

John M Torkelson

List of Publications by Year in descending order

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208
papers

13,862
citations

17440

63
h-index

24982

109
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211
all docs

211
docs citations

211
times ranked

9527
citing authors

#	ARTICLE	IF	CITATIONS
1	The distribution of glass-transition temperatures in nanoscopically confined glass formers. <i>Nature Materials</i> , 2003, 2, 695-700.	27.5	1,072
2	Structural Relaxation of Polymer Glasses at Surfaces, Interfaces, and In Between. <i>Science</i> , 2005, 309, 456-459.	12.6	659
3	Model polymer nanocomposites provide an understanding of confinement effects in real nanocomposites. <i>Nature Materials</i> , 2007, 6, 278-282.	27.5	618
4	Spin coating of thin and ultrathin polymer films. <i>Polymer Engineering and Science</i> , 1998, 38, 2039-2045.	3.1	425
5	Crumpled Graphene Nanosheets as Highly Effective Barrier Property Enhancers. <i>Advanced Materials</i> , 2010, 22, 4759-4763.	21.0	420
6	Polymer-nanoparticle interfacial interactions in polymer nanocomposites: Confinement effects on glass transition temperature and suppression of physical aging. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2006, 44, 2935-2943.	2.1	368
7	Impacts of Polystyrene Molecular Weight and Modification to the Repeat Unit Structure on the Glass Transition—Nanoconfinement Effect and the Cooperativity Length Scale. <i>Macromolecules</i> , 2005, 38, 1767-1778.	4.8	292
8	Polymer—Graphite Nanocomposites: Effective Dispersion and Major Property Enhancement via Solid-State Shear Pulverization. <i>Macromolecules</i> , 2008, 41, 1905-1908.	4.8	273
9	Vitrimers Designed Both To Strongly Suppress Creep and To Recover Original Cross-Link Density after Reprocessing: Quantitative Theory and Experiments. <i>Macromolecules</i> , 2018, 51, 5537-5546.	4.8	218
10	Eliminating the Enhanced Mobility at the Free Surface of Polystyrene: Fluorescence Studies of the Glass Transition Temperature in Thin Bilayer Films of Immiscible Polymers. <i>Macromolecules</i> , 2007, 40, 2568-2574.	4.8	201
11	Uniquely Broad Glass Transition Temperatures of Gradient Copolymers Relative to Random and Block Copolymers Containing Repulsive Comonomers. <i>Macromolecules</i> , 2006, 39, 6152-6160.	4.8	173
12	Rotational reorientation dynamics of disperse red 1 in polystyrene: Relaxation dynamics probed by second harmonic generation and dielectric relaxation. <i>Journal of Chemical Physics</i> , 1994, 100, 6046-6054.	3.0	159
13	Reprocessable polyhydroxyurethane networks exhibiting full property recovery and concurrent associative and dissociative dynamic chemistry via transcarbamoylation and reversible cyclic carbonate aminolysis. <i>Polymer Chemistry</i> , 2017, 8, 6349-6355.	3.9	159
14	Reprocessable Polymer Networks via Thiourethane Dynamic Chemistry: Recovery of Cross-link Density after Recycling and Proof-of-Principle Solvolysis Leading to Monomer Recovery. <i>Macromolecules</i> , 2019, 52, 8207-8216.	4.8	135
15	Sensing the glass transition in thin and ultrathin polymer films via fluorescence probes and labels. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2002, 40, 2745-2758.	2.1	133
16	Dramatic Reduction of the Effect of Nanoconfinement on the Glass Transition of Polymer Films via Addition of Small-Molecule Diluent. <i>Physical Review Letters</i> , 2004, 92, 095702.	7.8	130
17	Dispersion and Major Property Enhancements in Polymer/Multiwall Carbon Nanotube Nanocomposites via Solid-State Shear Pulverization Followed by Melt Mixing. <i>Macromolecules</i> , 2008, 41, 5974-5977.	4.8	128
18	Fragility is a Key Parameter in Determining the Magnitude of T_g -Confinement Effects in Polymer Films. <i>Macromolecules</i> , 2013, 46, 6091-6103.	4.8	127

