Thomas H Epps Iii

List of Publications by Year
in descending order

124	7,876	43973	53109
papers	citations	48 h-index	85 g-index

127	127	127	7923
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Inline Rolling Shear Alignment: Deposition and Long-Range Order of Block Polymer Templates in a Fast, Single-Step Process. ACS Applied Polymer Materials, 2022, 4, 682-691.	2.0	3
2	Ambient-pressure lignin valorization to high-performance polymers by intensified reductive catalytic deconstruction. Science Advances, 2022, 8, eabj7523.	4.7	30
3	Sustainability of Synthetic Plastics: Considerations in Materials Life-Cycle Management. Jacs Au, 2022, 2, 3-11.	3.6	43
4	Impact of zinc salt counterion on poly(ethylene oxide) solution viscosity, conductivity, and ability to generate electrospun MOF/nanofiber composites. Polymer, 2022, 252, 124816.	1.8	5
5	Innovations Toward the Valorization of Plastics Waste. Annual Review of Materials Research, 2022, 52, 249-280.	4.3	21
6	Methoxy groups reduced the estrogenic activity of lignin-derivable replacements relative to bisphenol A and bisphenol F as studied through two in vitro assays. Food Chemistry, 2021, 338, 127656.	4.2	23
7	<scp>Metalâ€“organic framework polymer</scp> composite enhancement via acyl chloride modification. Polymer International, 2021, 70, 783-789.	1.6	11
8	Redox Flow Battery Membranes: Improving Battery Performance by Leveraging Structureâ€“Property Relationships. ACS Energy Letters, 2021, 6, 158-176.	8.8	73
9	Estrogenic activity of lignin-derivable alternatives to bisphenol A assessed via molecular docking simulations. RSC Advances, 2021, 11, 22149-22158.	1.7	9
10	Fibre-based composites from the integration of metalâ€“organic frameworks and polymers. Nature Reviews Materials, 2021, 6, 605-621.	23.3	128
11	Entrepreneurship in Polymer Chemistry. ACS Macro Letters, 2021, 10, 864-872.	2.3	1
12	Toward polymer upcyclingâ€”adding value and tackling circularity. Science, 2021, 373, 66-69.	6.0	280
13	Quantifying the Effects of Monomer Segment Distributions on Ion Transport in Tapered Block Polymer Electrolytes. Macromolecules, 2021, 54, 7590-7602.	2.2	10
14	From Lab to Fab: Enabling Enhanced Control of Block Polymer Thin-Film Nanostructures. ACS Applied Polymer Materials, 2021, 3, 4288-4303.	2.0	4
15	Single pot catalyst strategy to branched products via adhesive isomerization and hydrocracking of polyethylene over platinum tungstated zirconia. Applied Catalysis B: Environmental, 2021, 299, 120483.	10.8	71
16	Recent developments towards performance-enhancing lignin-based polymers. Polymer Chemistry, 2021, 12, 4130-4158.	1.9	39
17	Kinetic Modeling to Accelerate the Development of Nucleic Acid Formulations. ACS Nano, 2021, 15, 16055-16066.	7.3	4
18	Nanostructured Block Polymer Electrolytes: Tailoring Self-Assembly to Unlock the Potential in Lithium-Ion Batteries. Accounts of Chemical Research, 2021, 54, 4342-4353.	7.6	14

#	Article	IF	Citations
19	Block Copolymer Vitrimers. Journal of the American Chemical Society, 2020, 142, 283-289.	6.6	172
20	Poly(ethylene oxide) crystallite growth during solvent vapor annealing in block polymer thin films. Materials Today, 2020, 37, 144-145.	8.3	0
21	Aromatics from Lignocellulosic Biomass: A Platform for High-Performance Thermosets. ACS Sustainable Chemistry and Engineering, 2020, 8, 15072-15096.	3.2	64
