Alexander Malkin

List of Publications by Year
in descending order

119 papers	3,597 citations	126708 33 h-index	174990 52 g-index
121 all docs	121 docs citations	121 times ranked	1919 citing authors

#	Article	IF	Citations
1	Rheology of Polymers. , 1980, , .		331
2	Viscoelastic properties and flow of narrow distribution polybutadienes and polyisoprenes. Journal of Polymer Science Part A-2 Polymer Physics, 1972, 10, 1061-1084.	0.8	178
3	Rheological properties of anisotropic poly(para-benzamide) solutions. Journal of Polymer Science, Polymer Physics Edition, 1974, 12, 1753-1770.	1.0	175
4	Physical chemistry of highly concentrated emulsions. Advances in Colloid and Interface Science, 2015, 220, 78-91.	7.0	167
5	Some conditions for rupture of polymer liquids in extension. Journal of Rheology, 1997, 41, 1-25.	1.3	151
6	Viscoelastic Properties of Filled Polymers. International Journal of Polymeric Materials and Polymeric Biomaterials, 1972, 2, 1-27.	1.8	121
7	Asphaltenes in heavy crude oil: Designation, precipitation, solutions, and effects on viscosity. Journal of Petroleum Science and Engineering, 2016, 147, 211-217.	2.1	113
8	A modern look on yield stress fluids. Rheologica Acta, 2017, 56, 177-188.	1.1	84
9	Wall slip for complex liquids â€" Phenomenon and its causes. Advances in Colloid and Interface Science, 2018, 257, 42-57.	7.0	80
10	Rheological Evidence of Gel Formation in Dilute Poly(acrylonitrile) Solutions. Macromolecules, 2013, 46, 257-266.	2.2	78
11	Flow, high-elastic (recoverable) deformation, and rupture of uncured high molecular weight linear polymers in uniaxial extension. Journal of Polymer Science, Polymer Physics Edition, 1975, 13, 1721-1735.	1.0	74
12	Rheopexy in highly concentrated emulsions. Journal of Rheology, 2005, 49, 839-849.	1.3	70
13	Peculiarities of rheological properties and flow of highly concentrated emulsions: The role of concentration and droplet size. Colloid Journal, 2007, 69, 185-197.	0.5	62
14	Flow curve-molecular weight distribution: Is the solution of the inverse problem possible?. Polymer Engineering and Science, 1991, 31, 1590-1596.	1.5	58
15	Rheology in polymerization processes. Polymer Engineering and Science, 1980, 20, 1035-1044.	1.5	53
16	Evolution of rheological properties of highly concentrated emulsions with aging â€"Emulsion-to-suspension transition. Journal of Rheology, 2006, 50, 435-451.	1.3	47
17	The state of the art in the rheology of polymers: Achievements and challenges. Polymer Science - Series A, 2009, 51, 80-102.	0.4	47
18	Viscoplasticity and stratified flow of colloid suspensions. Soft Matter, 2012, 8, 2607.	1.2	47

#	Article	IF	Citations
19	The rheology of binary mixtures of highly concentrated emulsions: Effect of droplet size ratio. Journal of Rheology, 2012, 56, 1299.	1.3	46
20	Self-organization in the flow of complex fluids (colloid and polymer systems). Advances in Colloid and Interface Science, 2010, 157, 75-90.	7.0	45
21	Some Compositional Viscosity Correlations for Crude Oils from Russia and Norway. Energy & Fuels, 2016, 30, 9322-9328.	2.5	42
22	From dynamic modulus via different relaxation spectra to relaxation and creep functions. Rheologica Acta, 2001, 40, 261-271.	1.1	41
23	Conditions of unstable flow of visco-elastic polymer systems. Kolloid-Zeit & Zeit Fuer Polymers, 1963, 191, 25-30.	0.7	40
24	Mesoscopic Patterning in Evaporated Polymer Solutions: Poly(ethylene glycol) and Roomâ€Temperatureâ€Vulcanized Polyorganosilanes/â€siloxanes Promote Formation of Honeycomb Structures. Macromolecular Chemistry and Physics, 2008, 209, 567-576.	1.1	40
25	The rheological state of suspensions in varying the surface area of nano-silica particles and molecular weight of the poly(ethylene oxide) matrix. Colloid and Polymer Science, 2017, 295, 555-563.	1.0	40
26	General treatment of polymer crystallization kinetics?Part 2. The kinetics of nonisothermal crystallization. Polymer Engineering and Science, 1984, 24, 1402-1408.	1.5	39
27	The use of a continuous relaxation spectrum for describing the viscoelastic properties of polymers. Polymer Science - Series A, 2006, 48, 39-45.	0.4	39
28	Solâ€"gel transition and rheological properties of silica nanoparticle dispersions. Colloid Journal, 2016, 78, 608-615.	0.5	38
29	Approach to generalization of concentration dependence of zero-shear viscosity in polymer solutions. Journal of Polymer Science Part A-2 Polymer Physics, 1973, 11, 1055-1076.	0.8	36
30	Gels of cysteine/Ag-based dilute colloid systems and their rheological properties. Soft Matter, 2011, 7, 9090.	1.2	36
31	On the nature of phase separation of polymer solutions at high extension rates. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 559-565.	2.4	36
32	Spinnability of Dilute Polymer Solutions. Macromolecules, 2017, 50, 8231-8244.	2.2	36
33	Shear and normal stresses in flow of highly concentrated emulsions. Journal of Non-Newtonian Fluid Mechanics, 2007, 147, 65-68.	1.0	35
34	Rheological properties of heavy oil emulsions with different morphologies. Journal of Petroleum Science and Engineering, 2017, 149, 522-530.	2.1	35
35	Structure and rheology of highly concentrated emulsions: a modern look. Russian Chemical Reviews, 2015, 84, 803-825.	2.5	33
36	Modifying the Viscosity of Heavy Crude Oil Using Surfactants and Polymer Additives. Energy & Fuels, 2018, 32, 11991-11999.	2.5	32

