Simon J Haward

List of Publications by Year
in descending order

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82 papers	2,422 citations	172457 29 h-index	223800 46 g-index
92 all docs	92 docs citations	92 times ranked	1710 citing authors

#	Article	IF	Citations
1	Shear and Extensional Rheology of Cellulose/Ionic Liquid Solutions. Biomacromolecules, 2012, 13, 1688-1699.	5.4	154
2	Optimized Cross-Slot Flow Geometry for Microfluidic Extensional Rheometry. Physical Review Letters, 2012, 109, 128301.	7.8	116
3	Microfluidic extensional rheometry using a hyperbolic contraction geometry. Rheologica Acta, 2013, 52, 529-546.	2.4	113
4	Extensional rheology and elastic instabilities of a wormlike micellar solution in a microfluidic cross-slot device. Soft Matter, 2012, 8, 536-555.	2.7	95
5	Extensional rheology of human saliva. Rheologica Acta, 2011, 50, 869-879.	2.4	85
6	The rheology of aqueous solutions of ethyl hydroxy-ethyl cellulose (EHEC) and its hydrophobically modified analogue (hmEHEC): extensional flow response in capillary break-up, jetting (ROJER) and in a cross-slot extensional rheometer. Soft Matter, 2015, 11, 3251-3270.	2.7	82
7	Elastic instabilities in planar elongational flow of monodisperse polymer solutions. Scientific Reports, 2016, 6, 33029.	3.3	80
8	Microfluidic extensional rheometry using stagnation point flow. Biomicrofluidics, 2016, 10, 043401.	2.4	77
9	Relaxation time of dilute polymer solutions: A microfluidic approach. Journal of Rheology, 2017, 61, 327-337.	2.6	72
10	Extensional flow of hyaluronic acid solutions in an optimized microfluidic cross-slot device. Biomicrofluidics, 2013, 7, 044108.	2.4	68
11	Stagnation point flow of wormlike micellar solutions in a microfluidic cross-slot device: Effects of surfactant concentration and ionic environment. Physical Review E, 2012, 85, 031502.	2.1	64
12	Flow of wormlike micellar solutions around confined microfluidic cylinders. Soft Matter, 2016, 12, 8666-8681.	2.7	54
13	Extensional opto-rheometry with biofluids and ultra-dilute polymer solutions. Soft Matter, 2011, 7, 9908.	2.7	51
14	Flow of wormlike micellar solutions around microfluidic cylinders with high aspect ratio and low blockage ratio. Soft Matter, 2019, 15, 1927-1941.	2.7	51
15	Steady viscoelastic flow around high-aspect-ratio, low-blockage-ratio microfluidic cylinders. Journal of Non-Newtonian Fluid Mechanics, 2018, 254, 23-35.	2.4	49
16	Asymmetric flows of complex fluids past confined cylinders: A comprehensive numerical study with experimental validation. Physics of Fluids, 2020, 32, 053103.	4.0	48
17	3D-printed glass microfluidics for fluid dynamics and rheology. Current Opinion in Colloid and Interface Science, 2019, 43, 1-14.	7.4	46
18	Intracellular Nanomaterial Delivery via Spiral Hydroporation. ACS Nano, 2020, 14, 3048-3058.	14.6	45