22	Bentâ€Butâ€Notâ€Broken: Reactive Metalâ€Organic Framework Composites from Elastomeric Phaseâ€Inverted Polymers. Advanced Functional Materials, 2020, 30, 2005517.	7.8	14
23	100th Anniversary of Macromolecular Science Viewpoint: Polymers from Lignocellulosic Biomass. Current Challenges and Future Opportunities. ACS Macro Letters, 2020, 9, 476-493.	2.3	105
24	Dualâ€functional, aromatic, epoxyâ€methacrylate monomers from bioâ€based feedstocks and their respective epoxyâ€functional thermoplastics. Journal of Polymer Science, 2020, 58, 673-682.	2.0	9
25	Virtual Congressional Education Briefing: End of Life for Bioplastics. Industrial Biotechnology, 2020, 16, 349-358.	0.5	2
26	Multivariate CuBTC Metalâ€“Organic Framework with Enhanced Selectivity, Stability, Compatibility, and Processability. Chemistry of Materials, 2019, 31, 8459-8465.	3.2	24
27	Coating Architects: Manipulating Multiscale Structures To Optimize Interfacial Properties for Coating Applications. ACS Applied Polymer Materials, 2019, 1, 2249-2266.	2.0	23
28	Charging toward improved lithium-ion polymer electrolytes: exploiting synergistic experimental and computational approaches to facilitate materials design. Molecular Systems Design and Engineering, 2019, 4, 223-238.	1.7	41
29	Directional Selfâ€Assembly of Fluorinated Star Block Polymer Thin Films Using Mixed Solvent Vapor Annealing. Journal of Polymer Science, Part B: Polymer Physics, 2019, 57, 1663-1672.	2.4	6
30	Enhanced Conductivity via Homopolymer-Rich Pathways in Block Polymer-Blended Electrolytes. Macromolecules, 2019, 52, 9682-9692.	2.2	26
31	Enhanced Conductivity via Homopolymer-Rich Pathways in Block Polymer-Blended Electrolytes. Macromolecules, 2019, 52, .	2.2	0
32	Quantifying Lithium Salt and Polymer Density Distributions in Nanostructured Ion-Conducting Block Polymers. Macromolecules, 2018, 51, 1917-1926.	2.2	39
33	MOFwich: Sandwiched Metalâ€“Organic Framework-Containing Mixed Matrix Composites for Chemical Warfare Agent Removal. ACS Applied Materials & Interfaces, 2018, 10, 6820-6824.	4.0	34
34	Exploiting Feedstock Diversity To Tune the Chemical and Tribological Properties of Lignin-Inspired Polymer Coatings. ACS Sustainable Chemistry and Engineering, 2018, 6, 6856-6866.	3.2	23
35	Flexible SIS/HKUST-1 Mixed Matrix Composites as Protective Barriers against Chemical Warfare Agent Simulants. ACS Applied Materials & Interfaces, 2018, 10, 43080-43087.	4.0	31
36	Evaluation of Estrogenic Activity of Novel Bisphenol A Alternatives, Four Bioinspired Bisguaiacol F Specimens, by in Vitro Assays. Journal of Agricultural and Food Chemistry, 2018, 66, 11775-11783.	2.4	32

#	Article	IF	Citations
37	Potential Lignin-Derived Alternatives to Bisphenol A in Diamine-Hardened Epoxy Resins. ACS Sustainable Chemistry and Engineering, 2018, 6, 14812-14819.	3.2	67
38	From Tree to Tape: Direct Synthesis of Pressure Sensitive Adhesives from Depolymerized Raw Lignocellulosic Biomass. ACS Central Science, 2018, 4, 701-708.	5.3	116
39	Design and development of a robust photo-responsive block copolymer framework for tunable nucleic acid delivery and efficient gene silencing. Polymer Journal, 2018, 50, 711-723.	1.3	11
40	Efficient tuning of siRNA dose response by combining mixed polymer nanocarriers with simple kinetic modeling. Acta Biomaterialia, 2017, 50, 407-416.	4.1	17