#	Article	IF	Citations
37	A Novel Technique for Fiber Formation: Mechanotropic Spinningâ€”Principle and Realization. Polymers, 2018, 10, 856.	2.0	31
38	Non-linearity in rheology ?an essay of classification. Rheologica Acta, 1995, 34, 27-39.	1.1	28
39	The role of interdroplet interaction in the physics of highly concentrated emulsions. Colloid Journal, 2010, 72, 74-92.	0.5	28
40	Heavy oil as an emulsion: Composition, structure, and rheological properties. Colloid Journal, 2016, 78, 735-746.	0.5	28
41	Flow behaviour of highly concentrated emulsions of supersaturated aqueous solution in oil. Rheologica Acta, 2011, 50, 897-907.	1.1	27
42	Experimental estimation of wall slip for filled rubber compounds. Rheologica Acta, 1993, 32, 150-155.	1.1	26
43	Flow instability in polymer solutions and melts. Polymer Science - Series C, 2006, 48, 21-37.	0.8	26
44	From Polyacrylonitrile, its Solutions, and Filaments to Carbon Fibers <scp>II</scp>. Spinning <scp>PAN</scp>â€Precursors and their Thermal Treatment. Advances in Polymer Technology, 2018, 37, 1099-1113.	0.8	25
45	Rheology of Highly Concentrated Emulsions â€“ Concentration and Droplet Size Dependencies. Applied Rheology, 2007, 17, 42250-1-42250-9.	3.5	24
46	A new mechanism of aging of highly concentrated emulsions: Correlation between crystallization and plasticity. Colloid Journal, 2007, 69, 198-202.	0.5	24
47	Shear thickening and dynamic glass transition of concentrated suspensions. State of the problem. Colloid Journal, 2016, 78, 1-8.	0.5	24
48	Modeling macromolecular movement in polymer melts and its relation to nonlinear rheology. Rheologica Acta, 2011, 50, 485-489.	1.1	23
49	Rheological properties of road bitumens modified with polymer and solid nanosized additives. Colloid Journal, 2014, 76, 425-434.	0.5	23
50	Some inverse problems in rheology leading to integral equations. Rheologica Acta, 1990, 29, 512-518.	1.1	21
51	Application of large amplitude oscillatory shear for the analysis of polymer material properties in the nonlinear mechanical behavior. Polymer Science - Series A, 2014, 56, 98-110.	0.4	21
52	Rheological peculiarities of concentrated suspensions. Colloid Journal, 2012, 74, 472-482.	0.5	20
53	Correlation of stationary and dynamic mechanical characteristics of elastomers. Rheologica Acta, 1969, 8, 490-496.	1.1	19
54	General characteristics of the visco-elastic properties of flexible-chain polymer solutions over a wide range of concentrations. Rheologica Acta, 1973, 12, 486-495.	1.1	19