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19	Biobased Reprocessable Polyhydroxyurethane Networks: Full Recovery of Crosslink Density with Three Concurrent Dynamic Chemistries. ACS Sustainable Chemistry and Engineering, 2019, 7, 10025-10034.	6.7	126
20	Gradient copolymers with broad glass transition temperature regions: Design of purely interphase compositions for damping applications. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 48-58.	2.1	120
21	Physical Aging of Ultrathin Polymer Films above and below the Bulk Glass Transition Temperature: Effects of Attractive vs Neutral Polymer-Substrate Interactions Measured by Fluorescence. Macromolecules, 2005, 38, 654-657.	4.8	117
22	Photocurable bioresorbable adhesives as functional interfaces between flexible bioelectronic devices and soft biological tissues. Nature Materials, 2021, 20, 1559-1570.	27.5	114
23	Translation-Rotation Paradox for Diffusion in Glass-Forming Polymers: The Role of the Temperature Dependence of the Relaxation Time Distribution. Physical Review Letters, 1997, 79, 103-106.	7.8	113
24	Polymer Blend Compatibilization by Gradient Copolymer Addition during Melt Processing: Stabilization of Dispersed Phase to Static Coarsening. Macromolecules, 2005, 38, 1037-1040.	4.8	111
25	Influence of solvent and molecular weight on thickness and surface topography of spin-coated polymer films. Polymer Engineering and Science, 1990, 30, 644-653.	3.1	108
26	Ultrathin Polymer Films near the Glass Transition: Effect on the Distribution of Relaxation Times As Measured by Second Harmonic Generation. Macromolecules, 1997, 30, 667-669.	4.8	108
27	Effects of Nanoscale Confinement and Interfaces on the Glass Transition Temperatures of a Series of Poly(n-methacrylate) Films. Australian Journal of Chemistry, 2007, 60, 765.	0.9	108
28	Distribution of Glass Transition Temperatures in Free-Standing, Nanoconfined Polystyrene Films: A Test of de Gennes' Sliding Motion Mechanism. Macromolecules, 2011, 44, 4546-4553.	4.8	106
29	Selectively Probing the Glass Transition Temperature in Multilayer Polymer Films: Equivalence of Block Copolymers and Multilayer Films of Different Homopolymers. Macromolecules, 2007, 40, 3328-3336.	4.8	105
30	Coarsening Effects on Microstructure Formation in Isopycnic Polymer Solutions and Membranes Produced via Thermally Induced Phase Separation. Macromolecules, 1994, 27, 6389-6397.	4.8	104
31	Reprocessable Polyhydroxyurethane Network Composites: Effect of Filler Surface Functionality on Cross-link Density Recovery and Stress Relaxation. ACS Applied Materials & Interfaces, 2019, 11, 2398-2407.	8.0	103
32	Glass transition and τ_{\pm} -relaxation dynamics of thin films of labeled polystyrene. Physical Review E, 2007, 75, 061806.	2.1	100
33	Recyclable Crosslinked Polymer Networks via One-Step Controlled Radical Polymerization. Advanced Materials, 2016, 28, 6746-6750.	21.0	99
34	Confinement, composition, and spin-coating effects on the glass transition and stress relaxation of thin films of polystyrene and styrene-containing random copolymers: Sensing by intrinsic fluorescence. Polymer, 2006, 47, 7747-7759.	3.8	98
35	Novel Strategy for Polymer Blend Compatibilization: Solid-State Shear Pulverization. Macromolecules, 2000, 33, 225-228.	4.8	97
36	Coarsening effects on the formation of microporous membranes produced via thermally induced phase separation of polystyrene-cyclohexanol solutions. Journal of Membrane Science, 1995, 98, 209-222.	8.2	94

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37	Effect of nanoscale confinement on the glass transition temperature of free-standing polymer films: Novel, self-referencing fluorescence method. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2008, 46, 2754-2764.	2.1	93
38	Glass Transition Breadths and Composition Profiles of Weakly, Moderately, and Strongly Segregating Gradient Copolymers: Experimental Results and Calculations from Self-Consistent Mean-Field Theory. <i>Macromolecules</i> , 2009, 42, 7863-7876.	4.8	93
39	A Critical Experimental Examination of the Gel Effect in Free Radical Polymerization: Do Entanglements Cause Autoacceleration?. <i>Macromolecules</i> , 1996, 29, 7477-7490.	4.8	92
40	Cellular structures of carbon nanotubes in a polymer matrix improve properties relative to composites with dispersed nanotubes. <i>Polymer</i> , 2008, 49, 1332-1337.	3.8	92
41	Polypropylene-graphite nanocomposites made by solid-state shear pulverization: Effects of significantly exfoliated, unmodified graphite content on physical, mechanical and electrical properties. <i>Polymer</i> , 2010, 51, 5525-5531.	3.8	91
42	Cellulose nanocrystal/polyolefin biocomposites prepared by solid-state shear pulverization: Superior dispersion leading to synergistic property enhancements. <i>Polymer</i> , 2015, 56, 464-475.	3.8	88
43	Novel thermoplastic polyhydroxyurethane elastomers as effective damping materials over broad temperature ranges. <i>European Polymer Journal</i> , 2016, 84, 770-783.	5.4	88
44	Physical aging effects on molecular-scale polymer relaxations monitored with mobility-sensitive fluorescent molecules. <i>Macromolecules</i> , 1993, 26, 5331-5335.	4.8	87
45	Nonisocyanate Thermoplastic Polyhydroxyurethane Elastomers via Cyclic Carbonate Aminolysis: Critical Role of Hydroxyl Groups in Controlling Nanophase Separation. <i>ACS Macro Letters</i> , 2016, 5, 424-429.	4.8	87
46	Synthesis and Glass Transition Behavior of High Molecular Weight Styrene/4-Acetoxy styrene and Styrene/4-Hydroxystyrene Gradient Copolymers Made via Nitroxide-Mediated Controlled Radical Polymerization. <i>Macromolecules</i> , 2004, 37, 5586-5595.	4.8	86
47	Achievement of quasi-nanostructured polymer blends by solid-state shear pulverization and compatibilization by gradient copolymer addition. <i>Polymer</i> , 2006, 47, 6773-6781.	3.8	85
48	Small Molecule Probe Diffusion in Thin Polymer Films Near the Glass Transition: A Novel Approach Using Fluorescence Nonradiative Energy Transfer. <i>Macromolecules</i> , 1996, 29, 3898-3908.	4.8	80
49	Non-Isocyanate Polyurethane Thermoplastic Elastomer: Amide-Based Chain Extender Yields Enhanced Nanophase Separation and Properties in Polyhydroxyurethane. <i>Macromolecules</i> , 2017, 50, 4425-4434.	4.8	80
50	Coupling of Probe Reorientation Dynamics and Rotor Motions to Polymer Relaxation As Sensed by Second Harmonic Generation and Fluorescence. <i>Macromolecules</i> , 1995, 28, 7683-7692.	4.8	78
51	Modeling Insight into the Diffusion-Limited Cause of the Gel Effect in Free Radical Polymerization. <i>Macromolecules</i> , 1999, 32, 411-422.	4.8	78
52	Synthesis and application of styrene/4-hydroxystyrene gradient copolymers made by controlled radical polymerization: Compatibilization of immiscible polymer blends via hydrogen-bonding effects. <i>Polymer</i> , 2006, 47, 5799-5809.	3.8	77
53	Small Molecule Probe Diffusion in Thin and Ultrathin Supported Polymer Films. <i>Macromolecules</i> , 1998, 31, 8817-8825.	4.8	76
54	Evidence for the molecular-scale origin of the suppression of physical ageing in confined polymer: fluorescence and dielectric spectroscopy studies of polymer-silica nanocomposites. <i>Journal of Physics Condensed Matter</i> , 2007, 19, 205120.	1.8	74

