Nathaniel A Lynd

List of Publications by Year
in descending order

94	5,356	76196	88477
papers	citations	40 h-index	70 g-index

98	98	98	5753
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Polydispersity and block copolymer self-assembly. Progress in Polymer Science, 2008, 33, 875-893.	11.8	419
2	Machine learning-aided engineering of hydrolases for PET depolymerization. Nature, 2022, 604, 662-667.	13.7	396
3	Tunable, High Modulus Hydrogels Driven by Ionic Coacervation. Advanced Materials, 2011, 23, 2327-2331.	11.1	315
4	Influence of Polydispersity on the Self-Assembly of Diblock Copolymers. Macromolecules, 2005, 38, 8803-8810.	2.2	276
5	Renewable-Resource Thermoplastic Elastomers Based on Polylactide and Polymenthide. Biomacromolecules, 2007, 8, 3634-3640.	2.6	162
6	Linear versus Dendritic Molecular Binders for Hydrogel Network Formation with Clay Nanosheets: Studies with ABA Triblock Copolyethers Carrying Guanidinium Ion Pendants. Journal of the American Chemical Society, 2013, 135, 15650-15655.	6.6	149
7	Rewiring Yarrowia lipolytica toward triacetic acid lactone for materials generation. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 2096-2101.	3.3	144
8	Allyl Glycidyl Ether-Based Polymer Electrolytes for Room Temperature Lithium Batteries. Macromolecules, 2013, 46, 8988-8994.	2.2	142
9	Effects of Polydispersity on the Orderâ^'Disorder Transition in Block Copolymer Melts. Macromolecules, 2007, 40, 8050-8055.	2.2	132
10	Mussel-Inspired Anchoring of Polymer Loops That Provide Superior Surface Lubrication and Antifouling Properties. ACS Nano, 2016, 10, 930-937.	7.3	128
11	Effects of Polymer and Salt Concentration on the Structure and Properties of Triblock Copolymer Coacervate Hydrogels. Macromolecules, 2013, 46, 1512-1518.	2.2	113
12	Synthetic Aptamer-Polymer Hybrid Constructs for Programmed Drug Delivery into Specific Target Cells. Journal of the American Chemical Society, 2014, 136, 15010-15015.	6.6	110
13	A General Approach to Controlling the Surface Composition of Poly(ethylene oxide)-Based Block Copolymers for Antifouling Coatings. Langmuir, 2011, 27, 13762-13772.	1.6	106
14	Poly(allyl glycidyl ether)â€A versatile and functional polyether platform. Journal of Polymer Science Part A, 2011, 49, 4498-4504.	2.5	104
15	C₂-Symmetric Ni(II) Î±-Diimines Featuring Cumyl-Derived Ligands: Synthesis of Improved Elastomeric Regioblock Polypropylenes. Macromolecules, 2008, 41, 9548-9555.	2.2	100
16	Sequence of Hydrophobic and Hydrophilic Residues in Amphiphilic Polymer Coatings Affects Surface Structure and Marine Antifouling/Fouling Release Properties. ACS Macro Letters, 2014, 3, 364-368.	2.3	96
17	Influence of Dielectric Constant on Ionic Transport in Polyether-Based Electrolytes. ACS Macro Letters, 2017, 6, 1362-1367.	2.3	89
18	Simple and Accurate Determination of Reactivity Ratios Using a Nonterminal Model of Chain Copolymerization. Macromolecules, 2015, 48, 6922-6930.	2.2	87

