

Rob J Poole

List of Publications by Year in descending order

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132
papers

4,072
citations

87888

38
h-index

149698

56
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142
all docs

142
docs citations

142
times ranked

2835
citing authors

#	ARTICLE	IF	CITATIONS
1	Purely Elastic Flow Asymmetries. <i>Physical Review Letters</i> , 2007, 99, 164503.	7.8	173
2	Laminar natural convection of power-law fluids in a square enclosure with differentially heated side walls subjected to constant temperatures. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2011, 166, 1049-1063.	2.4	169
3	Laminar natural convection of Bingham fluids in a square enclosure with differentially heated side walls. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 901-913.	2.4	158
4	3D printing with 2D colloids: designing rheology protocols to predict "printability"™ of soft-materials. <i>Soft Matter</i> , 2019, 15, 1444-1456.	2.7	129
5	On the reproducibility of the rheology of shear-thinning liquids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2001, 97, 99-124.	2.4	103
6	Near-wake characteristics of a model horizontal axis tidal stream turbine. <i>Renewable Energy</i> , 2014, 63, 222-235.	8.9	98
7	Ascending aortic curvature as an independent risk factor for type A dissection, and ascending aortic aneurysm formation: a mathematical model. <i>European Journal of Cardio-thoracic Surgery</i> , 2008, 33, 995-1001.	1.4	93
8	Development-Length Requirements for Fully Developed Laminar Pipe Flow of Inelastic Non-Newtonian Liquids. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2007, 129, 1281-1287.	1.5	83
9	Non-dimensional scaling of tidal stream turbines. <i>Energy</i> , 2012, 44, 820-829.	8.8	82
10	Laminar Rayleigh-Bénard convection of yield stress fluids in a square enclosure. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2012, 171-172, 83-96.	2.4	79
11	Geometric scaling of a purely elastic flow instability in serpentine channels. <i>Journal of Fluid Mechanics</i> , 2012, 712, 203-218.	3.4	75
12	Observations of asymmetrical flow behaviour in transitional pipe flow of yield-stress and other shear-thinning liquids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2005, 127, 143-155.	2.4	69
13	Aspect ratio effects in laminar natural convection of Bingham fluids in rectangular enclosures with differentially heated side walls. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2011, 166, 208-230.	2.4	67
14	Serpentine channels: micro-rheometers for fluid relaxation times. <i>Lab on A Chip</i> , 2014, 14, 351-358.	6.0	67
15	Numerical and experimental investigation of heat transfer and fluid flow characteristics in a micro-scale serpentine channel. <i>International Journal of Heat and Mass Transfer</i> , 2015, 88, 790-802.	4.8	66
16	On extensibility effects in the cross-slot flow bifurcation. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 156, 58-69.	2.4	63
17	Experimental investigation of the impact of elastic turbulence on heat transfer in a serpentine channel. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 231, 68-78.	2.4	63
18	Opening a Can of Worm (like Micelle): The Effect of Temperature of Solutions of Functionalized Dipeptides. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 10467-10470.	13.8	62