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55	Microphase Separation and Shear Alignment of Gradient Copolymers: Melt Rheology and Small-Angle X-Ray Scattering Analysis. <i>Macromolecules</i> , 2008, 41, 5818-5829.	4.8	74
56	Stabilization of Dispersed Phase to Static Coarsening: A Polymer Blend Compatibilization via Solid-State Shear Pulverization. <i>Macromolecules</i> , 2002, 35, 8672-8675.	4.8	73
57	Effect of Spatial Confinement on the Glass-Transition Temperature of Patterned Polymer Nanostructures. <i>Nano Letters</i> , 2007, 7, 713-718.	9.1	73
58	Breadth of glass transition temperature in styrene/acrylic acid block, random, and gradient copolymers: Unusual sequence distribution effects. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2007, 45, 2842-2849.	2.1	70
59	Importance of superior dispersion versus filler surface modification in producing robust polymer nanocomposites: The example of polypropylene/nanosilica hybrids. <i>Polymer</i> , 2015, 68, 147-157.	3.8	67
60	Major Impact of Cyclic Chain Topology on the T_g -Confinement Effect of Supported Thin Films of Polystyrene. <i>Macromolecules</i> , 2016, 49, 257-268.	4.8	67
61	Nanoscale Confinement and Temperature Effects on Associative Polymers in Thin Films: A Fluorescence Study of a Telechelic, Pyrene-Labeled Poly(dimethylsiloxane). <i>Macromolecules</i> , 2002, 35, 5943-5952.	4.8	66
62	Green composites of polypropylene and eggshell: Effective biofiller size reduction and dispersion by single-step processing with solid-state shear pulverization. <i>Composites Science and Technology</i> , 2014, 102, 152-160.	7.8	66
63	Miscibility and phase separation in poly(methyl methacrylate)/poly(vinyl chloride) blends: study of thermodynamics by thermal analysis. <i>Macromolecules</i> , 1992, 25, 721-728.	4.8	65
64	Polyethylene/starch blends with enhanced oxygen barrier and mechanical properties: Effect of granule morphology damage by solid-state shear pulverization. <i>Polymer</i> , 2007, 48, 1066-1074.	3.8	65
65	Well-mixed blends of HDPE and ultrahigh molecular weight polyethylene with major improvements in impact strength achieved via solid-state shear pulverization. <i>Polymer</i> , 2014, 55, 4948-4958.	3.8	64
66	Arresting Elevated-Temperature Creep and Achieving Full Cross-Link Density Recovery in Reprocessable Polymer Networks and Network Composites via Nitroxide-Mediated Dynamic Chemistry. <i>Macromolecules</i> , 2021, 54, 1452-1464.	4.8	64
67	Direct Use of Natural Antioxidant-rich Agro-wastes as Thermal Stabilizer for Polymer: Processing and Recycling. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 881-889.	6.7	62
68	Synthesis and Functionalization of ROMP-Based Gradient Copolymers of 5-Substituted Norbornenes. <i>Macromolecules</i> , 2004, 37, 5504-5512.	4.8	59
69	Solid-State Shear Pulverization of Plastics: A Green Recycling Process. <i>Polymer-Plastics Technology and Engineering</i> , 1999, 38, 445-457.	1.9	58
70	Comparison of Critical Micelle Concentrations of Gradient Copolymer and Block Copolymer in Homopolymer: A Novel Characterization by Intrinsic Fluorescence. <i>Macromolecules</i> , 2007, 40, 5631-5633.	4.8	57
71	An Evaluation of Free Volume Approaches to Describe the Gel Effect in Free Radical Polymerization. <i>Macromolecules</i> , 1998, 31, 4537-4545.	4.8	55
72	Suppression of the T_g -Nanoconfinement Effect in Thin Poly(vinyl acetate) Films by Sorbed Water. <i>Macromolecules</i> , 2010, 43, 5158-5161.	4.8	54