41	Tuning Block Polymer Structure, Properties, and Processability for the Design of Efficient Nanostructured Materials Systems. Macromolecular Chemistry and Physics, 2017, 218, 1600513.	1.1	22
42	Anionic Polymer and Quantum Dot Excipients to Facilitate siRNA Release and Self-Reporting of Disassembly in Stimuli-Responsive Nanocarrier Formulations. Biomacromolecules, 2017, 18, 1814-1824.	2.6	11
43	Force-induced cleavage of a labile bond for enhanced mechanochemical crosslinking. Polymer Chemistry, 2017, 8, 6485-6489.	1.9	18
44	Unexpected Tribological Synergy in Polymer Blend Coatings: Leveraging Phase Separation to Isolate Domain Size Effects and Reduce Friction. ACS Applied Materials & Interfaces, 2017, 9, 34480-34488.	4.0	13
45	Predicting Gene Silencing Through the Spatiotemporal Control of siRNA Release from Photo-responsive Polymeric Nanocarriers. Journal of Visualized Experiments, 2017, , .	0.2	5
46	Tuning the Morphology and Activity of Electrospun Polystyrene/UiO-66-NH₂ Metalâ€“Organic Framework Composites to Enhance Chemical Warfare Agent Removal. ACS Applied Materials & Interfaces, 2017, 9, 32248-32254.	4.0	93
47	Domain Spacing and Composition Profile Behavior in Salt-Doped Cyclic vs Linear Block Polymer Thin Films: A Joint Experimental and Simulation Study. Macromolecules, 2017, 50, 7169-7176.	2.2	27
48	Harnessing the Power of Plastics: Nanostructured Polymer Systems in Lithium-Ion Batteries. ACS Energy Letters, 2017, 2, 1919-1936.	8.8	77
49	Effect of Methoxy Substituent Position on Thermal Properties and Solvent Resistance of Lignin-Inspired Poly(dimethoxyphenyl methacrylate)s. ACS Macro Letters, 2017, 6, 802-807.	2.3	54
50	Attenuation of Maladaptive Responses in Aortic Adventitial Fibroblasts through Stimuliâ€Triggered siRNA Release from Lipidâ€“Polymer Nanocomplexes. Advanced Biology, 2017, 1, 1700099.	3.0	5
51	Kinetics of Domain Alignment in Block Polymer Thin Films during Solvent Vapor Annealing with Soft Shear: An in Situ Small-Angle Neutron Scattering Investigation. Macromolecules, 2017, 50, 5367-5376.	2.2	15
52	Block copolymer thin films: Characterizing nanostructure evolution with in situ X-ray and neutron scattering. Polymer, 2016, 105, 545-561.	1.8	26
53	Mechanistic Design of Polymer Nanocarriers to Spatiotemporally Control Gene Silencing. ACS Biomaterials Science and Engineering, 2016, 2, 1582-1594.	2.6	15
54	Syringyl Methacrylate, a Hardwood Lignin-Based Monomer for High-T_g Polymeric Materials. ACS Macro Letters, 2016, 5, 574-578.	2.3	82

#	Article	IF	Citations
55	Determination of Interfacial Mixing in Tapered Block Polymer Thin Films: Experimental and Theoretical Investigations. Macromolecules, 2016, 49, 5213-5222.	2.2	42
56	Tracking Solvent Distribution in Block Polymer Thin Films during Solvent Vapor Annealing with in Situ Neutron Scattering. Macromolecules, 2016, 49, 7525-7534.	2.2	16
57	Leveraging Gibbs Ensemble Molecular Dynamics and Hybrid Monte Carlo/Molecular Dynamics for Efficient Study of Phase Equilibria. Journal of Chemical Theory and Computation, 2016, 12, 5501-5510.	2.3	7
58	Block copolymers: controlling nanostructure to generate functional materials â€“ synthesis, characterization, and engineering. Chemical Science, 2016, 7, 1674-1689.	3.7	139
59	Mapping Substrate Surface Field Propagation in Block Polymer Thin Films. Macromolecules, 2016, 49, 574-580.	2.2	16
