

Nathaniel A Lynd

List of Publications by Year in descending order

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94
papers

5,356
citations

76196

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88477

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docs citations

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times ranked

5753
citing authors

#	ARTICLE	IF	CITATIONS
1	Biocompatible Materials Enabled by Biobased Production of Pyomelanin Isoforms Using an Engineered <i>Yarrowia lipolytica</i> . <i>Advanced Functional Materials</i> , 2022, 32, 2109366.	7.8	5
2	Concurrent Ring-Opening/Ring-Closing Polymerization of Glycidyl Acetate to Acid-Degradable Poly(ether-co-orthoester) Materials Using a Mono($\frac{1}{4}$ -alkoxy)bis(alkylaluminum) Initiator. <i>Macromolecules</i> , 2022, 55, 2797-2805.	2.2	1
3	Machine learning-aided engineering of hydrolases for PET depolymerization. <i>Nature</i> , 2022, 604, 662-667.	13.7	396
4	Controlling Architecture and Mechanical Properties of Polyether Networks with Organoaluminum Catalysts. <i>Macromolecules</i> , 2022, 55, 5601-5609.	2.2	8
5	â€œBenchtopâ€ Biaryl Coupling Using Pd/Cu Cocatalysis: Application to the Synthesis of Conjugated Polymers. <i>Organic Letters</i> , 2021, 23, 2873-2877.	2.4	8
6	Effects of Poly(glycidyl ether) Structure and Ether Oxygen Placement on CO ₂ Solubility. <i>Journal of Chemical & Engineering Data</i> , 2021, 66, 2832-2843.	1.0	4
7	Relationship between Ionic Conductivity, Glass Transition Temperature, and Dielectric Constant in Poly(vinyl ether) Lithium Electrolytes. <i>ACS Macro Letters</i> , 2021, 10, 1002-1007.	2.3	17
8	Non-intuitive Trends in Floryâ€Huggins Interaction Parameters in Polyether-Based Polymers. <i>Macromolecules</i> , 2021, 54, 6670-6677.	2.2	8
9	Boric acid removal with polyol-functionalized polyether membranes. <i>Journal of Membrane Science</i> , 2021, 638, 119690.	4.1	4
10	Earlyâ€career investigator special issue. <i>Journal of Polymer Science</i> , 2021, 59, 2364-2364.	2.0	0
11	Impact of Macromonomer Molar Mass and Feed Composition on Branch Distributions in Model Graft Copolymerizations. <i>ACS Macro Letters</i> , 2021, 10, 1622-1628.	2.3	11
12	Design of Polymer Blend Electrolytes through a Machine Learning Approach. <i>Macromolecules</i> , 2020, 53, 9449-9459.	2.2	29
13	Modes of Interaction in Binary Blends of Hydrophobic Polyethers and Imidazolium Bis(trifluoromethylsulfonyl)imide Ionic Liquids. <i>Macromolecules</i> , 2020, 53, 6519-6528.	2.2	8
14	Self-Healing Thermoplastic Elastomers Formed from Triblock Copolymers with Dense 1,2,3-Triazole Blocks. <i>Macromolecules</i> , 2020, 53, 10323-10329.	2.2	17
15	Aerobic radical polymerization mediated by microbial metabolism. <i>Nature Chemistry</i> , 2020, 12, 638-646.	6.6	55
16	Role of Side-Chain Architecture in Poly(ethylene oxide)-Based Copolymers. <i>Macromolecules</i> , 2020, 53, 4960-4967.	2.2	17
17	Unusual Thermal Properties of Certain Poly(3,5-disubstituted styrene)s. <i>Macromolecules</i> , 2020, 53, 5504-5511.	2.2	2
18	Mechanism of Polymer-Mediated Cryopreservation Using Poly(methyl glycidyl sulfoxide). <i>Biomacromolecules</i> , 2020, 21, 3047-3055.	2.6	17

