

# Randy H 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.

86  
papers

4,302  
citations

29  
h-index

65  
g-index

91  
ext. papers

5,016  
ext. citations

6  
avg, IF

5.93  
L-index

#	Paper	IF	Citations
86	Particle contact dynamics as the origin for noninteger power expansion rheology in attractive suspension networks. <i>Journal of Rheology</i> , <b>2022</b> , 66, 17-30	4.1	2
85	Designing Complex Fluids. <i>Annual Review of Fluid Mechanics</i> , <b>2022</b> , 54,	22	6
84	Dual function organic active materials for nonaqueous redox flow batteries. <i>Materials Advances</i> , <b>2021</b> , 2, 1390-1401	3.3	12
83	Linear and nonlinear viscoelasticity of concentrated thermoresponsive microgel suspensions. <i>Journal of Colloid and Interface Science</i> , <b>2021</b> , 601, 886-898	9.3	4
82	TEMPO allegro: liquid catholyte redoxmers for nonaqueous redox flow batteries. <i>Journal of Materials Chemistry A</i> , <b>2021</b> , 9, 16769-16775	13	3
81	Questioning a fundamental assumption of rheology: Observation of noninteger power expansions. <i>Journal of Rheology</i> , <b>2020</b> , 64, 625-635	4.1	6
80	Viscoplastic drop impact on thin films. <i>Journal of Fluid Mechanics</i> , <b>2020</b> , 891,	3.7	5
79	Base-triggered self-amplifying degradable polyurethanes with the ability to translate local stimulation to continuous long-range degradation. <i>Chemical Science</i> , <b>2020</b> , 11, 3326-3331	9.4	9
78	The weakly nonlinear response and nonaffine interpretation of the Johnson-Begelman/Gordon-Schowalter model. <i>Journal of Rheology</i> , <b>2020</b> , 64, 1409-1424	4.1	6
77	Self-Assembled Solute Networks in Crowded Electrolyte Solutions and Nanoconfinement of Charged Redoxmer Molecules. <i>Journal of Physical Chemistry B</i> , <b>2020</b> , 124, 10226-10236	3.4	8
76	Exploiting Nonlinear Elasticity for Anomalous Magneto-responsive Stiffening. <i>ACS Macro Letters</i> , <b>2020</b> , 9, 1632-1637	6.6	1
75	Viscous flow properties and hydrodynamic diameter of phenothiazine-based redox-active molecules in different supporting salt environments. <i>Physics of Fluids</i> , <b>2020</b> , 32, 083108	4.4	8
74	Uncertainty propagation in simulation predictions of generalized Newtonian fluid flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , <b>2019</b> , 271, 104138	2.7	2
73	Designing and transforming yield-stress fluids. <i>Current Opinion in Solid State and Materials Science</i> , <b>2019</b> , 23, 100758	12	32
72	Simultaneous design of non-Newtonian lubricant and surface texture using surrogate-based multiobjective optimization. <i>Structural and Multidisciplinary Optimization</i> , <b>2019</b> , 60, 99-116	3.6	4
71	Linear and nonlinear rheology and structural relaxation in dense glassy and jammed soft repulsive pNIPAM microgel suspensions. <i>Soft Matter</i> , <b>2019</b> , 15, 1038-1052	3.6	29
70	Acid-Triggered, Acid-Generating, and Self-Amplifying Degradable Polymers. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 2838-2842	16.4	25

