Mark D Dadmun

List of Publications by Year in descending order

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91712 109137 5,379 126 35 69 citations h-index g-index papers 131 131 131 5703 docs citations times ranked citing authors all docs

#	Article	IF	Citations
1	Deep Eutectic Solvents: A Review of Fundamentals and Applications. Chemical Reviews, 2021, 121, 1232-1285.	23.0	1,334
2	A New Model for the Morphology of P3HT/PCBM Organic Photovoltaics from Small-Angle Neutron Scattering: Rivers and Streams. ACS Nano, 2011, 5, 4756-4768.	7.3	295
3	Dynamics at the Polymer/Nanoparticle Interface in Poly(2-vinylpyridine)/Silica Nanocomposites. Macromolecules, 2014, 47, 1837-1843.	2.2	248
4	Big Effect of Small Nanoparticles: A Shift in Paradigm for Polymer Nanocomposites. ACS Nano, 2017, 11, 752-759.	7.3	177
5	Acetylation of Cellulose Nanowhiskers with Vinyl Acetate under Moderate Conditions. Macromolecular Bioscience, 2009, 9, 997-1003.	2.1	158
6	Controlling Interfacial Dynamics: Covalent Bonding <i>versus</i> Physical Adsorption in Polymer Nanocomposites. ACS Nano, 2016, 10, 6843-6852.	7.3	152
7	Unraveling the Mechanism of Nanoscale Mechanical Reinforcement in Glassy Polymer Nanocomposites. Nano Letters, 2016, 16, 3630-3637.	4.5	142
8	Unexpected Molecular Weight Effect in Polymer Nanocomposites. Physical Review Letters, 2016, 116, 038302.	2.9	134
9	The efficiency of the oxidation of carbon nanofibers with various oxidizing agents. Carbon, 2007, 45, 1072-1080.	5.4	126
10	Interfacial Properties of Polymer Nanocomposites: Role of Chain Rigidity and Dynamic Heterogeneity Length Scale. Macromolecules, 2017, 50, 2397-2406.	2.2	115
11	Liquid Structure and Transport Properties of the Deep Eutectic Solvent Ethaline. Journal of Physical Chemistry B, 2020, 124, 5251-5264.	1.2	84
12	Understanding the Chemistry of the Development of Latent Fingerprints by Superglue Fuming. Journal of Forensic Sciences, 2007, 52, 1057-1062.	0.9	82
13	Bimodal molecular weight samples improve the isotropy of 3D printed polymeric samples. Polymer, 2017, 122, 232-241.	1.8	75
14	Interlayer diffusion of surface segregating additives to improve the isotropy of fused deposition modeling products. Polymer, 2018, 152, 35-41.	1.8	71
15	Effect of Copolymer Architecture on the Interfacial Structure and Miscibility of a Ternary Polymer Blend Containing a Copolymer and Two Homopolymers. Macromolecules, 1996, 29, 3868-3874.	2.2	70
16	Precise Structural Development and its Correlation to Function in Conjugated Polymer: Fullerene Thin Films by Controlled Solvent Annealing. Advanced Functional Materials, 2013, 23, 1701-1710.	7.8	65
17	Unraveling the Molecular Weight Dependence of Interfacial Interactions in Poly(2-vinylpyridine)/Silica Nanocomposites. ACS Macro Letters, 2017, 6, 68-72.	2.3	65
18	Stimuli-Induced Multiple Solâ-'Gelâ-'Sol Transitions of Aqueous Solution of a Thermo- and Light-Sensitive Hydrophilic Block Copolymer. Macromolecules, 2009, 42, 8468-8476.	2.2	59

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19	Ternary behavior and systematic nanoscale manipulation of domain structures in P3HT/PCBM/P3HT-b-PEO films. Journal of Materials Chemistry, 2012, 22, 13013.	6.7	53
20	The Role of Fullerene Mixing Behavior in the Performance of Organic Photovoltaics: PCBM in Lowâ€Bandgap Polymers. Advanced Functional Materials, 2014, 24, 140-150.	7.8	53
21	Polymer nanotube nanocomposites: Correlating intermolecular interaction to ultimate properties. Polymer, 2006, 47, 4734-4741.	1.8	52
