i>Soft Matter</i> , 2016 , 12, 7655-62	3.6	4
51	Effect of the environmental humidity on the bulk, interfacial and nanoconfined properties of an ionic liquid. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 22719-30	3.6	36
50	Impacts of yield-stress fluid drops on permeable mesh substrates. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016 , 238, 107-114	2.7	1
49	Asymmetric surface textures decrease friction with Newtonian fluids in full film lubricated sliding contact. <i>Tribology International</i> , 2016 , 97, 490-498	4.9	25
48	Non-integer asymptotic scaling of a thixotropic-viscoelastic model in large-amplitude oscillatory shear. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016 , 227, 80-89	2.7	15
47	Temporal Modulation of Stem Cell Activity Using Magnetoactive Hydrogels. <i>Advanced Healthcare Materials</i> , 2016 , 5, 2536-2544	10.1	54
46	Shape Parameterization Comparison for Full-Film Lubrication Texture Design 2016 ,		2
45	Predictions for the northern coast of the shear rheology map: XXLAOS. <i>Journal of Fluid Mechanics</i> , 2016 , 798, 1-4	3.7	8
44	Setting Material Function Design Targets for Linear Viscoelastic Materials and Structures. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2016 , 138,	3	8
43	Dynamic mechanical measurement of the viscoelasticity of single adherent cells. <i>Applied Physics Letters</i> , 2016 , 108, 093701	3.4	19
42	Automatic control: the vertebral column of dogfish sharks behaves as a continuously variable transmission with smoothly shifting functions. <i>Journal of Experimental Biology</i> , 2016 , 219, 2908-2919	3	14
41	Single-point parallel disk correction for asymptotically nonlinear oscillatory shear. <i>Rheologica Acta</i> , 2015 , 54, 223-233	2.3	14
40	Design and fabrication of ceramic beads by the vibration method. <i>Journal of the European Ceramic Society</i> , 2015 , 35, 3587-3594	6	8
39	Sticking and splashing in yield-stress fluid drop impacts on coated surfaces. <i>Physics of Fluids</i> , 2015 , 27, 043101	4.4	16

38	Quantitative rheological model selection: Good fits versus credible models using Bayesian inference. <i>Journal of Rheology</i> , 2015 , 59, 667-701	4.1	23
37	Shear stress characteristics of microtextured surfaces in gap-controlled hydrodynamic lubrication. <i>Tribology International</i> , 2015 , 82, 123-132	4.9	13
36	On Using Adaptive Surrogate Modeling in Design for Efficient Fluid Power 2015 ,		2
35	Constitutive model fingerprints in medium-amplitude oscillatory shear. <i>Journal of Rheology</i> , 2015 , 59, 557-592	4.1	40
34	Experimental Challenges of Shear Rheology: How to Avoid Bad Data 2015 , 207-241		98
33	A simple thixotropic viscoelastic constitutive model produces unique signatures in large-amplitude oscillatory shear (LAOS). <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2014 , 208-209, 27-41	2.7	37
32	A critical gel fluid with high extensibility: The rheology of chewing gum. <i>Journal of Rheology</i> , 2014 , 58, 821-838	4.1	18
31	Extremely Soft: Design with Rheologically Complex Fluids. <i>Soft Robotics</i> , 2014 , 1, 12-20	9.2	33
30	The general low-frequency prediction for asymptotically nonlinear material functions in oscillatory shear. <i>Journal of Rheology</i> , 2014 , 58, 891-910	4.1	44
29	Plasmonic optical trapping in biologically relevant media. <i>PLoS ONE</i> , 2014 , 9, e93929	3.7	18
28	Low-dimensional intrinsic material functions for nonlinear viscoelasticity. <i>Rheologica Acta</i> , 2013 , 52, 201-219	2.1	104
27	Precision rheometry: Surface tension effects on low-torque measurements in rotational rheometers. <i>Journal of Rheology</i> , 2013 , 57, 1515-1532	4.1	45
26	Reactive coupling between immiscible polymer chains: Acceleration by compressive flow. <i>AIChE Journal</i> , 2013 , 59, 3391-3402	3.6	18
25	Describing and prescribing the constitutive response of yield stress fluids using large amplitude oscillatory shear stress (LAOS _{stress}). <i>Journal of Rheology</i> , 2013 , 57, 27-70	4.1	177
24	Defining nonlinear rheological material functions for oscillatory shear. <i>Journal of Rheology</i> , 2013 , 57, 177-195	4.1	98
23	Early-Stage Design of Rheologically Complex Materials via Material Function Design Targets 2013 ,		2
22	Nanometer-scale flow of molten polyethylene from a heated atomic force microscope tip. <i>Nanotechnology</i> , 2012 , 23, 215301	3.4	41
21	Large amplitude oscillatory shear flow of gluten dough: A model power-law gel. <i>Journal of Rheology</i> , 2011 , 55, 627-654	4.1	103

