

Wayne F Reed

List of Publications by Year in descending order

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103
papers

2,355
citations

218677

26
h-index

276875

41
g-index

114
all docs

114
docs citations

114
times ranked

1425
citing authors

#	ARTICLE	IF	CITATIONS
1	Dependence of polyelectrolyte apparent persistence lengths, viscosity, and diffusion on ionic strength and linear charge density. <i>Macromolecules</i> , 1991, 24, 6189-6198.	4.8	111
2	Monte Carlo study of titration of linear polyelectrolytes. <i>Journal of Chemical Physics</i> , 1992, 96, 1609-1620.	3.0	97
3	Apparent persistence lengths and diffusion behavior of high molecular weight hyaluronate. <i>Biopolymers</i> , 1990, 30, 1101-1112.	2.4	94
4	Kinetics and Mechanisms of Acrylamide Polymerization from Absolute, Online Monitoring of Polymerization Reaction. <i>Macromolecules</i> , 2001, 34, 1180-1191.	4.8	94
5	Absolute, On-Line Monitoring of Molar Mass during Polymerization Reactions. <i>Macromolecules</i> , 1998, 31, 7226-7238.	4.8	93
6	Monte Carlo electrostatic persistence lengths compared with experiment and theory. <i>Journal of Chemical Physics</i> , 1991, 94, 8479-8486.	3.0	65
7	Online Monitoring of Controlled Radical Polymerization: A Nitroxide-Mediated Gradient Copolymerization. <i>Macromolecules</i> , 2004, 37, 966-975.	4.8	65
8	Surfactant/Polymer Assemblies. 1. Surfactant Binding Properties. <i>Macromolecules</i> , 1998, 31, 2957-2965.	4.8	56
9	Polyelectrolyte properties of proteoglycan monomers. <i>Journal of Chemical Physics</i> , 1991, 94, 4568-4580.	3.0	48
10	Aggregates and other particles as the origin of the "extraordinary" diffusional phase in polyelectrolyte solutions. <i>Biopolymers</i> , 1992, 32, 1105-1122.	2.4	47
11	Kinetics and molecular weight evolution during controlled radical polymerization. <i>Macromolecular Chemistry and Physics</i> , 2002, 203, 2029-2041.	2.2	45
12	Data evaluation for unified multi-detector size exclusion chromatography "molar mass, viscosity and radius of gyration distributions. <i>Macromolecular Chemistry and Physics</i> , 1995, 196, 1539-1575.	2.2	42
13	Comparison of On-line Single-Capillary and Bridge Capillary Viscometric Detectors for Size Exclusion Chromatography. <i>International Journal of Polymer Analysis and Characterization</i> , 1997, 4, 99-132.	1.9	42
14	Electrostatic and Association Phenomena in Aggregates of Polymers and Micelles. <i>Langmuir</i> , 2002, 18, 353-364.	3.5	42
15	Automated batch characterization of polymer solutions by static light scattering and viscometry. <i>Journal of Applied Polymer Science</i> , 1999, 73, 2359-2367.	2.6	41
16	The effects of pH on hyaluronate as observed by light scattering. <i>Biopolymers</i> , 1989, 28, 1981-2000.	2.4	39
17	Monitoring protein aggregation kinetics with simultaneous multiple sample light scattering. <i>Analytical Biochemistry</i> , 2013, 437, 185-197.	2.4	36
18	Polydopamine particles as nontoxic, blood compatible, antioxidant and drug delivery materials. <i>Colloids and Surfaces B: Biointerfaces</i> , 2018, 172, 618-626.	5.0	36