22	Guidelines To Creating a True Molecular Composite:Â Inducing Miscibility in Blends by Optimizing Intermolecular Hydrogen Bonding. Macromolecules, 2002, 35, 5049-5060.	2.2	50
23	The impact of controlled solvent exposure on the morphology, structure and function of bulk heterojunction solar cells. Solar Energy Materials and Solar Cells, 2012, 107, 112-124.	3.0	48
24	Enhancing the Quality of Aged Latent Fingerprints Developed by Superglue Fuming: Loss and Replenishment of Initiator. Journal of Forensic Sciences, 2008, 53, 1138-1144.	0.9	47
25	Neutron scattering in the biological sciences: progress and prospects. Acta Crystallographica Section D: Structural Biology, 2018, 74, 1129-1168.	1.1	47
26	Improving Dispersion of Single-Walled Carbon Nanotubes in a Polymer Matrix Using Specific Interactions. Chemistry of Materials, 2006, 18, 3513-3522.	3.2	46
27	Understanding the Impact of Poly(ethylene oxide) on the Assembly of Lignin in Solution toward Improved Carbon Fiber Production. ACS Applied Materials & Samp; Interfaces, 2016, 8, 3200-3207.	4.0	46
28	Tuning the Morphology and Performance of Low Bandgap Polymer: Fullerene Heterojunctions via Solvent Annealing in Selective Solvents. Advanced Functional Materials, 2014, 24, 5129-5136.	7.8	45
29	Tuning of Thermo-Triggered Gel-to-Sol Transition of Aqueous Solution of Multi-Responsive Diblock Copolymer Poly(methoxytri(ethylene glycol) acrylate-co-acrylic acid)-b-poly(ethoxydi(ethylene glycol)) Tj ETQq1	1 02728431	4 r g BT /Over
30	The impact of lignin source on its self-assembly in solution. RSC Advances, 2015, 5, 67258-67266.	1.7	42
31	Evolution of microscopic heterogeneity and dynamics in choline chloride-based deep eutectic solvents. Nature Communications, 2022, 13, 219.	5.8	42
32	A Neutron Scattering Study of the Orientation of a Liquid Crystalline Polymer by Shear Flow. Macromolecules, 1994, 27, 7522-7532.	2.2	39
33	Improving Interlayer Adhesion in 3D Printing with Surface Segregating Additives: Improving the Isotropy of Acrylonitrile–Butadiene–Styrene Parts. ACS Applied Polymer Materials, 2019, 1, 876-884.	2.0	39
34	Reactive Processing in Extrusion-Based 3D Printing to Improve Isotropy and Mechanical Properties. Macromolecules, 2019, 52, 6495-6501.	2.2	38
35	Important thermodynamic characteristics of poly(3-hexyl thiophene). Polymer, 2014, 55, 4-7.	1.8	35
36	The importance of chain connectivity in the formation of non-covalent interactions between polymers and single-walled carbon nanotubes and its impact on dispersion. Soft Matter, 2010, 6, 2801.	1.2	34

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37	Correlation of polymeric compatibilizer structure to its impact on the morphology and function of P3HT:PCBM bulk heterojunctions. Journal of Materials Chemistry A, 2013, 1, 5309.	5.2	33
38	Formation of Oriented Nanostructures from Single Molecules of Conjugated Polymers in Microdroplets of Solution:Â The Role of Solvent. Macromolecules, 2004, 37, 6132-6140.	2.2	32
39	InÂvivo oxidative degradation of polypropylene pelvic mesh. Biomaterials, 2015, 73, 131-141.	5.7	32
40	Ion Transport in Glassy Polymerized Ionic Liquids: Unraveling the Impact of the Molecular Structure. Macromolecules, 2019, 52, 88-95.	2.2	31
41	Facile synthesis of thiol-terminated poly(styrene-ran-vinyl phenol) (PSVPh) copolymers via reversible addition-fragmentation chain transfer (RAFT) polymerization and their use in the synthesis of gold nanoparticles with controllable hydrophilicity. Polymer, 2010, 51, 1244-1251.	1.8	29