69	Time-strain separability in medium-amplitude oscillatory shear. <i>Physics of Fluids</i> , <b>2019</b> , 31, 021213	4.4	14
68	On fitting data for parameter estimates: residual weighting and data representation. <i>Rheologica Acta</i> , <b>2019</b> , 58, 341-359	2.3	8
67	Thermoresponsive Stiffening with Microgel Particles in a Semiflexible Fibrin Network. <i>Macromolecules</i> , <b>2019</b> , 52, 3029-3041	5.5	6
66	Unravelling hagfish slime. <i>Journal of the Royal Society Interface</i> , <b>2019</b> , 16, 20180710	4.1	7
65	Low Reynolds number friction reduction with polymers and textures. <i>Journal of Non-Newtonian Fluid Mechanics</i> , <b>2019</b> , 273, 104167	2.7	2
64	Mapping linear viscoelasticity for design and tactile intuition. <i>Applied Rheology</i> , <b>2019</b> , 29, 141-161	1.2	3
63	Particle-Free Emulsions for 3D Printing Elastomers. <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1707032	15.6	26
62	Solution Properties and Practical Limits of Concentrated Electrolytes for Nonaqueous Redox Flow Batteries. <i>Journal of Physical Chemistry C</i> , <b>2018</b> , 122, 8159-8172	3.8	42
61	Nonlinear viscoelasticity of fat crystal networks. <i>Rheologica Acta</i> , <b>2018</b> , 57, 251-266	2.3	10
60	Modulation of the Electrochemical Reactivity of Solubilized Redox Active Polymers via Polyelectrolyte Dynamics. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 2093-2104	16.4	18
59	Extending yield-stress fluid paradigms. <i>Journal of Rheology</i> , <b>2018</b> , 62, 357-369	4.1	23
58	Optomechanical microrheology of single adherent cancer cells. <i>APL Bioengineering</i> , <b>2018</b> , 2, 016108	6.6	1
57	Dynamic Remodeling of Covalent Networks via Ring-Opening Metathesis Polymerization. <i>ACS Macro Letters</i> , <b>2018</b> , 7, 933-937	6.6	35
56	First-harmonic nonlinearities can predict unseen third-harmonics in medium-amplitude oscillatory shear (MAOS) <b>2018</b> , 30, 1-10		11
55	Emulsions: Particle-Free Emulsions for 3D Printing Elastomers (Adv. Funct. Mater. 21/2018). <i>Advanced Functional Materials</i> , <b>2018</b> , 28, 1870141	15.6	1
54	Frequency-sweep medium-amplitude oscillatory shear (MAOS). <i>Journal of Rheology</i> , <b>2018</b> , 62, 277-293	4.1	15
53	Concentration-independent mechanics and structure of hagfish slime. <i>Acta Biomaterialia</i> , <b>2018</b> , 79, 123-134	15.8	6
52	Inferring the Nonlinear Mechanisms of a Reversible Network. <i>Macromolecules</i> , <b>2018</b> , 51, 8772-8789	5.5	21