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19	Effect of Polymer Polarity on Ion Transport: A Competition between Ion Aggregation and Polymer Segmental Dynamics. ACS Macro Letters, 2018, 7, 1149-1154.	2.3	84
20	Theory of Polydisperse Block Copolymer Melts: Beyond the Schulzâ˜Zimm Distribution. Macromolecules, 2008, 41, 4531-4533.	2.2	71
21	Toward Strong Thermoplastic Elastomers with Asymmetric Miktoarm Block Copolymer Architectures. Macromolecules, 2014, 47, 2037-2043.	2.2	69
22	Nonaqueous Polyelectrolyte Solutions as Liquid Electrolytes with High Lithium Ion Transference Number and Conductivity. ACS Energy Letters, 2017, 2, 481-487.	8.8	69
23	Shewanella oneidensis as a living electrode for controlled radical polymerization. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 4559-4564.	3.3	68
24	Ketene Functionalized Polyethylene: Control of Cross-Link Density and Material Properties. Journal of the American Chemical Society, 2010, 132, 14706-14709.	6.6	67
25	Design of Soft and Strong Thermoplastic Elastomers Based on Nonlinear Block Copolymer Architectures Using Self-Consistent-Field Theory. Macromolecules, 2010, 43, 3479-3486.	2.2	67
26	Impact of Hydration and Sulfonation on the Morphology and Ionic Conductivity of Sulfonated Poly(phenylene) Proton Exchange Membranes. Macromolecules, 2019, 52, 857-876.	2.2	61
27	Phase behavior of electrostatically complexed polyelectrolyte gels using an embedded fluctuation model. Soft Matter, 2015, 11, 1214-1225.	1.2	58
28	Small Angle Neutron Scattering Study of Complex Coacervate Micelles and Hydrogels Formed from Ionic Diblock and Triblock Copolymers. Journal of Physical Chemistry B, 2014, 118, 13011-13018.	1.2	57
29	Reactivity Ratios and Mechanistic Insight for Anionic Ring-Opening Copolymerization of Epoxides. Macromolecules, 2012, 45, 3722-3731.	2.2	56
30	Functional block copolymer nanoparticles: toward the next generation of delivery vehicles. Polymer Chemistry, 2012, 3, 1618.	1.9	56
31	pH-triggered self-assembly of biocompatible histamine-functionalized triblock copolymers. Soft Matter, 2013, 9, 82-89.	1.2	55
32	Aerobic radical polymerization mediated by microbial metabolism. Nature Chemistry, 2020, 12, 638-646.	6.6	55
33	Mesostructured Block Copolymer Nanoparticles: Versatile Templates for Hybrid Inorganic/Organic Nanostructures. Chemistry of Materials, 2012, 24, 4036-4042.	3.2	51
34	Poly[(ethylene oxide)-co-(methylene ethylene oxide)]: A hydrolytically degradable poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10	2.3	49
35	Fluidity and water in nanoscale domains define coacervate hydrogels. Chemical Science, 2014, 5, 58-67.	3.7	48
36	Synthesis of thermally stable Au-core/Pt-shell nanoparticles and their segregation behavior in diblock copolymer mixtures. Soft Matter, 2011, 7, 6255.	1.2	47

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37	Monitoring multicomponent transport using in situ ATR FTIR spectroscopy. Journal of Membrane Science, 2018, 550, 348-356.	4.1	47
38	Recommendation for Accurate Experimental Determination of Reactivity Ratios in Chain Copolymerization. Macromolecules, 2019, 52, 2277-2285.	2.2	45
39	Structural Evolution of Polyelectrolyte Complex Core Micelles and Ordered-Phase Bulk Materials. Macromolecules, 2014, 47, 8026-8032.	2.2	44
40	The role of polydispersity in the lamellar mesophase of model diblock copolymers. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 3386-3393.	2.4	43
41	Structureâ€“Conductivity Relationships of Block Copolymer Membranes Based on Hydrated Protic Polymerized Ionic Liquids: Effect of Domain Spacing. Macromolecules, 2016, 49, 2216-2223.	2.2	43
42	Ring-Opening Polymerization of Epoxides: Facile Pathway to Functional Polyethers via a Versatile Organoaluminum Initiator. Macromolecules, 2017, 50, 3121-3130.	2.2	42
43	Creating Extremely Asymmetric Lamellar Structures via Fluctuation-Assisted Unbinding of Miktoarm Star Block Copolymer Alloys. Journal of the American Chemical Society, 2015, 137, 6160-6163.	6.6	41
44	Supramolecular guests in solvent driven block copolymer assembly: from internally structured nanoparticles to micelles. Polymer Chemistry, 2013, 4, 5038.	1.9	40
45	Processingâ€structureâ€mechanical property relationships of semicrystalline polyolefinâ€based block copolymers. Journal of Polymer Science, Part B: Polymer Physics, 2010, 48, 1428-1437.	2.4	38
46	Understanding Poly(vinyl alcohol)-Mediated Ice Recrystallization Inhibition through Ice Adsorption Measurement and pH Effects. Biomacromolecules, 2018, 19, 248-255.	2.6	38
47	Physiologically relevant, pH-responsive PEG-based block and statistical copolymers with N,N-diisopropylamine units. Polymer Chemistry, 2013, 4, 5735.	1.9	36
48	Sequence-Dependent Peptide Surface Functionalization of Metalâ€“Organic Frameworks. ACS Applied Materials & Interfaces, 2018, 10, 18601-18609.	4.0	35
49	Nanopatterning Biomolecules by Block Copolymer Self-Assembly. ACS Macro Letters, 2012, 1, 758-763.	2.3	33
50	Aperiodic â€œBricks and Mortarâ€•Mesophase: a New Equilibrium State of Soft Matter and Application as a Stiff Thermoplastic Elastomer. Macromolecules, 2015, 48, 5378-5384.	2.2	33
51	Controlling the polysulfide diffusion in lithium-sulfur batteries with a polymer membrane with intrinsic nanoporosity. Materials Today Energy, 2018, 7, 98-104.	2.5	31
52	Chemically Triggered Synthesis, Remodeling, and Degradation of Soft Materials. Journal of the American Chemical Society, 2020, 142, 3913-3922.	6.6	31
53	Novel Elastomers Prepared by Grafting n-Butyl Acrylate from Polyethylene Macroinitiator Copolymers. Macromolecules, 2009, 42, 8763-8768.	2.2	29
54	Thermally cross-linked diaminophenylindane (DAPI) containing polyimides for membrane based gas separations. Polymer, 2019, 161, 16-26.	1.8	29