42	Control of morphology and function of low band gap polymer–bis-fullerene mixed heterojunctions in organic photovoltaics with selective solvent vapor annealing. Journal of Materials Chemistry A, 2014, 2, 9883.	5.2	28
43	Structural, mechanical, and thermal properties of 3D printed L NC/acrylonitrile butadiene styrene nanocomposites. Journal of Applied Polymer Science, 2017, 134, 45082.	1.3	26
44	Electrospun Micro―and Nanostructured Polymer Particles. Macromolecular Chemistry and Physics, 2008, 209, 2390-2398.	1.1	25
45	The Impact of Fullerene Structure on Its Miscibility with P3HT and Its Correlation of Performance in Organic Photovoltaics. Chemistry of Materials, 2014, 26, 3993-4003.	3.2	25
46	The Role of Nanoparticle Rigidity on the Diffusion of Linear Polystyrene in a Polymer Nanocomposite. Macromolecules, 2015, 48, 8369-8375.	2.2	25
47	Looped Polymer Brushes Formed by Self-Assembly of Poly(2-vinylpyridine)â^'Polystyreneâ^'Poly(2-vinylpyridine)â^'Polystyreneâ^'Poly(2-vinylpyridine) Triblock Copolymers at the Solidâ^'Fluid Interface. Kinetics of Preferential Adsorption. Macromolecules, 2006, 39, 8434-8439.	2.2	24
48	Tuning of Thermally Induced Sol-to-Gel Transitions of Moderately Concentrated Aqueous Solutions of Doubly Thermosensitive Hydrophilic Diblock Copolymers Poly(methoxytri(ethylene glycol)) Tj ETQq0 0 0 rgBT Chemistry B, 2012, 116, 3125-3137.	/Oyerlock	10 Tf 50 302
49	Role of compatibilizer in 3D printing of polymer blends. Additive Manufacturing, 2019, 27, 267-277.	1.7	23
50	Isotropization of nematic liquid crystals by TMDSC. Thermochimica Acta, 1998, 324, 87-94.	1.2	22
51	Controlling Non-Covalent Interactions to Modulate the Dispersion of Fullerenes in Polymer Nanocomposites. Macromolecules, 2011, 44, 7737-7745.	2.2	22
52	Electron Transfer in Microemulsion-Based Electrolytes. ACS Applied Materials & Samp; Interfaces, 2020, 12, 40213-40219.	4.0	22
53	Critical Role of the Interfacial Layer in Associating Polymers with Microphase Separation. Macromolecules, 2021, 54, 4246-4256.	2.2	22
54	Understanding the Grafting of Telechelic Polymers on a Solid Substrate to Form Loops. Macromolecules, 2008, 41, 1009-1018.	2.2	20

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55	Reinforcing 3D printed acrylonitrile butadiene styrene by impregnation of methacrylate resin and cellulose nanocrystal mixture: Structural effects and homogeneous properties. Materials and Design, 2018, 138, 62-70.	3.3	20
56	MALDI-TOF MS Characterization of Carboxyl-End-Capped Polystyrenes Synthesized Using Anionic Polymerization. Macromolecules, 2005, 38, 9950-9956.	2.2	19
57	Impact of Solvent Quality on the Density Profiles of Looped Triblock Copolymer Brushes by Neutron Reflectivity Measurements. Macromolecules, 2008, 41, 1745-1752.	2.2	19
58	Distinguishing the Importance of Fullerene Phase Separation from Polymer Ordering in the Performance of Low Band Gap Polymer:Bisâ€Fullerene Heterojunctions. Advanced Functional Materials, 2014, 24, 7284-7290.	7.8	19
59	Monitoring the dynamics of miscible P3HT:PCBM blends: A quasi elastic neutron scattering study of organic photovoltaic active layers. Polymer, 2015, 61, 155-162.	1.8	19
60	Illumination of Conjugated Polymer in Solution Alters Its Conformation and Thermodynamics. Macromolecules, 2016, 49, 3490-3496.	2.2	19
61	Improving heat transfer in fused deposition modeling with graphene enhances inter filament bonding. Polymer Chemistry, 2019, 10, 5967-5978.	1.9	19
62	Polymer Loop Formation on a Functionalized Hard Surface: Quantitative Insight by Comparison of Experimental and Monte Carlo Simulation Results. Langmuir, 2010, 26, 202-209.	1.6	18