20	How Dr. Malcom M. Cross may have tackled the development of an apparent viscosity function for shear thickening fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2011 , 166, 1421-1424	2.7	44
19	A review of nonlinear oscillatory shear tests: Analysis and application of large amplitude oscillatory shear (LAOS). <i>Progress in Polymer Science</i> , 2011 , 36, 1697-1753	29.6	852
18	Flow accelerates adhesion between functional polyethylene and polyurethane. <i>AICHE Journal</i> , 2011 , 57, 3496-3506	3.6	31
17	Non-linear viscoelasticity of hagfish slime. <i>International Journal of Non-Linear Mechanics</i> , 2011 , 46, 627-638	3.6	39
16	Controllable adhesion using field-activated fluids. <i>Physics of Fluids</i> , 2011 , 23, 073104	4.4	28
15	A microcomposite hydrogel for repeated on-demand ultrasound-triggered drug delivery. <i>Biomaterials</i> , 2010 , 31, 5208-17	15.6	91
14	Large amplitude oscillatory shear of pseudoplastic and elastoviscoplastic materials. <i>Rheologica Acta</i> , 2010 , 49, 191-212	2.3	201
13	On secondary loops in LAOS via self-intersection of Lissajous-Bowditch curves. <i>Rheologica Acta</i> , 2010 , 49, 213-219	2.3	100
12	<i>Helicobacter pylori</i> moves through mucus by reducing mucin viscoelasticity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009 , 106, 14321-6	11.5	269
11	From ultra-soft slime to hard α -keratins: The many lives of intermediate filaments. <i>Integrative and Comparative Biology</i> , 2009 , 49, 32-9	2.8	29
10	Nonlinear viscoelastic biomaterials: meaningful characterization and engineering inspiration. <i>Integrative and Comparative Biology</i> , 2009 , 49, 40-50	2.8	48
9	Probing Shear-Banding Transitions of Entangled Liquids Using Large Amplitude Oscillatory Shearing (LAOS) Deformations. <i>AIP Conference Proceedings</i> , 2008 ,	0	4
8	New measures for characterizing nonlinear viscoelasticity in large amplitude oscillatory shear. <i>Journal of Rheology</i> , 2008 , 52, 1427-1458	4.1	613
7	An Ontology for Large Amplitude Oscillatory Shear Flow. <i>AIP Conference Proceedings</i> , 2008 ,	0	9
6	Rheology of gastric mucin exhibits a pH-dependent sol-gel transition. <i>Biomacromolecules</i> , 2007 , 8, 1580-6.9	6.9	190
5	Rheological fingerprinting of gastropod pedal mucus and synthetic complex fluids for biomimicking adhesive locomotion. <i>Soft Matter</i> , 2007 , 3, 634-643	3.6	160
4	Turbulent and transitional velocity measurements in a rectangular microchannel using microscopic particle image velocimetry. <i>Experimental Thermal and Fluid Science</i> , 2005 , 29, 435-446	3	40
3	Experimental Protocols for Studying Organic Non-aqueous Redox Flow Batteries. <i>ACS Energy Letters</i> , 2011 , 2, 3932-3943	20.1	2

2	3D Printing High-Resolution Conductive Elastomeric Structures with a Solid Particle-Free Emulsion Ink. <i>Advanced Engineering Materials</i> ,2100902	3.5	1
1	Self-Regulative Direct Ink Writing of Frontally Polymerizing Thermoset Polymers. <i>Advanced Materials Technologies</i> ,2200230	6.8	2