Manfred H Wagner

List of Publications by Year
in descending order

124	3,874	136740	138251
papers	citations	32 h-index	58 g-index

128	128	128	1608
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Analysis of time-dependent non-linear stress-growth data for shear and elongational flow of a low-density branched polyethylene melt. Rheologica Acta, 1976, 15, 136-142.	1.1	387
2	Development of a polymer stent with shape memory effect as a drug delivery system. Journal of Materials Science: Materials in Medicine, 2003, 14, 109-112.	1.7	242
3	A constitutive analysis of uniaxial elongational flow data of low-density polyethylene melt. Journal of Non-Newtonian Fluid Mechanics, 1978, 4, 39-55.	1.0	189
4	The strain-hardening behaviour of linear and long-chain-branched polyolefin melts in extensional flows. Rheologica Acta, 2000, 39, 97-109.	1.1	157
5	Quantitative prediction of transient and steady-state elongational viscosity of nearly monodisperse polystyrene melts. Journal of Rheology, 2005, 49, 1317-1327.	1.3	118
6	Prediction of primary normal stress difference from shear viscosity data using a single integral constitutive equation. Rheologica Acta, 1977, 16, 43-50.	1.1	99
7	Nonlinear shear creep and constrained elastic recovery of a LDPE melt. Rheologica Acta, 1978, 17, 138-148.	1.1	98
8	The damping function in rheology. Rheologica Acta, 2009, 48, 245-284.	1.1	96
9	Tensile stress overshoot in uniaxial extension of a LDPE melt. Rheologica Acta, 1979, 18, 427-428.	1.1	86
10	Quantitative analysis of melt elongational behavior of LLDPE/LDPE blends. Rheologica Acta, 2004, 44, 198-218.	1.1	84
11	Analysis of stress-growth data for simple extension of a low-density branched polyethylene melt. Rheologica Acta, 1976, 15, 133-135.	1.1	65
12	Residue Stabilization in the Fire Retardancy of Woodâ€“Plastic Composites: Combination of Ammonium Polyphosphate, Expandable Graphite, and Red Phosphorus. Macromolecular Chemistry and Physics, 2012, 213, 2370-2377.	1.1	64
13	Rheotens-mastercurves and drawability of polymer melts. Polymer Engineering and Science, 1996, 36, 925-935.	1.5	61
14	Impact of processing history on rheological properties for branched polypropylene. Polymer, 2006, 47, 3629-3635.	1.8	60
15	Elongational behaviour of polymer melts in constant elongation-rate, constant tensile stress, and constant tensile force experiments. Rheologica Acta, 1979, 18, 681-692.	1.1	59
16	Assessment of nonlinear strain measures for extensional and shearing flows of polymer melts. Rheologica Acta, 1994, 33, 506-516.	1.1	56
17	Modeling non-Gaussian extensibility effects in elongation of nearly monodisperse polystyrene melts. Journal of Rheology, 2006, 50, 327-340.	1.3	52
18	Verification of branch point withdrawal in elongational flow of pom-pom polystyrene melt. Journal of Rheology, 2008, 52, 1049-1068.	1.3	51