51	Mechanically active materials in three-dimensional mesostructures. <i>Science Advances</i> , <b>2018</b> , 4, eaat8313	14.3	57
50	Continuous relaxation spectra for constitutive models in medium-amplitude oscillatory shear. <i>Journal of Rheology</i> , <b>2018</b> , 62, 1271-1298	4.1	8
49	Quantifying compressive forces between living cell layers and within tissues using elastic round microgels. <i>Nature Communications</i> , <b>2018</b> , 9, 1878	17.4	60
48	Integration of colloids into a semi-flexible network of fibrin. <i>Soft Matter</i> , <b>2017</b> , 13, 1430-1443	3.6	6
47	Design-Driven Modeling of Surface-Textured Full-Film Lubricated Sliding: Validation and Rationale of Nonstandard Thrust Observations. <i>Tribology Letters</i> , <b>2017</b> , 65, 1	2.8	7
46	Regulating dynamic signaling between hematopoietic stem cells and niche cells via a hydrogel matrix. <i>Biomaterials</i> , <b>2017</b> , 125, 54-64	15.6	36
45	A strain stiffening theory for transient polymer networks under asymptotically nonlinear oscillatory shear. <i>Journal of Rheology</i> , <b>2017</b> , 61, 643-665	4.1	24
44	Mapping thixo-elasto-visco-plastic behavior. <i>Rheologica Acta</i> , <b>2017</b> , 56, 195-210	2.3	60
43	Design of yield-stress fluids: a rheology-to-structure inverse problem. <i>Soft Matter</i> , <b>2017</b> , 13, 7578-7594	3.6	56
42	Self-adaptive hydrogels to mineralization. <i>Soft Matter</i> , <b>2017</b> , 13, 5469-5480	3.6	7
41	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> , <b>2017</b> , 361, 334-344	8.9	24
40	QUANTITATIVE MEASURES OF YIELD-STRESS FLUID DROP IMPACTS ON COATED SURFACES. <i>Atomization and Sprays</i> , <b>2017</b> , 27, 337-343	1.2	2
39	Intrinsic nonlinearities in the mechanics of hard sphere suspensions. <i>Soft Matter</i> , <b>2016</b> , 12, 7655-62	3.6	4
38	Effect of the environmental humidity on the bulk, interfacial and nanoconfined properties of an ionic liquid. <i>Physical Chemistry Chemical Physics</i> , <b>2016</b> , 18, 22719-30	3.6	36
37	Non-integer asymptotic scaling of a thixotropic-viscoelastic model in large-amplitude oscillatory shear. <i>Journal of Non-Newtonian Fluid Mechanics</i> , <b>2016</b> , 227, 80-89	2.7	15
36	Temporal Modulation of Stem Cell Activity Using Magnetoactive Hydrogels. <i>Advanced Healthcare Materials</i> , <b>2016</b> , 5, 2536-2544	10.1	54
35	Predictions for the northern coast of the shear rheology map: XXLAOS. <i>Journal of Fluid Mechanics</i> , <b>2016</b> , 798, 1-4	3.7	8
34	Setting Material Function Design Targets for Linear Viscoelastic Materials and Structures. <i>Journal of Mechanical Design, Transactions of the ASME</i> , <b>2016</b> , 138,	3	8

33	Automatic control: the vertebral column of dogfish sharks behaves as a continuously variable transmission with smoothly shifting functions. <i>Journal of Experimental Biology</i> , <b>2016</b> , 219, 2908-2919	3	14
32	Single-point parallel disk correction for asymptotically nonlinear oscillatory shear. <i>Rheologica Acta</i> , <b>2015</b> , 54, 223-233	2.3	14
31	Design and fabrication of ceramic beads by the vibration method. <i>Journal of the European Ceramic Society</i> , <b>2015</b> , 35, 3587-3594	6	8
30	Sticking and splashing in yield-stress fluid drop impacts on coated surfaces. <i>Physics of Fluids</i> , <b>2015</b> , 27, 043101	4.4	16
29	Quantitative rheological model selection: Good fits versus credible models using Bayesian inference. <i>Journal of Rheology</i> , <b>2015</b> , 59, 667-701	4.1	23
28	Constitutive model fingerprints in medium-amplitude oscillatory shear. <i>Journal of Rheology</i> , <b>2015</b> , 59, 557-592	4.1	40
27	Experimental Challenges of Shear Rheology: How to Avoid Bad Data <b>2015</b> , 207-241		98
26	A simple thixotropic viscoelastic constitutive model produces unique signatures in large-amplitude oscillatory shear (LAOS). <i>Journal of Non-Newtonian Fluid Mechanics</i> , <b>2014</b> , 208-209, 27-41	2.7	37
25	A critical gel fluid with high extensibility: The rheology of chewing gum. <i>Journal of Rheology</i> , <b>2014</b> , 58, 821-838	4.1	18
24	Extremely Soft: Design with Rheologically Complex Fluids. <i>Soft Robotics</i> , <b>2014</b> , 1, 12-20	9.2	33
23	The general low-frequency prediction for asymptotically nonlinear material functions in oscillatory shear. <i>Journal of Rheology</i> , <b>2014</b> , 58, 891-910	4.1	44
22	Plasmonic optical trapping in biologically relevant media. <i>PLoS ONE</i> , <b>2014</b> , 9, e93929	3.7	18
21	Low-dimensional intrinsic material functions for nonlinear viscoelasticity. <i>Rheologica Acta</i> , <b>2013</b> , 52, 201-219	2.1	104
20	Precision rheometry: Surface tension effects on low-torque measurements in rotational rheometers. <i>Journal of Rheology</i> , <b>2013</b> , 57, 1515-1532	4.1	45
19	Reactive coupling between immiscible polymer chains: Acceleration by compressive flow. <i>AICHE Journal</i> , <b>2013</b> , 59, 3391-3402	3.6	18
18	Describing and prescribing the constitutive response of yield stress fluids using large amplitude oscillatory shear stress (LAOS <sub>stress</sub> ). <i>Journal of Rheology</i> , <b>2013</b> , 57, 27-70	4.1	177
17	Defining nonlinear rheological material functions for oscillatory shear. <i>Journal of Rheology</i> , <b>2013</b> , 57, 177-195	4.1	98
16	Early-Stage Design of Rheologically Complex Materials via Material Function Design Targets <b>2013</b> ,		2