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73	Retardation of rotational reorientation dynamics in polymers near the glass transition: a novel study over eleven decades in time using second-order non-linear optics. <i>Journal of Non-Crystalline Solids</i> , 1994, 172-174, 286-296.	3.1	53
74	Phase-Separated Thiol-Epoxy-Acrylate Hybrid Polymer Networks with Controlled Cross-Link Density Synthesized by Simultaneous Thiol-Acrylate and Thiol-Epoxy Click Reactions. <i>Macromolecules</i> , 2016, 49, 4115-4123.	4.8	53
75	Streamlined ellipsometry procedure for characterizing physical aging rates of thin polymer films. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2009, 47, 2509-2519.	2.1	52
76	Cooperative Catalysis of Cyclic Carbonate Ring Opening: Application Towards Non-Isocyanate Polyurethane Materials. <i>European Journal of Organic Chemistry</i> , 2015, 2015, 2791-2795.	2.4	52
77	A Reconsideration of the Measurement of Polymer Interdiffusion by Fluorescence Nonradiative Energy Transfer. <i>Macromolecules</i> , 1994, 27, 4817-4824.	4.8	51
78	Polystyrene-Grafted Silica Nanoparticles: Investigating the Molecular Weight Dependence of Glass Transition and Fragility Behavior. <i>Macromolecules</i> , 2017, 50, 1589-1598.	4.8	51
79	Reprocessable covalent adaptable networks with excellent elevated-temperature creep resistance: facilitation by dynamic, dissociative bis(hindered amino) disulfide bonds. <i>Polymer Chemistry</i> , 2021, 12, 2760-2771.	3.9	51
80	Kinetics of multifunctional thiol-epoxy click reactions studied by differential scanning calorimetry: Effects of catalysis and functionality. <i>Polymer</i> , 2015, 81, 70-78.	3.8	50
81	Probe translational and rotational diffusion in polymers near T _g : roles of probe size, shape, and secondary bonding in deviations from Debye-Stokes-Einstein scaling. <i>Journal of Non-Crystalline Solids</i> , 1998, 235-237, 48-56.	3.1	48
82	Compatibilized polymer blends with nanoscale or sub-micron dispersed phases achieved by hydrogen-bonding effects: Block copolymer vs blocky gradient copolymer addition. <i>Polymer</i> , 2008, 49, 2686-2697.	3.8	48
83	Tuning nanophase separation behavior in segmented polyhydroxyurethane via judicious choice of soft segment. <i>Polymer</i> , 2017, 110, 218-227.	3.8	48
84	Combined Effects of Carbonate and Soft-Segment Molecular Structures on the Nanophase Separation and Properties of Segmented Polyhydroxyurethane. <i>Macromolecules</i> , 2017, 50, 3193-3203.	4.8	47
85	Sub-micron dispersed-phase particle size in polymer blends: overcoming the Taylor limit via solid-state shear pulverization. <i>Polymer</i> , 2003, 44, 199-206.	3.8	46
86	Polyurethane/polyhydroxyurethane hybrid polymers and their applications as adhesive bonding agents. <i>International Journal of Adhesion and Adhesives</i> , 2016, 64, 1-8.	2.9	46
87	Modulus, Confinement, and Temperature Effects on Surface Capillary Wave Dynamics in Bilayer Polymer Films Near the Glass Transition. <i>Physical Review Letters</i> , 2012, 109, 038302.	7.8	45
88	Methacrylate-based polymer films useful in lithographic applications exhibit different glass transition temperature-confinement effects at high and low molecular weight. <i>Polymer</i> , 2014, 55, 1249-1258.	3.8	45
89	Comparison of polyolefin biocomposites prepared with waste cardboard, microcrystalline cellulose, and cellulose nanocrystals via solid-state shear pulverization. <i>Polymer</i> , 2015, 75, 78-87.	3.8	45
90	Dynamic Covalent Polyurethane Networks with Excellent Property and Cross-Link Density Recovery after Recycling and Potential for Monomer Recovery. <i>ACS Applied Polymer Materials</i> , 2020, 2, 2093-2101.	4.4	45

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91	Fluorescence and absorbance of polystyrene in dilute and semidilute solutions. <i>Macromolecules</i> , 1983, 16, 326-330.	4.8	44
92	Photochromic and fluorescent probe studies in glassy polymer matrices. 4. Effects of physical aging on poly(methyl methacrylate) as sensed by a size distribution of photochromic probes. <i>Macromolecules</i> , 1992, 25, 729-734.	4.8	44
93	Photochromic and fluorescent probe studies in glassy polymer matrices. 5. Effects of physical aging on bisphenol A polycarbonate and poly(vinyl acetate) as sensed by a size distribution of photochromic probes. <i>Macromolecules</i> , 1992, 25, 4792-4796.	4.8	44
94	Mobility-sensitive fluorescence probes for quantitative monitoring of water sorption and diffusion in polymer coatings. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1995, 33, 2343-2349.	2.1	44
95	Limitations in the Synthesis of High Molecular Weight Polymers via Nitroxide-Mediated Controlled Radical Polymerization: Modeling Studies. <i>Macromolecules</i> , 2003, 36, 7812-7823.	4.8	44
96	Fragility-Confinement Effects: Apparent Universality as a Function of Scaled Thickness in Films of Freely Deposited, Linear Polymer and Its Absence in Densely Grafted Brushes. <i>Macromolecules</i> , 2016, 49, 1331-1343.	4.8	44
97	Polystyrene fluorescence: effects of molecular weight in various solvents. <i>Macromolecules</i> , 1981, 14, 1601-1603.	4.8	43
98	Molecular-scale asymmetry and memory behavior in poly(vinyl acetate) monitored with mobility-sensitive fluorescent molecules. <i>Macromolecules</i> , 1992, 25, 1705-1710.	4.8	43
99	In Situ Block Copolymer Formation during Solid-State Shear Pulverization: An Explanation for Blend Compatibilization via Interpolymer Radical Reactions. <i>Macromolecules</i> , 2002, 35, 9716-9722.	4.8	43
100	Residual stress relaxation and stiffness in spin-coated polymer films: Characterization by ellipsometry and fluorescence. <i>Polymer</i> , 2015, 76, 113-122.	3.8	43
101	Maleic anhydride functionalization of polypropylene with suppressed molecular weight reduction via solid-state shear pulverization. <i>Polymer</i> , 2013, 54, 4143-4154.	3.8	42
102	Substantial spatial heterogeneity and tunability of glass transition temperature observed with dense polymer brushes prepared by ARGET ATRP. <i>Polymer</i> , 2015, 64, 183-192.	3.8	42
103	Two-dimensional coarsening and phase separation in thin polymer solution films. <i>Physical Review E</i> , 1997, 55, 3191-3201.	2.1	41
104	Binary mixture pyrolysis of polypropylene and polystyrene: A modeling and experimental study. <i>Journal of Analytical and Applied Pyrolysis</i> , 2005, 73, 342-354.	5.5	41
105	Preparation and characterization of multiwalled carbon nanotube dispersions in polypropylene: Melt mixing versus solid-state shear pulverization. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2009, 47, 1426-1436.	2.1	41
106	Covalent Adaptive Networks for Enhanced Adhesion: Exploiting Disulfide Dynamic Chemistry and Annealing during Application. <i>ACS Applied Polymer Materials</i> , 2020, 2, 4658-4665.	4.4	41
107	Effect of Gradient Sequencing on Copolymer Order-Disorder Transitions: Phase Behavior of Styrene- <i>n</i> -Butyl Acrylate Block and Gradient Copolymers. <i>Macromolecules</i> , 2011, 44, 6220-6226.	4.8	39
108	Processing-structure-property relationships in solid-state shear pulverization: Parametric study of specific energy. <i>Polymer Engineering and Science</i> , 2012, 52, 1555-1564.	3.1	39