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19	A constitutive analysis of transient and steady-state elongational viscosities of bidisperse polystyrene blends. Journal of Rheology, 2008, 52, 67-86.	1.3	50
20	Measurement technique and data analysis of extensional viscosity for polymer melts by Sentmanat extensional rheometer (SER). Rheologica Acta, 2010, 49, 359-370.	1.1	50
21	Review on tube model based constitutive equations for polydisperse linear and long-chain branched polymer melts. Journal of Rheology, 2019, 63, 361-375.	1.3	45
22	The nonlinear strain measure of polyisobutylene melt in general biaxial flow and its comparison to the Doi-Edwards model. Rheologica Acta, 1990, 29, 594-603.	1.1	42
23	Rheotens-mastercurves and elongational viscosity of polymer melts. Rheologica Acta, 1996, 35, 117-126.	1.1	42
24	Determination of elongational viscosity of polymer melts by RME and Rheotens experiments. Rheologica Acta, 2002, 41, 316-325.	1.1	42
25	The MSF model: relation of nonlinear parameters to molecular structure of long-chain branched polymer melts. Rheologica Acta, 2007, 46, 583-593.	1.1	42
26	Modelling elongational and shear rheology of two LDPE melts. Rheologica Acta, 2009, 48, 691-697.	1.1	37
27	Das Folienblasverfahren als rheologisch-thermodynamischer Prozeï¿½. Rheologica Acta, 1976, 15, 40-51.	1.1	36
28	LDPE melt rheology and the pomâ€“pom model. Journal of Non-Newtonian Fluid Mechanics, 2000, 92, 245-259.	1.0	35
29	Modeling strain hardening of polydisperse polystyrene melts by molecular stress function theory. Rheologica Acta, 2005, 44, 235-243.	1.1	35
30	Study on the Performance of Hybrid Jute/Betel Nut Fiber Reinforced Polypropylene Composites. Journal of Adhesion Science and Technology, 2011, 25, 615-626.	1.4	34
31	Scaling relations for elongational flow of polystyrene melts and concentrated solutions of polystyrene in oligomeric styrene. Rheologica Acta, 2014, 53, 765-777.	1.1	34
32	Rheological and molecular characterization of long-chain branched poly(ethylene terephthalate). Rheologica Acta, 2017, 56, 887-904.	1.1	33
33	A hierarchical multi-mode MSF model for long-chain branched polymer melts part I: elongational flow. Rheologica Acta, 2015, 54, 779-791.	1.1	30
34	A hierarchical multimode molecular stress function model for linear polymer melts in extensional flows. Journal of Rheology, 2016, 60, 625-636.	1.3	30
35	Model analysis of nonlinear viscoelastic behaviour by use of a single integral constitutive equation: Stresses and birefringence of a polystyrene melt in intermittent shear flows. Rheologica Acta, 1979, 18, 615-622.	1.1	29
36	The interchain pressure effect in shear rheology. Rheologica Acta, 2010, 49, 459-471.	1.1	29

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37	Effect of layered silicate nanoclay on the properties of silane crosslinked linear low-density polyethylene (LLDPE). EXPRESS Polymer Letters, 2010, 4, 252-262.	1.1	29
38	Constant force elongational flow of a low-density polyethylene meltâ€"experiment and theory. Journal of Non-Newtonian Fluid Mechanics, 1982, 11, 239-256.	1.0	28
39	Constitutive equations from Gaussian slip-link network theories in polymer melt rheology. Rheologica Acta, 1992, 31, 22-31.	1.1	27
40	The spike-strain test for polymeric liquids and its relevance for irreversible destruction of network connectivity by deformation. Rheologica Acta, 1979, 18, 463-468.	1.1	26
41	Surface treatment mechanism of nano-SiO2 and the properties of PP/nano-SiO2 composite materials. Colloid and Polymer Science, 2003, 281, 550-555.	1.0	26
42	On the origin of brittle fracture of entangled polymer solutions and melts. Journal of Rheology, 2018, 62, 221-233.	1.3	26
43	Extensional viscosity in uniaxial extension and contraction flowâ€"Comparison of experimental methods and application of the molecular stress function model. Journal of Non-Newtonian Fluid Mechanics, 2010, 165, 212-218.	1.0	25
44	Dynamics of polymer melts in reversing shear flows1Dedicated to the memory of Professor Gianni Astarita.1. Journal of Non-Newtonian Fluid Mechanics, 1998, 76, 183-197.	1.0	23
45	Nonlinear viscoelastic characterization of a linear polyethylene (HDPE) melt in rotational and irrotational flows. Journal of Non-Newtonian Fluid Mechanics, 1998, 79, 283-296.	1.0	23
46	Modeling elongational viscosity of blends of linear and long-chain branched polypropylenes. Rheologica Acta, 2006, 46, 211-221.	1.1	23
47	The effect of dynamic tube dilation on chain stretch in nonlinear polymer melt rheology. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 915-924.	1.0	23
48	Constant force elongational flow of polymer melts: Experiment and modelling. Journal of Rheology, 2012, 56, 1279.	1.3	23
49	Enhancement of strain-hardening by thermo-oxidative degradation of low-density polyethylene. Rheologica Acta, 2011, 50, 519-535.	1.1	22
50	Mechanical performance of hybrid rice straw/sea weed polypropylene composites. Journal of Applied Polymer Science, 2011, 120, 1843-1849.	1.3	22
51	Increase of long-chain branching by thermo-oxidative treatment of LDPE: Chromatographic, spectroscopic, and rheological evidence. Journal of Rheology, 2013, 57, 105-129.	1.3	22
52	A hierarchical multi-mode MSF model for long-chain branched polymer melts part II: multiaxial extensional flows. Rheologica Acta, 2016, 55, 327-333.	1.1	22
53	Study of inkjet printing as additive manufacturing process for gradient polyurethane material. Production Engineering, 2014, 8, 25-32.	1.1	21
54	From linear viscoelasticity to elongational flow of polydisperse linear and branched polymer melts: The hierarchical multi-mode molecular stress function model. Polymer, 2016, 104, 204-214.	1.8	21