63	The impact of selective solvents on the evolution of structure and function in solvent annealed organic photovoltaics. RSC Advances, 2014, 4, 27931-27938.	1.7	18
64	Quantitative Evaluation of the Hierarchical Porosity in Polyimide Aerogels and Corresponding Solvated Gels. ACS Applied Materials & Interfaces, 2020, 12, 30457-30465.	4.0	18
65	Polymer-nanofiber composites: Enhancing composite properties by nanofiber oxidation. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 3053-3061.	2.4	17
66	Shifting Sol–Gel Phase Diagram of a Doubly Thermosensitive Hydrophilic Diblock Copolymer Poly(methoxytri(ethylene glycol) acrylate- <i>co</i> -acrylic acid)- <i>b</i> -poly(ethoxydi(ethylene) Tj ETQq0 0 0 r	gB ⊉./ ©verl	oct2710 Tf 50
67	3D reconstruction of carbon nanotube networks from neutron scattering experiments. Nanotechnology, 2015, 26, 385704.	1.3	17
68	Nano-donuts from pH-dependent block restructuring in amphiphilic ABA triblock copolymer vesicles at the air-water interface. Soft Matter, 2009, 5, 747-749.	1.2	16
69	Rapid and Facile Formation of P3HT Organogels via Spin Coating: Tuning Functional Properties of Organic Electronic Thin Films. Advanced Functional Materials, 2015, 25, 5848-5857.	7.8	15
70	Tunable synthetic control of soft polymeric nanoparticle morphology. Soft Matter, 2017, 13, 8849-8857.	1.2	15
71	The importance of solvent quality on the modification of conjugated polymer conformation and thermodynamics with illumination. Soft Matter, 2017, 13, 2773-2780.	1.2	14
72	The tracer diffusion coefficient of soft nanoparticles in a linear polymer matrix. RSC Advances, 2017, 7, 15574-15581.	1.7	14

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73	Relative Size of the Polymer and Nanoparticle Controls Polymer Diffusion in All-Polymer Nanocomposites. Macromolecules, 2019, 52, 2843-2852.	2.2	14
74	The impact of radical loading and oxidation on the conformation of organic radical polymers by small angle neutron scattering. Journal of Materials Chemistry A, 2018, 6, 15659-15667.	5.2	13
75	Tough, Rapidly Swelling Thermoplastic Elastomer Hydrogels for Hemorrhage Control. Macromolecules, 2018, 51, 4705-4717.	2.2	13
76	Quantifying and Controlling the Composition and  Randomness' Distributions of Random Copolymers. Macromolecular Theory and Simulations, 2001, 10, 795-801.	0.6	12
77	Assembly and Characterization of Well-Defined High-Molecular-Weight Poly(<i>p</i> p>li>-phenylene) Polymer Brushes. Chemistry of Materials, 2011, 23, 4367-4374.	3.2	12
78	The impact of nanoparticle softness on its tracer diffusion coefficient in all polymer nanocomposites. Journal of Applied Physics, 2020, 127, 074303.	1.1	12
79	Formation of a True Molecular Composite using Optimal Hydrogen Bonding. Macromolecular Rapid Communications, 2001, 22, 779-782.	2.0	11
80	Anionic Synthesis of Epoxy End-Capped Polymers. Macromolecular Chemistry and Physics, 2007, 208, 807-814.	1.1	11
81	A Novel Reactive Processing Technique: Using Telechelic Polymers To Reactively Compatibilize Polymer Blends. ACS Applied Materials & Samp; Interfaces, 2009, 1, 2163-2173.	4.0	11
82	Insights into the Morphology and Kinetics of Growth of Silver Metal–Organic Nanotubes. Crystal Growth and Design, 2016, 16, 1395-1403.	1.4	11
83	The Effect of Chain Architecture on the Dynamics of Copolymers in a Homopolymer Matrix: Lattice Monte Carlo Simulations using the Bond-Fluctuation Model. Macromolecular Theory and Simulations, 2005, 14, 519-527.	0.6	10