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109	Enhanced T_g -Confinement Effect in Cross-Linked Polystyrene Compared to Its Linear Precursor: Roles of Fragility and Chain Architecture. <i>Macromolecules</i> , 2016, 49, 5092-5103.	4.8	39
110	Reprocessable and Recyclable Chain-Growth Polymer Networks Based on Dynamic Hindered Urea Bonds. <i>ACS Macro Letters</i> , 2022, 11, 568-574.	4.8	39
111	Small molecule diffusion in a rubbery polymer near T_g : Effects of probe size, shape, and flexibility. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1996, 34, 2987-2997.	2.1	38
112	Small-Molecule Probe Diffusion in Polymer Solutions: Studies by Taylor Dispersion and Phosphorescence Quenching. <i>Macromolecules</i> , 1996, 29, 6193-6207.	4.8	37
113	Efficient mixing of polymer blends of extreme viscosity ratio: Elimination of phase inversion via solid-state shear pulverization. <i>Polymer Engineering and Science</i> , 2000, 40, 1447-1457.	3.1	37
114	Critical micelle concentrations of block and gradient copolymers in homopolymer: Effects of sequence distribution, composition, and molecular weight. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2008, 46, 2672-2682.	2.1	37
115	Sustainable Green Hybrids of Polyolefins and Lignin Yield Major Improvements in Mechanical Properties When Prepared via Solid-State Shear Pulverization. <i>ACS Sustainable Chemistry and Engineering</i> , 2015, 3, 959-968.	6.7	37
116	Recyclable polymer networks containing hydroxyurethane dynamic cross-links: Tuning morphology, cross-link density, and associated properties with chain extenders. <i>Polymer</i> , 2019, 178, 121604.	3.8	37
117	Dramatic Tunability of the Glass Transition Temperature and Fragility of Low Molecular Weight Polystyrene by Initiator Fragments Located at Chain Ends. <i>Macromolecules</i> , 2016, 49, 2387-2398.	4.8	36
118	Reprocessable Polymer Networks Designed with Hydroxyurethane Dynamic Crosslinks: Effect of Backbone Structure on Network Morphology, Phase Segregation, and Property Recovery. <i>Macromolecular Chemistry and Physics</i> , 2019, 220, 1900083.	2.2	36
119	Differences in enthalpy recovery of gradient and random copolymers of similar overall composition: styrene/4-methylstyrene copolymers made by nitroxide-mediated controlled radical polymerization. <i>Polymer</i> , 2004, 45, 4777-4786.	3.8	35
120	Novel, synergistic composites of polypropylene and rice husk ash: Sustainable resource hybrids prepared by solid-state shear pulverization. <i>Polymer Composites</i> , 2013, 34, 1211-1221.	4.6	34
121	Role of neighboring domains in determining the magnitude and direction of T_g -confinement effects in binary, immiscible polymer systems. <i>Polymer</i> , 2015, 80, 180-187.	3.8	34
122	Compatibilizing effects of block copolymer mixed with immiscible polymer blends by solid-state shear pulverization: stabilizing the dispersed phase to static coarsening. <i>Polymer</i> , 2005, 46, 4753-4761.	3.8	33
123	Suppression of the Fragility-Confinement Effect via Low Molecular Weight Cyclic or Ring Polymer Topology. <i>Macromolecules</i> , 2017, 50, 1147-1154.	4.8	33
124	Recyclable Polymethacrylate Networks Containing Dynamic Dialkylamino Disulfide Linkages and Exhibiting Full Property Recovery. <i>Macromolecules</i> , 2020, 53, 8367-8373.	4.8	33
125	Stiffness of thin, supported polystyrene films: Free-surface, substrate, and confinement effects characterized via self-referencing fluorescence. <i>Polymer</i> , 2016, 99, 417-426.	3.8	32
126	Styrene/4-hydroxystyrene random, block and gradient copolymers modified with an organic dye: Synthesis by controlled radical polymerization and characterization of electrorheological properties. <i>Polymer</i> , 2006, 47, 3287-3291.	3.8	31