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55	Design of Polymer Blend Electrolytes through a Machine Learning Approach. Macromolecules, 2020, 53, 9449-9459.	2.2	29
56	Statistical Copolymerization of Epoxides and Lactones to High Molecular Weight. Macromolecules, 2017, 50, 2714-2723.	2.2	28
57	Coordination-Assisted Self-Assembled Polypeptide Nanogels to Selectively Combat Bacterial Infection. ACS Applied Materials & Interfaces, 2019, 11, 33599-33611.	4.0	27
58	Demystifying the Mechanism of Regio- and Isoselective Epoxide Polymerization Using the Vandenberg Catalyst. Macromolecules, 2018, 51, 1777-1786.	2.2	26
59	Hierarchically Ordered Nanopatterns for Spatial Control of Biomolecules. ACS Nano, 2014, 8, 11846-11853.	7.3	23
60	Histamine-functionalized copolymer micelles as a drug delivery system in 2D and 3D models of breast cancer. Journal of Materials Chemistry B, 2015, 3, 2472-2486.	2.9	20
61	Four-fold increase in epoxide polymerization rate with change of alkyl-substitution on mono-Î¼-oxo-dialuminum initiators. Polymer Chemistry, 2017, 8, 4503-4511.	1.9	20
62	Decoupling Catalysis and Chain-Growth Functions of Mono(Î¼-alkoxo)bis(alkylaluminums) in Epoxide Polymerization: Emergence of the Nâ€“Al Adduct Catalyst. ACS Catalysis, 2018, 8, 8796-8803.	5.5	20
63	Synthetic strategy for preparing chiral double-semicrystalline polyether block copolymers. Polymer Chemistry, 2015, 6, 1465-1473.	1.9	19
64	Improving the Gas Barrier Properties of Nafion via Thermal Annealing: Evidence for Diffusion through Hydrophilic Channels and Matrix. Macromolecules, 2015, 48, 3303-3309.	2.2	19
65	Influence of Host Polarity on Correlating Salt Concentration, Molecular Weight, and Molar Conductivity in Polymer Electrolytes. ACS Macro Letters, 2019, 8, 888-892.	2.3	18
66	Self-Healing Thermoplastic Elastomers Formed from Triblock Copolymers with Dense 1,2,3-Triazole Blocks. Macromolecules, 2020, 53, 10323-10329.	2.2	17
67	Role of Side-Chain Architecture in Poly(ethylene oxide)-Based Copolymers. Macromolecules, 2020, 53, 4960-4967.	2.2	17
68	Mechanism of Polymer-Mediated Cryopreservation Using Poly(methyl glycidyl sulfoxide). Biomacromolecules, 2020, 21, 3047-3055.	2.6	17
69	Relationship between Ionic Conductivity, Glass Transition Temperature, and Dielectric Constant in Poly(vinyl ether) Lithium Electrolytes. ACS Macro Letters, 2021, 10, 1002-1007.	2.3	17
70	Cooperative and Sequential Phase Transitions in it-Poly(propylene oxide)-b-poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 3069-3079.	2.2	15
71	Effect of Host Incompatibility and Polarity Contrast on Ion Transport in Ternary Polymer-Polymer-Salt Blend Electrolytes. Macromolecules, 2020, 53, 875-884.	2.2	15
72	Numerical self-consistent field theory of multicomponent polymer blends in the Gibbs ensemble. Soft Matter, 2013, 9, 11288.	1.2	14