#	Article	IF	Citations
55	Master curves for elastic and plastic properties of highly concentrated emulsions. Colloid Journal, 2008, 70, 327-336.	0.5	19
56	Surface instabilities. Colloid Journal, 2008, 70, 673-689.	0.5	19
57	On the rheology of oil (Review). Petroleum Chemistry, 2016, 56, 541-551.	0.4	19
58	From Polyacrylonitrile, Its Solutions, and Filaments to Carbon Fibers: I. Phase State and Rheology of Basic Polymers and Their Solutions. Advances in Polymer Technology, 2018, 37, 1076-1084.	0.8	19
59	Oil as an Object of Rheology (Review). Petroleum Chemistry, 2019, 59, 1092-1107.	0.4	19
60	The engineering rheology of liquid explosives as highly concentrated emulsions. Chemical Engineering Research and Design, 2013, 91, 204-210.	2.7	18
61	Shear Stability of Highly Concentrated Emulsions. Colloid Journal, 2018, 80, 54-58.	0.5	18
62	The Role of Structure in Polymer Rheology: Review. Polymers, 2022, 14, 1262.	2.0	18
63	Self-organization in the flow of complex fluids (colloid and polymer systems). Part 2: Theoretical models. Advances in Colloid and Interface Science, 2011, 162, 29-38.	7.0	17
64	Emulsification of highly concentrated emulsionsâ€"A criterion of shear stability. Journal of Rheology, 2018, 62, 781-790.	1.3	16
65	Chemical transformations and phase transitions in polymer rheology and technology. Makromolekulare Chemie Macromolecular Symposia, 1993, 68, 301-322.	0.6	15
66	Linearization as a method for determining parameters of relaxation spectra. Rheologica Acta, 2000, 39, 379-383.	1.1	15
67	From capillary to elastic instability of jets of polymeric liquids: Role of the entanglement network of macromolecules. JETP Letters, 2015, 101, 690-692.	0.4	15
68	Rheological properties of emulsions formed by polymer solutions and modified by nanoparticles. Colloid and Polymer Science, 2015, 293, 1647-1654.	1.0	15
69	Introduction: yield stressâ€"or 100Âyears of rheology. Rheologica Acta, 2017, 56, 161-162.	1.1	14
70	Flow of heavy crude oil-in-water emulsions in long capillaries simulating pipelines. Journal of Petroleum Science and Engineering, 2017, 157, 117-123.	2.1	14
71	Relaxation spectra of polymers and phenomena of electrical and hydrophobic recovery: Interplay between bulk and surface properties of polymers. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 198-205.	2.4	13
72	Effect of Composition and Interfacial Tension on the Rheology and Morphology of Heavy Oil-In-Water Emulsions. ACS Omega, 2020, 5, 16460-16469.	1.6	13

#	Article	IF	Citations
73	On the optimal form of a signal in Fourier Transform Mechanical Spectroscopy. Rheologica Acta, 2004, 43, 1-5.	1.1	12
74	Multi-Walled Carbon Nanotubes as a Cosurfactant for Highly Concentrated Emulsions. Journal of Dispersion Science and Technology, 2013, 34, 1074-1078.	1.3	11
75	Spreading of Oil-in-Water Emulsions on Water Surface. Langmuir, 2018, 34, 10974-10983.	1.6	11
76	Structuring during flow of polymer and colloidal systems. Polymer Science - Series A, 2010, 52, 1083-1104.	0.4	10
77	IR Studies of Interfacial Interaction of the Succinic Surfactants with Different Head Groups in Highly Concentrated W/O Emulsions. Journal of Dispersion Science and Technology, 2011, 32, 1547-1555.	1.3	10
78	Pressure losses in flow of viscoelastic polymeric fluids through short channels. Journal of Rheology, 2014, 58, 433-448.	1.3	10
79	Viscosity and viscoelasticity of liquid nanoparticles with polymeric matrix. Physics of Fluids, 2019, 31, 083104.	1.6	10
80	Shear-induced transitions in colloidal and polymeric liquids. Advances in Colloid and Interface Science, 2021, 290, 102381.	7.0	10
81	Influence of electrolyte on interfacial and rheological properties and shear stability of highly concentrated W/O emulsions. Colloid Journal, 2010, 72, 806-814.	0.5	9
82	Stability of polymer jets in extension: physicochemical and rheological mechanisms. Russian Chemical Reviews, 2020, 89, 811-823.	2.5	9
83	Superposition of temperature and diluent concentration for the viscosity reduction of heavy crude oil. Journal of Dispersion Science and Technology, 2021, 42, 270-277.	1.3	9
84	On continuous relaxation spectrum. Method of calculation. Polymer Science - Series A, 2010, 52, 1137-1141.	0.4	8
85	Entanglement junctions in melts and concentrated solutions of flexible-chain polymers: Macromodeling. Polymer Science - Series A, 2011, 53, 1198-1206.	0.4	8
86	Kinetics of Crystallization of Aqueous Droplets in Water-in-Crude Oil Emulsions at Low Temperatures. Energy & Fuels, 2018, 32, 2197-2202.	2.5	8
87	Large Elastic Deformations of Polymers in Shear and Extensional Flows. International Journal of Polymeric Materials and Polymeric Biomaterials, 1981, 9, 1-8.	1.8	7
88	Why does the viscosity of waxy oil decrease with the decrease in the cooling rate? A model. Thermochimica Acta, 2016, 624, 82-85.	1.2	7
89	Explosive spreading of a concentrated emulsion over a liquid surface. Colloid Journal, 2017, 79, 414-417.	0.5	7
90	Flow of polymerizing liquids. Advances in Polymer Science, 1990, , 111-147.	0.4	7