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19	Turbulent flow of viscoelastic shear-thinning liquids through a rectangular duct: Quantification of turbulence anisotropy. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 160, 2-10.	2.4	61
20	Divergent flow in contractions. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2007, 144, 140-148.	2.4	54
21	The effects of wave-current interaction on the performance of a model horizontal axis tidal turbine. <i>International Journal of Marine Energy</i> , 2014, 8, 17-35.	1.8	53
22	Influences of boundary conditions on laminar natural convection in rectangular enclosures with differentially heated side walls. <i>International Journal of Heat and Fluid Flow</i> , 2012, 33, 131-146.	2.4	51
23	Bifurcation in a T-channel junction: Effects of aspect ratio and shear-thinning. <i>Chemical Engineering Science</i> , 2013, 104, 839-848.	3.8	51
24	Laminar, transitional and turbulent annular flow of drag-reducing polymer solutions. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2010, 165, 1357-1372.	2.4	50
25	Turbulent pipe flow of a drag-reducing rigid rod-like-polymer solution. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 161, 86-93.	2.4	49
26	Nonlinear Effects in Multicomponent Supramolecular Hydrogels. <i>Langmuir</i> , 2017, 33, 2387-2395.	3.5	49
27	Closure technique after carotid endarterectomy influences local hemodynamics. <i>Journal of Vascular Surgery</i> , 2014, 60, 418-427.	1.1	47
28	The stabilizing effect of shear thinning on the onset of purely elastic instabilities in serpentine microflows. <i>Soft Matter</i> , 2016, 12, 6167-6175.	2.7	46
29	Viscoelastic secondary flows in serpentine channels. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2013, 201, 10-16.	2.4	44
30	Turbulent drag reduction by polymer additives in parallel-shear flows. <i>Journal of Fluid Mechanics</i> , 2017, 827, .	3.4	44
31	Numerical Predictions of Momentum and Heat Transfer Characteristics from a Heated Sphere in Yield-Stress Fluids. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 6848-6861.	3.7	42
32	Lid-driven cavity flow of viscoelastic liquids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 234, 129-138.	2.4	42
33	Tricritical spiral vortex instability in cross-slot flow. <i>Physical Review E</i> , 2016, 93, 031101.	2.1	42
34	Turbulent flow of viscoelastic liquids through an axisymmetric sudden expansion. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2004, 117, 25-46.	2.4	41
35	Purely elastic flow asymmetries in flow-focusing devices. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 160, 31-39.	2.4	41
36	On creeping flow of a Bingham plastic fluid past a square cylinder. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2012, 171-172, 17-30.	2.4	41

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37	Laminar forced convection heat transfer from a heated square cylinder in a Bingham plastic fluid. <i>International Journal of Heat and Mass Transfer</i> , 2013, 56, 625-639.	4.8	41
38	Effect of Shear-Thinning Behavior on Heat Transfer from a Heated Sphere in Yield-Stress Fluids. <i>Industrial & Engineering Chemistry Research</i> , 2013, 52, 13490-13504.	3.7	41
39	Plane sudden expansion flows of viscoelastic liquids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2007, 146, 79-91.	2.4	40
40	Bifurcation phenomena in viscoelastic flows through a symmetric 1:4 expansion. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2007, 141, 1-17.	2.4	38
41	Enhancing heat transfer at the micro-scale using elastic turbulence. <i>Theoretical and Applied Mechanics Letters</i> , 2015, 5, 103-106.	2.8	37
42	Bundling of elastic filaments induced by hydrodynamic interactions. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	37
43	Development Length Requirements for Fully Developed Laminar Pipe Flow of Yield Stress Fluids. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2010, 132, .	1.5	35
44	Turbulent flow through a plane sudden expansion of modest aspect ratio. <i>Physics of Fluids</i> , 2002, 14, 3641-3654.	4.0	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. <i>International Journal of Heat and Mass Transfer</i> , 2013, 60, 722-738.	4.8	33
46	Laminar natural convection of power-law fluids in a square enclosure submitted from below to a uniform heat flux density. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2013, 199, 80-95.	2.4	32
47	A new viscoelastic benchmark flow: Stationary bifurcation in a cross-slot. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2014, 214, 57-68.	2.4	32
48	Effects of aspect ratio on laminar Rayleigh-Bénard convection of power-law fluids in rectangular enclosures: A numerical investigation. <i>International Journal of Heat and Mass Transfer</i> , 2015, 91, 1292-1307.	4.8	32
49	Effects of aspect ratio on natural convection of Bingham fluids in rectangular enclosures with differentially heated horizontal walls heated from below. <i>International Journal of Heat and Mass Transfer</i> , 2015, 80, 727-736.	4.8	32
50	Influence of outlet geometry on strongly swirling turbulent flow through a circular tube. <i>Physics of Fluids</i> , 2006, 18, 125103.	4.0	31
51	Turbulent flow of non-Newtonian liquids over a backward-facing step. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2003, 109, 193-230.	2.4	30
52	Flow produced in a conical container by a rotating endwall. <i>International Journal of Heat and Fluid Flow</i> , 2007, 28, 1418-1428.	2.4	30
53	Laminar Natural Convection of Power-Law Fluids in a Square Enclosure With Differentially Heated Sidewalls Subjected to Constant Wall Heat Flux. <i>Journal of Heat Transfer</i> , 2012, 134, .	2.1	30
54	Opening a Can of Worm(like Micelle): The Effect of Temperature of Solutions of Functionalized Dipeptides. <i>Angewandte Chemie</i> , 2017, 129, 10603-10606.	2.0	30

