Rob J Poole

List of Publications by Year
in descending order

132	4,072	87723	149479
papers	citations	38 h-index	56 g-index

142	142	142	2835
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Purely Elastic Flow Asymmetries. Physical Review Letters, 2007, 99, 164503.	2.9	173
2	Laminar natural convection of power-law fluids in a square enclosure with differentially heated side walls subjected to constant temperatures. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 1049-1063.	1.0	169
3	Laminar natural convection of Bingham fluids in a square enclosure with differentially heated side walls. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 901-913.	1.0	158
4	3D printing with 2D colloids: designing rheology protocols to predict â€˜printabilityâ€™ of soft-materials. Soft Matter, 2019, 15, 1444-1456.	1.2	129
5	On the reproducibility of the rheology of shear-thinning liquids. Journal of Non-Newtonian Fluid Mechanics, 2001, 97, 99-124.	1.0	103
6	Near-wake characteristics of a model horizontal axis tidal stream turbine. Renewable Energy, 2014, 63, 222-235.	4.3	98
7	Ascending aortic curvature as an independent risk factor for type A dissection, and ascending aortic aneurysm formation: a mathematical modelâ˜†. European Journal of Cardio-thoracic Surgery, 2008, 33, 995-1001.	0.6	93
8	Development-Length Requirements for Fully Developed Laminar Pipe Flow of Inelastic Non-Newtonian Liquids. Journal of Fluids Engineering, Transactions of the ASME, 2007, 129, 1281-1287.	0.8	83
9	Non-dimensional scaling of tidal stream turbines. Energy, 2012, 44, 820-829.	4.5	82
10	Laminar Rayleigh-BÃ©nard convection of yield stress fluids in a square enclosure. Journal of Non-Newtonian Fluid Mechanics, 2012, 171-172, 83-96.	1.0	79
11	Geometric scaling of a purely elastic flow instability in serpentine channels. Journal of Fluid Mechanics, 2012, 712, 203-218.	1.4	75
12	Observations of asymmetrical flow behaviour in transitional pipe flow of yield-stress and other shear-thinning liquids. Journal of Non-Newtonian Fluid Mechanics, 2005, 127, 143-155.	1.0	69
13	Aspect ratio effects in laminar natural convection of Bingham fluids in rectangular enclosures with differentially heated side walls. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 208-230.	1.0	67
14	Serpentine channels: micro-rheometers for fluid relaxation times. Lab on A Chip, 2014, 14, 351-358.	3.1	67
15	Numerical and experimental investigation of heat transfer and fluid flow characteristics in a micro-scale serpentine channel. International Journal of Heat and Mass Transfer, 2015, 88, 790-802.	2.5	66
16	On extensibility effects in the cross-slot flow bifurcation. Journal of Non-Newtonian Fluid Mechanics, 2009, 156, 58-69.	1.0	63
17	Experimental investigation of the impact of elastic turbulence on heat transfer in a serpentine channel. Journal of Non-Newtonian Fluid Mechanics, 2016, 231, 68-78.	1.0	63
18	Opening a Can of Worm(â€like Micelle)s: The Effect of Temperature of Solutions of Functionalized Dipeptides. Angewandte Chemie - International Edition, 2017, 56, 10467-10470.	7.2	62