#	Article	IF	Citations
91	Phase separation of polymer solutions on a solvent surface. Colloid Journal, 2017, 79, 278-285.	0.5	6
92	Self-Oscillations Accompanying Shear Flow of Colloidal and Polymeric Systems. Reality and Instrumental Effects. Colloid Journal, 2019, 81, 176-186.	0.5	6
93	Elasticity and plasticity of highly concentrated noncolloidal suspensions under shear. Journal of Rheology, 2020, 64, 469-479.	1.3	6
94	The shape of a falling jet formed by concentrated polymer solutions. Physics of Fluids, 2021, 33, .	1.6	6
95	Fibers spinning from poly(trimethylsilylpropyne) solutions. Journal of Applied Polymer Science, 2020, 137, 48511.	1.3	5
96	Comparing flow characteristics of viscoelastic liquids in long and short capillaries (entrance) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 542 T	1.6	5
97	Rheology of Highly Concentrated Suspensions with a Bimodal Size Distribution of Solid Particles for Powder Injection Molding. Polymers, 2021, 13, 2709.	2.0	5
98	Plasticity of Highly Concentrated Suspensions. Colloid Journal, 2019, 81, 532-540.	0.5	4
99	Unexpected rheological behavior of solutions of aromatic polyamide in transient physical states. Physics of Fluids, 2020, 32, 073107.	1.6	4
100	Rheology of linear and branched styreneâ€"acrylonitrile copolymers. Similarities and differences. Polymer Science - Series A, 2010, 52, 1142-1155.	0.4	3
101	LIQUIDS. , 2012, , 127-221.		3
102	Non-Newtonian behavior of polydisperse polymer melts as a consequence of the evolution of their relaxation spectra. Polymer Science - Series A, 2012, 54, 752-759.	0.4	3
103	Deformation Properties of Concentrated Metal-in-Polymer Suspensions under Superimposed Compression and Shear. Polymers, 2020, 12, 1038.	2.0	3
104	Molecular motion in mixtures of polymer melts in a capillary flow. Journal of Molecular Liquids, 2021, 344, 117919.	2.3	3
105	LIQUIDS. , 2017, , 129-232.		2
106	Electrospinning and Mechanotropic Phenomena in Polymer Solutions. Macromolecular Symposia, 2020, 389, 1900091.	0.4	2
107	Some Dynamic Properties of the Interface. Russian Journal of General Chemistry, 2022, 92, 679-693.	0.3	2
108	Macroscopic modeling of entanglement network evolution in polymer melt flow. Doklady Chemistry, 2011, 438, 137-139.	0.2	1

#	Article	IF	Citations
109	High-rate deformation of polymer melts as discrete media: Justification of the model. Polymer Science - Series A, 2015, 57, 904-909.	0.4	1
110	Measurement of Viscoelastic Characteristics of Interfacial Layers on Liquid Surfaces Using New Experimental Equipment. Colloid Journal, 2019, 81, 681-686.	0.5	1
111	The Formation and Elasticity of a Hydroxypropyl Cellulose Film at a Waterâ€"Air Interface. Colloid Journal, 2019, 81, 696-702.	0.5	1
112	Flow-Spurt Transition under Shear Deformation of Concentrated Suspensions. Colloid Journal, 2020, 82, 408-413.	0.5	1
113	Polymer Rheology in the Petroleum Industry. Polymer Science - Series C, 2021, 63, 144-160.	0.8	1
114	VISCOELASTICITY. , 2022, , 45-131.		1
115	Model of the behavior of viscoelastic media at high strain rates. Doklady Physical Chemistry, 2015, 464, 210-213.	0.2	0
116	LIQUIDS. , 2022, , 133-250.		0
117	SOLIDS. , 2022, , 251-285.		0
118	RHEOMETRY EXPERIMENTAL METHODS. , 2022, , 287-402.		0
119	Applications of Rheology. , 2022, , 403-460.		0