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19	Dissolution kinetics of polymer powders. <i>AIChE Journal</i> , 2000, 46, 1290-1299.	3.6	35
20	Surfactant/Polymer Assemblies. 2. Polyelectrolyte Properties. <i>Macromolecules</i> , 1998, 31, 2966-2971.	4.8	34
21	Electrostatically Enhanced Second and Third Virial Coefficients, Viscosity, and Interparticle Correlations for Linear Polyelectrolytes. <i>Macromolecules</i> , 2002, 35, 5218-5227.	4.8	34
22	Automatic continuous online monitoring of polymerization reactions (ACOMP). <i>Polymer International</i> , 2008, 57, 390-396.	3.1	32
23	Coupling of near infrared spectroscopy to automatic continuous online monitoring of polymerization reactions. <i>European Polymer Journal</i> , 2005, 41, 535-545.	5.4	30
24	A Method for Online Monitoring of Polydispersity during Polymerization Reactions. <i>Macromolecules</i> , 2000, 33, 7165-7172.	4.8	29
25	Fundamental Measurements in Online Polymerization Reaction Monitoring and Control with a Focus on ACOMP. <i>Macromolecular Reaction Engineering</i> , 2010, 4, 470-485.	1.5	29
26	Monte Carlo test of electrostatic persistence length for short polymers. <i>Journal of Chemical Physics</i> , 1990, 92, 6916-6926.	3.0	27
27	Static Light Scattering from Mixtures of Polyelectrolytes in Low Ionic Strength Solutions. <i>Macromolecules</i> , 1996, 29, 4293-4304.	4.8	27
28	Online Monitoring of Copolymerization Involving Comonomers of Similar Spectral Characteristics. <i>Macromolecules</i> , 2006, 39, 5705-5713.	4.8	27
29	Automatic Control of Polymer Molecular Weight during Synthesis. <i>Macromolecules</i> , 2016, 49, 7170-7183.	4.8	27
30	Light scattering power of randomly cut random coils with application to the determination of depolymerization rates. <i>Journal of Chemical Physics</i> , 1989, 91, 7193-7199.	3.0	26
31	High osmotic stress behavior of hyaluronate and heparin. <i>Biopolymers</i> , 1992, 32, 219-238.	2.4	25
32	Simultaneous Monitoring of Polymer and Particle Characteristics during Emulsion Polymerization. <i>Macromolecules</i> , 2008, 41, 2406-2414.	4.8	25
33	Quantitative Contrasts in the Copolymerization of Acrylate- and Methacrylate-Based Comonomers. <i>Macromolecules</i> , 2006, 39, 8283-8292.	4.8	24
34	Evolution of Composition, Molar Mass, and Conductivity during the Free Radical Copolymerization of Polyelectrolytes. <i>Journal of Physical Chemistry B</i> , 2007, 111, 8560-8566.	2.6	23
35	Identifying protein aggregation mechanisms and quantifying aggregation rates from combined monomer depletion and continuous scattering. <i>Analytical Biochemistry</i> , 2016, 511, 80-91.	2.4	23
36	New evidence of the nonequilibrium nature of the "slow modes" of diffusion in polyelectrolyte solutions. <i>Biopolymers</i> , 2000, 53, 19-39.	2.4	22