60	Softwood Lignin-Based Methacrylate Polymers with Tunable Thermal and Viscoelastic Properties. Macromolecules, 2016, 49, 1286-1295.	2.2	134
61	Metal oxide arrays from block copolymer thin film templates. Journal of Materials Chemistry A, 2015, 3, 7822-7829.	5.2	17
62	Lightâ€Mediated Activation of siRNA Release in Diblock Copolymer Assemblies for Controlled Gene Silencing. Advanced Healthcare Materials, 2015, 4, 760-770.	3.9	37
63	Controlled ionic conductivity via tapered block polymer electrolytes. RSC Advances, 2015, 5, 12597-12604.	1.7	69
64	Determination of Lithium-Ion Distributions in Nanostructured Block Polymer Electrolyte Thin Films by X-ray Photoelectron Spectroscopy Depth Profiling. ACS Nano, 2015, 9, 512-520.	7.3	66
65	Writing Highly Ordered Macroscopic Patterns in Cylindrical Block Polymer Thin Films via Raster Solvent Vapor Annealing and Soft Shear. ACS Macro Letters, 2015, 4, 516-520.	2.3	30
66	Decoupling Substrate Surface Interactions in Block Polymer Thin Film Self-Assembly. Macromolecules, 2015, 48, 4572-4580.	2.2	24
67	RAFT polymerization and associated reactivity ratios of methacrylate-functionalized mixed bio-oil constituents. Polymer Chemistry, 2015, 6, 5728-5739.	1.9	50
68	Using tapered interfaces to manipulate nanoscale morphologies in ion-doped block polymers. MRS Communications, 2015, 5, 251-256.	0.8	19
69	Synthesis and characterization of bicontinuous cubic poly(3,4-ethylene dioxythiophene) gyroid (PEDOT GYR) gels. Physical Chemistry Chemical Physics, 2015, 17, 5115-5123.	1.3	26
70	A Facile Method for Generating Designer Block Copolymers from Functionalized Lignin Model Compounds. ACS Sustainable Chemistry and Engineering, 2014, 2, 569-573.	3.2	125
71	Size evolution of highly amphiphilic macromolecular solution assemblies via a distinct bimodal pathway. Nature Communications, 2014, 5, 3599.	5.8	69
72	Block copolymer electrolytes for rechargeable lithium batteries. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 1-16.	2.4	331

#	Article	IF	Citations
73	Biobased building blocks for the rational design of renewable block polymers. Soft Matter, 2014, 10, 7405-7424.	1.2	136
74	Unlocking Chain Exchange in Highly Amphiphilic Block Polymer Micellar Systems: Influence of Agitation. ACS Macro Letters, 2014, 3, 1106-1111.	2.3	24
75	Real time laser interference microscopy for barâ€spread polystyrene/poly(methyl methacrylate) blends. Journal of Polymer Science, Part B: Polymer Physics, 2014, 52, 985-992.	2.4	2
76	Catch and release: photocleavable cationic diblock copolymers as a potential platform for nucleic acid delivery. Polymer Chemistry, 2014, 5, 5535-5541.	1.9	25
77	PEGâ€“Polypeptide Block Copolymers as pH-Responsive Endosome-Solubilizing Drug Nanocarriers. Molecular Pharmaceutics, 2014, 11, 2420-2430.	2.3	70
78	Stimuli responsive materials. Chemical Society Reviews, 2013, 42, 7055.	18.7	404
79	Hollow Block Copolymer Nanoparticles through a Spontaneous One-step Structural Reorganization. ACS Nano, 2013, 7, 1120-1128.	7.3	31
80	Stimuli-responsive copolymer solution and surface assemblies for biomedical applications. Chemical Society Reviews, 2013, 42, 7057.	18.7	267
81	Directed Block Copolymer Thin Film Self-Assembly: Emerging Trends in Nanopattern Fabrication. Macromolecules, 2013, 46, 7567-7579.	2.2	233
82	Structural Characterization of Amphiphilic Homopolymer Micelles Using Light Scattering, SANS, and Cryo-TEM. Macromolecules, 2013, 46, 6319-6325.	2.2	34