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55	Turbulent duct flow with polymers. <i>Journal of Fluid Mechanics</i> , 2019, 859, 1057-1083.	3.4	30
56	The influence of blade pitch angle on the performance of a model horizontal axis tidal stream turbine operating under wave-current interaction. <i>Energy</i> , 2016, 102, 166-175.	8.8	29
57	Secondary flows of viscoelastic fluids in serpentine microchannels. <i>Microfluidics and Nanofluidics</i> , 2019, 23, 1.	2.2	29
58	Laminar Natural Convection of Bingham Fluids in a Square Enclosure with Vertical Walls Subjected to Constant Heat Flux. <i>Numerical Heat Transfer; Part A: Applications</i> , 2011, 60, 381-409.	2.1	28
59	Influence of channel aspect ratio on the onset of purely-elastic flow instabilities in three-dimensional planar cross-slots. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2016, 227, 65-79.	2.4	26
60	Viscoelastic drops moving on hydrophilic and superhydrophobic surfaces. <i>Journal of Colloid and Interface Science</i> , 2018, 513, 53-61.	9.4	26
61	Controlling the properties of the micellar and gel phase by varying the counterion in functionalised-dipeptide systems. <i>Chemical Communications</i> , 2020, 56, 4094-4097.	4.1	26
62	Inertioelastic Flow Instability at a Stagnation Point. <i>Physical Review X</i> , 2017, 7, .	8.9	25
63	The effect of expansion ratio for creeping expansion flows of UCM fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 163, 35-44.	2.4	24
64	Controlling vortex breakdown in swirling pipe flows: Experiments and simulations. <i>Physics of Fluids</i> , 2014, 26, 053602.	4.0	24
65	Low-drag events in transitional wall-bounded turbulence. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	24
66	Emulsification using elastic turbulence. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2012, 177-178, 15-18.	2.4	21
67	Experiments on low-Reynolds-number turbulent flow through a square duct. <i>Journal of Fluid Mechanics</i> , 2016, 798, 398-410.	3.4	21
68	Asymmetry in transitional pipe flow of drag-reducing polymer solutions. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 161, 19-29.	2.4	20
69	Control of a purely elastic symmetry-breaking flow instability in cross-slot geometries. <i>Journal of Fluid Mechanics</i> , 2019, 881, 1123-1157.	3.4	20
70	Laminar flow of a viscoelastic shear-thinning liquid through a plane sudden expansion preceded by a gradual contraction. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2005, 461, 3827-3845.	2.1	19
71	Laminar flow of a viscoelastic shear-thinning liquid over a backward-facing step preceded by a gradual contraction. <i>Physics of Fluids</i> , 2007, 19, .	4.0	19
72	Partially filled pipes: experiments in laminar and turbulent flow. <i>Journal of Fluid Mechanics</i> , 2018, 848, 467-507.	3.4	19