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19	Effect of Host Incompatibility and Polarity Contrast on Ion Transport in Ternary Polymer-Polymer-Salt Blend Electrolytes. <i>Macromolecules</i> , 2020, 53, 875-884.	2.2	15
20	Chemically Triggered Synthesis, Remodeling, and Degradation of Soft Materials. <i>Journal of the American Chemical Society</i> , 2020, 142, 3913-3922.	6.6	31
21	Spatial Control of the Self-assembled Block Copolymer Domain Orientation and Alignment on Photopatterned Surfaces. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 23399-23409.	4.0	7
22	Compositionally Controlled Polyether Membranes via Mono($\frac{1}{4}$ -alkoxo)bis(alkylaluminum)-Initiated Chain-Growth Network Epoxide Polymerization: Synthesis and Transport Properties. <i>Macromolecules</i> , 2020, 53, 1191-1198.	2.2	13
23	Coordination-Assisted Self-Assembled Polypeptide Nanogels to Selectively Combat Bacterial Infection. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 33599-33611.	4.0	27
24	Influence of Host Polarity on Correlating Salt Concentration, Molecular Weight, and Molar Conductivity in Polymer Electrolytes. <i>ACS Macro Letters</i> , 2019, 8, 888-892.	2.3	18
25	Recommendation for Accurate Experimental Determination of Reactivity Ratios in Chain Copolymerization. <i>Macromolecules</i> , 2019, 52, 2277-2285.	2.2	45
26	Thermally cross-linked diaminophenylindane (DAPI) containing polyimides for membrane based gas separations. <i>Polymer</i> , 2019, 161, 16-26.	1.8	29
27	Impact of Hydration and Sulfonation on the Morphology and Ionic Conductivity of Sulfonated Poly(phenylene) Proton Exchange Membranes. <i>Macromolecules</i> , 2019, 52, 857-876.	2.2	61
28	Demystifying the Mechanism of Regio- and Ioselective Epoxide Polymerization Using the Vandenberg Catalyst. <i>Macromolecules</i> , 2018, 51, 1777-1786.	2.2	26
29	<i>Shewanella oneidensis</i> as a living electrode for controlled radical polymerization. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 4559-4564.	3.3	68
30	Rewiring <i>Yarrowia lipolytica</i> toward triacetic acid lactone for materials generation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 2096-2101.	3.3	144
31	Controlling the polysulfide diffusion in lithium-sulfur batteries with a polymer membrane with intrinsic nanoporosity. <i>Materials Today Energy</i> , 2018, 7, 98-104.	2.5	31
32	Monitoring multicomponent transport using in situ ATR FTIR spectroscopy. <i>Journal of Membrane Science</i> , 2018, 550, 348-356.	4.1	47
33	Understanding Poly(vinyl alcohol)-Mediated Ice Recrystallization Inhibition through Ice Adsorption Measurement and pH Effects. <i>Biomacromolecules</i> , 2018, 19, 248-255.	2.6	38
34	Effect of Polymer Polarity on Ion Transport: A Competition between Ion Aggregation and Polymer Segmental Dynamics. <i>ACS Macro Letters</i> , 2018, 7, 1149-1154.	2.3	84
35	Sequence-Dependent Peptide Surface Functionalization of Metal-Organic Frameworks. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 18601-18609.	4.0	35
36	Decoupling Catalysis and Chain-Growth Functions of Mono($\frac{1}{4}$ -alkoxo)bis(alkylaluminums) in Epoxide Polymerization: Emergence of the N-Al Adduct Catalyst. <i>ACS Catalysis</i> , 2018, 8, 8796-8803.	5.5	20