83	Determination of Solventâ€“Polymer and Polymerâ€“Polymer Floryâ€“Huggins Interaction Parameters for Poly(3-hexylthiophene) via Solvent Vapor Swelling. Macromolecules, 2013, 46, 6533-6540.	2.2	111
84	Poly(methyl methacrylate-block-vinyl-m-triphenylamine): synthesis by RAFT polymerization and melt-state self-assembly. Soft Matter, 2013, 9, 10146.	1.2	13
85	Manipulating Nanoscale Morphologies in Cylinder-Forming Poly(styrene-b-isoprene-b-styrene) Thin Films Using Film Thickness and Substrate Surface Chemistry Gradients. Macromolecules, 2013, 46, 1803-1811.	2.2	39
86	Catalytic Y-tailed amphiphilic homopolymers â€“ aqueous nanoreactors for high activity, low loading SCS pincer catalysts. Polymer Chemistry, 2013, 4, 2033.	1.9	37
87	Interfacial Manipulations: Controlling Nanoscale Assembly in Bulk, Thin Film, and Solution Block Copolymer Systems. Langmuir, 2013, 29, 3864-3878.	1.6	39
88	Ionic Conductivities of Block Copolymer Electrolytes with Various Conducting Pathways: Sample Preparation and Processing Considerations. Macromolecules, 2012, 45, 4689-4697.	2.2	139
89	A simple approach to characterizing block copolymer assemblies: graphene oxide supports for high contrast multi-technique imaging. Soft Matter, 2012, 8, 3322.	1.2	65
90	Effect of Partial Hydrogenation on the Phase Behavior of Poly(isoprene-b-styrene-b-methyl methacrylate) Triblock Copolymers. Macromolecules, 2012, 45, 8347-8355.	2.2	11

#	Article	IF	Citations
91	Controlling Particle Location with Mixed Surface Functionalities in Block Copolymer Thin Films. Chemistry of Materials, 2012, 24, 2627-2634.	3.2	24
92	Design and Synthesis of Network-Forming Triblock Copolymers Using Tapered Block Interfaces. ACS Macro Letters, 2012, 1, 519-523.	2.3	38
93	Impact of Homopolymer Pore Expander on the Morphology of Mesoporous Carbon Films Using Organicâ€“Organic Self-Assembly. Journal of Physical Chemistry C, 2012, 116, 6038-6046.	1.5	17
94	Slow release kinetics of mitoxantrone from ordered mesoporous carbon films. Microporous and Mesoporous Materials, 2012, 160, 143-150.	2.2	15
95	Spatial and Orientation Control of Cylindrical Nanostructures in ABA Triblock Copolymer Thin Films by Raster Solvent Vapor Annealing. ACS Nano, 2012, 6, 9855-9862.	7.3	48
96	Inducing Order from Disordered Copolymers: On Demand Generation of Triblock Morphologies Including Networks. Macromolecules, 2012, 45, 4599-4605.	2.2	16
97	Systematic Study on the Effect of Solvent Removal Rate on the Morphology of Solvent Vapor Annealed ABA Triblock Copolymer Thin Films. ACS Nano, 2012, 6, 459-466.	7.3	121
98	Manipulating morphology and orientation in thermally responsive block copolymer thin films. Journal of Polymer Science, Part B: Polymer Physics, 2012, 50, 263-271.	2.4	14
99	Mixed-Salt Effects on the Ionic Conductivity of Lithium-Doped PEO-Containing Block Copolymers. Macromolecules, 2011, 44, 8116-8123.	2.2	79
100	Structural changes in block copolymer micelles induced by cosolvent mixtures. Soft Matter, 2011, 7, 7094.	1.2	39
101	Double-Gyroid Network Morphology in Tapered Diblock Copolymers. Macromolecules, 2011, 44, 3910-3915.	2.2	54
102	Gradient Solvent Vapor Annealing of Block Copolymer Thin Films Using a Microfluidic Mixing Device. Nano Letters, 2011, 11, 1351-1357.	4.5	93