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55	Interactive Shear and Extensional Rheologyâ€”25Âyears of IRIS Software. Rheologica Acta, 2022, 61, 259-269.	1.1	21
56	Effect of Br gassing after Ar plasma treatment of polyolefins. Journal of Adhesion Science and Technology, 2013, 27, 1828-1839.	1.4	19
57	Elongational rheology of polystyrene melts and solutions: Concentration dependence of the interchain tube pressure effect. Journal of Rheology, 2020, 64, 95-110.	1.3	19
58	Developing flow in circular conduits: transition from plug flow to tube flow. Journal of Fluid Mechanics, 1975, 72, 257.	1.4	18
59	The Matching of Experimental Polymer Processing Flows to Viscoelastic Numerical Simulation. International Polymer Processing, 2002, 17, 3-10.	0.3	18
60	Correlation between molecular structure parameters and network properties of silaneâ€grafted and moisture crossâ€linked polyethylenes. Advances in Polymer Technology, 2011, 30, 286-300.	0.8	18
61	A constitutive analysis of nonlinear shear flow. Rheologica Acta, 2020, 59, 487-506.	1.1	17
62	A modification of the convective constraint release mechanism in the molecular stress function model giving enhanced vortex growth. Journal of Non-Newtonian Fluid Mechanics, 2006, 135, 68-81.	1.0	16
63	A hierarchical multi-mode MSF model for long-chain branched polymer melts part III: shear flows. Rheologica Acta, 2016, 55, 633-639.	1.1	16
64	Prediction of steady-state viscous and elastic properties of polyolefin melts in shear and elongation. Rheologica Acta, 2011, 50, 645-653.	1.1	15
65	Rheological behavior of lubricating systems in polypropylene/seaweed composites. Journal of Applied Polymer Science, 2011, 121, 2143-2148.	1.3	15
66	Elongational rheology and cohesive fracture of photo-oxidated LDPE. Journal of Rheology, 2014, 58, 199-222.	1.3	15
67	Analysis of high meltâ€strength poly(ethylene terephthalate) produced by reactive processing by shear and elongational rheology. Polymer Engineering and Science, 2019, 59, 396-410.	1.5	15
68	Exponential shear flow of branched polyethylenes in rotational parallel-plate geometry. Rheologica Acta, 2005, 45, 164-173.	1.1	14
69	Recent Advances in Constitutive Modeling of Polymer Melts. , 2009, , .		14
70	Rheological characterization of degradation and polycondensation of poly(ethylene terephthalate) melt in air and in nitrogen. AIP Conference Proceedings, 2013, , .	0.3	14
71	Modeling nonlinear rheology of unentangled polymer melts based on a single integral constitutive equation. Journal of Rheology, 2020, 64, 129-140.	1.3	14
72	Scaling relations for brittle fracture of entangled polystyrene melts and solutions in elongational flow. Journal of Rheology, 2021, 65, 311-324.	1.3	14