#	Article	IF	Citations
19	Turbulent flow of viscoelastic shear-thinning liquids through a rectangular duct: Quantification of turbulence anisotropy. Journal of Non-Newtonian Fluid Mechanics, 2009, 160, 2-10.	1.0	61
20	Divergent flow in contractions. Journal of Non-Newtonian Fluid Mechanics, 2007, 144, 140-148.	1.0	54
21	The effects of waveâ€“current interaction on the performance of a model horizontal axis tidal turbine. International Journal of Marine Energy, 2014, 8, 17-35.	1.8	53
22	Influences of boundary conditions on laminar natural convection in rectangular enclosures with differentially heated side walls. International Journal of Heat and Fluid Flow, 2012, 33, 131-146.	1.1	51
23	Bifurcation in a T-channel junction: Effects of aspect ratio and shear-thinning. Chemical Engineering Science, 2013, 104, 839-848.	1.9	51
24	Laminar, transitional and turbulent annular flow of drag-reducing polymer solutions. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 1357-1372.	1.0	50
25	Turbulent pipe flow of a drag-reducing rigid â€œrod-likeâ€•polymer solution. Journal of Non-Newtonian Fluid Mechanics, 2009, 161, 86-93.	1.0	49
26	Nonlinear Effects in Multicomponent Supramolecular Hydrogels. Langmuir, 2017, 33, 2387-2395.	1.6	49
27	Closure technique after carotid endarterectomy influences local hemodynamics. Journal of Vascular Surgery, 2014, 60, 418-427.	0.6	47
28	The stabilizing effect of shear thinning on the onset of purely elastic instabilities in serpentine microflows. Soft Matter, 2016, 12, 6167-6175.	1.2	46
29	Viscoelastic secondary flows in serpentine channels. Journal of Non-Newtonian Fluid Mechanics, 2013, 201, 10-16.	1.0	44
30	Turbulent drag reduction by polymer additives in parallel-shear flows. Journal of Fluid Mechanics, 2017, 827, .	1.4	44
31	Numerical Predictions of Momentum and Heat Transfer Characteristics from a Heated Sphere in Yield-Stress Fluids. Industrial & Engineering Chemistry Research, 2013, 52, 6848-6861.	1.8	42
32	Lid-driven cavity flow of viscoelastic liquids. Journal of Non-Newtonian Fluid Mechanics, 2016, 234, 129-138.	1.0	42
33	Tricritical spiral vortex instability in cross-slot flow. Physical Review E, 2016, 93, 031101.	0.8	42
34	Turbulent flow of viscoelastic liquids through an axisymmetric sudden expansion. Journal of Non-Newtonian Fluid Mechanics, 2004, 117, 25-46.	1.0	41
35	Purely elastic flow asymmetries in flow-focusing devices. Journal of Non-Newtonian Fluid Mechanics, 2009, 160, 31-39.	1.0	41
36	On creeping flow of a Bingham plastic fluid past a square cylinder. Journal of Non-Newtonian Fluid Mechanics, 2012, 171-172, 17-30.	1.0	41

#	Article	IF	Citations
37	Laminar forced convection heat transfer from a heated square cylinder in a Bingham plastic fluid. International Journal of Heat and Mass Transfer, 2013, 56, 625-639.	2.5	41
38	Effect of Shear-Thinning Behavior on Heat Transfer from a Heated Sphere in Yield-Stress Fluids. Industrial & Engineering Chemistry Research, 2013, 52, 13490-13504.	1.8	41
39	Plane sudden expansion flows of viscoelastic liquids. Journal of Non-Newtonian Fluid Mechanics, 2007, 146, 79-91.	1.0	40
40	Bifurcation phenomena in viscoelastic flows through a symmetric 1:4 expansion. Journal of Non-Newtonian Fluid Mechanics, 2007, 141, 1-17.	1.0	38
41	Enhancing heat transfer at the micro-scale using elastic turbulence. Theoretical and Applied Mechanics Letters, 2015, 5, 103-106.	1.3	37
42	Bundling of elastic filaments induced by hydrodynamic interactions. Physical Review Fluids, 2017, 2, .	1.0	37
43	Development Length Requirements for Fully Developed Laminar Pipe Flow of Yield Stress Fluids. Journal of Fluids Engineering, Transactions of the ASME, 2010, 132, .	0.8	35
44	Turbulent flow through a plane sudden expansion of modest aspect ratio. Physics of Fluids, 2002, 14, 3641-3654.	1.6	34
45	Aspect ratio and boundary conditions effects on laminar natural convection of power-law fluids in a rectangular enclosure with differentially heated side walls. International Journal of Heat and Mass Transfer, 2013, 60, 722-738.	2.5	33
46	Laminar natural convection of power-law fluids in a square enclosure submitted from below to a uniform heat flux density. Journal of Non-Newtonian Fluid Mechanics, 2013, 199, 80-95.	1.0	32
47	A new viscoelastic benchmark flow: Stationary bifurcation in a cross-slot. Journal of Non-Newtonian Fluid Mechanics, 2014, 214, 57-68.	1.0	32
48	Effects of aspect ratio on laminar Rayleighâ€“BÃ©nard convection of power-law fluids in rectangular enclosures: A numerical investigation. International Journal of Heat and Mass Transfer, 2015, 91, 1292-1307.	2.5	32
49	Effects of aspect ratio on natural convection of Bingham fluids in rectangular enclosures with differentially heated horizontal walls heated from below. International Journal of Heat and Mass Transfer, 2015, 80, 727-736.	2.5	32
50	Influence of outlet geometry on strongly swirling turbulent flow through a circular tube. Physics of Fluids, 2006, 18, 125103.	1.6	31
51	Turbulent flow of non-Newtonian liquids over a backward-facing step. Journal of Non-Newtonian Fluid Mechanics, 2003, 109, 193-230.	1.0	30
52	Flow produced in a conical container by a rotating endwall. International Journal of Heat and Fluid Flow, 2007, 28, 1418-1428.	1.1	30
53	Laminar Natural Convection of Power-Law Fluids in a Square Enclosure With Differentially Heated Sidewalls Subjected to Constant Wall Heat Flux. Journal of Heat Transfer, 2012, 134, .	1.2	30
54	Opening a Can of Worm(â€like Micelle)s: The Effect of Temperature of Solutions of Functionalized Dipeptides. Angewandte Chemie, 2017, 129, 10603-10606.	1.6	30