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19	Tricritical spiral vortex instability in cross-slot flow. Physical Review E, 2016, 93, 031101.	2.1	42
20	Asymmetric flow of polymer solutions around microfluidic cylinders: Interaction between shear-thinning and viscoelasticity. Journal of Non-Newtonian Fluid Mechanics, 2020, 278, 104250.	2.4	40
21	Transition between solid and liquid state of yield-stress fluids under purely extensional deformations. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 12611-12617.	7.1	39
22	Instabilities in stagnation point flows of polymer solutions. Physics of Fluids, 2013, 25, .	4.0	38
23	Monitoring of cellulose depolymerization in 1-ethyl-3-methylimidazolium acetate by shear and elongational rheology. Carbohydrate Polymers, 2015, 117, 355-363.	10.2	36
24	Non-linear dynamics of semi-dilute polydisperse polymer solutions in microfluidics: A study of a benchmark flow problem. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 951-963.	2.4	33
25	Effects of Shearing and Extensional Flows on the Alignment of Colloidal Rods. Macromolecules, 2021, 54, 4176-4185.	4.8	33
26	Rheological characterizations of wormlike micellar solutions containing cationic surfactant and anionic hydrotropic salt. Journal of Rheology, 2015, 59, 1229-1259.	2.6	32
27	Ectomycorrhizal weathering, a matter of scale?. Mineralogical Magazine, 2008, 72, 131-134.	1.4	30
28	The rheology of polymer solution elastic strands in extensional flow. Rheologica Acta, 2010, 49, 781-788.	2.4	30
29	Characterization of hyaluronic acid and synovial fluid in stagnation point elongational flow. Biopolymers, 2014, 101, 287-305.	2.4	30
30	Extensional rheology of dilute polymer solutions in oscillatory cross-slot flow: the transient behaviour of birefringent strands. Rheologica Acta, 2010, 49, 633-645.	2.4	29
31	Secondary flows of viscoelastic fluids in serpentine microchannels. Microfluidics and Nanofluidics, 2019, 23, 1.	2.2	29
32	Tristability in Viscoelastic Flow Past Side-by-Side Microcylinders. Physical Review Letters, 2021, 126, 054501.	7.8	29
33	Stagnation points control chaotic fluctuations in viscoelastic porous media flow. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	29
34	Purely Elastic Fluidâ€“Structure Interactions in Microfluidics: Implications for Mucociliary Flows. Small, 2020, 16, e1903872.	10.0	27
35	Flow of dilute to semi-dilute polystyrene solutions through a benchmark 8:1 planar abrupt micro-contraction. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 1654-1669.	2.4	26
36	In situ atomic force microscopy measurements of biotite basal plane reactivity in the presence of oxalic acid. Geochimica Et Cosmochimica Acta, 2011, 75, 6870-6881.	3.9	25

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37	Inertioelastic Flow Instability at a Stagnation Point. Physical Review X, 2017, 7, .	8.9	25
38	Quantitative polarized light microscopy of unstained mammalian cochlear sections. Journal of Biomedical Optics, 2013, 18, 026021.	2.6	24
39	Molecular orientation in non-Newtonian flow of dilute polymer solutions around spheres. Rheologica Acta, 2004, 43, 350.	2.4	22
40	Spatiotemporal flow instabilities of wormlike micellar solutions in rectangular microchannels. Applied Physics Letters, 2014, 104, 124101.	3.3	20
41	Microscopic investigation of vortex breakdown in a dividing T-junction flow. Physical Review Fluids, 2018, 3, .	2.5	20
42	Viscosity enhancement In non-Newtonian flow of dilute polymer solutions through crystallographic porous media. Rheologica Acta, 2003, 42, 516-526.	2.4	18
43	Direct realâ€time imaging of protein adsorption onto hydrophilic and hydrophobic surfaces. Biopolymers, 2010, 93, 74-84.	2.4	18
44	Controlled symmetry breaking and vortex dynamics in intersecting flows. Physics of Fluids, 2019, 31, .	4.0	18
45	Viscous flow through microfabricated axisymmetric contraction/expansion geometries. Experiments in Fluids, 2020, 61, 1.	2.4	17
46	Viscosity enhancement in non-Newtonian flow of dilute aqueous polymer solutions through crystallographic and random porous media. Rheologica Acta, 2006, 45, 853-863.	2.4	16
47	High-resolution imaging of biotite dissolution and measurement of activation energy. Mineralogical Magazine, 2008, 72, 115-120.	1.4	16
48	Non-linear dynamics of semi-dilute polydisperse polymer solutions in microfluidics: effects of flow geometry. Rheologica Acta, 2011, 50, 277-290.	2.4	16
49	Periodic fluctuations of streamwise vortices in inertia-dominated intersecting flows. Physics of Fluids, 2021, 33, .	4.0	16
50	Structure-property relationship of a soft colloidal glass in simple and mixed flows. Journal of Colloid and Interface Science, 2021, 601, 454-466.	9.4	15
51	Coupling of vortex breakdown and stability in a swirling flow. Physical Review Fluids, 2019, 4, .	2.5	15
52	Bifurcations in flows of complex fluids around microfluidic cylinders. Lab on A Chip, 2021, 21, 4041-4059.	6.0	14
53	Viscosity enhancement in the flow of hydrolysed poly(acrylamide) saline solutions around spheres: implications for enhanced oil recovery. Rheologica Acta, 2008, 47, 129-137.	2.4	13
54	Elastic modifications of an inertial instability in a 3D cross-slot. Journal of Non-Newtonian Fluid Mechanics, 2018, 262, 12-24.	2.4	13