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73	Analysis of Small-Angle Neutron Scattering Data on Poly(dimethylsiloxane) Network Unfolding. Macromolecules, 1994, 27, 5223-5226.	2.2	12
74	Damping functions and nonlinear viscoelasticityâ€"a review. Journal of Non-Newtonian Fluid Mechanics, 1997, 68, 169-171.	1.0	12
75	Review of the hierarchical multiâ€mode molecular stress function model for broadly distributed linear and LCB polymer melts. Polymer Engineering and Science, 2019, 59, 573-583.	1.5	12
76	Endor study of atomic hydrogen in KI-crystals. Solid State Communications, 1974, 14, 1101-1104.	0.9	11
77	Seaweed as novel biofiller in polypropylene composites. Journal of Applied Polymer Science, 2010, 118, 997-1005.	1.3	11
78	An extended interchain tube pressure model for elongational flow of polystyrene melts and concentrated solutions. Journal of Non-Newtonian Fluid Mechanics, 2015, 222, 121-131.	1.0	11
79	Elongational viscosity and brittle fracture of bidisperse blends of a high and several low molar mass polystyrenes. Rheologica Acta, 2021, 60, 803-817.	1.1	11
80	Modelling elongational viscosity overshoot and brittle fracture of low-density polyethylene melts. Rheologica Acta, 2022, 61, 281-298.	1.1	11
81	Effect of Î³-Radiation on the Mechanical Performance of Hybrid Rice Straw/Seaweed-Polypropylene Composites. Journal of Adhesion Science and Technology, 2011, 25, 1961-1971.	1.4	10
82	Enhancing the potential of employing thermosetting powder recyclates as filler in LLDPE by structural modifications. Journal of Polymer Engineering, 2017, 37, 287-296.	0.6	10
83	Modeling elongational viscosity and brittle fracture of polystyrene solutions. Rheologica Acta, 2021, 60, 385-396.	1.1	9
84	A new perspective on monomeric friction reduction in fast elongational flows of polystyrene melts and solutions. Journal of Rheology, 2021, 65, 1413-1421.	1.3	9
85	Study on phase separation of PET/PEN blends by dynamic rheology. Journal of Applied Polymer Science, 2008, 110, 177-182.	1.3	8
86	Rheological characterization of cross-linked poly(methyl methacrylate). Rheologica Acta, 2013, 52, 753-765.	1.1	8
87	From melt to solution: Scaling relations for concentrated polystyrene solutions. Journal of Rheology, 2015, 59, 1113-1130.	1.3	8
88	Elongational viscosity scaling of polymer melts with different chemical constituents. Rheologica Acta, 2021, 60, 163-174.	1.1	8
89	The Rheology of Linear and Long-chain Branched Polymer Melts. Macromolecular Symposia, 2006, 236, 219-227.	0.4	7
90	Role of compatibilizers on the physicomechanical performance of tea dust polypropylene composites. Journal of Applied Polymer Science, 2012, 125, E413.	1.3	7