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127	Behavior of Gradient Copolymers at Liquid/Liquid Interfaces. <i>Langmuir</i> , 2010, 26, 3261-3267.	3.5	31
128	Dielectric Relaxation Spectroscopy of Gradient Copolymers and Block Copolymers: Comparison of Breadths in Relaxation Time for Systems with Increasing Interphase. <i>Macromolecules</i> , 2010, 43, 5740-5748.	4.8	31
129	Segmented Thermoplastic Polymers Synthesized by Thiol-ene Click Chemistry: Examples of Thiol-Norbornene and Thiol-Maleimide Click Reactions. <i>Macromolecules</i> , 2018, 51, 3620-3631.	4.8	31
130	Translational and Rotational Diffusion of Probe Molecules in Polymer Films near Tg: Effect of Hydrogen Bonding. <i>Macromolecules</i> , 1999, 32, 8052-8058.	4.8	30
131	Interpolymer radical coupling reactions during sonication of polymer solutions. <i>Polymer</i> , 2003, 44, 2823-2828.	3.8	30
132	Green polypropylene/waste paper composites with superior modulus and crystallization behavior: Optimizing specific energy in solid-state shear pulverization for filler size reduction and dispersion. <i>Composites Part A: Applied Science and Manufacturing</i> , 2016, 83, 47-55.	7.6	30
133	Tuning the properties of segmented polyhydroxyurethanes via chain extender structure. <i>Journal of Applied Polymer Science</i> , 2017, 134, 44942.	2.6	30
134	Stiffness Gradients in Glassy Polymer Model Nanocomposites: Comparisons of Quantitative Characterization by Fluorescence Spectroscopy and Atomic Force Microscopy. <i>Macromolecules</i> , 2017, 50, 5447-5458.	4.8	30
135	Influence of cure via network structure on mechanical properties of a free-radical polymerizing thermoset. <i>Polymer</i> , 2002, 43, 2747-2760.	3.8	29
136	Phase separation of oligomeric polystyrene-polybutadiene blends as studied by excimer fluorescence. <i>Macromolecules</i> , 1988, 21, 1026-1033.	4.8	27
137	Fluorescence energy transfer studies of styrene-isoprene diblock copolymer solutions. <i>Macromolecules</i> , 1990, 23, 1700-1710.	4.8	27
138	2D Coarsening in Phase-Separated Polymer Solutions: Dependence on Distance from Criticality. <i>Physical Review Letters</i> , 1995, 75, 3134-3137.	7.8	27
139	Gel effect in free radical polymerization: Model discrimination of its cause. <i>AIChE Journal</i> , 1998, 44, 1226-1231.	3.6	27
140	Glass Transition Temperature of a Component near Infinite Dilution in Binary Polymer Blends: Determination via Fluorescence Spectroscopy. <i>Macromolecules</i> , 2011, 44, 6645-6648.	4.8	27
141	Tg and Tg breadth of poly(2,6-dimethyl-1,4-phenylene oxide)/polystyrene miscible polymer blends characterized by differential scanning calorimetry, ellipsometry, and fluorescence spectroscopy. <i>Polymer</i> , 2015, 65, 233-242.	3.8	27
142	Self-referencing fluorescence sensor for monitoring conversion of nonisothermal polymerization and nanoscale mixing of resin components. <i>Polymer</i> , 2003, 44, 423-432.	3.8	26
143	Limitations in the Synthesis of High Molecular Weight Polymers via Nitroxide-Mediated Controlled Radical Polymerization: Experimental Studies. <i>Macromolecules</i> , 2003, 36, 5792-5797.	4.8	26
144	Poly(methyl methacrylate) nanotubes in AAO templates: Designing nanotube thickness and characterizing the T-confinement effect by DSC. <i>Polymer</i> , 2016, 82, 327-336.	3.8	26

#	ARTICLE	IF	CITATIONS
145	Fluorescence energy-transfer studies of bulk styrene-isoprene diblock copolymers and their blends with polyisoprene: applications to microphase separation. <i>Macromolecules</i> , 1990, 23, 1711-1717.	4.8	25
146	In situ monitoring of sorption and drying of polymer films and coatings: self-referencing, nearly temperature-independent fluorescence sensors. <i>Polymer</i> , 2004, 45, 2623-2632.	3.8	25
147	Reprocessable polyhydroxyurethane networks reinforced with reactive polyhedral oligomeric silsesquioxanes (POSS) and exhibiting excellent elevated temperature creep resistance. <i>Polymer</i> , 2022, 252, 124971.	3.8	25
148	Major Roles of Blend Partner Fragility and Dye Placement on Component Glass Transition Temperatures: Fluorescence Study of Near-Infinately Dilute Species in Binary Blends. <i>Macromolecules</i> , 2012, 45, 8319-8327.	4.8	24
149	Determining multiple component glass transition temperatures in miscible polymer blends: Comparison of fluorescence spectroscopy and differential scanning calorimetry. <i>Polymer</i> , 2012, 53, 6118-6124.	3.8	24
150	Isolating the effect of polymer-grafted nanoparticle interactions with matrix polymer from dispersion on composite property enhancement: The example of polypropylene/halloysite nanocomposites. <i>Polymer</i> , 2019, 176, 38-50.	3.8	24
151	Molecular probe techniques for studying diffusion and relaxation in thin and ultrathin polymer films. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1997, 35, 2795-2802.	2.1	23
152	Ester Functionalization of Polypropylene via Controlled Decomposition of Benzoyl Peroxide during Solid-State Shear Pulverization. <i>Macromolecules</i> , 2013, 46, 7834-7844.	4.8	23
153	Molecular Weight Dependence of the Glass Transition Temperature (T_g)-Confinement Effect in Well-Dispersed Poly(2-vinyl pyridine)-Silica Nanocomposites: Comparison of Interfacial Layer T_g and Matrix T_g . <i>Macromolecules</i> , 2020, 53, 8725-8736.	4.8	23
154	In situ monitoring of free-radical polymerization by fluorescence quenching of fluorene and reactive derivatives. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1994, 32, 2625-2635.	2.1	22
155	Novel synthesis of branched polypropylene via solid-state shear pulverization. <i>Polymer</i> , 2015, 60, 77-87.	3.8	21
156	Imaging of phase segregation in gradient copolymers: Island and hole surface topography. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2012, 50, 189-197.	2.1	20
157	Determination of interpenetration of polystyrene in solution and film by energy-transfer techniques. <i>Macromolecules</i> , 1987, 20, 1860-1865.	4.8	19
158	Molecular weight dependence of the intrinsic size effect on T_g in AAO template-supported polymer nanorods: A DSC study. <i>Journal of Chemical Physics</i> , 2017, 146, 203323.	3.0	19
159	Synthesis, characterization and photophysical properties of benzil-labelled polymers for studies of diffusion-limited interactions by phosphorescence quenching. <i>Polymer</i> , 1990, 31, 2402-2410.	3.8	18
160	Effect of chain length on rates of diffusion-limited small molecule-polymer and polymer-polymer reactions: Phosphorescence quenching studies. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1996, 34, 2999-3008.	2.1	18
161	Simultaneous Determination of Critical Micelle Temperature and Micelle Core Glass Transition Temperature of Block Copolymer-Solvent Systems via Pyrene-Label Fluorescence. <i>Macromolecules</i> , 2013, 46, 4131-4140.	4.8	18
162	Influence of initiator fragments as chain ends on the T_g -confinement effect and dewetting of thin films of ultralow molecular weight polymer. <i>Polymer</i> , 2015, 65, 105-114.	3.8	18