84	Improving the dispersion and interfaces in polymer arbon nanotube nanocomposites by sample preparation choice. Journal of Polymer Science, Part B: Polymer Physics, 2008, 46, 1747-1759.	2.4	10
85	Illumination alters the structure of gels formed from the model optoelectronic material P3HT. Polymer, 2017, 108, 313-321.	1.8	10
86	Structure and Dispersion of Free and Grafted Polymer in Nanoparticle Organic Hybrid Materials-Based Solutions by Small-Angle Neutron Scattering. Journal of Physical Chemistry C, 2021, 125, 5327-5334.	1.5	10
87	Flow-induced structure in a thermotropic liquid crystalline polymer as studied by SANS. Journal of Polymer Science, Part B: Polymer Physics, 1998, 36, 3017-3023.	2.4	9
88	Theory of the Miscibility of Fullerenes in Random Copolymer Melts. Macromolecules, 2013, 46, 8732-8743.	2.2	9
89	Mechanism of Soft Nanoparticle Diffusion in Entangled Polymer Melts. Macromolecules, 2020, 53, 7580-7589.	2.2	9
90	A Monte Carlo study of the effect of polymer rigidity on adsorption behaviour. Computational and Theoretical Polymer Science, 1999, 9, 47-56.	1.1	8

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91	Synthesis and characterization of wellâ€defined [polystyreneâ€ <i>b</i> â€poly(2â€vinylpyridine)] <i>n</i> starâ€block copolymers with poly(2â€vinylpyridine) corona blocks. Journal of Polymer Science Part A, 2007, 45, 3949-3955.	2.5	8
92	Grafting Polymer Loops onto Functionalized Nanotubes: Monitoring Grafting and Loop Formation. Macromolecular Chemistry and Physics, 2011, 212, 465-477.	1.1	8
93	The influence of temperature on the polymerization of ethyl cyanoacrylate from the vapor phase. Reactive and Functional Polymers, 2011, 71, 809-819.	2.0	8
94	Effect of chain structure on the miscibility of cellulose acetate blends: a small-angle neutron scattering study. Soft Matter, 2013, 9, 3402.	1.2	8
95	The impact of fullerenes on the ordering of polyacrylonitrile during nanocomposites formation. Polymer, 2015, 75, 134-140.	1.8	8
96	Resolving Hierarchical Structures in Carbon Nanotube Networks Using Small- and Ultrasmall-Angle Neutron Scattering. Journal of Physical Chemistry C, 2017, 121, 22442-22451.	1.5	8
97	Elucidating the Kinetic and Thermodynamic Driving Forces in Polymer Blend Film Self-Stratification. Macromolecules, 2018, 51, 7836-7844.	2.2	8
98	Optimizing Noncovalent Interactions Between Lignin and Synthetic Polymers to Develop Effective Compatibilizers. Macromolecular Chemistry and Physics, 2012, 213, 1196-1205.	1.1	7
99	The impact of solvent doping on the morphology and performance of spray-coated PEDOT:dPSS: A USANS and SANS study. Organic Electronics, 2017, 51, 86-93.	1.4	7
100	Decoupling Conductivity and Solubility in Electrolytes Using Microemulsions. Journal of the Electrochemical Society, 2021, 168, 080502.	1.3	7
101	Rheology and birefringence of Fomblin YR at very high shear rates. Rheologica Acta, 2007, 46, 839-845.	1.1	6
102	The effect of illumination on the depth profile of thermally annealed MEHâ€PPV/dPS blends. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 1142-1149.	2.4	6
103	Microemulsions as Emerging Electrolytes: The Correlation of Structure to Electrochemical Response. ACS Applied Materials & Diterfaces, 2022, 14, 20179-20189.	4.0	6
104	Diblock copolymers of polystyreneâ€ <i>b</i> â€poly(1,3â€cyclohexadiene) exhibiting unique threeâ€phase microdomain morphologies. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 1564-1572.	2.4	5
105	The role of incident light intensity, wavelength, and exposure time in the modification of conjugated polymer structure in solution. European Polymer Journal, 2017, 89, 272-280.	2.6	5