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73	Heat transfer enhancement in a cross-slot micro-geometry. <i>International Journal of Thermal Sciences</i> , 2017, 121, 249-265.	4.9	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. <i>Industrial & Engineering Chemistry Research</i> , 2014, 53, 456-473.	3.7	17
75	Evaluating the resilience of superhydrophobic materials using the slip-length concept. <i>Journal of Materials Chemistry A</i> , 2018, 6, 4458-4465.	10.3	17
76	BOUNDARY CONDITION EFFECTS ON NATURAL CONVECTION OF BINGHAM FLUIDS IN A SQUARE ENCLOSURE WITH DIFFERENTIALLY HEATED HORIZONTAL WALLS. <i>Computational Thermal Sciences</i> , 2012, 4, 77-97.	0.9	17
77	Influences of Boundary Conditions on Laminar Natural Convection of Bingham Fluids in Rectangular Enclosures With Differentially Heated Side Walls. <i>Heat Transfer Engineering</i> , 2014, 35, 822-849.	1.9	16
78	Periodic fluctuations of streamwise vortices in inertia-dominated intersecting flows. <i>Physics of Fluids</i> , 2021, 33, .	4.0	16
79	Elastic instabilities in parallel shear flows of a viscoelastic shear-thinning liquid. <i>Physical Review Fluids</i> , 2016, 1, .	2.5	16
80	Turbulent flow of a viscoelastic shear-thinning liquid through a plane sudden expansion of modest aspect ratio. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2003, 112, 1-26.	2.4	15
81	Development-Length Requirements for Fully Developed Laminar Flow in Concentric Annuli. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2010, 132, .	1.5	15
82	Viscoelastic fluid flow simulations in the e-VROCTM geometry. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2020, 278, 104222.	2.4	15
83	Three-dimensional viscoelastic instabilities in microchannels. <i>Journal of Fluid Mechanics</i> , 2019, 870, 1-4.	3.4	14
84	Type IIIb Endoleak and Relining. <i>Journal of Endovascular Therapy</i> , 2016, 23, 297-301.	1.5	13
85	Elastic modifications of an inertial instability in a 3D cross-slot. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2018, 262, 12-24.	2.4	13
86	Turbulent flow of non-Newtonian liquids over a backward-facing step. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2003, 109, 177-191.	2.4	12
87	Viscoelastic flows in mixing-separating cells. <i>Journal of Engineering Mathematics</i> , 2011, 71, 3-13.	1.2	12
88	GO CaBER: Capillary breakup and steady-shear experiments on aqueous graphene oxide (GO) suspensions. <i>Journal of Rheology</i> , 2020, 64, 81-93.	2.6	12
89	Experimental evidence of symmetry-breaking supercritical transition in pipe flow of shear-thinning fluids. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	12
90	Velocity overshoots in gradual contraction flows. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2009, 160, 47-54.	2.4	11

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91	Development of emulsification resistant heavier-than-water tamponades using high molecular weight silicone oil polymers. <i>Journal of Biomaterials Applications</i> , 2015, 30, 212-220.	2.4	11
92	Energetic motions in turbulent partially filled pipe flow. <i>Physics of Fluids</i> , 2021, 33, .	4.0	11
93	Sliding viscoelastic drops on slippery surfaces. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	10
94	Secondary flows due to finite aspect ratio in inertialess viscoelastic Taylor-Couette flow. <i>Journal of Fluid Mechanics</i> , 2018, 857, 823-850.	3.4	10
95	Inertial instabilities in a microfluidic mixing-separating device. <i>Physics of Fluids</i> , 2019, 31, 074101.	4.0	10
96	On the similarities between the simplified Phan-Thien-Tanner model and the finitely extensible nonlinear elastic dumbbell (Peterlin closure) model in simple and complex flows. <i>Physics of Fluids</i> , 2022, 34, .	4.0	10
97	Freezing as a Storage Process for Aqueous Polymer Solutions. <i>Applied Rheology</i> , 2005, 15, 90-97.	5.2	9
98	The concept of aortic replacement based on computational fluid dynamic analysis: patient-directed aortic replacement. <i>Interactive Cardiovascular and Thoracic Surgery</i> , 2013, 16, 583-588.	1.1	9
99	Laminar Natural Convection of Bingham Fluids in Inclined Differentially Heated Square Enclosures Subjected to Uniform Wall Temperatures. <i>Journal of Heat Transfer</i> , 2015, 137, .	2.1	9
100	An experimental investigation into spatiotemporal intermittencies in turbulent channel flow close to transition. <i>Experiments in Fluids</i> , 2019, 60, 1.	2.4	9
101	Computational fluid dynamic analysis of the effect of morphologic features on distraction forces in fenestrated stent grafts. <i>Journal of Vascular Surgery</i> , 2014, 60, 1648-1656.e1.	1.1	8
102	A symmetry-breaking inertial bifurcation in a cross-slot flow. <i>Computers and Fluids</i> , 2014, 93, 91-99.	2.5	8
103	Low- and High-Drag Intermittencies in Turbulent Channel Flows. <i>Entropy</i> , 2020, 22, 1126.	2.2	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. <i>International Journal of Numerical Methods for Heat and Fluid Flow</i> , 2016, 26, 85-107.	2.8	7
105	A viscoelastic two-phase solver using a phase-field approach. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2020, 284, 104364.	2.4	7
106	Investigating channel flow using wall shear stress signals at transitional Reynolds numbers. <i>International Journal of Heat and Fluid Flow</i> , 2020, 82, 108525.	2.4	7
107	Stabilization of purely elastic instabilities in cross-slot geometries. <i>Journal of Fluid Mechanics</i> , 2021, 922, .	3.4	7
108	Viscoelastic fluid flow in microporous media. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2021, 296, 104638.	2.4	7