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37	Nonaqueous Polyelectrolyte Solutions as Liquid Electrolytes with High Lithium Ion Transference Number and Conductivity. <i>ACS Energy Letters</i> , 2017, 2, 481-487.	8.8	69
38	Controlled co-solvent vapor annealing and the importance of quenching conditions in thin-film block copolymer self-assembly. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2017, 55, 1125-1130.	2.4	7
39	Four-fold increase in epoxide polymerization rate with change of alkyl-substitution on mono- η^4 -oxo-dialuminum initiators. <i>Polymer Chemistry</i> , 2017, 8, 4503-4511.	1.9	20
40	Ring-Opening Polymerization of Epoxides: Facile Pathway to Functional Polyethers via a Versatile Organoaluminum Initiator. <i>Macromolecules</i> , 2017, 50, 3121-3130.	2.2	42
41	Statistical Copolymerization of Epoxides and Lactones to High Molecular Weight. <i>Macromolecules</i> , 2017, 50, 2714-2723.	2.2	28
42	De Novo Synthesis of Phosphorylated Triblock Copolymers with Pathogen Virulence-Suppressing Properties That Prevent Infection-Related Mortality. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 2076-2085.	2.6	9
43	Influence of Dielectric Constant on Ionic Transport in Polyether-Based Electrolytes. <i>ACS Macro Letters</i> , 2017, 6, 1362-1367.	2.3	89
44	Morphology re-entry in asymmetric PS- <i>b</i> -PI- <i>b</i> -PS triblock copolymer and PS homopolymer blends. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2016, 54, 169-179.	2.4	8
45	Structure-Conductivity Relationships of Block Copolymer Membranes Based on Hydrated Protic Polymerized Ionic Liquids: Effect of Domain Spacing. <i>Macromolecules</i> , 2016, 49, 2216-2223.	2.2	43
46	Mussel-Inspired Anchoring of Polymer Loops That Provide Superior Surface Lubrication and Antifouling Properties. <i>ACS Nano</i> , 2016, 10, 930-937.	7.3	128
47	A facile synthesis of catechol-functionalized poly(ethylene oxide) block and random copolymers. <i>Journal of Polymer Science Part A</i> , 2015, 53, 2685-2692.	2.5	12
48	Histamine-functionalized copolymer micelles as a drug delivery system in 2D and 3D models of breast cancer. <i>Journal of Materials Chemistry B</i> , 2015, 3, 2472-2486.	2.9	20
49	Aperiodic "Bricks and Mortar" Mesophase: a New Equilibrium State of Soft Matter and Application as a Stiff Thermoplastic Elastomer. <i>Macromolecules</i> , 2015, 48, 5378-5384.	2.2	33
50	Synthetic strategy for preparing chiral double-semicrystalline polyether block copolymers. <i>Polymer Chemistry</i> , 2015, 6, 1465-1473.	1.9	19
51	Creating Extremely Asymmetric Lamellar Structures via Fluctuation-Assisted Unbinding of Miktoarm Star Block Copolymer Alloys. <i>Journal of the American Chemical Society</i> , 2015, 137, 6160-6163.	6.6	41
52	A synthetic strategy for the preparation of sub-100 nm functional polymer particles of uniform diameter. <i>Polymer Chemistry</i> , 2015, 6, 1431-1435.	1.9	9
53	Cooperative and Sequential Phase Transitions in <i>Poly(propylene oxide)-<i>b</i>-poly(ethylene oxide)</i> . <i>Macromolecules</i> , 2015, 48, 3069-3079.	2.2	15
54	Simple and Accurate Determination of Reactivity Ratios Using a Nonterminal Model of Chain Copolymerization. <i>Macromolecules</i> , 2015, 48, 6922-6930.	2.2	87