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37	Online Monitoring of Polymerization Reactions in Inverse Emulsions. <i>Langmuir</i> , 2006, 22, 831-840.	3.5	22
38	Predictive control and verification of conversion kinetics and polymer molecular weight in semi-batch free radical homopolymer reactions. <i>European Polymer Journal</i> , 2009, 45, 2288-2303.	5.4	22
39	Predictive Control of Average Composition and Molecular Weight Distributions in Semibatch Free Radical Copolymerization Reactions. <i>Macromolecules</i> , 2009, 42, 5558-5565.	4.8	22
40	Random coil scission rates determined by time-dependent total intensity light scattering: Hyaluronate depolymerization by hyaluronidase. <i>Biopolymers</i> , 1990, 30, 1073-1082.	2.4	21
41	Monte Carlo study of light scattering by linear polyelectrolytes. <i>Journal of Chemical Physics</i> , 1992, 97, 7766-7776.	3.0	21
42	Online Polymerization Monitoring in a Continuous Reactor. <i>Macromolecular Chemistry and Physics</i> , 2002, 203, 586-597.	2.2	21
43	Kinetics and Molar Mass Evolution during Atom Transfer Radical Polymerization of n-Butyl Acrylate Using Automatic Continuous Online Monitoring. <i>Macromolecules</i> , 2005, 38, 9556-9563.	4.8	21
44	Determination of Molecular Mass during Online Monitoring of Copolymerization Reactions. <i>Macromolecules</i> , 2007, 40, 8040-8049.	4.8	21
45	Characterization of stability, aggregation, and equilibrium properties of modified natural products; The case of carboxymethylated chitosans. <i>Materials Science and Engineering C</i> , 2010, 30, 34-41.	7.3	21
46	New characteristic signatures from time-dependent static light scattering during polymer depolymerization, with application to proteoglycan subunit degradation. <i>Biopolymers</i> , 1995, 35, 435-450.	2.4	20
47	Simultaneous in-Situ Monitoring of Parallel Polymerization Reactions Using Light Scattering; A New Tool for High-Throughput Screening. <i>ACS Combinatorial Science</i> , 2004, 6, 710-716.	3.3	19
48	Effect of Valence and Chemical Species of Added Electrolyte on Polyelectrolyte Conformations and Interactions. <i>Macromolecules</i> , 2004, 37, 554-565.	4.8	19
49	In Situ Time-Dependent Signatures of Light Scattered from Solutions undergoing Polymerization Reactions. <i>Macromolecules</i> , 2004, 37, 2578-2587.	4.8	19
50	Online Monitoring of Chain Transfer in Free-Radical Polymerization. <i>Macromolecular Chemistry and Physics</i> , 2001, 202, 2518-2524.	2.2	18
51	Automatic, simultaneous determination of differential refractive index of a polymer and its corresponding monomer. <i>Journal of Applied Polymer Science</i> , 2000, 77, 3259-3262.	2.6	17
52	Real-time monitoring of enzymatic hydrolysis of galactomannans. <i>Biopolymers</i> , 2001, 59, 226-242.	2.4	17
53	Simultaneous multiple sample light scattering for analysis of polymer solutions. <i>Journal of Applied Polymer Science</i> , 2004, 92, 2724-2732.	2.6	17
54	Online Monitoring of Ring-Opening Metathesis Polymerization of Cyclooctadiene and a Functionalized Norbornene. <i>Macromolecules</i> , 2007, 40, 444-451.	4.8	17