#	Article	IF	Citations
55	Turbulent duct flow with polymers. Journal of Fluid Mechanics, 2019, 859, 1057-1083.	1.4	30
56	The influence of blade pitch angle on the performance of a model horizontal axis tidal stream turbine operating under waveâ€“current interaction. Energy, 2016, 102, 166-175.	4.5	29
57	Secondary flows of viscoelastic fluids in serpentine microchannels. Microfluidics and Nanofluidics, 2019, 23, 1.	1.0	29
58	Laminar Natural Convection of Bingham Fluids in a Square Enclosure with Vertical Walls Subjected to Constant Heat Flux. Numerical Heat Transfer; Part A: Applications, 2011, 60, 381-409.	1.2	28
59	Influence of channel aspect ratio on the onset of purely-elastic flow instabilities in three-dimensional planar cross-slots. Journal of Non-Newtonian Fluid Mechanics, 2016, 227, 65-79.	1.0	26
60	Viscoelastic drops moving on hydrophilic and superhydrophobic surfaces. Journal of Colloid and Interface Science, 2018, 513, 53-61.	5.0	26
61	Controlling the properties of the micellar and gel phase by varying the counterion in functionalised-dipeptide systems. Chemical Communications, 2020, 56, 4094-4097.	2.2	26
62	Inertioelastic Flow Instability at a Stagnation Point. Physical Review X, 2017, 7, .	2.8	25
63	The effect of expansion ratio for creeping expansion flows of UCM fluids. Journal of Non-Newtonian Fluid Mechanics, 2009, 163, 35-44.	1.0	24
64	Controlling vortex breakdown in swirling pipe flows: Experiments and simulations. Physics of Fluids, 2014, 26, 053602.	1.6	24
65	Low-drag events in transitional wall-bounded turbulence. Physical Review Fluids, 2017, 2, .	1.0	24
66	Emulsification using elastic turbulence. Journal of Non-Newtonian Fluid Mechanics, 2012, 177-178, 15-18.	1.0	21
67	Experiments on low-Reynolds-number turbulent flow through a square duct. Journal of Fluid Mechanics, 2016, 798, 398-410.	1.4	21
68	Asymmetry in transitional pipe flow of drag-reducing polymer solutions. Journal of Non-Newtonian Fluid Mechanics, 2009, 161, 19-29.	1.0	20
69	Control of a purely elastic symmetry-breaking flow instability in cross-slot geometries. Journal of Fluid Mechanics, 2019, 881, 1123-1157.	1.4	20
70	Laminar flow of a viscoelastic shear-thinning liquid through a plane sudden expansion preceded by a gradual contraction. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2005, 461, 3827-3845.	1.0	19
71	Laminar flow of a viscoelastic shear-thinning liquid over a backward-facing step preceded by a gradual contraction. Physics of Fluids, 2007, 19, .	1.6	19
72	Partially filled pipes: experiments in laminar and turbulent flow. Journal of Fluid Mechanics, 2018, 848, 467-507.	1.4	19