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55	Improving the Gas Barrier Properties of Nafion via Thermal Annealing: Evidence for Diffusion through Hydrophilic Channels and Matrix. <i>Macromolecules</i> , 2015, 48, 3303-3309.	2.2	19
56	Probing the Effect of Molecular Nonuniformity in Directed Self-Assembly of Diblock Copolymers in Nanoconfined Space. <i>ACS Nano</i> , 2015, 9, 9594-9602.	7.3	10
57	Phase behavior of electrostatically complexed polyelectrolyte gels using an embedded fluctuation model. <i>Soft Matter</i> , 2015, 11, 1214-1225.	1.2	58
58	Structural Evolution of Polyelectrolyte Complex Core Micelles and Ordered-Phase Bulk Materials. <i>Macromolecules</i> , 2014, 47, 8026-8032.	2.2	44
59	Synthetic Aptamer-Polymer Hybrid Constructs for Programmed Drug Delivery into Specific Target Cells. <i>Journal of the American Chemical Society</i> , 2014, 136, 15010-15015.	6.6	110
60	Small Angle Neutron Scattering Study of Complex Coacervate Micelles and Hydrogels Formed from Ionic Diblock and Triblock Copolymers. <i>Journal of Physical Chemistry B</i> , 2014, 118, 13011-13018.	1.2	57
61	Fluidity and water in nanoscale domains define coacervate hydrogels. <i>Chemical Science</i> , 2014, 5, 58-67.	3.7	48
62	Hierarchically Ordered Nanopatterns for Spatial Control of Biomolecules. <i>ACS Nano</i> , 2014, 8, 11846-11853.	7.3	23
63	Toward Strong Thermoplastic Elastomers with Asymmetric Miktoarm Block Copolymer Architectures. <i>Macromolecules</i> , 2014, 47, 2037-2043.	2.2	69
64	Phase Coexistence Calculations of Reversibly Bonded Block Copolymers: A Unit Cell Gibbs Ensemble Approach. <i>Macromolecules</i> , 2014, 47, 1865-1874.	2.2	13
65	Symmetric Poly(ethylene oxide- <i>b</i> -styrene- <i>b</i> -isoprene) Triblock Copolymers: Synthesis, Characterization, and Self-Assembly in Bulk and Thin Film. <i>Macromolecules</i> , 2014, 47, 6373-6381.	2.2	11
66	Sequence of Hydrophobic and Hydrophilic Residues in Amphiphilic Polymer Coatings Affects Surface Structure and Marine Antifouling/Fouling Release Properties. <i>ACS Macro Letters</i> , 2014, 3, 364-368.	2.3	96
67	Physiologically relevant, pH-responsive PEG-based block and statistical copolymers with N,N-diisopropylamine units. <i>Polymer Chemistry</i> , 2013, 4, 5735.	1.9	36
68	Linear versus Dendritic Molecular Binders for Hydrogel Network Formation with Clay Nanosheets: Studies with ABA Triblock Copolyethers Carrying Guanidinium Ion Pendants. <i>Journal of the American Chemical Society</i> , 2013, 135, 15650-15655.	6.6	149
69	Allyl Glycidyl Ether-Based Polymer Electrolytes for Room Temperature Lithium Batteries. <i>Macromolecules</i> , 2013, 46, 8988-8994.	2.2	142
70	Supramolecular guests in solvent driven block copolymer assembly: from internally structured nanoparticles to micelles. <i>Polymer Chemistry</i> , 2013, 4, 5038.	1.9	40
71	Numerical self-consistent field theory of multicomponent polymer blends in the Gibbs ensemble. <i>Soft Matter</i> , 2013, 9, 11288.	1.2	14
72	pH-triggered self-assembly of biocompatible histamine-functionalized triblock copolymers. <i>Soft Matter</i> , 2013, 9, 82-89.	1.2	55