103	<scp>l</scp>-Proline Functionalized Polymers Prepared by RAFT Polymerization and Their Assemblies as Supported Organocatalysts. Macromolecules, 2011, 44, 7233-7241.	2.2	111
104	Synthesis and Characterization of Amphiphilic Cyclic Diblock Copolypeptoids from N-Heterocyclic Carbene-Mediated Zwitterionic Polymerization of N-Substituted N-Carboxyanhydride. Macromolecules, 2011, 44, 9574-9585.	2.2	118
105	Controlled vapor deposition approach to generating substrate surface energy/chemistry gradients. Review of Scientific Instruments, 2011, 82, 065103.	0.6	12
106	Self-assembly of block copolymer thin films. Materials Today, 2010, 13, 24-33.	8.3	453
107	Phase Behavior of Neat Triblock Copolymers and Copolymer/Homopolymer Blends Near Network Phase Windows. Macromolecules, 2010, 43, 9039-9048.	2.2	32
108	Investigation of Thermally Responsive Block Copolymer Thin Film Morphologies Using Gradients. ACS Applied Materials & Interfaces, 2010, 2, 3241-3248.	4.0	29

#	Article	IF	Citations
109	Nanoscale Networks in Poly[isopreneâ€blockâ€styreneâ€blockâ€(methyl methacrylate)] Triblock Copolymers. Macromolecular Rapid Communications, 2009, 30, 1751-1755.	2.0	14
110	Salt Doping in PEO-Containing Block Copolymers: Counterion and Concentration Effects. Macromolecules, 2009, 42, 2672-2678.	2.2	181
111	Ordered Three- and Five-ply Nanocomposites from ABC Block Terpolymer Microphase Separation with Niobia and Aluminosilicate Sols. Chemistry of Materials, 2009, 21, 5466-5473.	3.2	64
112	Manipulating ordering transitions in interfacially modified block copolymers. Soft Matter, 2009, 5, 4757.	1.2	59
113	Generation of Monolayer Gradients in Surface Energy and Surface Chemistry for Block Copolymer Thin Film Studies. ACS Nano, 2009, 3, 3977-3986.	7.3	61
114	Preparation of Combinatorial Arrays of Polymer Thin Films for Transmission Electron Microscopy Analysis. ACS Combinatorial Science, 2008, 10, 966-973.	3.3	16
115	Crystallization-Induced Lamellar-to-Lamellar Thermal Transition in Salt-Containing Block Copolymer Electrolytes. Macromolecules, 2008, 41, 6276-6279.	2.2	38
116	Substrate Surface Energy Dependent Morphology and Dewetting in an ABC Triblock Copolymer Film. Langmuir, 2007, 23, 3355-3362.	1.6	82
117	Generating thickness gradients of thin polymer films via flow coating. Review of Scientific Instruments, 2006, 77, 023908.	0.6	176
118	Effect of Molecular Weight on Network Formation in Linear ABC Triblock Copolymers. Macromolecules, 2006, 39, 2676-2682.	2.2	35
119	Phase Transformations Involving Network Phases in ISO Triblock Copolymerâ^'Homopolymer Blends. Macromolecules, 2005, 38, 8775-8784.	2.2	33
120	Ordered Network Phases in Linear Poly(isoprene-b-styrene-b-ethylene oxide) Triblock Copolymers. Macromolecules, 2004, 37, 8325-8341.	2.2	209
121	Network Phases in ABC Triblock Copolymers. Macromolecules, 2004, 37, 7085-7088.	2.2	138
122	Phase Behavior and Block Sequence Effects in Lithium Perchlorate-Doped Poly(isoprene-b-styrene-b-ethylene oxide) and Poly(styrene-b-isoprene-b-ethylene oxide) Triblock Copolymers. Macromolecules, 2003, 36, 2873-2881.	2.2	153
123	Phase Behavior of Lithium Perchlorate-Doped Poly(styrene-b-isoprene-b-ethylene oxide) Triblock Copolymers. Chemistry of Materials, 2002, 14, 1706-1714.	3.2	103
124	A Noncubic Triply Periodic Network Morphology in Poly(isoprene-b-styrene-b-ethylene oxide) Triblock Copolymers. Macromolecules, 2002, 35, 7007-7017.	2.2	216