#	Article	IF	Citations
73	Heat transfer enhancement in a cross-slot micro-geometry. International Journal of Thermal Sciences, 2017, 121, 249-265.	2.6	18
74	Boundary Condition Effects on Laminar Natural Convection of Power-Law Fluids in a Square Enclosure Heated from below with Differentially Heated Horizontal Walls. Industrial & Engineering Chemistry Research, 2014, 53, 456-473.	1.8	17
75	Evaluating the resilience of superhydrophobic materials using the slip-length concept. Journal of Materials Chemistry A, 2018, 6, 4458-4465.	5.2	17
76	BOUNDARY CONDITION EFFECTS ON NATURAL CONVECTION OF BINGHAM FLUIDS IN A SQUARE ENCLOSURE WITH DIFFERENTIALLY HEATED HORIZONTAL WALLS. Computational Thermal Sciences, 2012, 4, 77-97.	0.5	17
77	Influences of Boundary Conditions on Laminar Natural Convection of Bingham Fluids in Rectangular Enclosures With Differentially Heated Side Walls. Heat Transfer Engineering, 2014, 35, 822-849.	1.2	16
78	Periodic fluctuations of streamwise vortices in inertia-dominated intersecting flows. Physics of Fluids, 2021, 33, .	1.6	16
79	Elastic instabilities in parallel shear flows of a viscoelastic shear-thinning liquid. Physical Review Fluids, 2016, 1, .	1.0	16
80	Turbulent flow of a viscoelastic shear-thinning liquid through a plane sudden expansion of modest aspect ratio. Journal of Non-Newtonian Fluid Mechanics, 2003, 112, 1-26.	1.0	15
81	Development-Length Requirements for Fully Developed Laminar Flow in Concentric Annuli. Journal of Fluids Engineering, Transactions of the ASME, 2010, 132, .	0.8	15
82	Viscoelastic fluid flow simulations in the e-VROCTM geometry. Journal of Non-Newtonian Fluid Mechanics, 2020, 278, 104222.	1.0	15
83	Three-dimensional viscoelastic instabilities in microchannels. Journal of Fluid Mechanics, 2019, 870, 1-4.	1.4	14
84	Type IIIb Endoleak and Relining. Journal of Endovascular Therapy, 2016, 23, 297-301.	0.8	13
85	Elastic modifications of an inertial instability in a 3D cross-slot. Journal of Non-Newtonian Fluid Mechanics, 2018, 262, 12-24.	1.0	13
86	Turbulent flow of non-Newtonian liquids over a backward-facing step. Journal of Non-Newtonian Fluid Mechanics, 2003, 109, 177-191.	1.0	12
87	Viscoelastic flows in mixing-separating cells. Journal of Engineering Mathematics, 2011, 71, 3-13.	0.6	12
88	GO CaBER: Capillary breakup and steady-shear experiments on aqueous graphene oxide (GO) suspensions. Journal of Rheology, 2020, 64, 81-93.	1.3	12
89	Experimental evidence of symmetry-breaking supercritical transition in pipe flow of shear-thinning fluids. Physical Review Fluids, 2017, 2, .	1.0	12
90	Velocity overshoots in gradual contraction flows. Journal of Non-Newtonian Fluid Mechanics, 2009, 160, 47-54.	1.0	11

#	Article	IF	Citations
91	Development of emulsification resistant heavier-than-water tamponades using high molecular weight silicone oil polymers. Journal of Biomaterials Applications, 2015, 30, 212-220.	1.2	11
92	Energetic motions in turbulent partially filled pipe flow. Physics of Fluids, 2021, 33, .	1.6	11
93	Sliding viscoelastic drops on slippery surfaces. Applied Physics Letters, 2016, 108, .	1.5	10
94	Secondary flows due to finite aspect ratio in inertialess viscoelastic Taylorâ€“Couette flow. Journal of Fluid Mechanics, 2018, 857, 823-850.	1.4	10
95	Inertial instabilities in a microfluidic mixing-separating device. Physics of Fluids, 2019, 31, 074101.	1.6	10
96	On the similarities between the simplified Phan-Thienâ€“Tanner model and the finitely extensible nonlinear elastic dumbbell (Peterlin closure) model in simple and complex flows. Physics of Fluids, 2022, 34, .	1.6	10
97	Freezing as a Storage Process for Aqueous Polymer Solutions. Applied Rheology, 2005, 15, 90-97.	3.5	9
98	The concept of aortic replacement based on computational fluid dynamic analysis: patient-directed aortic replacementâ€. Interactive Cardiovascular and Thoracic Surgery, 2013, 16, 583-588.	0.5	9
99	Laminar Natural Convection of Bingham Fluids in Inclined Differentially Heated Square Enclosures Subjected to Uniform Wall Temperatures. Journal of Heat Transfer, 2015, 137, .	1.2	9
100	An experimental investigation into spatiotemporal intermittencies in turbulent channel flow close to transition. Experiments in Fluids, 2019, 60, 1.	1.1	9
101	Computational fluid dynamic analysis of the effect of morphologic features on distraction forces in fenestrated stent grafts. Journal of Vascular Surgery, 2014, 60, 1648-1656.e1.	0.6	8
102	A symmetry-breaking inertial bifurcation in a cross-slot flow. Computers and Fluids, 2014, 93, 91-99.	1.3	8
103	Low- and High-Drag Intermittencies in Turbulent Channel Flows. Entropy, 2020, 22, 1126.	1.1	8
104	Numerical investigation of steady-state laminar natural convection of power-law fluids in square cross-sectioned cylindrical annular cavity with differentially-heated vertical walls. International Journal of Numerical Methods for Heat and Fluid Flow, 2016, 26, 85-107.	1.6	7
105	A viscoelastic two-phase solver using a phase-field approach. Journal of Non-Newtonian Fluid Mechanics, 2020, 284, 104364.	1.0	7
106	Investigating channel flow using wall shear stress signals at transitional Reynolds numbers. International Journal of Heat and Fluid Flow, 2020, 82, 108525.	1.1	7
107	Stabilization of purely elastic instabilities in cross-slot geometries. Journal of Fluid Mechanics, 2021, 922, .	1.4	7
108	Viscoelastic fluid flow in microporous media. Journal of Non-Newtonian Fluid Mechanics, 2021, 296, 104638.	1.0	7