#	ARTICLE	IF	CITATIONS
163	Functionalization of hydroxyl groups in segmented polyhydroxyurethane eliminates nanophase separation. <i>Journal of Polymer Science Part A</i> , 2017, 55, 3347-3351.	2.3	18
164	Large melting point depression of 2-3-nm length-scale nanocrystals formed by the self-assembly of an associative polymer: Telechelic, pyrene-labeled poly(dimethylsiloxane). <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2004, 42, 3470-3475.	2.1	17
165	Birefringence and second-order nonlinear optics as probes of polymer cooperative segmental mobility: Demonstration of Debye-type relaxation. <i>Journal of Chemical Physics</i> , 1999, 111, 2779-2788.	3.0	16
166	Crystallization and Enthalpy Relaxation of Physically Associating, End-Linked Polymer Networks: Telechelic Pyrene-Labeled Polydimethylsiloxane. <i>Polymer Bulletin</i> , 2004, 51, 411-418.	3.3	16
167	Dispersion and Property Enhancements in Polyolefin/Soy Flour Biocomposites Prepared via Melt Extrusion Followed by Solid-State Shear Pulverization. <i>Macromolecular Materials and Engineering</i> , 2015, 300, 772-784.	3.6	16
168	Tuning the T _g -confinement effect in thin polymer films via minute levels of residual surfactant which cap the free surface. <i>Polymer</i> , 2016, 87, 226-235.	3.8	16
169	Hybrid thiol-acrylate-epoxy polymer networks: Comparison of one-pot synthesis with sequential reactions and shape memory properties. <i>Polymer</i> , 2016, 96, 198-204.	3.8	16
170	Tenfold increase in the photostability of an azobenzene guest in vapor-deposited glass mixtures. <i>Journal of Chemical Physics</i> , 2018, 149, 204503.	3.0	16
171	Correlations in polymer melts and solutions as investigated by fluorescence nonradiative energy transfer: a novel comparison of theory to experiment by fluorescence intensity decay measurements. <i>Macromolecules</i> , 1993, 26, 6789-6799.	4.8	15
172	Fluorescence of vinyl aromatic polyelectrolytes: effects of conformation, concentration, and molecular weight of sodium poly(styrene sulfonate). <i>Macromolecules</i> , 1986, 19, 2801-2806.	4.8	14
173	On the Proper Use of Concentration Profiles for Determining Polymer Diffusion Coefficients via Fluorescence Nonradiative Energy Transfer. <i>Macromolecules</i> , 1997, 30, 5560-5562.	4.8	14
174	Porod scattering study of coarsening in immiscible polymer blends. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2005, 43, 3413-3420.	2.1	14
175	T _g -confinement effects in strongly miscible blends of poly(2,6-dimethyl-1,4-phenylene oxide) and polystyrene: Roles of bulk fragility and chain segregation. <i>Polymer</i> , 2017, 118, 85-96.	3.8	14
176	Functional enzyme-polymer complexes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, e2119509119.	7.1	13
177	Use of Taylor dispersion for the measurement of probe diffusion in polymer solutions. <i>AIChE Journal</i> , 1996, 42, 1157-1163.	3.6	11
178	Bulk physical aging behavior of cross-linked polystyrene compared to its linear precursor: Effects of cross-linking and aging temperature. <i>Polymer</i> , 2017, 115, 197-203.	3.8	11
179	Diffusion-Controlled Polymer-Polymer Reactions in Bulk: A Novel Strategy for Model Experiments and Reactive Compatibilization Using Polymers Synthesized via Controlled Radical Polymerization. <i>Macromolecules</i> , 2002, 35, 8261-8264.	4.8	10
180	Polystyrene-methylcyclohexane solutions undergoing phase separation: a study by fluorescence spectroscopy. <i>Macromolecules</i> , 1984, 17, 1505-1512.	4.8	9