106	Investigations on the Phase Diagram and Interaction Parameter of Poly(styrene- <i>b</i> -1,3-cyclohexadiene) Copolymers. Macromolecules, 2017, 50, 2354-2363.	2.2	5
107	Incorporating crosslinks in fused filament fabrication: Molecular insight into post deposition reactions. Additive Manufacturing, 2021, 38, 101746.	1.7	5
108	Gas expanded polymer process to anneal nanoparticle dispersion in thin films. Solar Energy Materials and Solar Cells, 2015, 140, 101-107.	3.0	4

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109	Design, synthesis, and characterization of lightly sulfonated multigraft acrylate-based copolymer superelastomers. RSC Advances, 2018, 8, 5090-5098.	1.7	4
110	Investigating the Copolymerization of Ligands into Metal–Organic Nanotubes Using Small-Angle Neutron Scattering: Implications for Nanostraws. ACS Applied Nano Materials, 2020, 3, 5605-5611.	2.4	4
111	Impacts of Bond Type and Grafting Density on the Thermal, Structural, and Transport Behaviors of Nanoparticle Organic Hybrid Materialsâ€Based Electrolytes. Advanced Functional Materials, 0, , 2203947.	7.8	4
112	The effect of copolymer composition on the dynamics of random copolymers in a homopolymer matrix. Journal of Chemical Physics, 2006, 125, 094902.	1,2	3
113	The Importance of Thermodynamic Interactions on the Dynamics of Multicomponent Polymer Systems Revealed by Examination of the Dynamics of Copolymer/Homopolymer Blends. Macromolecules, 2008, 41, 3339-3348.	2.2	3
114	The interplay of thermodynamics and kinetics: imparting hierarchical control over film formation of self-stratified blends. Soft Matter, 2020, 16, 1287-1297.	1.2	3
115	Correlation of the Structure with Performance in MEH-PPV/dPS Thin Films Illuminated during Processing. ACS Applied Polymer Materials, 2021, 3, 3821-3830.	2.0	3
116	Polymer Chain Diffusion in All-Polymer Nanocomposites: Confinement vs Chain Acceleration. Journal of Physical Chemistry C, 2020, 124, 18834-18839.	1.5	2
117	Impact of Substrate Rigidity on the Structure of Multilayer Nanoscale ITO Films: Implications for Flexible Electronic Devices. ACS Applied Nano Materials, 2020, 3, 2383-2392.	2.4	2
118	Shear-Induced Orientation of Liquid-Crystalline Hydroxypropylcellulose in D ₂ O as Measured by Neutron Scattering. ACS Symposium Series, 1995, , 320-334.	0.5	1
119	Compatibilization of Natural Fibers with Synthetic Polymers Using Triblock Copolymers as Coupling Agents. Macromolecular Chemistry and Physics, 2008, 209, 832-845.	1.1	1
120	Diffusion of copolymers composed of monomers with drastically different friction factors in copolymer/homopolymer blends. Journal of Chemical Physics, 2017, 146, 054905.	1.2	1
121	Monitoring the Effects of Illumination on the Structure of Conjugated Polymer Gels Using Neutron Scattering. Journal of Visualized Experiments, 2017, , .	0.2	1
122	Controlling the Morphology of PEDOT:PSS Blend Films with Pre-Deposition Solution Composition and Deposition Technique. ACS Applied Polymer Materials, 2022, 4, 36-43.	2.0	1
123	Handbook of Liquid Crystal Research (ed.s Collings, Peter J.; Patel, Jay S.). Journal of Chemical Education, 1998, 75, 1220.	1.1	0
124	Effect of Solvent Quality and Monomer Water Solubility on Soft Nanoparticle Morphology. ACS Symposium Series, 2018, , 117-137.	0.5	0
125	X-ray and neutron scattering of polymers. , 2021, , 561-585.		0
126	Identifying optimal dispersant aids for flame retardant additives in tetramethyl cyclobutanediolâ€based copolyesters. Journal of Applied Polymer Science, 0, , .	1.3	0