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73	Effects of Polymer and Salt Concentration on the Structure and Properties of Triblock Copolymer Coacervate Hydrogels. <i>Macromolecules</i> , 2013, 46, 1512-1518.	2.2	113
74	Poly[(ethylene oxide)- <i>b</i> -(methylene ethylene oxide)]: A hydrolytically degradable poly(ethylene) Tj ETQq0 0.0 rgBT /Overlock 10	2.3	49
75	Reactivity Ratios and Mechanistic Insight for Anionic Ring-Opening Copolymerization of Epoxides. <i>Macromolecules</i> , 2012, 45, 3722-3731.	2.2	56
76	Functional block copolymer nanoparticles: toward the next generation of delivery vehicles. <i>Polymer Chemistry</i> , 2012, 3, 1618.	1.9	56
77	Mesostructured Block Copolymer Nanoparticles: Versatile Templates for Hybrid Inorganic/Organic Nanostructures. <i>Chemistry of Materials</i> , 2012, 24, 4036-4042.	3.2	51
78	Nanopatterning Biomolecules by Block Copolymer Self-Assembly. <i>ACS Macro Letters</i> , 2012, 1, 758-763.	2.3	33
79	Synthesis of thermally stable Au-core/Pt-shell nanoparticles and their segregation behavior in diblock copolymer mixtures. <i>Soft Matter</i> , 2011, 7, 6255.	1.2	47
80	A General Approach to Controlling the Surface Composition of Poly(ethylene oxide)-Based Block Copolymers for Antifouling Coatings. <i>Langmuir</i> , 2011, 27, 13762-13772.	1.6	106
81	Poly(allyl glycidyl ether)â€A versatile and functional polyether platform. <i>Journal of Polymer Science Part A</i> , 2011, 49, 4498-4504.	2.5	104
82	Tunable, High Modulus Hydrogels Driven by Ionic Coacervation. <i>Advanced Materials</i> , 2011, 23, 2327-2331.	11.1	315
83	Modular Hydrogels: Tunable, High Modulus Hydrogels Driven by Ionic Coacervation (<i>Adv. Mater.</i>) Tj ETQq1 1 0.784314 rgBT /Overlock 1	11.1	1
84	Ketene Functionalized Polyethylene: Control of Cross-Link Density and Material Properties. <i>Journal of the American Chemical Society</i> , 2010, 132, 14706-14709.	6.6	67
85	Processingâ€structureâ€mechanical property relationships of semicrystalline polyolefinâ€based block copolymers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2010, 48, 1428-1437.	2.4	38
86	Design of Soft and Strong Thermoplastic Elastomers Based on Nonlinear Block Copolymer Architectures Using Self-Consistent-Field Theory. <i>Macromolecules</i> , 2010, 43, 3479-3486.	2.2	67
87	Novel Elastomers Prepared by Grafting <i>n</i> -Butyl Acrylate from Polyethylene Macroinitiator Copolymers. <i>Macromolecules</i> , 2009, 42, 8763-8768.	2.2	29
88	Polydispersity and block copolymer self-assembly. <i>Progress in Polymer Science</i> , 2008, 33, 875-893.	11.8	419
89	<i>C</i> ₂ -Symmetric Ni(II) $\hat{\pm}$ -Diimines Featuring Cumyl-Derived Ligands: Synthesis of Improved Elastomeric Regioblock Polypropylenes. <i>Macromolecules</i> , 2008, 41, 9548-9555.	2.2	100
90	Theory of Polydisperse Block Copolymer Melts: Beyond the Schulzâ”Zimm Distribution. <i>Macromolecules</i> , 2008, 41, 4531-4533.	2.2	71

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91	Renewable-Resource Thermoplastic Elastomers Based on Polylactide and Polymethide. <i>Biomacromolecules</i> , 2007, 8, 3634-3640.	2.6	162
92	Effects of Polydispersity on the Order~Disorder Transition in Block Copolymer Melts. <i>Macromolecules</i> , 2007, 40, 8050-8055.	2.2	132
93	The role of polydispersity in the lamellar mesophase of model diblock copolymers. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2007, 45, 3386-3393.	2.4	43
94	Influence of Polydispersity on the Self-Assembly of Diblock Copolymers. <i>Macromolecules</i> , 2005, 38, 8803-8810.	2.2	276