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109	Asymmetry in the turbulent flow of a viscoelastic liquid through an axisymmetric sudden expansion. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2005, 125, 61-70.	2.4	6
110	Symmetry-breaking Bifurcations in T-channel Flows: Effects of Fluid Viscoelasticity. <i>Procedia Engineering</i> , 2014, 79, 28-34.	1.2	6
111	Minimizing recalibration using a non-linear regression technique for thermal anemometry. <i>Experiments in Fluids</i> , 2019, 60, 1.	2.4	6
112	Heat Transfer of Power-Law Fluids in Plane Couette–Poiseuille Flows with Viscous Dissipation. <i>Heat Transfer Engineering</i> , 2020, 41, 1189-1207.	1.9	6
113	Heat Transfer of Bingham Fluids in an Annular Duct with Viscous Dissipation. <i>Heat Transfer Engineering</i> , 2018, 39, 1749-1765.	1.9	4
114	Vortex breakdown in swirling pipe flow of fluids with shear-dependent viscosity. <i>Physics of Fluids</i> , 2018, 30, .	4.0	4
115	Highlighting the need for high-speed imaging in capillary breakup extensional rheometry. <i>Measurement Science and Technology</i> , 2021, 32, 095301.	2.6	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. <i>Computational Thermal Sciences</i> , 2015, 7, 261-282.	0.9	4
117	Drag Reduction of Biopolymer Flows. <i>Journal of Applied Sciences</i> , 2011, 11, 1544-1551.	0.3	4
118	Comment on “Bejan's flow visualization of buoyancy-driven flow of a hydromagnetic Casson fluid from an isothermal wavy surface” [Phys. Fluids 33(9), 093113 (2021)]. <i>Physics of Fluids</i> , 2021, 33, 129101.	4.0	4
119	Mathematical Modeling in Cardiac Surgery: Helping Clinical Trials Answer the Question. <i>Seminars in Cardiothoracic and Vascular Anesthesia</i> , 2009, 13, 81-86.	1.0	3
120	Viscoelastic simulations using the closed-form Adaptive Length Scale (ALS-C) model. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2022, 304, 104776.	2.4	3
121	A Novel Microfluidic Mixing Element for Viscoelastic Fluids. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	1
122	Entry Length Requirements for Two- and Three-Dimensional Laminar Couette–Poiseuille Flows. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2019, 141, .	1.5	1
123	Heat Transfer in Laminar Flow of a Herschel-Bulkley Fluid between Parallel Plates. <i>Heat Transfer Engineering</i> , 0, , 1-22.	1.9	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. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	0
126	Viscoelastic Fluid Flow Through Gradual Contractions: Experiments And Simulations. <i>AIP Conference Proceedings</i> , 2008, , .	0.4	0

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127	Turbulent Pipe Flow of "Rod-Like" Polymer Solutions. AIP Conference Proceedings, 2008, , .	0.4	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