#	ARTICLE	IF	CITATIONS
181	Diffusion-Limited Photophysical Interactions as in situ Probes of Conversion in Free Radical Polymerization: Quantitative Analysis with Predictive Free-Volume Theory. <i>Macromolecules</i> , 1994, 27, 7217-7219.	4.8	9
182	Effects of process method and quiescent coarsening on dispersed-phase size distribution in polymer blends: comparison of solid-state shear pulverization with intensive batch melt mixing. <i>Polymer Bulletin</i> , 2015, 72, 693-711.	3.3	9
183	Enhanced glass transition temperature of low molecular weight poly(methyl methacrylate) by initiator fragments located at chain ends. <i>Polymer</i> , 2017, 122, 194-199.	3.8	9
184	Identification of Known and Novel Monomers for Poly(hydroxyurethanes) from Biobased Materials. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 6814-6825.	3.7	9
185	Enhancement of Surface Wettability by Incorporating Polar Initiator Fragments at Chain Ends of Low-Molecular-Weight Polymers. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 12176-12181.	8.0	8
186	Rigid amorphous fraction and crystallinity in cold-crystallized syndiotactic polystyrene: Characterization by differential scanning calorimetry. <i>Polymer</i> , 2021, 230, 124044.	3.8	8
187	Remarkable glass transition breadths up to 120 K exhibited by block-gradient copolymers and by gradient copolymers plasticized by oligomer. <i>Polymer</i> , 2018, 151, 145-153.	3.8	7
188	Impact of bottlebrush chain architecture on T_g confinement and α fragility effects enabled by thermo-cleavable bottlebrush polymers synthesized by radical coupling and atom transfer radical polymerization. <i>Journal of Polymer Science</i> , 2020, 58, 2887-2905.	3.8	7
189	Second Order Nonlinear Optics and Polymer Physics of Corona Poled, Doped Polymer Materials. <i>Materials Research Society Symposia Proceedings</i> , 1989, 173, 625.	0.1	6
190	Engineering Surface Hydrophilicity via Polymer Chain-End Segregation in Coatings Formed by Photopolymerization. <i>ACS Applied Polymer Materials</i> , 2019, 1, 3095-3102.	4.4	6
191	Determining order-to-disorder transitions in block copolymer thin films using a self-referencing fluorescent probe. <i>Molecular Systems Design and Engineering</i> , 2020, 5, 330-338.	3.4	6
192	Fluorescence nonradiative energy transfer in bulk polymer and miscible and phase-separated polymer blends: A quantitative analysis including correlation effects. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 1994, 32, 2667-2681.	2.1	5
193	On the importance of including intermolecular correlations in the measurement of polymer interdiffusion by fluorescence nonradiative energy transfer. <i>Macromolecular Theory and Simulations</i> , 1997, 6, 931-948.	1.4	5
194	Heterogeneous Charged Complexes of Random Copolymers for the Segregation of Organic Molecules. <i>ACS Central Science</i> , 2021, 7, 882-891.	11.3	5
195	The effects of blending small amounts of homopolystyrene on the mechanical properties of a low styrene content styrene-butadiene-styrene block copolymer. <i>Polymer Engineering and Science</i> , 1990, 30, 49-58.	3.1	4
196	A Combined Computational and Experimental Study of Copolymerization Propagation Kinetics for 1-ethylcyclopentyl methacrylate and Methyl methacrylate. <i>Macromolecular Theory and Simulations</i> , 2016, 25, 263-273.	1.4	4
197	Quantitative, Rational Predictions of the Long-Term Temporal Decay Properties of Second-Order Nonlinear Optical Polymers from the Analysis of Relaxation Dynamics. <i>ACS Symposium Series</i> , 1995, , 318-332.	0.5	3
198	Development of rigid amorphous fraction in cold-crystallized syndiotactic polystyrene films confined near the nanoscale: Novel analysis via ellipsometry. <i>Journal of Polymer Science</i> , 2022, 60, 1631-1642.	3.8	3

#	ARTICLE	IF	CITATIONS
199	Title is missing!. Die Makromolekulare Chemie, 1990, 191, 2367-2375.	1.1	2
200	Thermal Effects on Dopant Orientation in Poled, Doped Polymers. ACS Symposium Series, 1991, , 294-302.	0.5	2
201	Monohydroxy-hydrazone-functionalized thermally crosslinked polymers for nonlinear optics. Journal of Applied Polymer Science, 2004, 92, 770-781.	2.6	2
202	A study of interpenetration using fluorescence quenching of chromophore-labelled polymers. Polymer, 1987, 28, 2257-2261.	3.8	1
203	The effects of blending small amounts of homopolystyrene on the mechanical properties of a low styrene content styrene-butadiene-styrene block copolymer-corrections. Polymer Engineering and Science, 1990, 30, 1180-1181.	3.1	1
204	Lateral diffusion of single poly(ethylene oxide) chains on the surfaces of glassy and molten polymer films. Journal of Chemical Physics, 2021, 154, 164902.	3.0	1
205	Molecular probe techniques for studying diffusion and relaxation in thin and ultrathin polymer films. Journal of Polymer Science, Part B: Polymer Physics, 1997, 35, 2795-2802.	2.1	1
206	Introduction to material & energy balances, by G. V. Reklaitis(with contributions by Daniel R.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462	3.6	0
207	Diffusional Dynamics Near the Glass Transition in Amorphous Polymer Thin Films. Materials Research Society Symposia Proceedings, 1995, 407, 221.	0.1	0
208	A Combined Computational and Experimental Study of Copolymerization Propagation Kinetics for 1-Ethylcyclopentyl methacrylate and Methyl methacrylate. Macromolecular Theory and Simulations, 2016, 25, 263-273.	1.4	0