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55	Kinetic Trends in RAFT Homopolymerization from Online Monitoring. <i>Macromolecules</i> , 2008, 41, 332-338.	4.8	17
56	Online Monitoring of Molecular Weight and Other Characteristics during Semibatch Emulsion Polymerization under Monomer Starved and Flooded Conditions. <i>Macromolecules</i> , 2009, 42, 8093-8101.	4.8	16
57	Online Monitoring of the Final, Divergent Growth Phase in the Step-Growth Polymerization of Polyamines. <i>Macromolecules</i> , 2005, 38, 1148-1158.	4.8	15
58	Simultaneous continuous, nonchromatographic monitoring and discrete chromatographic monitoring of polymerization reactions. <i>Journal of Applied Polymer Science</i> , 2009, 113, 190-198.	2.6	15
59	Anion binding to ubiquitin and its relevance to the Hofmeister effects. <i>Chemical Science</i> , 2021, 12, 320-330.	7.4	15
60	Time-dependent light scattering from singly and multiply stranded linear polymers undergoing random and endwise scission. <i>Journal of Chemical Physics</i> , 1995, 103, 7576-7584.	3.0	14
61	Phase behavior of aqueous gelatin/oligosaccharide mixtures. <i>Biopolymers</i> , 1997, 41, 607-622.	2.4	14
62	Absolute online monitoring of a stepwise polymerization reaction: Polyurethane synthesis. <i>Journal of Applied Polymer Science</i> , 2001, 82, 2070-2077.	2.6	14
63	Online Optimal Feedback Control of Polymerization Reactors: Application to Polymerization of Acrylamide-Water-Potassium Persulfate (KPS) System. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 7322-7335.	3.7	14
64	Low cost, interferometric differential refractometer. <i>American Journal of Physics</i> , 1993, 61, 1046-1048.	0.7	13
65	Heterogeneous Time Dependent Static Light Scattering. <i>Macromolecules</i> , 1999, 32, 7055-7063.	4.8	13
66	Combining On-Line Characterization Tools with Modern Software Environments for Optimal Operation of Polymerization Processes. <i>Processes</i> , 2016, 4, 5.	2.8	13
67	Light-Scattering Results on Polyelectrolyte Conformations, Diffusion, and Interparticle Interactions and Correlations. <i>ACS Symposium Series</i> , 1993, , 297-314.	0.5	12
68	Absolute online monitoring of acrylic acid polymerization and the effect of salt and pH on reaction kinetics. <i>Journal of Applied Polymer Science</i> , 2004, 91, 1352-1359.	2.6	12
69	An Error-in-Variables Method for Determining Reactivity Ratios by On-Line Monitoring of Copolymerization Reactions. <i>Macromolecular Theory and Simulations</i> , 2004, 13, 162-168.	1.4	12
70	Online Monitoring of the Evolution of Polyelectrolyte Characteristics during Postpolymerization Modification Processes. <i>Macromolecules</i> , 2007, 40, 4409-4413.	4.8	12
71	Recent Advances in Automatic Continuous Online Monitoring of Polymerization Reactions (ACOMP). <i>Macromolecular Symposia</i> , 2008, 271, 15-25.	0.7	12
72	Experimental Observation of Crossover from Noncondensed to Counterion Condensed Regimes during Free Radical Polyelectrolyte Copolymerization under High-Composition Drift Conditions. <i>Journal of Physical Chemistry B</i> , 2009, 113, 8303-8309.	2.6	11

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73	Online, continuous monitoring of the sensitivity of the LCST of NIPAM-Am copolymers to discrete and broad composition distributions. <i>Polymer</i> , 2014, 55, 4899-4907.	3.8	11
74	Automatic Synthesis of Multimodal Polymers. <i>Macromolecular Reaction Engineering</i> , 2017, 11, 1600072.	1.5	11
75	Coupled Multiangle Light-Scattering and Viscosimetric Detectors for Size Exclusion Chromatography with Application to Polyelectrolyte Characterization. <i>ACS Symposium Series</i> , 1996, , 7-34.	0.5	10
76	Simultaneous multiple sample light scattering detection of LCST during copolymer synthesis. <i>Polymer</i> , 2011, 52, 4825-4833.	3.8	10
77	Effect of polydispersity and second virial coefficient on light scattering by randomly cut random coils. <i>Journal of Chemical Physics</i> , 1990, 93, 9069-9076.	3.0	9
78	Continuous Monitoring of the Effect of Changing Solvent Conditions on Polyelectrolyte Conformations and Interactions. <i>International Journal of Polymer Analysis and Characterization</i> , 2002, 7, 1-18.	1.9	9
79	Direct Monitoring of the Cross-Over from Diffusion-Controlled to Decomposition-Controlled Initiation in Free Radical Polymerization. <i>Macromolecular Chemistry and Physics</i> , 2008, 209, 2463-2474.	2.2	8
80	Online monitoring of the copolymerization of 2-(dimethylamino)ethyl acrylate with styrene by RAFT. Deviations from reaction control. <i>Polymer</i> , 2010, 51, 4726-4734.	3.8	8
81	Automatic, simultaneous control of polymer composition and molecular weight during free radical copolymer synthesis. <i>Polymer</i> , 2018, 136, 235-247.	3.8	8
82	Toxicity assessment of a novel oil dispersant based on silica nanoparticles using Fathead minnow. <i>Aquatic Toxicology</i> , 2020, 229, 105653.	4.0	8
83	Enhanced Surfactant Supramicellar Assembly by Hydrophobic Dopants. <i>Langmuir</i> , 2013, 29, 10376-10382.	3.5	7
84	Kinetic analysis of continuous reaction data for RAFT and free radical copolymerization with acrylic and styrenic monomers. <i>Polymer</i> , 2021, 226, 123798.	3.8	6
85	Angle-dependent effects in DLS measurements of polydisperse particles. <i>Measurement Science and Technology</i> , 2022, 33, 045202.	2.6	6
86	Direct Measurement of Chain Transfer during Controlled Radical Polymerization. <i>Macromolecules</i> , 2006, 39, 8213-8215.	4.8	5
87	On the Reproducibility of Early-Stage Thermally Induced and Contact-Stir-Induced Protein Aggregation. <i>Journal of Physical Chemistry B</i> , 2018, 122, 9361-9372.	2.6	5
88	Monitoring kinetic processes in polymer solutions with time dependent static light scattering (TDSLS). <i>Macromolecular Symposia</i> , 2002, 190, 131-150.	0.7	4
89	Feature Article: Automatic Continuous Online Monitoring of Polymerization Reactions (ACOMP). <i>Polymer News</i> , 2004, 29, 271-279.	0.1	4
90	Simultaneous Multiple Sample Light Scattering (SMSLS) for Continuous Monitoring of Protein Aggregation. <i>ACS Symposium Series</i> , 2015, , 159-188.	0.5	4