15	Large amplitude oscillatory shear flow of gluten dough: A model power-law gel. <i>Journal of Rheology</i> , <b>2011</b> , 55, 627-654	4.1	103
14	A review of nonlinear oscillatory shear tests: Analysis and application of large amplitude oscillatory shear (LAOS). <i>Progress in Polymer Science</i> , <b>2011</b> , 36, 1697-1753	29.6	852
13	Flow accelerates adhesion between functional polyethylene and polyurethane. <i>AIChE Journal</i> , <b>2011</b> , 57, 3496-3506	3.6	31
12	Controllable adhesion using field-activated fluids. <i>Physics of Fluids</i> , <b>2011</b> , 23, 073104	4.4	28
11	Large amplitude oscillatory shear of pseudoplastic and elastoviscoplastic materials. <i>Rheologica Acta</i> , <b>2010</b> , 49, 191-212	2.3	201
10	On secondary loops in LAOS via self-intersection of Lissajous-Bowditch curves. <i>Rheologica Acta</i> , <b>2010</b> , 49, 213-219	2.3	100
9	Helicobacter pylori moves through mucus by reducing mucin viscoelasticity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2009</b> , 106, 14321-6	11.5	269
8	Nonlinear viscoelastic biomaterials: meaningful characterization and engineering inspiration. <i>Integrative and Comparative Biology</i> , <b>2009</b> , 49, 40-50	2.8	48
7	Probing Shear-Banding Transitions of Entangled Liquids Using Large Amplitude Oscillatory Shearing (LAOS) Deformations. <i>AIP Conference Proceedings</i> , <b>2008</b> ,	0	4
6	New measures for characterizing nonlinear viscoelasticity in large amplitude oscillatory shear. <i>Journal of Rheology</i> , <b>2008</b> , 52, 1427-1458	4.1	613
5	An Ontology for Large Amplitude Oscillatory Shear Flow. <i>AIP Conference Proceedings</i> , <b>2008</b> ,	0	9
4	Rheology of gastric mucin exhibits a pH-dependent sol-gel transition. <i>Biomacromolecules</i> , <b>2007</b> , 8, 1580-6.9		190
3	Rheological fingerprinting of gastropod pedal mucus and synthetic complex fluids for biomimicking adhesive locomotion. <i>Soft Matter</i> , <b>2007</b> , 3, 634-643	3.6	160
2	Experimental Protocols for Studying Organic Non-aqueous Redox Flow Batteries. <i>ACS Energy Letters</i> , 3932-3943	20.1	2
1	3D Printing High-Resolution Conductive Elastomeric Structures with a Solid Particle-Free Emulsion Ink. <i>Advanced Engineering Materials</i> , 2100902	3.5	1