#	Article	IF	Citations
109	Asymmetry in the turbulent flow of a viscoelastic liquid through an axisymmetric sudden expansion. Journal of Non-Newtonian Fluid Mechanics, 2005, 125, 61-70.	1.0	6
110	Symmetry-breaking Bifurcations in T-channel Flows: Effects of Fluid Viscoelasticity. Procedia Engineering, 2014, 79, 28-34.	1.2	6
111	Minimizing recalibration using a non-linear regression technique for thermal anemometry. Experiments in Fluids, 2019, 60, 1.	1.1	6
112	Heat Transfer of Power-Law Fluids in Plane Couetteâ€“Poiseuille Flows with Viscous Dissipation. Heat Transfer Engineering, 2020, 41, 1189-1207.	1.2	6
113	Heat Transfer of Bingham Fluids in an Annular Duct with Viscous Dissipation. Heat Transfer Engineering, 2018, 39, 1749-1765.	1.2	4
114	Vortex breakdown in swirling pipe flow of fluids with shear-dependent viscosity. Physics of Fluids, 2018, 30, .	1.6	4
115	Highlighting the need for high-speed imaging in capillary breakup extensional rheometry. Measurement Science and Technology, 2021, 32, 095301.	1.4	4
116	NUMERICAL INVESTIGATION OF BOUNDARY CONDITION EFFECTS ON LAMINAR NATURAL CONVECTION OF POWER LAW FLUIDS IN SQUARE CROSS-SECTIONAL CYLINDRICAL ANNULAR SPACE WITH DIFFERENTIALLY HEATED VERTICAL WALLS. Computational Thermal Sciences, 2015, 7, 261-282.	0.5	4
117	Drag Reduction of Biopolymer Flows. Journal of Applied Sciences, 2011, 11, 1544-1551.	0.1	4
118	Comment on â€œBejan's flow visualization of buoyancy-driven flow of a hydromagnetic Casson fluid from an isothermal wavy surfaceâ€•[Phys. Fluids 33(9), 093113 (2021)]. Physics of Fluids, 2021, 33, 129101.	1.6	4
119	Mathematical Modeling in Cardiac Surgery: Helping Clinical Trials Answer the Question. Seminars in Cardiothoracic and Vascular Anesthesia, 2009, 13, 81-86.	0.4	3
120	Viscoelastic simulations using the closed-form Adaptive Length Scale (ALS-C) model. Journal of Non-Newtonian Fluid Mechanics, 2022, 304, 104776.	1.0	3
121	A Novel Microfluidic Mixing Element for Viscoelastic Fluids. AIP Conference Proceedings, 2008, , .	0.3	1
122	Entry Length Requirements for Two- and Three-Dimensional Laminar Couetteâ€“Poiseuille Flows. Journal of Fluids Engineering, Transactions of the ASME, 2019, 141, .	0.8	1
123	Heat Transfer in Laminar Flow of a Herschel-Bulkley Fluid between Parallel Plates. Heat Transfer Engineering, 0, , 1-22.	1.2	1
124	Control of purely-elastic instabilities in cross-slot geometries. , 2022, 3, 100054.		1
125	On Extensibility Effects in the Cross-slot Flow Bifurcation. AIP Conference Proceedings, 2008, , .	0.3	0
126	Viscoelastic Fluid Flow Through Gradual Contractions: Experiments And Simulations. AIP Conference Proceedings, 2008, , .	0.3	0

#	Article	IF	Citations
127	Turbulent Pipe Flow of â€œRod-Likeâ€•Polymer Solutions. AIP Conference Proceedings, 2008, , .	0.3	0
128	10.1063/5.0031712.5. , 2021, , .		0
129	10.1063/5.0031712.6. , 2021, , .		0
130	Asymmetrical Flow Behaviour in Transitional Pipe Flow of Non-Newtonian Liquids. , 2005, , .		0
131	10.1063/1.4875486.1. , 2014, , .		0
132	On the similarities of the sPTT and FENE-P models for polymeric fluids. , 2022, 2, 100015.		0