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73	Phase Coexistence Calculations of Reversibly Bonded Block Copolymers: A Unit Cell Gibbs Ensemble Approach. Macromolecules, 2014, 47, 1865-1874.	2.2	13
74	Compositionally Controlled Polyether Membranes via Mono(Î¼-alkoxo)bis(alkylaluminum)-Initiated Chain-Growth Network Epoxide Polymerization: Synthesis and Transport Properties. Macromolecules, 2020, 53, 1191-1198.	2.2	13
75	A facile synthesis of catecholâ€functionalized poly(ethylene oxide) block and random copolymers. Journal of Polymer Science Part A, 2015, 53, 2685-2692.	2.5	12
76	Symmetric Poly(ethylene oxide-b-styrene-b-isoprene) Triblock Copolymers: Synthesis, Characterization, and Self-Assembly in Bulk and Thin Film. Macromolecules, 2014, 47, 6373-6381.	2.2	11
77	Impact of Macromonomer Molar Mass and Feed Composition on Branch Distributions in Model Graft Copolymerizations. ACS Macro Letters, 2021, 10, 1622-1628.	2.3	11
78	Probing the Effect of Molecular Nonuniformity in Directed Self-Assembly of Diblock Copolymers in Nanoconfined Space. ACS Nano, 2015, 9, 9594-9602.	7.3	10
79	A synthetic strategy for the preparation of sub-100 nm functional polymer particles of uniform diameter. Polymer Chemistry, 2015, 6, 1431-1435.	1.9	9
80	De Novo Synthesis of Phosphorylated Triblock Copolymers with Pathogen Virulence-Suppressing Properties That Prevent Infection-Related Mortality. ACS Biomaterials Science and Engineering, 2017, 3, 2076-2085.	2.6	9
81	Morphology reâ€entry in asymmetric PSâ€Pâ€PS' triblock copolymer and PS homopolymer blends. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 169-179.	2.4	8
82	Modes of Interaction in Binary Blends of Hydrophobic Polyethers and Imidazolium Bis(trifluoromethylsulfonyl)imide Ionic Liquids. Macromolecules, 2020, 53, 6519-6528.	2.2	8
83	â€œBenchtopâ€•Biaryl Coupling Using Pd/Cu Cocatalysis: Application to the Synthesis of Conjugated Polymers. Organic Letters, 2021, 23, 2873-2877.	2.4	8
84	Non-intuitive Trends in Floryâ€“Huggins Interaction Parameters in Polyether-Based Polymers. Macromolecules, 2021, 54, 6670-6677.	2.2	8
85	Controlling Architecture and Mechanical Properties of Polyether Networks with Organoaluminum Catalysts. Macromolecules, 2022, 55, 5601-5609.	2.2	8
86	Controlled coâ€solvent vapor annealing and the importance of quenching conditions in thinâ€film block copolymer selfâ€assembly. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 1125-1130.	2.4	7
87	Spatial Control of the Self-assembled Block Copolymer Domain Orientation and Alignment on Photopatterned Surfaces. ACS Applied Materials & Interfaces, 2020, 12, 23399-23409.	4.0	7
88	Biocompatible Materials Enabled by Biobased Production of Pyomelanin Isoforms Using an Engineered Yarrowia lipolytica. Advanced Functional Materials, 2022, 32, 2109366.	7.8	5
89	Effects of Poly(glycidyl ether) Structure and Ether Oxygen Placement on CO₂ Solubility. Journal of Chemical & Engineering Data, 2021, 66, 2832-2843.	1.0	4
90	Boric acid removal with polyol-functionalized polyether membranes. Journal of Membrane Science, 2021, 638, 119690.	4.1	4

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91	Unusual Thermal Properties of Certain Poly(3,5-disubstituted styrene)s. Macromolecules, 2020, 53, 5504-5511.	2.2	2
92	Modular Hydrogels: Tunable, High Modulus Hydrogels Driven by Ionic Coacervation (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 7	11.1	1
93	Concurrent Ring-Opening/Ring-Closing Polymerization of Glycidyl Acetate to Acid-Degradable Poly(ether-co-orthoester) Materials Using a Mono(Î¼-alkoxo)bis(alkylaluminum) Initiator. Macromolecules, 2022, 55, 2797-2805.	2.2	1
94	Earlyâ€career investigator special issue. Journal of Polymer Science, 2021, 59, 2364-2364.	2.0	0