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55	â€œPhase diagramâ€•for viscoelastic Poiseuille flow over a wavy surface. Physics of Fluids, 2018, 30, .	4.0	12
56	Force spectroscopy of an elastic peptide: Effect of D₂O and temperature on persistence length. Microscopy Research and Technique, 2011, 74, 170-176.	2.2	11
57	Synovial Fluid Response to Extensional Flow: Effects of Dilution and Intermolecular Interactions. PLoS ONE, 2014, 9, e92867.	2.5	11
58	Viscoelastic flow development in planar microchannels. Microfluidics and Nanofluidics, 2015, 19, 1123-1137.	2.2	11
59	Optimised multi-stream microfluidic designs for controlled extensional deformation. Microfluidics and Nanofluidics, 2019, 23, 1.	2.2	11
60	Microtomographic particle image velocimetry measurements of viscoelastic instabilities in a three-dimensional microcontraction. Journal of Fluid Mechanics, 2021, 923, .	3.4	11
61	Reduced and increased flow resistance in shear-dominated flows of Oldroyd-B fluids. Journal of Non-Newtonian Fluid Mechanics, 2022, 300, 104698.	2.4	11
62	Buckling instabilities in dilute polymer solution elastic strands. Rheologica Acta, 2010, 49, 1219-1225.	2.4	10
63	Torsional fracture of viscoelastic liquid bridges. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	10
64	Alignment of Colloidal Rods in Crowded Environments. Macromolecules, 2022, 55, 5610-5620.	4.8	10
65	Inertioelastic Poiseuille flow over a wavy surface. Physical Review Fluids, 2018, 3, .	2.5	9
66	Spreading of miscible liquids. Physical Review Fluids, 2016, 1, .	2.5	8
67	Microfluidic analog of an opposed-jets device. Applied Physics Letters, 2019, 114, 223701.	3.3	7
68	Heterogeneous flow inside threads of low viscosity fluids leads to anomalous long filament lifetimes. Scientific Reports, 2019, 9, 7110.	3.3	7
69	Symmetry-breaking Bifurcations in T-channel Flows: Effects of Fluid Viscoelasticity. Procedia Engineering, 2014, 79, 28-34.	1.2	6
70	In-situ shear-banding quantification of surfactant solutions in straight microfluidic channels. Journal of Rheology, 2017, 61, 769-783.	2.6	6
71	Poiseuille flow over a wavy surface. Physical Review Fluids, 2017, 2, .	2.5	6
72	Upstream wall vortices in viscoelastic flow past a cylinder. Soft Matter, 2022, 18, 4868-4880.	2.7	6

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73	Evaluation of constitutive models for shear-banding wormlike micellar solutions in simple and complex flows. Journal of Non-Newtonian Fluid Mechanics, 2022, 307, 104855.	2.4	5
74	Torsional instability of constant viscosity elastic liquid bridges. Soft Matter, 2022, 18, 1965-1977.	2.7	4
75	Fluidâ€“structure interactions: From engineering to biomimetic systems. Physics of Fluids, 2020, 32, 120401.	4.0	3
76	Quantitative Characterization of Complex Fluids in Microfluidics. AIP Conference Proceedings, 2008, , .	0.4	0
77	10.1063/5.0031712.5. , 2021, , .		0
78	10.1063/5.0031712.6. , 2021, , .		0
79	Publisher's Note: Poiseuille flow over a wavy surface [Phys. Rev. Fluids 2 , 124102 (2017)]. Physical Review Fluids, 2018, 3, .	2.5	0
80	10.1063/1.5057392.1. , 2018, , .		0
81	Chapter 9. Microfluidic Flows and Confinement of Wormlike Micelles. , 0, , 236-278.		0
82	Non-Newtonian flows and instabilities in 3D glass microfluidic devices. , 2022, 2, 100023.		0