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91	Coupling of NMR to ACOMP for Terpolymerization Monitoring and Control. Macromolecular Reaction Engineering, 2019, 13, 1900039.	1.5	4
92	Time-Dependent processes in polyelectrolyte solutions. Zeitschrift Fur Elektrotechnik Und Elektrochemie, 1996, 100, 685-695.	0.9	3
93	Fundamentals of Static Light Scattering and Viscometry in Size-Exclusion Chromatography and Related Methods. ACS Symposium Series, 2004, , 13-51.	0.5	3
94	Simultaneous Monitoring of the Effects of Multiple Ionic Strengths on Properties of Copolymeric Polyelectrolytes during Their Synthesis. Processes, 2017, 5, 17.	2.8	3
95	Online Monitoring, Control, and Optimization of Polymer Reactions and Processes. Macromolecular Reaction Engineering, 2017, 11, 1700030.	1.5	2
96	Online monitoring of dopamine particle formation via continuous light scattering intensity measurement. European Polymer Journal, 2019, 112, 749-753.	5.4	2
97	Filtrodynamics: Time Dependent Trans-Filter Pressure Signals for Early Detection and Monitoring of Particulates During Chemical Processing. Macromolecular Reaction Engineering, 2014, 8, 186-192.	1.5	1
98	Continuous Monitoring and Characterization of Copolymerization Reactions of Acrylate Monomers with Indistinguishable Ultraviolet Spectra using Infrared Spectroscopy. Macromolecular Reaction Engineering, 0, , 2200034.	1.5	1
99	Filtrodynamics 2: Effects of Particle Size and Filter Type on Trans-Filter Time-Dependent Pressure Signals. Macromolecular Reaction Engineering, 2014, 8, 529-542.	1.5	0
100	Polymeric Suppression of Dopant-Enhanced Surfactant Supramicellar Assemblies. Macromolecular Chemistry and Physics, 2015, 216, 205-210.	2.2	0
101	A polarization sensitive light scattering unit for high throughput screening. Review of Scientific Instruments, 2018, 89, 113109.	1.3	0
102	Automatic Continuous Mixing Techniques for On-line Monitoring of Polymer Reactions and for the Determination of Equilibrium Properties. , 2003, , .		0
103	Smart manufacturing enabled by continuous monitoring and control of polymer characteristics. , 2020, , 257-308.		0