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91	Wall slip of polyisobutylenes: effect of molecular characteristics. Rheologica Acta, 2017, 56, 85-94.	1.1	7
92	Assessment of LDPE Melt Strength by Use of Rheotens Mastercurves. International Polymer Processing, 2000, 15, 268-272.	0.3	7
93	Modeling of nonlinear extensional and shear rheology of lowâ€viscosity polymer melts. Polymer Engineering and Science, 2021, 61, 1077-1086.	1.5	6
94	Untersuchungen zur irreversibilitÃt von Netzwerkentschlaufungen beim FlieÃŸen von Polymerschmelzen. Macromolecular Chemistry and Physics, 1995, 196, 2989-3004.	1.1	5
95	The peculiar behavior of functionalized carbon nanotubes in hydrocarbons and polymeric oxidation environments. Journal of Adhesion Science and Technology, 2017, 31, 988-1006.	1.4	5
96	Response to â€œLetter to the Editor: â€˜Melt rupture unleashed by few chain scission events in fully stretched strandsâ€™â€•[J. Rheol. 63, 105 (2018)]. Journal of Rheology, 2019, 63, 419-421.	1.3	5
97	Thermoset powder coating wastes as filler in LDPE â€“ Characterization of mechanical, thermal and morphological properties. Polymer Testing, 2021, 93, 106897.	2.3	5
98	Modelling of Elongational Flow of HDPE Melts by Hierarchical Multi-Mode Molecular Stress Function Model. Polymers, 2021, 13, 3217.	2.0	5
99	The slipâ€link model: A constitutive equation for general biaxial extension of polymer melts. Makromolekulare Chemie Macromolecular Symposia, 1992, 56, 13-24.	0.6	4
100	The role of the orientation tensor in the rheology of flexible polymers. Macromolecular Theory and Simulations, 1997, 6, 703-711.	0.6	4
101	The peculiar elongational viscosity of concentrated solutions of monodisperse PMMA in oligomeric MMA. Rheologica Acta, 2018, 57, 591-601.	1.1	4
102	The nonlinear strain measure of polymer melts and rubbers: A unifying approach. Makromolekulare Chemie Macromolecular Symposia, 1993, 68, 95-108.	0.6	3
103	The Internal Pressure Test in Experiment and Simulationâ€”Influence of the Wall Thickness Variation and the Change of the Packaging Behavior after the Impact of Standard Liquids. Packaging Technology and Science, 2013, 26, 311-326.	1.3	3
104	Utilizing hydrolyzed powder recyclates as filler in polystyrene. Materialwissenschaft Und Werkstofftechnik, 2019, 50, 25-32.	0.5	3
105	Piezo-Plunger Jetting Technology: An Experimental Study on Jetting Characteristics of Filled Epoxy Polymers. Fluids, 2019, 4, 23.	0.8	3
106	Universality of steady shear flow of Rouse melts. Rheologica Acta, 2020, 59, 755-763.	1.1	3
107	Effect of Wall Slip on Rheotens Mastercurves for Linear PE Melts. International Polymer Processing, 1999, 14, 336-341.	0.3	3
108	Analysis of elongational flow of star polymers. Rheologica Acta, 2022, 61, 415-425.	1.1	3

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109	Professor Dr. Joachim Meissner on the occasion of his retirement. Rheologica Acta, 1996, 35, 101-102.	1.1	2
110	Elongational flow of polymer melts at constant strain rate, constant stress and constant force. , 2013, , .		2
111	Drop Test of Plastic Packagings â€“ Correlation with Material Parameters and Change of Packaging Behaviour After Impact of Standard Liquids. Packaging Technology and Science, 2014, 27, 479-493.	1.3	2
112	Recent advances in modeling of polymer melt rheology. Polimery, 2015, 61, 603-611.	0.4	2
113	Einige offene Fragen in der Rheologie der Polymerschmelzen. Angewandte Makromolekulare Chemie, 1990, 179, 217-229.	0.3	1
114	Rheological Characterization and Constitutive Modeling of Two LDPE Melts. , 2009, , .		1
115	Uniaxial extensional flow behavior of comb-shaped poly(methyl methacrylate). Rheologica Acta, 2015, 54, 637-645.	1.1	1
116	Rheological characterization of H-shaped poly(methyl methacrylate)s. Rheologica Acta, 2015, 54, 793-804.	1.1	1
117	Golden Jubilee Meeting of the German Society of Rheology (DRG), Berlin, Germany. Rheologica Acta, 2002, 41, 290-291.	1.1	0
118	Probing Nonlinear Viscoelasticity of Polymer Melts by Medium Amplitude Oscillatory Shear (MAOS). , 2011, , .		0
119	Increase of Long-chain Branching by Thermo-oxidative Treatment of LDPE. , 2011, , .		0
120	Macromol. Chem. Phys. 22/2012. Macromolecular Chemistry and Physics, 2012, 213, 2436-2436.	1.1	0
121	Photo-oxidation of LDPE: Effects on elongational viscosity. , 2013, , .		0
122	Hierarchical multi-mode molecular stress function (HMMSF) model for linear and LCB polymer melts. AIP Conference Proceedings, 2019, , .	0.3	0
123	Experiment as a Boundary-Value Problem. , 2007, , 3-31.		0
124	Polymer Fiber Processing: The Rheotens Test. , 2019, , .		0